

WORKING-CAPITAL MANAGEMENT AND PROFITABILITY OF THE CONSTRUCTION SECTOR IN BANGALORE

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Abstract *Working-capital management is an important decision in financial management, playing a key role in a firm's financial performance. For construction companies, working capital is all the more important due to the long project cycles they face.*

The present study examines the impact of working capital on profitability in the construction sector in Bangalore, India. The data for the study were collected from a sample of five major builders based in Bangalore, and pertains to a study period during 2006-11. The study contributes to the literature by using 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 construction companies should focus on two working-capital variables to maximize their profitability, viz. average collection period and accounts payable, both of which were found to have significant positive impact on profitability.

Keywords: *Working-Capital Management, Construction Industry, Project Cycle, Average Collection Period, Accounts Payable*

INTRODUCTION

The construction industry is the second largest industry in India, accounting for approximately 8% of India's Gross Domestic Product. It is currently worth about \$125 billion, and is growing at about 6.5% p.a. The key drivers of this growth are government investment in infrastructure creation and real-estate demand in the residential and industrial sectors. With the present emphasis on creating physical infrastructure, massive investment in excess of \$165 billion is proposed in the Twelfth Five Year Plan, and the construction industry would play a crucial role in this regard¹. The government's commitments to infrastructure development, especially in the power and road sectors, are likely to add further impetus to the industry's growth.

Construction activity plays an integral part in infrastructure and industrial development. The industry generates substantial employment and provides a major growth impetus to other sectors through backward and forward linkages, including cement, steel, bricks/tiles, sand/aggregates, fixtures/fittings, paints and chemicals, construction equipment, petro-

products, timber, mineral products, aluminum, glass, and plastics².

However, there are several financial bottlenecks curtailing the smooth growth of the Indian construction industry. The construction industry is highly capital intensive, and construction companies need to have access to funds for meeting contractual commitments. Generally, big construction companies tend to have ready access to financing, whereas the small- and medium-scale enterprises still struggle to secure financing. There is usually a delay in release of working capital to contractors. The unavailability of short-term bridge finance and an absence of a system of factoring bills add to the woes of small contractors. Also, construction equipment account for nearly 20% of typical project costs, which is unaffordable for small-scale contractors. There is a need to introduce new construction-specific financing and insurance products due to the industry-specific risks, particularly for small-scale players.

¹ http://planningcommission.gov.in/aboutus/committee/wrk-grp12/transport/report/wg_reports_construction.pdf

² http://planningcommission.gov.in/plans/planrel/fiveyr/10th/volume2/v2_ch7_7.pdf

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The cost structure of the construction industry is dominated by raw materials cost (30-50% of the total cost) and subcontracting cost (20-40% of the total cost). The raw materials consumption includes primarily cement and steel, and increase in their prices has a direct impact on the cost of the project, and in turn the margins of construction companies. Profitability also increases with the diversity of the projects a company can execute; with companies entering into specialized segments like the power and industrial segments having higher margins³.

The current procedures for procurement of contractors are highly cumbersome and incur unnecessary costs for both the project owner as well as contractors (procurement costs up to 16% of the project cost, and supervising and monitoring cost about 6%, summing up to 22% of asset created). There is need for standardizing contract procedures and evaluation criteria. The adoption of technology in bidding process, e.g. using online tenders and online grading system for contractors, may reduce the cost and risk involved. Another issue is the chronic shortage of work force; especially, those with skill-sets to sustain the burgeoning growth in infrastructure and housing sectors. On the other hand, there is also a shortage of contractors, with existing contractors already overloaded. These add further to project delays and project costs.

Innovative and updated technology is required to improve productivity and quality and ensure the timely completion of projects. In particular, greater consciousness about environment safety and health standards has already increased the demand for the green construction and green buildings. The construction industry must be prepared to adopt green standards quickly. A lot needs to be done on the part of the industry as a whole, by the clients, contractors, and government departments, to improve the scenario.

The study is divided into five sections. The first section introduces the Indian construction industry and discusses some of its challenges. The second section focuses on the review of the literature on working-capital management and its impact on profitability, in order to identify a research gap. The third section presents the methodology adopted for the study; the fourth section presents the findings of the study. The fifth and last section presents a discussion of the findings and conclusions of the study, and a discussion of the limitations and scope for further study.

