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The Impact of Working Capital Policies and Capital Structure Decisions on Financial Performance: A Comparative Analysis

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Abstract

This study examines how working capital investments, financing policies, and capital structure decisions affect financial performance in firms operating in the food, beverage, and tobacco sectors, as well as the chemical, pharmaceutical, petroleum, rubber, and plastic products sectors. The model represents working capital investment and financing policies by the working capital indicator, financial leverage, debt maturity structure by the capital structure indicator, and asset size and net income by control variables. Financial performance indicators were included in the model by creating an index via principal component analysis. Panel data analysis was applied to determine the relationship using data from 22 firms from 2011 to 2024. The study revealed that financial performance in the FBT sector is positively related to a cautious investment strategy, asset size, and net period profit and negatively associated with financial leverage and debt maturity structure. In the CP sector, financial performance was positively related to a cautious investment strategy, financial leverage, asset size, and net period profit. However, it was negatively associated with debt maturity structure. To enhance performance, profitability, sustainability, and success, firms operating in the FBT and CP sectors are recommended to adopt a cautious working capital strategy. This involves keeping long-term debt levels at a minimum in capital structure decisions, maintaining a mindful approach to leverage usage in the FBT sector, and using leverage effectively and efficiently in the CP sector.

Keywords

Working Capital, Capital Structure, Financial Performance, Food Sector (FBT) and Chemical Sector (CP), Panel Data Analysis

JEL Classification

C23, D53, G32

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Çalışma Sermayesi Politikaları ile Sermaye Yapısı Kararlarının Finansal Performansa Etkisi: Karşılaştırmalı Bir Analiz

Öz

Bu çalışma, çalışma sermayesi yatırım ve finansman politikaları ile sermaye yapısı kararlarının gıda, içecek ve tütün sektörü ile kimya, ilaç, petrol, lastik ve plastik ürünler sektöründe yer alan firmaların finansal performansları üzerindeki etkisini araştırmaktadır. Modele yatırım ve finansman politikası çalışma sermayesi göstergesi, finansal kaldıraç ve borcun vade yapısı sermaye yapısı kararlarının göstergesi olarak, aktif büyüklük ve net dönem kârı ise kontrol değişkeni olarak belirlenmiştir. Finansal performans göstergeleri temel bileşen analizi ile endeks oluşturularak modele dahil edilmiştir. İlişkinin belirlenmesinde ayrı 22 firmanın 2011-2024 yıllarındaki verileri kullanılarak panel veri analiz yöntemi uygulanmıştır. Analiz sonucunda, GİT sektörü için finansal performansın ihtiyatlı yatırım stratejisi, aktif büyüklük ve net dönem kârı ile pozitif, finansal kaldıraç ve borcun vade yapısı ile negatif ilişkili olduğu tespit edilmiştir. KİP sektörü için finansal performans ihtiyatlı yatırım stratejisi, finansal kaldıraç, aktif büyüklük ve net dönem kârı ile pozitif ilişkiliyken borcun vade yapısı ile negatif ilişkili olduğu belirlenmiştir. GİT ve KİP sektöründe faaliyette bulunan firmaların performanslarını, kârlılıklarını, sürdürülebilirlik ve başarılarını arttırabilmeleri, ihtiyatlı çalışma sermayesi stratejisi benimsemeleri, sermaye yapısı kararlarında uzun vadeli borç düzeyini minimum seviyede tutarken kaldıraç kullanımında GİT sektöründeki firmaların daha temkinli ancak KİP sektörü firmalarının kaldıraç etkin ve verimli şekilde kullanmaya devam etmeleri ile sağlanmaktadır.

Anahtar Kelimeler

Çalışma Sermayesi, Sermaye Yapısı, Finansal Performans, Gıda Sektörü (GİT) ve Kimya Sektörü (KİP), Panel Veri Analizi

JEL Kodu

C23, D53, G32

1. Introduction

A firm's financial decisions include those related to long-term asset and capital management and the management of short-term assets and liabilities. These decisions relate to capital budgeting, capital structure, and working capital management (Bhalla, 2014). Short-term capital management refers to the funds needed to finance a firm's daily activities (i.e., current assets and current liabilities) and falls under working capital management. It involves planning, controlling, and financing the ratio of a firm's current assets, as well as the process of acquiring these assets (Singhania & Mehta, 2017). Working capital management refers to the financial resources a firm uses to meet its short-term obligations. It is an important factor in ensuring and maximizing firm profitability by avoiding excessive investment in short-term assets and maintaining optimal liquidity. Working capital refers to the regulation of the structure and level of current assets to balance return and risk. It is an indicator of a firm's current financial position and a measure of its overall performance. Therefore, working capital significantly affects firms' management and profitability (Pham et al., 2020; Balaban et al., 2023). The purpose of working capital management is to ensure that managers can cover firm expenses and pay short-term liabilities when they are due. Consequently, poorly managed working capital can lead to liquidity problems and decreased

profitability, which can disrupt the firm's operations and negatively affect its performance (Ukaegbu, 2014). Thus, the level of working capital should be determined by considering factors such as the nature of the firm, its size, and the regularity of sales (Aydın et al., 2021). There are specific strategies for determining the level of working capital required to finance investments in current assets. A balanced approach involves financing the fluctuating portion of current assets with short-term funding and the constant portion of current and fixed assets with long-term funding. In a conservative strategy, both the fluctuating and constant portions of current assets, as well as fixed assets, are financed with long-term sources. An aggressive strategy finances the fluctuating and constant portions of current assets with short-term sources, while financing fixed assets with long-term sources (Ceylan & Korkmaz, 2018; Ercan & Ban, 2005).

The capital structure forms a firm's long-term financing decisions and expresses the relationship between debt and equity. Proper management of these decisions, which directly impact risk and return, creates a balance between the two, thereby increasing firm profit and value while reducing capital costs (Balami & Koirala, 2024). Since the primary objective of managers is value maximization and the capital structure decision determines long-term financing, managers must exercise caution when making decisions regarding the components of the capital structure. The main focus when making capital structure decisions is achieving maximum returns at minimum risk. To this end, managers must determine the optimal ratio of equity to debt to reduce the cost of capital and increase profits. Thus, establishing an optimal capital structure is expected to reduce capital costs and risks, thereby increasing the value of firm shares, value, and profits (Chandra, 2019; Singh & Bagga, 2019). However, there is no single capital structure for firms because the optimal capital structure is formed by combining financial resources that minimize borrowing costs and eliminate risky conditions under specific conditions. This is because macroeconomic conditions, the sector in which a firm operates, and its unique characteristics can lead to differences in capital structure (Hoang, 2023).

