

Determinants of Working Capital in Consumer Non-Cyclicals Sector: An Empirical Study on LSE-listed Companies

Xiaoju Dong *

School of Economics and Management, Beijing Jiaotong University, Beijing, China

* Corresponding author: 21726046@bjtu.edu.cn

Abstract. In the contemporary and ever-changing economic environment, the skillful administration of working capital has become a crucial factor for organizations, particularly in industries that demonstrate resilience in the face of economic swings. The sector of Consumer Non-Cyclicals, renowned for its stability, is an example of a domain in which working capital plays a vital role. This study aims to examine the various factors that have an impact on working capital within the Consumer Non-Cyclicals Sector, focusing specifically on companies that are publicly listed on the London Stock Exchange (LSE). The study emphasizes the importance of managing working capital, underscoring its role in preserving liquidity, promoting expansion, and guaranteeing operational effectiveness. The objective of this study is to analyze the factors that influence working capital decisions in these businesses, utilizing a combination of theoretical frameworks and empirical evidence. This study utilizes a panel dataset and develops empirical models to examine the potential influence of firm-specific variables on working capital. The outcomes of this research are anticipated to offer significant perspectives for the management of firms, investors, lawmakers, and other relevant stakeholders. These insights will benefit both academic research and practical implementations within the area.

Keywords: Working Capital, Consumer Non-Cyclicals Sector, Profitability, Liquidity, Empirical Model.

1. Introduction

1.1. Background

The consumer non-cyclical sector involves those industries that tend to be engaged in consumer staples, healthcare, and utilities. These companies deal with the production and distribution of the services and products that are sold to the public and their demand remains unaffected by the economic changes [1]. One of the major features of these companies is that they have a very low reliance on economic and business cycle shifts. Enhancing working capital management has been observed to yield several benefits for firms, including increased operational efficiency, improved financial performance, and the promotion of economic growth [2]. Moreover, they tend to have a stable financial performance, despite the economic downturns since these are mandatory for the consumers.

The importance of working capital in the industry lies in the fact that these companies have a lot of transactions with the suppliers and the creditors. Furthermore, other aspects associated with the effectiveness of the working capital include better inventory management, which tends to be critical for consumer staples, seasonal fluctuations, which tends to be better for increasing demand, the credit management of the creditors and debtors, and therefore gaining an overall competitive advantage [3]. As a result, they need to maintain a high liquidity position [1], which is to measure an entity's ability to address short-term obligations through cash or short-term assets. Thus, the non-cyclical sector has several added benefits of maintaining a robust working capital and enhancing its financial performance and stability.

1.2. Related Research

1.2.1. Underlying Theory

The Working Capital Management Theory (WCM) focuses on elaborating on the practices and principles used by companies to manage their short-term liabilities and assets. The underlying

effectiveness of the working capital lies in the fact that it ensures that the companies are profitable [3], have a competitive advantage [4], sustainable growth. Furthermore, it tends to have a wide number of dimensions, such as the management of different current assets and current liabilities. Empirical research has demonstrated a significant correlation between working capital and the enhancement of organizations' performance and value. The role of the WCM tends to be highly critical as it prevents the companies from crises and has links with other profitability and position measures [5]. Therefore, it is evident that the planning and controlling of the two major elements of the working capital, i.e., the current assets and current liabilities tend to be important to ensure that the overall financial position of the company is stable.

1.2.2. Empirical Evidence from the Past Studies

The WCM of an entity is determined by firm-specific as well as macroeconomic variables. Some of the examples include sales growth, leverage, size, inflation, GDP, and tax rate [6]. The past studies have several empirical evidence regarding the companies that are in the manufacturing and consumer industry. A study on 37 Vietnamese firms found that company-specific factors such as cash, inventory, growth, ROA, and operating cycle are positive determinants while the size and accounts payable adversely influence the WC requirement [7]. Additionally, inflation, as an external factor tends to have a significant and positive impact on the working capital requirement. However, in the case of the manufacturing sector, only the ROA and Sales Growth tend to be significant, while in the case of the service sector, short-term debt to total assets is the significant variable [8].