LITERATURE REVIEW

Working-capital management is an extensively studied area in financial literature, and particularly its impact on firm

profitability. The following is a partial review of the related literature of working-capital management.

Several studies have identified the determinants of working capital and working capital policies. Lamberson (1995) found no significant relationship between changes in economic conditions and changes in working capital for small firms. Pandey and Parera (1997) found that most private-sector manufacturing companies in Sri Lanka had informal working-capital management policies. They found that company size has an influence on the overall working capital policy and approach, and, further, company profitability has an influence on the methods of working capital planning and control. Weinraub and Visscher (1998) examined the issue of aggressive and conservative working-capital management policies of US firms in 10 different industries. They concluded that the industries had distinctive and significantly different working-capital management policies, consistent over their 10-year study period. They also found highly significant negative correlation between industry asset and liability policies and found that when relatively aggressive working capital asset policies are followed, they are balanced by relatively conservative working capital financial policies. On the other hand, Filbeck and Krueger (2005) found significant differences between industries in working capital practices, as well as significant change within industries over time. Cheng and Chiou (2006) studied the determinants of working capital, including business indicators, industry effect, operating cash flows, growth opportunities for the firm, firm performance, and firm size. They obtained consistent results only for leverage and operating cash flow for both net liquid balance and working capital requirements. Afza and Nazir (2008) examined the internal and external determinants of working capital requirement of a firm. They considered operating cycle, operating cash flows, leverage, size, return on assets, and Tobin's q as internal factors and industry dummy and level of economic activity as external factors. They found that the top five significant factors influencing working capital requirements are – operating cycle, leverage, return on assets, and Tobin's q. They also found significant differences in working capital requirements and practices by industry. Siddiquee and Khan (2009) observed that firms that are better at managing working capital are found to be able to make counter-cyclical moves to build competitive advantage, are better at generating fund internally, and face less trouble while seeking external sources of financing.

There is abundant literature examining the impact of working capital policies on firm profitability in developed markets, particularly the United States. Soenen (1993) found a negative relationship between the net trade cycle and return on assets, with a wide variation from industry to industry. Jose et al. (1996) found a significant negative

³ <http://www.indianmirror.com/indian-industries/construction.html>

relationship between the cash-conversion cycle and profitability, suggesting that more aggressive working-capital management is associated with higher profitability. Shin and Sonen (1998) found a strong negative correlation between net trade cycle and profitability. Deloof (2003) found significant negative relationships between the number of days accounts receivable, inventories, accounts payable, and gross operating income of Belgian firms, indicating that firms can improve their profitability by reducing the number of days' accounts receivable and inventories to a reasonable minimum. He also suggested that the negative relationship between accounts payable and profitability is consistent with the view that less profitable firms wait longer to pay their bills.

There are also several studies examining the impact of working-capital management on firm profitability in emerging markets. Smith and Begemann (1997) found that the working capital ratio of total current liabilities to funds flow accounted for most of the variability in return on investment for South African firms. Eljelly (2004) found that the cash-conversion cycle was of more importance as a measure of liquidity than the current ratio in their impact on firm profitability among Saudi firms, though with great variation among industries, and along with a significant size effect. Rehman (2006) found strong negative correlation between working-capital variables including average payment period, average collection period, cash-conversion cycle, and inventory turnover in days, and net operating profit. He suggested that by reducing cash-conversion cycle up to optimum level, firms could improve their profitability. Padachi (2006) found that high investment in inventories and receivables was associated with lower profitability. Lazaridis and Tryfonidis (2006) found significant impact of working-capital management on corporate profitability among Greek firms. They suggested that by controlling the cash-conversion cycle, firms could improve their gross operating profit. Rahman and Nasr (2007) found negative relationships between working-capital management, liquidity, and debt and firm profitability, and a positive relationship between size and firm profitability. Afza and Nazir (2007a, 2007b, and 2009) found an inverse relationship between aggressiveness of working capital policies and firm profitability among Pakistani firms. They suggested that managers could create value if they adopt a conservative approach towards working capital financing policies and working capital investment. Mathuva (2009) found significant negative relationship between accounts payable period and profitability, and significant positive relationships between inventory-turnover period & accounts-receivables period and profitability for Kenyan firms. Azhar and Noriza (2010) found a strong

negative relationship between working-capital variables and firm performance among Malaysian firms. Charitou et al. (2010) examined the relationship between working-capital management and profitability among firms in Cyprus. They used average receivables days, payables days, and cash-conversion cycle as independent variables; debt ratio, sales growth, and natural logarithm of sales as control variables; and return on assets as the dependent variable. Their results indicate that the cash-conversion cycle and all its major components are associated with the firm profitability.