In line with the explanations, there is a significant relationship between short- and long-term financing decisions, such as working capital policies and capital structure, and a firm's market value, performance, profitability and sustainability. Therefore, these topics remain relevant in literature. The current study aims to determine the effect of working capital investment and financing policies, as well as capital structure decisions, on the financial performance of firms in the food, beverage, and tobacco sector, as well as the chemical, pharmaceutical, petroleum, rubber,

and plastic products sector, from 2011 to 2024. Consistent with this objective, the study consists of an introductory section with theoretical explanations, a literature review section that summarizes previous studies, a section with the data set and methodology that describes the data set and methodology used in the study and presents the analysis results, and a section with the results that evaluates the obtained findings.

Finally, it is expected that this study will contribute to the literature by including financial performance indicators in the study through the creation of an index using the principal component analysis method, examining the impact of working capital policies and capital structure decisions on financial performance by comparing different sectors, and developing policy recommendations based on the findings to guide stakeholders such as investors, firm managers, and analysts.

2. Literature Review

Working capital management is related to a firm's short-term financing decisions and is associated with the investment and financing of current assets. It directly affects firms' profitability and liquidity. Firms with high working capital ratios have an advantage in generating investment income; however, those with low ratios may face liquidity problems and consequently have difficulty meeting their obligations (Raheman & Nasr, 2007). Despite numerous studies investigating the relationship between working capital and performance, the nature of this relationship remains debated. Some studies assume that working capital investments affect growth and profitability in terms of sales and returns. Others assume that excessive investments lead to additional financial costs and high current asset holding costs. These costs are perceived negatively by stakeholders and may cause financial losses, reducing profitability and performance. Conversely, some studies assume a nonlinear relationship between working capital and profitability, i.e., an inverse U-shaped relationship (Anton & Afloarei Nucu, 2020; Jaworski & Czerwinka, 2024). Proper management of capital structure is important for firms. It forms the basis of long-term financing decisions and expresses decisions regarding the management of debt and equity components of financing sources. Making correct decisions is also important. One of managers' primary objectives is to structure the capital components in a way that minimizes costs and maximizes returns. This leads to increased firm profits and performance (Kumar et al., 2017). Although determining the optimal capital structure impacts firm performance, the relationship between capital structure and performance remains a subject of debate, with many studies having

been conducted on this topic. This section includes a review of previous national and international studies on the relationship between working capital, capital structure, and financial performance.

2.1. The Relationship Between Working Capital and Financial Performance

Singhanian and Mehta (2017) conducted a study on the subject using non-financial firm data from South Asia, East Asia, and Southeast Asia from 2004 to 2014. They found a non-linear relationship between firm profitability and working capital management in 11 economies. Dalcı et al. (2019) examined the role of firm size in the relationship between working capital management and profitability in non-financial German firms from 2006 to 2013. Their study revealed that firm size has a regulatory effect, indicating that medium-sized and small firms can enhance profitability by shortening the cash conversion cycle, whereas large firms cannot. The relationship between profitability and working capital was examined by Botoc and Anton (2017) using data from 2006 to 2015 for firms with high growth in Central, Eastern, and Southeastern Europe, by Altaf and Shah (2018) using data from 2007 to 2016 for non-financial firms in India, Dash et al. (2023) analyzed Indian manufacturing firms from 2011 to 2020, and Anton and Afloarei Nucu (2020) studied firms listed on the Polish Stock Exchange from 2007 to 2016. These studies concluded that there is an inverse U-shaped relationship between profitability and working capital levels. Phan et al. (2020) conducted research on steel firms operating on the Vietnam Stock Exchange and found that working capital significantly affected profitability, with most working capital indicators increasing it. Amponsah-Kwatiah and Asiamah (2021) examined the relationship using data from manufacturing firms on the Ghana Stock Exchange from 2015 to 2019 and determined that all indicators except leverage positively affected profitability. Louw et al. (2022) found a long-term relationship and single-directional causality between working capital management and profitability using data from firms listed in the construction and retail sectors in South Africa from 2004 to 2015. They also revealed that working capital management has a greater impact on the profitability of retail firms. Demiraj et al. (2022) found that the CCC, ITP, ARCP, and APP negatively impact profitability. Pant et al. (2024), with a similar scope, investigated the effect of working capital levels on performance among Indian manufacturing firms listed on the BSE500 Index during the period of the pandemic (2019–2020). They found that an increase in the working capital ratio positively impacted firm performance. Using data from 147 manufacturing firms operating in Malaysia between 2010 and 2019, Addin Al-Mawsheki (2022) investigated the relationship between investment and financing policy and financial performance. The analysis revealed that

financial performance was negatively affected by the current assets-to-total assets ratio, and that operating revenues could increase with a conservative working capital financing policy. Heliani (2023) examined the relationship between working capital management, profitability, corporate social responsibility, performance, sustainability, and liquidity risk among manufacturing firms listed on the Indonesia Stock Exchange. The study concluded that profitability is positively affected by working capital management, liquidity risk, and corporate social responsibility. Similarly, Wahyuningsih et al. (2024) investigated the relationship between working capital management and the profitability of green industry award-winning firms listed on the Indonesia Stock Exchange between 2019 and 2021. They also examined the moderating role of the diversification strategy in this relationship. The study found that inefficient working capital management negatively affects profitability, but a diversification strategy plays a positive moderating role. Koroma and Bein (2024) examined the moderating role of economic policy uncertainty in the relationship between profitability and working capital. Using data from firms listed on the UK Stock Exchange between 2006 and 2021, they found that economic policy uncertainty significantly affects the relationship between profitability and working capital management. Altaf (2024) investigated the extent to which working capital financing affected the performance of hotel firms in India between 2008 and 2017. The study revealed that performance is negatively affected by short-term debt financing, indicating an inverse U-shaped relationship between firm performance and working capital.

In their study of working capital and profitability in Turkey, Helhel and Karasakal (2017) examined accommodation firms between 2005 and 2015. They found that ROA and ROE were negatively affected by net operating capital and leverage, while ROA was positively affected by receivables and asset turnover. Turaboğlu and Topaloğlu Nur (2017) examined the relationship between working capital policies and the financial performance of firms listed on the BIST 100 Index from 2010 to 2015. They found a positive relationship between financial policy and ROA and TQ and a negative relationship between investment policy and TQ. Topak (2018) found that ROA is negatively affected by the average collection period, cash conversion period, current ratio, and average sales period and positively affected by firm size in a study using data from 2004 to 2017 for firms operating in the BIST Trade Index. Conversely, Eskin and Güvemli (2020) found no relationship between the CCP and asset profitability and operating profitability when examining data from 2012 to 2016 for firms listed on the BIST50 Index. However, they did find positive relationships between AP and firm age, OP and leverage, the number of employees, the liquidity