The size of the companies, operating cash flows, GDP, and capital expenditure tend to have an adverse influence on the WCM decisions [9]. The factors such as age, sales growth, GDP, leverage, and profitability are significant determinants of WCM. Furthermore, profitability and age are positive indicators, the other factors tend to have an adverse influence on the working capital [10]. The working capital requirement of the companies is determined by profitability and operating cash flows [2]. Additionally, the new companies tend to be highly leveraged and tangible and tend to pursue an aggressive working capital strategy. Therefore, these factors tend to be the positive determinants of the working capital requirement of the companies. While the tangibility and size of the firm tend to hurt the working capital, the profitability metric, i.e., ROCE and leverage tend to have a positive influence on the working capital requirement [5]. Since factors such as operational risk and financial risk tend to be critical in the management of working capital, there should be a priority-based system developed by the companies to ensure that the appropriate working capital management elements are managed at a proper time [11]. Overall, the empirical evidence provides a reasonable premise to justify the choice of the variables and subsequently imply the same in the case of the industry or sector which is to be considered by this particular study for the analysis.

1.3. Problem Statement

Even though the consumer non-cyclical sector is a resilient and stable part of the economy, certain companies within this sector are not immune to the changes in financial changes, especially related to the management of the working capital. The role of working capital tends to be effective in maintaining liquidity, fostering growth, and ensuring operational efficiency. However, there is a lack of scholarly studies focused on identifying the key factors that impact the working capital of industrialized countries. Therefore, considering the importance of the industry in the wider scope of economic advancement, it is crucial to assess the determinants that impact working capital in this particular sector.

1.4. Objectives of the Study

The main objective of this study is to examine the elements that contribute to the identification and analysis of important drivers impacting the working capital of companies in the Consumer Non-Cyclicals sector listed on the London Stock Exchange (LSE). Hence, the present study aims to accomplish the subsequent objectives:

The objective of this study is to examine the various elements that influence the management of working capital in companies operating in the Consumer Non-Cyclicals sector, namely those listed on the London Stock Exchange (LSE), and to provide certain practical recommendations to the policymakers based on the current findings of the study.

Therefore, the study intends to address the above objectives and subsequently contribute to the research gap that has been identified.

2. Method

2.1. Hypotheses Development

Based on the literature review, the following are the hypotheses, based on the variables which are likely to have a significant influence on the working capital:

H1: The magnitude of a company's size exerts a substantial impact on its working capital.

H2: The level of leverage exhibited by corporations exerts a substantial impact on their working capital.

H3: The profitability of the companies has a significant influence on the working capital of the companies.

H4: The growth of the companies has a significant influence on the working capital of the companies.

H5: The operating cash flow of the companies has a significant influence on the working capital of the companies.

2.2. Research Methodology

2.2.1. Data Collection

The data would be collected from the financial reports and the Refinitiv database, which consists of the financial information data of all the listed companies in the world's major countries. As far as the Sample size and the period of study are concerned, the current study considers a convenience sampling technique and subsequently would select the 20 companies from the FTSE which are a part of the Non-Cyclicals Sector. The primary focus would be to not select more than 5 companies from a single industry so that the data is well diversified and provides a significant diversity in terms of the sampling and the results. Furthermore, the study considers a longitudinal timeline of 5 years, i.e., 2018 to 2022 so that there is an indication of the changes over the timeline. Lastly, since the consumer non-cyclical sector tends to be unaffected by any economic downturn or the pandemic, it is unnecessary to control COVID-19 as a control or independent (dummy) variable.

2.2.2. Variables Definition

Dependent Variable: The study's dependent variables would encompass the quantifiable assessments of gross working capital (GWC) and net working capital (NWC). The approximate value of gross working capital (GWC) is determined by taking the natural logarithm of the total current assets. Comparing the whole value of current assets to the total value of current liabilities is required to calculate net working capital (NWC).

