

# WORKING CAPITAL MANAGEMENT IN LIQUIDTY-CONSTRAINED ECONOMY: A CASE OF ZIMBABWEAN STOCK EXCHANGE-LISTED FIRMS IN THE MULTI-CURRENCY ERA

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## ABSTRACT

*This study explores the management of working capital in non-financial companies listed in Zimbabwe, focusing on the period since the adoption of the multi-currency regime in 2009. This regime was implemented to revive the country's economy after years of political, social, and economic challenges. Coinciding with the global economic recovery from a severe recession, the multi-currency regime exacerbated liquidity issues faced by Zimbabwean companies. To investigate this topic, data was collected from 55 companies listed on the Zimbabwe Stock Exchange during the period of 2017-2022. Descriptive statistics and trend analysis techniques were employed to analyze the data. The findings reveal that these Zimbabwean companies heavily rely on trade credit as a primary source of short-term financing. Furthermore, their main investments in working capital are directed towards trade receivables and inventory. The study concludes that in countries where accessing funding from formal capital markets is difficult for companies, trade credit plays a vital role. It serves as a significant means of financing working capital requirements. The author suggests further exploration of this subject by developing an econometric model to analyze the financing of working capital and investment strategies employed by listed firms in Zimbabwe. Understanding the working capital management practices in Zimbabwe is crucial for policymakers, investors, and business practitioners. By investigating the financing sources and investment patterns of listed companies, this research contributes valuable insights into the financial dynamics of the Zimbabwean economy. Furthermore, it provides recommendations for potential improvements in working capital management and encourages further research in this area.*

**Keywords:** *multi-currency, dollarization, liquidity, trend, working capital, trade credit.*

## 1. INTRODUCTION

The management of working capital has evolved from being merely a matter of survival to becoming a strategic and successful business tool. It encompasses the funding and composition of a company's existing liquidity, which significantly influences its overall financial performance and potential for failure. However, both theoretical and empirical literature have largely overlooked the importance of working capital expenditure and funding decisions in achieving the objective of shareholder wealth maximization. There is a consensus among academic studies that there is a lack of theory on working capital management, likely stemming from the neglect of this issue in the exposure to effective market theory in academia [1].

In order to make a difference in short-term funding decisions, companies operating in efficient capital and commodity markets have limited room for maneuvering. Without sound and proper working capital management policies in place, companies, despite their revenue growth and profitability potential, would struggle to remain viable and are at risk of bankruptcy [2]. As stated by other scholars, the "engine" of fixed assets cannot function without the "oil" of working capital, as liquidity issues pose serious challenges and potential losses [3]. Research specifically focused on working capital management in Zimbabwe is scarce. A literature review identified only two studies in Zimbabwe that examined the management and viability of working capital [4-5]. However, this research differs from these previous studies as it seeks to explore how non-financial firms in Zimbabwe have managed their working capital in the era of multiple currencies.

Working capital management has gained even greater importance for Zimbabwean firms due to the severe liquidity challenges experienced under the multi-currency regime. Effective assets management is crucial for the survival and growth of these firms. Therefore, the objective of this study is to investigate how non-financial firms in Zimbabwe have handled their working capital, considering the well-documented funding challenges faced by the economy since dollarization. The rest of the paper is organized as follows: Section 1 provides a brief introduction, while Section 2 offers a concise review of the literature on assets management. Section 3 outlines the research methodology, including data sources and the research sample. The data collected from the field is presented, analyzed, and discussed in Section 4, and the conclusions and recommendations are presented in the final section of the research paper.

## 2. LITERATURE REVIEW

The following ideas are unit pertinent to the analysis study and area unit mentioned intimately as incontestable below.

### 2.1 Working capital management

Working capital management encompasses the effective handling of current assets and current liabilities to ensure that a firm has sufficient resources to sustain its operations and prevent costly disruptions [6]. Current assets include cash, marketable securities, trade receivables, prepaid expenses, and inventory (comprising raw materials, work-in-progress, and finished goods). On the other hand, current liabilities encompass accounts payable, short-term bank loans, other liabilities, and accruals that become due within a year.