Several studies have considered the impact of working-capital management on profitability in specific sectors in India. Ghosh and Maji (2003) examined the efficiency of working-capital management of the Indian cement companies using performance, utilization, and overall efficiency indices. Ganesan (2007) found an inverse relationship between liquidity and profitability in the Indian telecommunication sector. He suggested that working capital efficiency can be improved by reducing the days of working capital, and this would in turn lead to an improvement in profitability. Vishnani and Shah (2007) found no significant correlation between liquidity and profitability in the Indian consumer electronic industry as a whole; but several firms individually showed significant positive correlation between liquidity and profitability.

The previous studies provide a framework regarding working-capital management, its components, and its relationship with profitability. The common variables considered for working-capital management include cash-conversion cycle, average receivables days, average payables days, average inventory days, and most studies have found these to have a negative impact on profitability, usually measured by return on equity. Further, size is commonly taken as a control factor, and is found to have a positive influence on profitability. Several studies have examined working-capital management in diverse industries, including cement, food, pharmaceuticals, and engineering. The literature pertaining to working-capital management in construction industry in India is very limited, thus providing a research gap.

A major limitation of the methodology used in much of the literature comes from the use of pooled regression methodology for panel data (Driscoll & Kraay, 1998). They suggested the use of fixed-effects panel regression, as it allows for control for company-specific differences in profitability as well as for year-to-year differences in profitability for the industry as a whole (for further discussion of the fixed-effects panel regression model refer to Driscoll and Kraay, 1998). The present study contributes to the working-capital literature by comparing the results of pooled and fixed-effects panel regressions in order to overcome this limitation.

METHODOLOGY

The objective of the present study is to examine the impact of working capital on profitability in the construction sector in Bangalore, India. The data for the study were collected from a sample of five major builders based in Bangalore, viz. Brigade Developers⁴, ITC Constructions⁵, Larsen & Turbo⁶, Puravankara Group⁷, and Sobha Developers⁸, and pertains to a study period of 5 years (2006 to 2011).

The dependent variable for the study is the Net Operating Profit, defined as operating income plus depreciation, which is a measure of profitability of the firm. The independent variables for the study include: the aggregate variables, i.e. Current Assets, Current Liabilities, and Total Loans; the constituent variables, i.e. Accounts Receivable, Accounts Payable, and Inventory; and the derived variables, i.e. Average Collection Period (ACP), i.e. the ratio of Accounts Receivable to Sales, multiplied by 365 days (the number of days in a year), representing the collection policy of the firm; the Average Payment Period (APP), i.e. the ratio of Accounts Payable to Purchases, multiplied by 365 days, representing the payment policy of the firm; the Average Inventory Conversion Period (AICP), i.e. the ratio of Inventory to Cost of Goods Sold, multiplied by 365 days, representing the inventory policy of the firm; and the derived variable Cash-conversion cycle (CCC), i.e. the Average Collection Period added with the Average Inventory Conversion Period, less the Average Payment Period, representing the overall working capital efficiency of the firm. The control variable is the size of the firm, i.e. the natural logarithm of Sales.

The impact of the working-capital variables on profitability was analyzed using regression analysis. In model I, the impact of the aggregate working-capital variables of Current Assets, Current Liabilities, and Total Loans on profitability was studied, controlling for Size; formally, the model is given by:

$$NOP_{it} = a + b_1CA_{it} + b_2CL_{it} + b_3TL_{it} + c_1\ln(TA)_{it} + \epsilon_{it}$$

In model II, the impact of the constituent working-capital variables Accounts Receivable, Accounts Payable, and Inventory on profitability was studied, controlling for Size; formally, the model is given by:

$$NOP_{it} = a + b_1AR_{it} + b_2AP_{it} + b_3Inv_{it} + c_1\ln(TA)_{it} + \epsilon_{it}$$