Independent Variables: In this research, we focus on five firm-specific explanatory variables: leverage (LEVERAGE), profitability (PROFITABILITY), size (SIZE), sales growth (GROWTH), and operating cash flows (OCF). The total liability to total asset ratio is a rough metric for measuring leverage, while the operational profit ratio is a rough metric for measuring profitability. The natural logarithm of a company's annual sales revenue may be used to estimate its size, while sales growth refers to the percentage rise or reduction in sales over a period of years. The natural logarithm would be used to the numerical representations of the operational cash flow in the last step to generate an approximation of the measurement of operational cash flow.

2.2.3. Model Specification

Since the current study has two dependent variables, the following would be the empirical models:
Model 1: Taking the Gross Working Capital as the Dependent Variable:

$$GWC_{it} = \beta_0 + \beta_1 (SIZE_{it}) + \beta_2 (LEVERAGE_{it}) + \beta_3 (PROFITABILITY_{it}) + \beta_4 (GROWTH_{it}) + \beta_5 (OCF_{it}) + \varepsilon \quad (1)$$

Model 2: Taking the Net Working Capital as the Dependent Variable:

$$NWC_{it} = \beta_0 + \beta_1 (SIZE_{it}) + \beta_2 (LEVERAGE_{it}) + \beta_3 (PROFITABILITY_{it}) + \beta_4 (GROWTH_{it}) + \beta_5 (OCF_{it}) + \varepsilon \quad (2)$$

The *i* indicates the company and *t* time respectively, since the study would use a panel dataset.

2.2.4. Data Analysis Techniques

While Descriptive Statistics would be helpful to summarise the data and identify the features underlying the data, the correlation analysis would test the association and potential multicollinearity that might be prevalent in the independent variables. In case any pair of the variables has a high correlation (+/- 0.80), the Variance Inflation factor test would be considered to ascertain if there are chances of multicollinearity. Furthermore, considering that the study would use a panel dataset, the fixed effects and the random effects would be considered, followed by a Hausman test. The STATA software would be used to test the hypotheses.

3. Model Analysis and Factor Discussion

Although it tends to be very difficult to predict the actual outcomes that could be derived at this very stage, several aspects or considerations might provide certain insights regarding the probable results. The following are the results:

The magnitude of companies could potentially exert a favorable influence on their working capital, as larger organizations with higher revenues tend to necessitate a greater quantity of working capital.

The potential impact of leverage on a company's working capital is worth considering, since organizations with high leverage may be more inclined to finance their operations through debt rather than maintaining a stronger working capital position.

The profitability of the companies might influence the working capital positively as more profitability is a sign that the company has effective working capital management, and the decision-making tends to be robust.

The growth of the companies might have a favorable influence on the working capital, considering that the companies experiencing higher growth might look to raise more working capital, at least the gross amount, and then finance the operations.

H5: The operating cash flow of the companies is likely to have the opposite impact because the companies have a sufficient amount of operating cash flows and therefore, the dependence on external funds might be limited.

However, the above expected findings might be different from the actual ones but the prevalence of the findings with the WCM theory might prevail.

4. Conclusion

4.1. Significance of the Study

The study has a dual significance since it provides insights into the practical scenario, such as the implications for company managers, investors, policymakers, and other stakeholders, as well as contributes to academic literature. The academic literature has a very limited focus on the aforesaid industry and therefore, the current study provides a strong premise which could be useful for future researchers as well as addresses the current gaps. As far as the realistic scenarios are concerned, the study, through an empirical research strategy would provide several insights regarding the effectiveness of the potential determinants and which of the determinants are likely to have the most significant impact on the working capital decisions.