### 2.2 Current assets

Cash provides a firm with the essential liquidity required to fulfill its daily obligations to creditors and suppliers, while also offering the flexibility to seize emerging opportunities. Effective assets management involves making informed decisions and implementing credit policies, such as determining the length of time customers are allowed to make purchases and offering cash discounts for prompt payment. The financial manager must consider various factors, including which parties should be extended credit, the amount of credit to be granted, and the duration of the credit period. A stringent credit policy may result in missed sales opportunities as fewer potential customers meet the requirements for credit purchases. Conversely, lenient credit terms may lead to longer average collection periods and a buildup of uncollected accounts. These issues incur real costs, necessitating managers to find appropriate trade-offs that not only boost sales but also maximize profitability [7].

Another crucial aspect involves inventory management. For manufacturing firms, inventory typically consists of raw materials, work-in-progress, and finished products. There is a trade-off between holding excess inventory and facing inventory shortages. Maintaining surplus inventory levels enables uninterrupted production schedules and the ability to meet unexpected sales demands. However, the drawback of excessive inventory accumulation is that the firm's funds are tied up in non-interest-earning assets, which could be allocated to more profitable investments instead [8]. Managers must determine whether to synchronize production with sales patterns or maintain a steady production level regardless of current demand [3].

### 2.3 The cash conversion cycle (CCC)

There are multiple indicators of capital efficiency, one of which is the cash conversion cycle (CCC). The CCC combines information from the balance sheet and income statement to measure the net time interval between cash outflows and inflows [9-10]. It is widely regarded as a continuous liquidity metric because it focuses on the time gap between payment for raw materials and the collection of funds from customers [11-12]. The CCC recognizes that the core operations of a firm, such as procuring materials, paying suppliers, selling goods, and collecting from customers, do not occur simultaneously or instantaneously [13].

One advantage of the CCC in liquidity analysis is its ability to segment capital management efficiency into three distinct components: accounts receivable period, inventory period, and accounts payable period. By breaking down capital management efficiency in these key areas, the CCC enables firms to easily identify problematic areas when analyzing liquidity management concerns.

The calculation of the cash conversion cycle is as follows:

*Cash conversion cycle receivables inventory = + period – payables period*

*Receivables period = (accounts receivables / sales) × 365*

*Inventory period = (inventories / cost of sales) × 365*

*Payable period = (accounts payable / purchases) × 365*

*Payable period = (accounts payable / purchases) × 365*

*Cash conversion cycle accounts receivable 365 inventory 365 accounts payable 365*

## 2.4 Working capital requirements and net liquid balance

Working capital efficiency can also be assessed using two measures: Working Capital Requirements (WCR) and Net Liquid Balance (NLB). These metrics were introduced by Shulman and Cox (1985) as an attempt to overcome the limitations of traditional liquidity analysis methods. This approach to liquidity assessment divides the total working capital into the resources necessary to sustain the firm's operations and its surplus cash resources. WCR represents the difference between current operational needs (trade debtors and inventory) and current operational resources (trade creditors and net accruals). It is also referred to as the net operating assets approach in liquidity analysis [14]. Both needs and resources are inherent aspects associated solely with the acquisition, production, and sale of goods and services [15]. On the other hand, NLB reflects the disparity between all liquid cash assets and all liquid cash obligations, making it an absolute dollar indicator of a firm's liquidity. A positive NLB value indicates that the firm possesses sufficient cash resources to meet short-term obligations without diminishing the resources allocated to its operating cycle. Conversely, a negative NLB value implies reliance on external financing and suggests that the firm needs to obtain additional resources or reduce the resources dedicated to its operating cycle in order to fulfill short-term obligations. The calculations for WCR and NLB are shown below:

*WCR = (accounts receivables + inventories + prepayments) – (accounts payables + other payables)*

*NLB = (cash + cash equivalents + short-term investment) – (short-term debt + current portion of long-term debt payable within a year)*

One key drawback of the NLB model is that it calculates the remaining balance by subtracting the working capital needed to support the firm's operating cycle from the total working capital, considering changes in net working capital and WCR. Consequently, in order to effectively utilize NLB for liquidity analysis, it becomes crucial to have a method for estimating the working capital required to sustain the operating cycle.