ratio, and the CCP. Yaman and Topaloğlu (2021) investigated how financing and investment policies affect firm profitability in the manufacturing industry from 2004 to 2020. They concluded that profitability would increase with aggressive financing and investment policies in the food sector and with cautious policies in the metal goods, chemical, and primary metal industries. However, in the textile sector, cautious financing policies were found to positively impact profitability, while inventory investments negatively impacted it. Conversely, another finding is that profitability increased alongside the increase in investment levels in the paper sector but decreased alongside the increase in short-term debt repayment in the stone and soil sector. Özkan (2021) aimed to determine the relationship between working capital management and financial performance for firms operating in the BIST Sustainability Index from 2014 to 2019. Özkan found that ROA's working capital indicators were not significantly related, but financial leverage was negatively related, and sales were positively related. However, contrary to these findings, Topaloğlu and Akgüç (2021) investigated the effect of investment and financing policies on financial performance using data from 2005 to 2018 from firms operating in the BIST100 Index. They revealed that investment policy positively affected ROA and ROE, while financing policy negatively affected ROA but had no significant effect on ROE. Islıcık and Koçyiğit (2021) used 2016 data from public hospital enterprises in Istanbul, Izmir, and Ankara to determine a positive relationship between net working capital and inventory turnover rate and ROA and a negative relationship between CCP and ROA. However, they did not find a relationship between ROA and accounts receivable turnover rate. Yıldız and Deniz (2020) addressed the same issue with a similar objective. They used data from 2010 to 2018 from firms operating in the BIST Star Index. They found a positive relationship between ROA and firm size, the ratio of current assets to total assets, inventory turnover rate, and asset turnover rate. They also identified a negative relationship between ROA and financial leverage. They stated that there is no significant relationship between the cash conversion period and the turnover rates of receivables and payables. However, Çerçel and Sökmen (2019) revealed in their study of firms in the BIST metal goods, machinery, and equipment manufacturing sector from 2010 to 2017 that ROA's cash conversion period is positively affected by operating size and inventory turnover rate. They also found that there is no significant relationship between ROA and the leverage ratio. Erkan (2023) investigated the relationship between working capital components and profitability. Using data from firms operating in the BIST Textile, Clothing, and Leather Sector from 2013 to 2022, he found that the cash conversion period,

accounts receivable collection period, and financial leverage variables negatively impacted ROA and ROE. In contrast, the current ratio variable positively impacted them. Topaloğlu (2019) found that NPM and ROA were positively affected by investment policy and negatively affected by financing policy in a study using data from firms listed on the BIST30 Index from 2010:1 to 2018:3. Similarly, Işıldak (2023) concluded that ROA was negatively affected by its financing policy and leverage ratio when conducting research on the BISTKOBİ Index for the years 2019-2021. Additionally, he found that there was no relationship between ROA's investment policy, current ratio, or collection period and that none of these variables had a significant effect on ROA. Durdu and Aydın (2024) examined the relationship between profitability and working capital management in firms in the BIST food, beverage, and tobacco sector from 2015 to 2017. They found that the cash conversion period and the inventory holding period negatively affected gross sales profitability. Özekenci (2025) aimed to study the BIST food sector from 2018 to 2022 and found that working capital (receivables collection period, inventory turnover period, cash conversion cycle, and payables payment period) positively affected firm profitability (ROA) and firm value (TQ). The hypotheses developed within the literature are presented below.

H1: There is a relationship between working capital investment policy and financial performance.

H2: There is a relationship between working capital financing policies and financial performance.

2.2. The Relationship Between Capital Structure and Financial Performance

Many national and international studies have investigated the relationship between capital structure and financial performance. Jouida (2018) found a negative relationship between profitability, diversification, and leverage in French financial institutions between 2002 and 2012 when a certain portion of these studies was compiled. In their study of publicly traded manufacturing firms in India between 2005 and 2014, Jaisinghani and Kanjilal (2017) found that capital structure affected profitability differently. They also found that firms exceeding the threshold size benefited from debt usage in their capital structure, while those that failed to cross the threshold were negatively affected. Similarly, Eshwari and Baby (2023) studied FMCG firms in India from 2017 to 2022 and found that profitability had positive and negative effects on capital structure that varied by firm. Olajide et al. (2017) studied Nigerian firms from 1996 to 2014.

Nguyen and Nguyen (2020) examined the relationship between capital structure and firm performance for state- and non-state-owned firms listed on the Vietnam Stock Exchange from 2013 to 2018 and identified a negative relationship between the two. Musah (2018) analyzed commercial banks operating in Ghana from 2010 to 2015. Rosario and Chavali (2018) analyzed hotel firms in India from 2006 to 2017. Hoang (2023) analyzed plastic and packaging firms listed on the Vietnam Stock Exchange from 2010 to 2021 and found that long- and short-term debt ratios negatively affected profitability. However, Musah (2018) identified a positive relationship between total debt and profitability. Hajisaaid (2020) conducted research on firms listed in the basic materials sector in Saudi Arabia from 2009 to 2018. He determined that there was a negative relationship between profitability and long-term and short-term debt, as well as a positive relationship between total debt and profitability. Sing and Bagga (2019) studied Nifty50 firms operating on the Indian Stock Exchange and found that capital structure positively affected profitability. Between 2014 and 2019, Gómez and Herrera (2021) conducted research on Ecuadorian telecommunications firms and found that ROA was negatively affected by its capital structure. Putri and Dwiarti (2024) investigated the effects of profitability, liquidity, and tax avoidance on capital structure. They used data from 2020 to 2023 for diversified industrial sub-sector firms listed on the Indonesia Stock Exchange. The researchers found that liquidity negatively affected the capital structure, while profitability, liquidity, and tax avoidance significantly impacted it.

When examining a specific portion of studies focusing on the relationship between capital structure and profitability in Turkey, Akgüneş (2017), who conducted research using quarterly data from 2010 to 2016 for firms operating in the BIST Information Technology Index, found that the equity/assets ratio negatively affected net operating profit, while the foreign assets/assets, long-term foreign assets/assets, and short-term foreign assets/assets ratios did not have a significant effect. Investigating the effect of firm profitability and credit risk level on capital structure through publicly traded firms between 2013 and 2017, Küçükbay and Güler (2020) found that firm profitability was negatively affected by leverage and positively affected by firm size; however, credit risk level did not affect this relationship. Topaloğlu (2018) analyzed the relationship between financial leverage and the Katılım30 Index from 2007 to 2015, Akay and Nur (2022) examined the connection between ROA and financial leverage among Katılım30 Index firms from 2011 to 2020, Çöllü (2021) investigated the relationship between capital structure and profitability among real sector firms from 2010 to 2019, Aydoğan and Sarıkovanlık (2024) studied firms in non-financial