4.2. Limitations and Future Research

One of the major limitations, which is prevalent in the current study is that it has solely been focused on the firm-specific variables, considering that the macroeconomic variables might not be much relevant to the nature of the industry. Secondly, the selected variables and the proxies might not be relevant and therefore, there could be several other ways through which the choice of the proxies could have been made. Lastly, the convenience sampling technique might be an issue as it would consider only those companies for which the data is easily available. Based on the limitations, the study further provides a premise to replicate the same empirical model in different economies or consider the effect of macroeconomic variables, such as the GDP, Inflation, or Interest Rates, which could be significant proxies. Additionally, future studies could use the same empirical model to specifically conduct industry-wise segregation of the determinants of working capital and to ascertain if the determinants are the same for the different industries.

4.3. Ethical Considerations

Even though the current study is based on secondary data collection and has no human involvement, certain ethical factors need to be considered. Firstly, the data would not be manipulated to achieve the desired objectives and would be from authentic databases. Secondly, the dataset would not be used for any commercial purposes and would be saved in encrypted folders so that there is no unauthorized access to the dataset. Lastly, the submitted dissertation would abide by all the ethical considerations of the university and provide the needful shreds of evidence or proofs of the data and analyses, such as the links of the company information, an Excel file with the dataset, and output of the STATA software.

References

- [1] Arsita, Y., & Sihombing, P. Analysis of the Effect of Financial Ratio on Stock Returns of Non-Cyclicals Consumer Companies Listed on IDX 2015-2020. *International Journal of Innovative Science and Research Technology*, 2021, 6 (9): 1086 - 1096.
- [2] Jabbouri, I., Benrqya, Y., Satt, H., Naili, M., & Omari, K. Determinants of working capital management for emerging markets firms: evidence from the MENA region. *Journal of Economic and Administrative Sciences*, 2023.
- [3] Deloof, M. Does working capital management affect profitability of Belgian firms? *Journal of business finance & Accounting*, 2003, 30 (3-4): 573 - 588.
- [4] Boisjoly, R. P., Conine Jr, T. E., & McDonald IV, M. B. Working capital management: Financial and valuation impacts. *Journal of Business Research*, 2020, 108: 1 - 8.
- [5] Sharma, R. K., Bakshi, A., & Chhabra, S. Determinants of behaviour of working capital requirements of BSE listed companies: An empirical study using co-integration techniques and generalised method of moments. *Cogent Economics & Finance*, 2020, 8 (1): 1720893.

- [6] Atseye, F.A., Ugwu, J.I., & Takon, S.M. DETERMINANTS OF WORKING CAPITAL MANAGEMENT THEORETICAL REVIEW. *International Journal of Economics, Commerce and Management*, 2015, III (2): 1 - 11.
- [7] Le Thi Kim Nhung, T. T., & Trang, T. DETERMINANTS OF WORKING CAPITAL REQUIREMENTS: THE CASE OF LISTED PLASTIC FIRMS IN VIETNAM. Bank competition, ownership and stability interrelationship in transition economies: A case study of Vietnam, 2021, 39.
- [8] Nyeadì, J.D., Sare, Y.A., & Aawar, G. Determinants of working capital requirement in listed firms: Empirical evidence using a dynamicsystem GMM. *Cogent Economics & Finance*, 2018, 6: 1 - 14.
- [9] Safia, F. DETERMINANTS OF WORKING CAPITAL “EVIDENCE FROM PRODUCTION AND SERVICE SECTOR OF PAKISTAN”. *International Journal of Finance and Accounting*, 2020, 5 (1): 67 - 78.
- [10] Mansoori, D. E., & Muhammad, D. Determinants of working capital management: Case of Singapore firms. *Research Journal of Finance and Accounting*, 2012, 3 (11): 15 - 23.
- [11] Hussain, A., Apostu, S. A., Kijkasiwat, P., & Vasa, L. A Cross-Country Study on the Determinants of Working Capital Management: Gmm Approach. *Transformations in Business & Economics*, 2022, 21 (3).