In model III, the impact of the derived working-capital variables Average Collection Period, Average Conversion Period, and Average Payable Period on profitability was studied, controlling for Size; formally, the model is given by:

$$NOP_{it} = a + b_1ACollP_{it} + b_2AConvP_{it} + b_3APP_{it} + c_1\ln(TA)_{it} + \epsilon_{it}$$

In model IV, the impact of the derived working capital variable Cash-conversion cycle on profitability was studied, controlling for Size; formally, the model is given by:

$$NOP_{it} = a + b_1CCC_{it} + c_1\ln(TA)_{it} + \epsilon_{it}$$

The models discussed earlier were all pooled regressions. Further, to control for firm-specific differences and changes over time, fixed-effects panel-regression analysis was used. The panel-regression models are of the form:

$$NOP_{it} = a + \sum b_j x_{ijt} + c_1 \ln(TA)_{it} + u_i + v_t + \epsilon_{it}$$

where x_{ijt} represents the independent variables, $\ln(TA)_{it}$ represents firm size (i.e. the control variable, u_i represents the firm-specific fixed-effect, and v_t represents the year-specific fixed-effect. The panel regression models were estimated using the maximum likelihood method.

FINDINGS

The results of the pooled and fixed-effects regression analyses of profitability on the working-capital variables are presented in Tables 1 and 2, respectively.

Table 1: Pooled Regressions

	Model I	Model II	Model III	Model IV
Current Assets	0.175			
Current Liabilities	-0.051			
Total Loans	0.054			
Accounts Receivable		-0.223		
Accounts Payable		0.851**		
Inventories		-0.277		
Average Collection Period			4.856**	
Average Conversion Period			-0.495	
Average Payable Period			0.924	
Cash-conversion cycle				0.394
Size	637.970*	292.509	479.290	530.247*
(Constant)	-5007.466	-2014.727	-3941.772	-3819.577
R ²	22.7%	33.3%	56.7%	14.4%
F statistic	1.469	2.497	6.556	1.844
p-value	0.249	0.075	0.002	0.182

⁴ <http://www.brigadegroup.com/investor/annual-reports.html>

⁵ <http://www.itcportal.com/about-itc/shareholder-value/key-financials.aspx>

⁶ <http://www.larsentoubro.com/Intcorporate/common/>

⁷ http://www.puravankara.com/pages/Annual_Reports

⁸ <http://www.sobha.com/>

Table 2: Fixed-Effects Regressions

	Model I	Model II	Model III	Model IV
Current Assets	0.585*			
Current Liabilities	0.259**			
Total Loans	0.035			
Accounts Receivable		0.242		
Accounts Payable		1.607**		
Inventories		0.625		
Average Collection Period			1.370*	
Average Conversion Period			-0.291	
Average Payable Period			2.977	
Cash-conversion cycle				-0.454
Size	-153.840	-110.258	167.429	-384.429
(Constant)	-259.182	-938.197	-2597.292	3000.079
Brigade	1088.133*	1397.584*	1447.127	695.961
ITC	670.203	936.757	860.597	74.516
L&T	-916.727	-109.414	526.261	345.789
Purvankara	2026.885**	1512.556**	1759.423	1808.191**
Shobha	-	-	-	-
2006-07	670.033*	777.760*	362.821	124.635
2007-08	442.376	554.478*	347.381	208.998
2008-09	43.364	107.298	-96.336	-93.059
2009-10	327.678	440.355	111.221	92.311
2010-11	-	-	-	-
R ²	85.3%	85.7%	79.8%	77.2%
F statistic	8.521	6.009	3.958	4.731
p-value	0.002**	0.002**	0.012*	0.004**

The results of model I in the pooled regression suggest a significant positive size effect on profitability, whereas in the fixed-effects regression indicate that both Current Assets and Current Liabilities have a statistically significant positive impact on profitability, with significant differences at the company level for Purvankara and Brigade as compared to Shobha, and significant difference at the temporal level for 2006-07 as compared to 2010-11. The fixed-effects regression was statistically significant, explaining 85.3% of the variation in profitability.