sector indices in E7 and G7 countries from 2016 to 2022 and discovered that ROA and ROE were negatively impacted by capital structure ratios. Conversely, Şeker (2022) examined this relationship within the context of non-bank financial institutions, employing quarterly data from 2008 to 2022. The study revealed that debt-to-total assets ratio positively impacted ROA; however, no significant correlation was observed between this ratio and equity-to-total assets ratio with regard to ROE. Similarly, an analysis of firms operating in the Borsa Istanbul Technology Index from 2010 to 2020 revealed that ROA is influenced by the equity-to-total assets ratio, but liquidity, long-term debt-to-total assets ratio, leverage, and equity-to-total assets ratio do not affect ROE. Çelik (2024) found that profitability increased with the rise in the short-term debt-to-assets ratio and was positively influenced by equity and long-term debt usage. However, firm size had no effect. This study used data from 2011 to 2015 from firms listed in the BIST Manufacturing Industry Sector. Düzakın and Özekenci (2024) investigated the relationship between capital structure and financial performance. Using data from 2013 to 2022, they found that capital structure was positively affected by ROA and ROE. However, there was no significant relationship between MV/BF and capital structure. However, Işık (2023) investigated the relationship between debt structures and the profitability of firms operating in the BIST Holding and Investment Firms sector, covering the pre- and post-Covid-19 periods, and found no significant relationship. The hypotheses formed within the scope of the literature are presented below.

H3: There is a relationship between financial leverage and financial performance.

H4: There is a relationship between the maturity structure of debt and financial performance.

When we examine the studies compiled in the literature, we see that many national and international studies have investigated the relationship between working capital policies, capital structure decisions, and financial performance. However, there is no consensus on this relationship due to factors such as country group, firm industry, year restrictions, and variable differences. This study, which addresses an ongoing research topic, is expected to contribute to the literature by investigating the combined effect of capital structure decisions and working capital policies on performance, including performance indicators in the study as a single indicator by creating an index using PCA analysis, and examining the relationship by comparing the FBT and CP sectors.

3. Data Set, Method and Findings

This study aims to determine how working capital investments, financing policies, and capital structure decisions affect the financial performance of firms in the food, beverage, and tobacco (FBT) sector and the chemical, pharmaceutical, petroleum, rubber, and plastic products (CP) sector. The study also aims to compare this effect from a sectoral perspective. Due to the availability of data and the number of operational years of the firms in question, the study includes a total of 22 firms from both sectors. To eliminate the effects of the global crisis, the study covers the years 2011-2024. Working capital refers to the difference between a firm's current assets and its short-term liabilities and indicates its ability to meet these liabilities. Capital structure, on the other hand, refers to a firm's combination of equity and debt, reflecting its long-term financial decisions. The scope of this study covers firms in the food, beverage and tobacco sector, as well as the chemical, pharmaceutical, petroleum, rubber and plastic products sector. These sectors were chosen due to the availability of data, the large number of firms within them, and the differences in their working capital requirements and capital structure levels. The high potential of these firms to create financial value and their strategic importance were also key factors in determining the two sectors. The financial performance of firms in the FBT and CP sectors from 2011 to 2024 was used as the dependent variable to reveal the effects of working capital investments, financing policies, and capital structure decisions on financial performance. An index was created using financial performance indicators via principal component analysis. The explanatory variables were investment and financing policies as working capital indicators and financial leverage and the long-term maturity structure of debt as capital structure indicators. Asset size and net period profit, which affect financial performance, were included in the analysis as control variables. Explanations of the determined variables are presented in Table 1.

Table 1

Variable Comprising the Scope of the Study

Variable	Notation	Formula
Financial Performance	FP	The FP index is calculated based on PCA analysis of the following variables: return on assets, return on equity, Tobin's Q ratio, net profit margin, market value/book value, and price/earnings ratio.
Investment Policy	IP	Current Assets/Total Assets
Finance Policy	FP	Short-Term Debt/Total Assets
Financial Leverage	FL	Total Debt/Total Assets

Debt Maturity Structure	DMS	Long-Term Liabilities/Total Assets
Total Assets	TA	Log (Total Assets)
Net Income	NI	Percentage (Net Period Profit)
FP Variable Indicators	Notation	Formula
Return on Assets	ROA	Net Period Profit/Total Assets
Return on Equity	ROE	Net Period Profit/Shareholders' Equity
Tobin's Q	TQ	(Market Value+Total Debt)/Total Assets
Net Profit Margin	NPM	Net Period Profit/Sales
Market Value/Book Value	MVBV	Market Value/Book Value
Price/Earnings	PE	Market Price/Earnings Per Share

Secondary data for the specified variables was obtained from the FINNET database and KAP. After the scope of the study was determined, a panel data regression model was created to analyze the impact of IP, FP, FL, and DMS, TA, NI on FP, as illustrated by equation 1.

$$FP_{it} = \alpha_0 + \alpha_1 IP_{it} + \alpha_2 FP_{it} + \alpha_3 FL_{it} + \alpha_4 DMS_{it} + \alpha_5 \ln(TA_{it}) + \alpha_6 NI_{it} + \varepsilon_{it} \quad (1)$$

In the equality equation, the constant coefficient is represented by “ α_0 ”, the prediction coefficient by “ α_1 - α_6 ”, the cross-sectional size by “i”, the time dimension by “t”, and the error term by “ ε_{it} ”. To proceed with the analysis in this study, datasets consisting of time and cross-sectional dimensions were created using data from firms operating in the FBT and CP sectors. These datasets were used to determine the relationship between working capital policies, capital structure decisions, and financial performance. Therefore, panel data regression analysis was applied to determine this relationship. Before panel data estimation can proceed, certain assumptions must be tested to ensure the results are unbiased and reliable. These assumptions include normality, multicollinearity, endogeneity, cross-sectional dependence, heterogeneity of slope coefficients, stationarity testing, estimation model determination, autocorrelation, and heteroskedasticity. The Jarque-Bera test was used to test normality. This test revealed that the series were not normally distributed. The Spearman correlation test was then used to determine whether there was a high level of correlation between the explanatory variables. The equation in Equation 2 was used to calculate the values to determine the correlation between the explanatory variables.

$$r_s = 1 - \frac{6 \sum_{i=1}^n d_i^2}{n(n^2-1)} \quad (2)$$

Additionally, multicollinearity was examined using the VIF test alongside the correlation test, and endogeneity was analyzed using the Sargan-Hansen test. Equation 3 shows the formula developed for calculating the tolerance value included in the VIF test.