## 3. METHODOLOGY

The empirical study is based on a sample of 55 business firms that are publicly listed on the ZSE (Zimbabwe Stock Exchange). The data for these companies primarily consists of financial statements covering the period from 2017 to 2022. The information was gathered from the INET BFA Library online database, as well as from company websites and annual reports.

The selection of the sample was driven by the availability of data relevant to the study. Only companies that regularly generated financial statements for a minimum of three years were included in the sample. Companies with missing data were excluded during the data refinement process. Additionally, in line with previous studies

on working capital management, financial services sector companies were excluded due to their unique asset characteristics, which did not align with the scope of this study [16,12].

To examine whether there were any significant structural changes during the study period, the components of total assets were subjected to analysis. The annual means for each component were calculated and compiled to identify the overall trend over the specified period. Furthermore, the liquidity of the sample was assessed over the six-year period using a comprehensive liquidity ranking test (LR). This involved assigning individual rankings to each of the three main components of current assets and then summing up the scores to derive a final rank.

#### 4. DISCUSSION

The major findings of the study in question are as illustrated below.

##### 4.1 Sources of working capital finance

Finance managers constantly face the challenge of determining the size and source of funding for their assets. The trends and composition of current liabilities over the five-year period under review are presented in Table 1. The findings from Table 1 demonstrate that trade credit as a proportion of current liabilities (TCCL) declined from 73% in 2017 to 58% in 2021, but increased to 64% in 2022. On average, TCCL accounts for 63% of current liabilities, which is almost twice the contribution of short-term borrowing debt (STBCL). Limited availability of bank credit indicates that trade credit becomes a relatively more significant source of finance.

Trade credit plays a crucial role in compensating for the limitations of bank credit. The results in Table 1 also reveal an upward trend in short-term cash borrowings as a percentage of current liabilities (STBCL), rising from 23% in 2017 to 37% in 2021, and then decreasing to 32% in 2022. On average, STBCL contributed 33% to current liabilities, which is nearly eleven times the contribution of accrued debt (ACCL). Based on the trends observed in TCCL and STBCL in Table 1, one can infer that as companies accessed more short-term cash debt, their reliance on trade credit decreased, and vice versa.

Over the six-year period, the contribution of accruals to current liabilities (ACCL) exhibited a downward trend, starting at 4.5% in 2018, reaching a low of 2.06% in 2019, and then gradually increasing in the last three years to 3.35% in 2022.

**Table 1:** Composition of current liabilities for the period 2017-2022

Year	TCCL	STBCL	ACCL
2017	0.7265	0.2280	0.0454
2018	0.6582	0.3001	0.0417
2019	0.6089	0.3705	0.0206
2020	0.6045	0.3716	0.0255
2021	0.5785	0.3741	0.0263
2022	0.6403	0.3171	0.0335
overall	0.6330	0.3307	0.0317

Source: authors' calculations using an unbalanced panel over the period 2017 to 2022. Data obtained from the INET BFA online database.

##### 4.2 Percentage composition of working capital finance

Table 2 illustrates the financial composition of asset investments, including Trade Credit to Current Assets (TCCA), Short Borrowings to Current Assets (STBCA), Accruals to Current Assets (ACA), and Long-Term

Funds to Current Assets (LTFCA). CLCA represents the total of TCCA, STBCA, and ACCA, indicating the extent to which companies utilized short-term funds to finance current assets. The results presented in Table 2 demonstrate that, except for 2017, all current assets were funded by short-term financing throughout the six-year period. On average, trade credit supported 68% of the current assets, with a low of 62% in 2019 and a high of 90% in 2022. Short-term borrowings for financing current assets showed an upward trend, increasing from 22% in 2017 to 58%, suggesting that listed companies were likely more successful in accessing bank financing for their operations.