The results of model II in the pooled regression suggest that Accounts Payable has a significant positive impact on profitability, and the same holds in the fixed-effects regression, with significant differences at the company level for Purvankara and Brigade as compared to Shobha, and significant difference at the temporal level for 2006-07 as compared to 2010-11. The fixed-effects regression was statistically significant, explaining 85.7% of the variation in profitability.

The results of model III in the pooled regression suggest that Average Collection Period has a significant positive impact on profitability, and the same holds in the fixed-effects regression, with no significant difference between the individual companies, and between years. The fixed-effects regression was statistically significant, explaining 79.8% of the variation in profitability.

The results of model IV in the pooled regression also suggest a significant positive size effect on profitability, whereas in the fixed-effects regression indicate significant difference at the company level for Purvankara as compared to Shobha. The fixed-effects regression was statistically significant, explaining 77.2% of the variation in profitability.

CONCLUSION

Working capital is used to bridge the time lag between the outflow of money towards the purchase of raw materials for production and the inflow of money from the sale of the product. As working capital investments in the construction

industry are substantial, they can be expected to have a significant effect on the profitability of a company. Thus, companies try to optimize the level of working capital, typically by paying bills as late as possible, turning over inventories quickly, and collecting on receivables as quickly as possible. However, the optimal level of working capital may vary to reflect business conditions. This study examined the working capital and profitability relationship in the construction industry in Bangalore.

The results of the study suggest that both current assets and current liabilities have impact on profitability in construction companies. From the current assets side, the average collection period was found to be significantly positively with regard to profitability, while among the current liabilities, accounts payable was found to be significantly positively related with profitability. These results do not conform entirely to those in several previous studies. Deloof (2003) found significant negative relationship between number of days of accounts receivable and gross operating income, and Rehman (2006) found strong negative correlation between average collection period and net operating profit. Mathuva (2009) found a significant negative relationship between accounts payable and profitability. Thus, the results may be specific to the construction industry.

Average collection period is the average time between making a sale and receiving the cash payment. In the construction industry, construction companies receive cash from the customers at specified points of time in the project cycle, depending on how much of the construction is completed. The average collection period thus depends on the project-completion time. However, delaying the delivery of the project is generally undesirable, as it usually has legal implications, and affects the brand image of the builder. Instead, construction companies should try to maximize their sales at as early a stage in the project cycle as possible, i.e. in the pre-launch and launch stages. This means that the project should be marketed well in advance of the launch, and builders should offer promotional discounts to attract maximum customers early on in the project cycle. Most builders have in fact adopted such a strategy.

Accounts payable is a component of current liabilities, comprising of payments due mainly for raw materials such as cement and steel that are purchased on credit. Payables act as a float, whereby construction companies can avoid taking short-term loans to cover day-to-day expenses if they defer these payments. As these results in decreasing interest payments, it indirectly increases profitability. Thus, construction companies should optimally leverage their payables to improve their profitability.

The study has contributed to the literature of working-capital management by studying the impact of working-

capital variables on profitability in the construction sector in Bangalore, India, using pooled regressions and fixed-effects panel regressions. In fact, the results of the pooled regressions are similar to those of the fixed-effects panel regressions, in that both have identified average collection period and accounts payable as having a significant positive impact on profitability in the construction industry. However, the latter methodology is preferred, as it controls for company-specific differences in profitability as well as for year-to-year differences in profitability for the industry as a whole.

There are some limitations inherent in the study. The data used for the study were very limited, with only five sample companies over a 5-year study period. Moreover, the study period included the global financial crisis of 2008-09, which may have adversely affected the profitability of the sample companies, as the construction industry as a whole experienced a slowdown due to low demand. This was reflected in the coefficients of 2008-09 year dummy variable in the fixed-effects regressions, but not significantly. Thus, the results of the study may not be generalizable.

The study can be extended to consider more disaggregated measures of working capital for a more sensitive analysis of its impact on profitability. Further, a proper temporal perspective can be captured by taking monthly data, so that the working capital cycles may be properly estimated and modeled, and vector autoregressive modeling may also be applicable, in order to estimate lagged impacts; for example, the lagged impact of capacity expansion on working capital, sales, and profitability.