$$Tolerance\ Value = \frac{1}{VIF} \quad (3)$$

This study's data set consists of firms operating in two sectors with different structures in the same country. These firms differ in terms of management structures, areas of activity, sectors, and profitability. Therefore, it is necessary to determine whether a shock in one cross-section impacts other cross-sections. The emergence of a situation in one cross-section that impacts other cross-sections indicates a relationship between them. After examining CSD, testing the heterogeneity of the slope coefficients of the variables for both sectors is necessary. Additionally, CSD and homogeneity testing are necessary to determine which unit root tests should be applied to assess stationarity. Various tests were used to determine whether CSD was present in the model, as explained. However, since the cross-sectional dimension ($n/22$) is larger than the time dimension ($t/2011-2024$) in the dataset, cross-sectional dependence was examined using Pesaran's (2004) CD test. The test equation is shown in Equation 4.

$$CD = \sqrt{\frac{2T}{N(N-1)}} \left(\sum_{i=1}^{N-1} \sum_{j=i+1}^N \hat{\rho}_{ij} \right) \sim N(0,1) \quad i, j = 1, \dots, N \quad (4)$$

The binary correlation of residuals in the formula is used as a sample estimation indicator, “ $\hat{\rho}_{ij}$ ”. We examined the heterogeneity of the slope coefficients using the Pesaran and Yamagata (2008) delta test. The test equation is shown in Equation 5.

$$\hat{\Delta}_{adj} = \sqrt{N} \left(\frac{N^{-1} \hat{S} - E(\hat{Z}_i T)}{\sqrt{VAR(\hat{Z}_i T)}} \right) \quad (5)$$

The FP, DMS, and TA variables for the FBT sector and the FP, IP, FL, DMS, and TA variables for the CP sector, including CSD, were examined for stationarity using the Pesaran (2007) CIPS test, based on the results obtained. CIPS test values are obtained by calculating the arithmetic mean of the values obtained from the CADF test. The CADF test is used to test the stationarity of units, while the CIPS test is used to test the stationarity of the panel as a whole. The mathematical representation of the test is shown in Equation 6.

$$CIPS = \frac{\sum_{i=1}^N CADF_i}{N} \quad (6)$$

On the other hand, since the IP, FL, and NI variables for the FBT sector and the NI variable for the CP sector do not include CSD, first-generation unit root tests must be applied to the stationarity test. To this end, the LLC test by Levin et al. (2002) was employed to examine the NI variable's stationarity within the FBT and CP sectors. The equation for the t-statistic underlying the LLC test is presented in Equation 7.

$$t_{\delta} = \frac{\hat{\delta}}{STD(\hat{\delta})} \quad (7)$$

The equation of the test created based on the t-statistic is shown in equation

$$t_{\delta}^* = \frac{t_{\delta} - N\tilde{T}\hat{\delta}_N\hat{\sigma}_{\tilde{\varepsilon}}^{-2}STD(\hat{\delta})\mu_{m\tilde{T}}^*}{\sigma_{m\tilde{T}}^*} \quad (8)$$

The “ σ_m^* ” in the equation represents the standard deviation of the “ μ_m^* ” error terms.

Within the scope of the FBT sector, the IPS unit root test is required because the IP and FL variables do not contain CSD and have a heterogeneous structure. The main difference between the IPS test by Im et al. (2003) and the LLC test is that the former allows for heterogeneity between cross-sections (Tıraşoğlu, 2013). The IPS model is specified in equation.

$$\Delta X_{i,t} = \alpha_i + \beta_i t + p_i X_{i,t-1} \sum_{j=k}^{ki} \phi_k \Delta X_{i,t-j} + \mu_{it} \quad (9)$$

In the IPS test, the ADF test is applied separately to all the observations that make up the model, and the panel test statistics are created by standardizing the average of the calculated test statistics (Nur et al., 2025). The equation for the standardized panel root test statistic is given in equation.

$$W_{tbar} = \frac{\sqrt{N}\{tbar_{NT} - \frac{1}{N}\sum_{i=1}^N E[t_{iT}(p_i, 0)|\beta_i = 0]\}}{\sqrt{\frac{1}{N}\sum_{i=1}^N var[t_{iT}(p_i, 0)|\beta_i = 0]}} \xrightarrow{T,N} N(0,1) \quad (10)$$

Although there are different methods in regression models, the study's data set consists of specific cross-sections and time intervals. Therefore, it is assumed that a fixed effects model is more effective for estimation in order to obtain reliable results (Baltagi, 2005). The F-test was used for model estimation; the F-test determines whether differences in the model's constant originate from the cross-sectional or time dimensions, or both. There are two models in this test: restricted and unrestricted. The equations for these models are provided below.

$$\gamma_i = \chi_i \beta_i + u_i \quad (10)$$

$$\gamma_i = \mathcal{X}\beta + u \quad (11)$$

After determining whether there are cross-sectional or time effects in the estimation model, it is necessary to test the autocorrelation assumption, which states that consecutive error terms are related, and the heteroscedasticity assumption, which states that the variance of error terms varies

and that cross-sectional covariances are not zero. We tested autocorrelation using tests developed by Baltagi and Li (1991), Born and Bretuing (2016), and Bhargava et al. (1982). We tested heteroskedasticity using the Breusch-Pagan-Godfrey test.

To address estimation issues, the Period SUR estimator developed by Beck-Katz (1985) was employed to correct panel standard errors and resolve both problems. Additionally, diagnostic tests and robust estimators were applied to determine the presence of autocorrelation, heteroscedasticity and specification errors in the model. The tests used were the error term correlogram test, the Breusch-Pagan-Godfrey test and the Ramsey RESET test, respectively.

After explaining the methodological process for analyzing panel data to determine the variables and relationships that constitute the scope of the study, descriptive statistics are calculated. This is done before proceeding with the analysis to determine the general structure of the series. The descriptive statistics, calculated separately for both sectors and presented in Table 2, include scatter plots showing random distribution and box plots showing minimum, maximum and outlier values.