**Table 3:** Percentage composition of working capital finance

Year	TCCA	STBCA	ACCA	CLCA	LTFCA
2009	0.6663	0.2216	0.0259	0.9284	0.0862
2010	0.6156	0.3523	0.0211	0.9900	0.0110
2011	0.6124	0.4076	0.0139	1.0626	-0.0339
2012	0.6704	0.4197	0.0182	1.1069	-0.1083
2013	0.6598	0.4660	0.0246	1.2019	-0.1505
2014	0.8981	0.5812	0.0299	1.5127	-0.5091
overall	0.6814	0.4089	0.0220	1.1273	-0.1122

**Source:** authors' calculations using an unbalanced panel over the period 2009 to 2014. Data obtained from the INET BFA online database.

#### 4.3. Distribution of current asset values and liquidity rankings

The structure of working capital investment refers to the allocation of working capital and highlights the current asset that constitutes the largest proportion of the total. This study analyzed the distribution of working capital over a six-year period to determine if there were any discernible patterns or structural changes in the level of investment across the four components. The findings of the working capital investment distribution are presented in Table 4.

**Table 4:** Distribution of Working Capital Investment

Year	Inventory	Trade Receivables	Cash Holdings	Other Current Assets	Total Working Capital Investment
2017	43%	50%	21%	6%	100%
2018	40%	48%	21%	11%	100%
2019	39%	47%	19%	15%	100%
2020	41%	44%	22%	13%	100%
2021	42%	47%	20%	11%	100%
2022	43%	46%	20%	11%	100%

On average, the investment in working capital was distributed as follows: inventory 34%, trade receivables 39%, cash holdings 21%, and other current assets 7%. Inventory and trade receivables together accounted for nearly three quarters of the total working capital investment, indicating that, on average, these firms maintained a significant portion of their working capital in the form of stocks and receivables during the period under review. The proportion of inventory to total current assets (INVCA) did not follow a clear pattern but fluctuated between 39% (the lowest proportion in 2012) and 43% (the highest proportion in 2010). Similarly, the proportion of trade debtors to current assets (TDCA) did not exhibit a distinct trend but varied between 44% (the lowest proportion in 2013) and 50% (the highest proportion in 2010). Throughout the six-year period, TDCA

consistently exceeded INVCA, indicating that these firms held more receivables than inventories. Moreover, this trend could also suggest the challenges these firms faced in collecting payments from their customers.

#### 4.4. Firms' working capital efficiency in the period.

In an effort to evaluate the working capital efficiency of the selected firms during the review period, various measures were utilized. One of these measures was the calculation of the Net Trade Cycle (NTC). As indicated in Table 5, negative NTC values of 84 days and 57 days were recorded in 2020 and 2021, respectively. The negative NTC values observed could be attributed to the firms' practice of maintaining inventory for short periods, enforcing strict credit policies, and delaying payments to suppliers. However, it is worth noting that the extension of payment terms to creditors has had adverse effects on some of the firms listed, as trade credit is a two-edged sword. While it provides cost-free financing, it is also often cited as a major cause of bankruptcy among firms [17].

**Table 5:** Measures of working capital efficiency

Year	Net trade cycle (days)	Average collection period (days)	Working capital requirements (\$ 000)	Net liquid balance (\$ 000)
2017	64	103	23 423	-17 365
2018	67	64	23 384	-19 884
2019	27	65	25 817	-20 454
2020	-84	75	30 608	-23 203
2021	57	89	30 152	-12 712
2022	42	78	22 618	-5 462

The average school assortment was massively improved from 103 days in 2017 to sixty-four days in 2018 then increasing to eighty-nine days in 2021. The positive assets necessities exhibited over the six-year amount reflects these firms' want for funding as a result of a positive WCR should be supported. Over the six-year amount cyber web Liquid Balance was negative probable as a result of these companies having additional borrowings than money holdings and short-run investments. The negative NLB isn't stunning and reflects the requirement for funding than the requirement to carry short-run investments.