REFERENCES

- Afza, T., & Nazir, S. M. (2007a). Working capital management policies of firms: Empirical evidence from Pakistan. Presented at 9th South Asian Management Forum, North-South University, Dhaka, Bangladesh.
- Afza, T., & Nazir, S. M. (2007b). Is it better to be aggressive or conservative in managing working capital? Presented at Singapore Economic Review Conference.
- Afza, T., & Nazir, S. M. (2008). *On the Factor Determining Working Capital Requirements*. Proceedings of American Society of Business and Behavioral Sciences 15(1), 293-301.
- Afza, T., & Nazir, S. M. (2009). Is it better to be aggressive or conservative in managing working capital? *IUP Journal of Applied Finance*, 15(8), 19-30.
- Azhar, N., & Noriza, M. (2010). Working capital management: The effect of market valuation and profitability in Malaysia. *International Journal of Business and Management*, 5(11), 140-147.

- Charitou, M. S., Elfani M., & Lois, P. (2010). The effect of working capital management on firms profitability: Empirical evidence from an emerging market. *Journal of Business and Economic Research*, 8(12), 63 -68.
- Cheng, L., & Chiou, J. (2006). The determinants of working capital management. *Journal of American Academy of Business*, 10(1), 149-155.
- Deloof, M. (2003). Does working capital management affect profitability of Belgian firms? *Journal of Business Finance and Accounting*, 30(3/4), 573-587.
- Driscoll, J., & Kraay, A. (1998). Consistent covariance matrix estimation with spatially dependent panel data. *The Review of Economics and Statistics*, 80(4), 549-560.
- Eljelly, A. (2004). Liquidity-profitability tradeoff: An empirical investigation in an emerging market. *International Journal of Commerce & Management*, 14(2), 48-61.
- Filbeck, G., & Krueger, M. T. (2005). An analysis of working capital management results across industries. *Mid-American Journal of Business*, 20, 11-18.
- Ganesan, V. (2007). An Analysis of Working Capital Management Efficiency in Telecommunications Equipment Industry. *Rivier Academic Journal*, 3(2), 1-10.
- Ghosh, S. K., & Maji, S. G. (2003). *Working capital management efficiency: A study on the Indian Cement Industry*. The Institute of Cost and Works Accountants of India.
- Jose, M. L., Lancaster, C., & Stevens, J. L. (1996). Corporate returns and cash conversion cycle. *Journal of Economics and Finance*, 20(1), 33-46.
- Lamberson, M. (1995). Changes in working capital of small firms in relation to changes in economic activity. *Mid-American Journal of Business*, 10(2), 45-50.
- Lazaridis, I., & Tryfonidis, D. (2006). Relationship between working capital management and profitability of listed companies in the Athens Stock Exchange. *Journal of Financial Management and Analysis*, 19(1), 26-35.
- Mathuva, D. (2009). The influence of working capital management components on corporate profitability: A survey on Kenyan listed firms. *Research Journal of Business Management*, 3, 1-11.
- Pandey, I. M., & Parera, K. L. W. (1997). Determinants of effective working capital management: A discriminant analysis approach. *Indian Institute of Management Ahmadabad Working Paper # 1349*.
- Rehman A. (2006). *Working capital management and profitability: Case of Pakistani firms*, (Unpublished Dissertation). COMSATS Institute of Information Technology (CIIT), Islamabad, Pakistan.
- Rehman, A., & Nasr, M. (2007). Working capital management and profitability: Case of Pakistani firms. *International Review of Business Research Papers*, 3(1), 279-300.
- Shin, H., & Soenen, L. (1998). Efficiency of working capital and corporate profitability. *Financial Practice and Education*, 8(2), 37-45.
- Siddiquee, M., & Khan, S. M. (2009). Analyzing Working Capital Performance: Evidence from Dhaka Stock Exchange (DSE) Ltd. SSRN Working Paper Series, Available at SSRN: <http://ssrn.com/abstract=1374210>
- Soenen, L. A. (1993). Cash conversion cycle and corporate profitability. *Journal of Cash Management*, 13(4), 53-58.
- Vishnani, S., & Shah, B. (2007). Impact of working capital management policies on corporate performance: An empirical study. *Global Business Review*, 8(2), 267-281.
- Weinraub, H. J., & Visscher, S. (1998). Industry practice relating to aggressive conservative working capital policies. *Journal of Financial and Strategic Decision*, 11(2), 11-18.