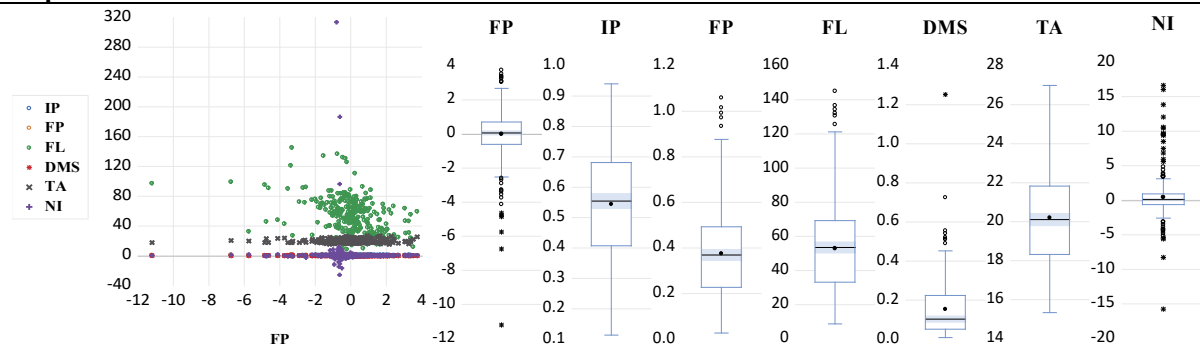
Table 2

Descriptive Statistics and Graphs

	FBT						
	FP	IP	FP	FL	DMS	TA	NI
Average	-3.26E-	0.496	0.464	63.232	0.168	20.426	0.409
Median	-0.104	0.490	0.357	50.290	0.107	20.274	0.049
Maximum	13.626	0.950	8.619	867.432	2.124	26.671	17.576
Minimum	-5.657	0.041	0.041	6.061	0.002	16.242	-18.875
Std.Dev.	1.481	0.192	0.699	79.019	0.212	2.268	3.624
Skewness	4.442	0.074	7.802	6.389	5.148	0.374	-0.747
Kurtosis	42.291	2.122	77.190	51.488	41.180	2.456	10.619
Jarque-Bera	20825.51***	10.176***	73761.85***	32268.22***	20068.46***	11.003***	773.676***

	CP						
	FP	IP	FP	FL	DMS	TA	NI
Average	-1.23E-	0.544	0.375	52.944	0.153	20.201	0.452

Median	0.091	0.555	0.371	53.718	0.105	20.133	0.155
Maximum	3.751	0.940	1.060	145.042	1.252	26.995	16.636
Minimum	-11.201	0.113	0.027	8.728	0.008	15.333	-15.758
Std.Dev.	1.541	0.183	0.186	24.280	0.141	2.364	2.927
Skewness	-1.865	-0.161	0.657	0.688	2.420	0.389	1.590
Kurtosis	13.601	2.343	3.764	3.982	14.814	2.673	14.261
Jarque-Bera	1621.226***	6.863**	29.728***	36.735***	2092.136***	9.145**	1757.449***



Note. *** (1%), ** (5%)

Examining the descriptive statistical values in Table 3 for the FBT sector, the average values were calculated as follows: -3.26 FP, 0.496 IP, 0.464 FL, 63.232 DMS, 20.426 TA, and 0.409 NI. On the other hand, skewness, kurtosis and Jarque-Bera values are assumed to indicate a normal distribution. A skewness value close to 0 is desirable. A positive value indicates that the data set consists of small values and is right-skewed, while a negative value indicates that the data set consists of large values and is left-skewed. The kurtosis value should be between +3 and -3. A high value indicates the presence of outliers in the dataset. A positive kurtosis value means that the data are sharp, while a negative value means that they are flat. It is assumed that the series are normally distributed if the JB probability value is greater than the critical value. In accordance with the explanations examining the skewness values reveals that the NI variable is skewed to the left and the other variables are skewed to the right. All variables have positive kurtosis values, indicating an upward-pointing sharp trend in the series. The Jarque-Bera values, which indicate normal distribution, are significant for all series. Thus, the H_0 hypothesis is rejected and it can be determined that the series are not normally distributed. The average values related to the CP sector are as follows: FP -1.23, IP 0.544, FL 0.375, DMS 52.944, TA 20.201, and NI 0.452. Examining the skewness values revealed that the dependent variable FP and the explanatory variable IP are left-skewed while the other series are right-skewed. According to the kurtosis values, all series exhibit an upward-peaked trend. The Jarque-Bera values are meaningful for the entire series, which is not normally distributed. Examining the box plots and scatter diagrams of both sectors supports the conclusion that there is no clustering in a single direction among the series; rather, they are

randomly distributed, and the maximum, minimum, and outlier values differ. Table 3 shows the results of the Spearman correlation test, which was applied to determine the correlation relationship between the explanatory variables. This was done in light of the JB test indicating that not all series are normally distributed.

Table 3

Correlation Test Results

	FBT						CP					
	IP	FP	FL	DMS	TA	NI	IP	FP	FL	DMS	TA	NI
IP	1.000						1.000					
FP	0.424	1.000					0.125	1.000				
FL	0.294	0.825	1.000				-0.114	0.810	1.000			
DMS	-0.154	0.067	0.545	1.000			-0.389	0.121	0.604	1.000		
TA	-0.007	-0.108	-0.001	0.112	1.000		-0.317	0.137	0.200	0.146	1.000	
NI	0.041	-0.045	-0.024	0.003	0.059	1.000	0.094	-0.026	-0.058	-0.047	-0.009	1.000

The correlation coefficients, which were calculated to determine the relationship between the explanatory variables, indicate that a value greater than 75% suggests a multiple linear regression problem in the model (Wooldridge, 2013). Examining the correlation coefficients in the table revealed that the coefficients for the FL and FP variables were higher than 75% for both the FBT and CP sectors. Since including one of these variables in the model would lead to multicollinearity, it must be removed. In addition to the correlation test, Table 4 presents the results of the VIF test, which was used to determine the existence of a MC problem, and the Sargan-Hansen test, which was used to determine the existence of an endogeneity problem in the model.

Table 4

VIF and Endogeneity Test Results

Variables	FBT		CP	
	VIF	Tolerance	VIF	Tolerance
IP	1.072	0.932	1.382	0.723
FL	1.558	0.641	1.832	0.545
DMS	1.434	0.696	2.039	0.490
TA	1.289	0.775	1.264	0.790
NI	1.013	0.986	1.001	0.998
Model Specification	SH J-stat.	J-prob.	SH J-stat.	J-prob.
@DYN(FP,-2) IP(-1) FL(-1)	14.312	0.501	16.585	0.344
DMS(-1) TA(-1) NI(-1)				

Note. Tolerance value= 1/VIF. The average VIF values were calculated as 1.2737 and 1.5041

According to the VIF test, VIF coefficients greater than 10 and tolerance coefficients less than 0.02 indicate a multiple linear regression problem in the model (Hair et al., 1998). Upon

examining the VIF and tolerance coefficients, the FP variable was excluded from both the FBT and CP models because the test was not run, and the correlation results indicated a relationship exceeding 75%. After removing the FP variable from the model, the test was run for both sectors. The VIF coefficients were then less than 10, and the tolerance coefficients were greater than 0.02. Therefore, the FP variable was removed from the model, and the analysis continued. Upon examining the results of the Sargan-Hansen test applied to the endogeneity problem among the variables, it was determined that the variables used in the model are valid variables.

After determining the variables that constitute the scope of the study, the results of the Pesaran (2004) CD test and the Pesaran and Yamagata (2008) Delta test, which were applied to determine whether there is a relationship between CSD, are presented in Table 5.