## 5. CONCLUSION

In this study, the management of operating capital by non-financial companies listed on the Zimbabwe Stock Exchange (ZSE) was evaluated from 2009 to 2014, after the country's economy was dollarized. The dominant short-term funding tool used by these companies was found to be trade credit, which played a significant role in funding capital investments. The study also revealed that companies in Zimbabwe employed aggressive capital management methods and relied on short-term funds due to limited access to long-term funds from the formal sector. It was concluded that trade credit is crucial for companies in countries with underdeveloped and poorly capitalized financial markets. The study recommends a deeper investigation into the capital management practices of all listed companies in Zimbabwe by building an economic model to better understand their funding and investment strategies in light of the country's level of growth and development.

## 6. REFERENCES

- [1] Sartoris, W.L., & Hill, N.C. (1982). A generalised cash flow approach to short-term financial decisions, *Journal of Finance*, 38(2), pp. 349-360.
- [2] Jose, M.L., Lancaster, C., & Stevens, J.L. (1996). Corporate returns and cash conversion cycles, *Journal of Economics and Finance*, 20(1), pp. 33-46.

- [3] Watson, D. & Head, A. (2004). *Corporate Finance: Principles and Practice* (3rd ed.). Harlow/England Financial Times Pearson Education.
- [4] Gachira, W., Chiwanza, W., Nkomo, D.J., & Chikore, R. (2014). Working capital management and profitability of non-financial firms listed on the Zimbabwe Stock Exchange (ZSE), *European Journal of Business and Economics*, 9(2), pp. 12-15.
- [5] Zawaira, T. & Mutenheri, E. (2014). The association between working capital management and profitability of non-financial companies listed on Zimbabwe Stock Exchange *International Journal of Research in Social Sciences*, 3(8), pp. 114-120.
- [6] Firer, C., Ross, S.A., Westerfield, R.W., & Jordan, B.D. (2012). *Fundamentals of Corporate Finance* (5th ed.). Berkshire McGraw-Hill Education.
- [7] Chandra, P. (2008). *Financial Management* (8th ed.). New Delhi: Tata McGraw Hill.
- [8] Baños-Caballero, S., García-Teruel, P. J., & Martínez-Solano, P. (2010). Working capital management in SMEs. *Accounting & Finance*, 50(3), pp. 511-527.
- [9] Richards, V.D., & Laughlin, E.J. (1980). A cash conversion cycle approach to liquidity analysis, *Financial management*, pp. 32-38.
- [10] Uyar, A. (2009). The Relationship of Cash Conversion Cycle with Firm Size and Profitability: An Empirical Investigation in Turkey, *International Research Journal of Finance and Economics*, 24, pp. 186-193.
- [11] Deloof, M. (2003). Does working capital management affect profitability of Belgian firms? *Journal of Business Finance & Accounting*, 30(3-4), pp. 573-588.
- [12] Padachi, K. (2006). Trends in Working Capital Management and its Impact on Firms' Performance: An Analysis of Mauritian Small Manufacturing Firms, *International Review of Business Research Papers*, 2, pp. 45-58. Public and Municipal Finance, Volume 4, Issue 1, 2015
- [13] Wang, Y.-J. (2002). Liquidity management, operating performance, and corporate value: evidence from Japan and Taiwan. *Journal of Multinational Financial Management*, 12(2), pp. 159-169.
- [14] Viskari, S., Lukkari, E. & Karri, T. (2011). State of working capital management research: Bibliometric study. *Middle Eastern Finance and Economics* (14), 2011.
- [15] Shulman, J.M., & Cox, R.A.K. (1985). An Integrative Approach to Working Capital Management. *Journal of Cash Management*, 5(6), pp. 64-68.
- [16] Kwenda, F. (2014). Trade Credit in Zimbabwe's Economic Recovery. *Mediterranean Journal of Social Sciences*, 5(2), pp. 431-439.
- [17] Bradelly, D.B., & Rubach, M.J. (2002). Trade credit and small business: A cause of business failures. Retrieved from: <http://www.sbaer.uca.edu/research/asbe/2002/papers/02asbe055.pdf>.