Table 5

CSD and Homogeneity Test Results

FBT						
Variable/Model	Pesaran CD Test		$\hat{\Delta}$	Delta Test		
	Statistics	Probability		Probability	$\hat{\Delta}_{adj.}$	Probability
FP	2.002	0.045	0.451	0.326	0.509	0.306
IP	1.011	0.311	5.254	0.000	5.927	0.000
FL	1.048	0.294	1.633	0.051	1.843	0.033
DMS	3.085	0.002	-0.173	0.569	-0.195	0.577
TA	54.734	0.000	-0.160	0.564	-0.180	0.572
NI	0.237	0.812	-1.335	0.909	-1.506	0.934
Panel	0.018	0.984	-0.029	0.512	-0.040	0.516
CP						
Variable/Model	Pesaran CD Test		$\hat{\Delta}$	Delta Test		
	Statistics	Probability		Probability	$\hat{\Delta}_{adj.}$	Probability
FP	6.022	0.000	-1.457	0.927	-1.644	0.950
IP	10.773	0.000	-1.019	0.846	-1.149	0.875
FL	11.486	0.000	-0.529	0.702	-0.597	0.725
DMS	3.195	0.001	-0.960	0.832	-1.083	0.861
TA	55.258	0.000	-0.679	0.751	-0.766	0.778
NI	1.036	0.300	-1.830	0.966	-2.065	0.981
Panel	11.667	0.000	0.263	0.396	0.360	0.359

Examining the results of the CSD test applied to the FBT sector in Table 5 revealed a correlation between sections in the FP, DMS, and TA series. However, there was no correlation between sections in the model-based, IP, FL, and NI series. Examining the CP sector revealed a correlation between the model and all variables except the NI variable. Examining the Delta test results for the FBT sector revealed that the slope coefficients of the IP and FL series are heterogeneous, while the slope coefficients of the model and other variables are homogeneous.

Examining the CP sector revealed that the slope coefficients of the model and all variables are homogeneous.

The CSD and homogeneity results, which are based on variables and models, require the application of the CIPS, LLC and IPS tests for stationarity. The results of the unit root test are presented in Table 6.

Table 6

Unit Root Test Results

FBT			CP		
	Fixed	Fixed-Trend		Fixed	Fixed-Trend
Variable/CIPS	t-statistics	t-statistics	Variable/CIPS	t-statistics	t-statistics
FP	-2.616***	-2.957**	FP	-2.594***	-4.033***
DMS	-2.574***	-3.650***	IP	-3.796***	-4.303***
TA	-2.072	-2.438	FL	-2.225*	-3.392***
ΔTA	-3.313***	-3.394***	DMS	-2.850***	-3.301***
Variable/LLC	t-statistics	t-statistics	TA	-1.636	-2.317
NI	-11.895(0.000)	-9.610(0.000)	ΔTA	-3.342***	-3.539***
Variable/IPS	t-statistics	t-statistics	Variable/LLC	t-statistics	t-statistics
IP	-1.914(0.027)	-2.188(0.014)	NI	-1.579(0.057)	-28.674(0.000)
FL	-3.176(0.000)	-2.494(0.006)			

Note. (..) represents probability values. *** (1%), ** (5%), * (10%)

The results of the unit root test, which was used to examine the stationarity assumption, were examined for the FBT and CP sectors. The FP, IP, FL, DMS, and NI variables were found to be stationary at the level in both the constant and constant-trend cases. The BUY variable, however, became stationary in the first difference.

The results of the F-test for model estimation, the autocorrelation indicating standard errors, and the test results for varying variance are shown in Table 7, following the determination of the stationarity of the series.

Table 7

F, Autocorrelation, and Heteroscedasticity Test Results

Test	FBT		CP	
	Statistics	Probability	Statistics	Probability
F _{group}	3.960***	0.000	3.061***	0.000
F _{time}	1.639*	0.074	2.341***	0.005
F _{two-way}	3.010***	0.000	3.563***	0.000
Autocorrelation Test	Statistics	Probability	Statistics	Probability
LMp	9.412***	0.002	23.861***	0.000
LMp*	19.413***	0.000	38.918***	0.000
Durbin-Watson		1.568		1.322

Heteroscedasticity Test	Statistics	Probability	Statistics	Probability
LMh ^{fixed}	449.980***	0.000	255.062***	0.000
<i>Note.</i> *** (1%), * (10%)				

The results of the F-test, which was performed to determine whether the fixed effects model (H_1) or the pooled model (H_0) is valid for model estimation, indicate that the fixed effects model is valid for both sectors. The differences observed in the fixed effects stem from the cross-section and time dimensions. However, according to the results of the autocorrelation and heteroskedasticity tests within the two-way fixed effects model framework, the model exhibits issues of autocorrelation and heteroskedasticity. The model estimation and diagnostic test results for the FBT and CP sectors are presented in Table 8.

Tablo 8

Panel Data Analysis Results

FBT			CP		
Variable	Coefficient	Probability	Variable	Coefficient	Probability
IP	0.9018***	0.0000	IP	0.2206*	0.0890
FL	-0.0166***	0.0000	FL	0.0033***	0.0007
DMS	-0.2601*	0.0903	DMS	-2.8100***	0.0000
TA	0.0734***	0.0016	TA	0.3226***	0.0009
NI	0.0505***	0.0035	NI	0.0769***	0.0000
C	-1.4410	0.0009	C	-0.5614	0.0000

Parameter	Diagnostic Tests	Parameter	Diagnostic Tests
R-Square 0.8814	ETC 2.5700(0.109)	R-Square 0.4093	ETC 0.7459(0.388)
Adj.R-Square 0.8793	BPG 0.1121(0.737)	Adj.R-Square 0.3987	BPG 1.7502(0.109)
F-stat(Prob.) 210.67(0.000)	Ram.RES. 0.3491(0.727)	F-stat(Olas.) 38.806(0.000)	Ram.RES. 0.2821(0.778)

Note. *** (1%), * (10%). (..) represent probability values. ETC test 1. delay length values are listed in the table, with delay lengths of 5, 10, 15, and 20 in the FBT sector corresponding to 4.3761(0.497), 4.7755(0.906), 5.1190(0.991), 5.5494 (0.999); in the CP sector, they are 7.6978 (0.174), 9.5134 (0.484), 10.751 (0.770), and 12.205 (0.909).

The results of the analysis, which determined the effect of working capital policies and capital structure decisions on financial performance, are meaningful. It can be concluded that these policies and decisions significantly impact financial performance in both the FBT and CP sectors. Examining the values indicating the model's explanatory power reveals that changes in financial performance account for approximately 88.14% in the FBT sector and 39.77% in the CP sector.

The results of the regression analysis conducted on the model developed for firms operating in the FBT sector indicate a significant relationship between the explanatory variables and financial performance. The IP, TA, and NI variables positively affect financial performance, while the FL and DMS variables negatively affect it. A one-unit increase in IP results in a 0.901-unit increase in

financial performance, a 1% increase in TA results in a roughly 7.34% increase in FP, and a one-unit increase in the NI variable results in a 0.0505-unit increase in FP. Conversely, a one-unit increase in the FL variable causes a 0.0166-unit decrease in FP, and a one-unit increase in the DMS variable causes a 0.2601-unit decrease in FP. The regression analysis results of the model developed to reveal the relationship between working capital policies and capital structure decisions in firms operating in the CP sector reveal a significant relationship between the explanatory variables and financial performance. All variables except the DMS variable have a positive effect on financial performance. A one-unit increase in the DMS variable causes a 2.81-unit decrease in financial performance. However, a one-unit increase in the IP, FL, and NI variables results in respective FP increases of 0.2206, 0.0033, and 0.0769 units, while a 1% increase in the TA variable leads to an approximate 32.26% increase.

After evaluating the prediction results, we used diagnostic tests to determine if the issues of autocorrelation and heteroscedasticity in the model had been resolved, as well as if there were any specification errors in the model design phase. According to the correlation plots of the error terms, the autocorrelation issue had been resolved. The Breusch-Pagan-Godfrey test results indicated that the heteroskedasticity issue had also been resolved. Finally, the Ramsey-Reset test results showed that there were no specification errors in the model.

4. Conclusion

In addition to generating profit, firms' fundamental objective is to maximize value. Firms that aim to maximize value consider investment and financing decisions because they seek to increase the value of investor assets and the market value of the firm through its share value. This is achieved by managing current assets and maintaining an appropriate debt-to-equity ratio. Therefore, both short-term investments in current assets and long-term investments in debt and equity are important for firms. Firms can achieve effective working capital management by avoiding excessive investment in short-term assets to maximize profitability while maintaining the necessary liquidity to sustain operations. A balanced approach should be adopted regarding the amount of debt and equity used in capital structure decisions. In this case, working capital policies and capital structure decisions positively impact profitability and, consequently, firm performance. However, the relationship between working capital policies, which vary according to firm structure and are important in financial decision-making, and capital structure decisions, and financial

performance is still being debated, with different views reported in studies. This indicates that the topic remains relevant and is an important area of study for financial managers, investors, and decision-makers. In this context, the present study aims to investigate the relationship between working capital policies, capital structure decisions, and financial performance. To this end, the model includes investment and financing policies representing working capital policies, as well as financial leverage and debt maturity structures representing capital structure decisions. Financial performance indicators (ROA, ROE, TQ, NPM, MVBV, PE) are also included. Panel regression analysis was applied to the 2011–2024 data of 22 firms operating in the food, beverage, and tobacco sector, as well as the chemical, pharmaceutical, petroleum, and plastic products sector. This was done to enable sector comparison, taking into account data availability and years of operation.

Within the scope of the explanations, when the results related to the FBT sector are examined, an increase in the ratio of current assets to total assets in other words, a prudent investment policy improves firm performance, as does an increase in the total asset ratio and profits generated from operations. Conversely, an increase in the total debt and long-term debt ratios reduces firm performance. Therefore, it can be concluded that working capital investment policy has a positive impact on firm performance, but a negative impact on capital structure decisions. In line with these findings, the practical implication for firms in the GIT sector is that financial managers and decision-makers should adopt a prudent working capital investment strategy to enhance financial sustainability and boost firm performance. The study also indicates that they should exercise caution when borrowing, as an increase in the debt utilisation ratio may result in a loss of financial flexibility and an inability to fulfil debt obligations, which could limit firm investment.

When evaluating the results related to the CP sector, it was determined that financial performance increases with a cautious strategy and with an increase in the total debt ratio and the ratio of profits obtained after operations to asset size. Conversely, an increase in the long-term debt ratio reduces performance in firms in the CP sector. Thus, investment policy is positively related to the performance of firms in the CP sector, while capital structure decisions are positively related to the financial leverage ratio, but negatively related to the long-term debt ratio. In line with these results, the study's practical implication for CP sector firms is that financial managers and decision-makers should consider a cautious investment strategy for working capital to improve financial sustainability and performance, as is the case in the FBT sector. An increase in financial

performance with an increase in the total debt ratio in total assets may be due to the leverage ratio providing more financing opportunities, which can positively affect operating income through investment direction. However, high leverage increases borrowing risk, necessitating effective debt management and policies that ensure the positive effects of leverage usage are sustainable. As shown in the results, an increase in the long-term debt ratio limits the firm's growth opportunities in the future, as it entails interest obligations and debt repayment obligations. This situation negatively affects the firm's profitability and, consequently, its financial performance. When the results are evaluated, the findings of Jouda (2018), Musah (2018), Topak (2018), Topaloğlu Nur (2019), Anton & Afloarei Nucu (2020), Phan et al. (2020), Eshwari & Baby (2023), Hoang (2023), Hajisaaid (2020), Yıldız and Deniz (2020), Küçükbay and Güler (2020), Heliani (2023), and Aydoğan & Sarikovanlık (2024), while they do not align with the studies by Çerçel & Sökmen (2019), Amponsah-Kwatiah & Asiamah (2021), Işık (2023), Wahyuningsih et al. (2024), and Çelik (2024).

To increase their performance, profitability, sustainability, and success, firms operating in the FBT and CP sectors should adopt a prudent working capital strategy. When it comes to capital structure decisions, firms in the FBT sector are advised to keep long-term debt levels to a minimum and exercise caution when using leverage. In contrast, firms in the CP sector should continue to use leverage effectively and efficiently.

This situation is due to firms in the FBT sector having higher inventory costs because of their need for rapid cash conversion and the perishable nature of their products. Their debt risk levels are also lower. Therefore, firms in the FBT sector are advised to focus on short-term borrowing and exercise caution when transitioning to long-term borrowing. Conversely, firms operating in the CP sector tend to focus on non-perishable products. They also face higher currency risk due to imports and have high fixed asset ratios, R&D investment levels and leverage, which indicates that they are well-suited to long-term debt. It is therefore recommended that firms in the CP sector develop an appropriate debt policy. Furthermore, this study is subject to constraints relating to sector, firm and time. In this context, it is thought that future studies on the subject could be developed by comparing different sectors, considering different working capital and capital structure indicators, and investigating the relationships between firm performance/success and different factors representing firm sustainability using different methods. It can also be said that

the findings will provide investors, managers and stakeholders with a perspective that aligns with their interests.

Declaration of Research and Publication Ethics

This study which does not require ethics committee approval and/or legal/specific permission complies with the research and publication ethics.

Researcher's Contribution Rate Statement

The authors contributed equally to the article.

Declaration of Researcher's Conflict of Interest

There are no potential conflicts of interest in this study.

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