



Working Capital as a Mediator of Financial Distress

Gregorius Rahadian*, Hadi Cahyadi, Ronnie Resdianto Masman,
Estralita Trisnawati, Henryanto Wijaya

Universitas Tarumanagara, Jakarta, Indonesia

*gregorius.127222009@stu.untar.ac.id

Abstract

This study examines financial distress in Indonesia Stock Exchange-listed family-owned textile and garment enterprises from 2019 to 2024. It uses working capital to mediate financial crisis and its causes. The study explores how operating cash flows, GDP, asset tangibility, leverage, and interest rate affect financial distress, employing working capital as a mediator. Panel data regression analysis utilizing SmartPLS software is used on 18 purposive-sampled organizations. The quantitative study is supplemented with an online interview with a leading Indonesian textile firm's finance director. Operating cash flow negatively impacts financial distress, asset tangibility positively impacts financial distress, while impacts negatively working capital. Financial distress is positively impacted by working capital. When mediated by working capital, operating cash flow, GDP, leverage, and interest rates have little impact on financial distress. Financial distress in family-owned textile and garment enterprises which addressed by the study, helping stakeholders to make educated choices.

Keywords: Financial Distress; Working Capital; Operating Cash Flows; Gross Domestic Product; Asset Tangibility; Leverage; Interest Rate; Family Business

Introduction

The textile and garment industry have important role for Indonesia's macroeconomic. This industry has contributed about 10% of the country's total exports in recent years. The United States, the European Union, and numerous Asian nations are among the textile industry's principal markets, and it continues to be the primary source of non-oil and gas exports (Rifa'i, 2025). Due to movement restrictions, the COVID-19 pandemic has hurt several companies financially. Companies' operations have been hampered, affecting goods and services supply. The supply drop reduced company revenues and profits.

The conditions caused financial distress and bankruptcy for the companies. The textile and apparel sub-sector lost around 749,000 workers and 1.7 million workers at home (Rahmawati et al., 2022). The textile and garment upstream industry includes fiber, spinning, yarn, knitting, stamping, and finishing, while downstream includes apparel industry. By 2021, the textile and garment sub-sector will have contributed around 6.05% of Indonesia's total output of manufacturing sector (Setiawan and Septiani, 2025). On the other hand, textile and garment are volatile sub-sectors due to fluctuating market conditions and requiring large amount of imported raw material, which is very dependent on foreign exchange rates (Usmansyah and Pudjiastuty, 2023).

Thrifting or the importation of used clothing from abroad is one of contributing factors as it provides high-quality clothing at much lower price and affect negatively on local clothing industries in developing countries (Brooks, 2025). Financial distress is influenced by operating cash flow available in the firms. If the funds are sufficient for working capital, companies are less vulnerable from financial distress as companies have

enough fund to cover daily operational expenses (Phan et al., 2022). While there is also a research show positive relationship between operating cash flow and financial distress. The higher the operating cash flow, the higher the risk of financial distress (Mahendra and Pujiono, 2022). GDP also affects the financial distress. GDP affects financial distress in positive way Arianto and Kurniasih (2023), as there are external factors that affect poor sales level which lead to financial distress although macroeconomic are growing. While there is another research shows negative effect (Curry, 2019).

This is because when the macroeconomic are in good condition, companies' sales and income are also growing, thereby, minimizing financial distress. Other specific nature of textile and garment businesses is large investment to buy substantial amount of fixed assets, as well as working capital. The large proportion of tangible assets to the total asset might affect how much money could be spent on working capital as a company needs to choose its priorities due to limited resources (Tjandra et al., 2022). High proportion of fixed assets indicate inefficiency in working capital usage, which lowers current assets amount and profitability which can cause company financially distressed (Isayas, 2021).

While another study shows negative relationship, the higher the fixed assets proportion, the companies are less risk from financial distress, as those companies can keep the revenue with higher production output (Abdioğlu, 2019). Due to the need for a substantial amount of working capital, textile and garment companies generally have large amount of debt or highly leveraged. Under such circumstances, it is challenging for the management team to maintain an optimum debt and equity amount as there are no one-size fits all formula for every company (Kenneth and Ikobo, 2022).

Therefore, they have to pay special attention on managing their cash flows in order to avoid event of default. Highly leveraged companies are more vulnerable to financial distress (Bui and Thach, 2023; Kebede, 2024). Yet, other finding shows the opposite result, where more leveraged companies are negatively related on financial distress (Ogachi et al., 2020). Government policy can also influence financial distress risk as Central Bank rate (BI- rate) is the determinant of commercial interest rate. Increase in the interest rate leads to an increase of payment to creditors, on which it also increases the risk of companies to face financial distress.

High interest rates lead the rising premium for borrowing money, affecting higher costs to do business and more vulnerable to financial distress (Budhidharma et al., 2023). On the other hand, interest rates have negative relationship with financial distress (Arianto and Kurniasih, 2023). Another variable which also determines whether the company will be financially distressed or not is working capital. The higher the working capital, it is more vulnerable to be financially distressed (Ogachi et al, 2020; Thach and Dan, 2024). However, there is a study has contrary result, if the working capital higher, then the company less financially distressed (Vu et al., 2023).

Financial distress can happen regardless of family-owned business or not. Family-owned businesses possess unique characteristics that set them apart from other types of businesses. In addition, it plays a significant role in contributing to the global economy and the development of nations (Cahyadi et al., 2022). Family businesses play an important role, during the COVID-19 pandemic, as Bajpai et al., (2021) found that they had lower employee layoff rate of 8.5% as opposed to non-family businesses, which had a layoff rate of 10.2%.

The capacity to maintain a higher number of employees during the difficult period of COVID-19 pandemic underscores the resilience and flexibility of family businesses amid economic upheavals. This study focuses on family businesses engage in the textile and garment sub-sector. Researchers have reviewed various studies, on which researchers noted diversity of results related to financial distress factors, underscoring the need for

further research. The study tests the influence of the independent variables namely operating cash flow, GDP, asset tangibility, leverage, and interest rate on financial distress as dependent variables. Based on the review, working capital is examined to evaluate if it mediates financial distress. The researchers also note that studies which have examined working capital as a predictor or mediator of financial difficulty are limited. Both microeconomic and macroeconomic factors of financial distress also influence working capital.

On-time receivables collection, fast inventory turnover, and vendor payment reflects how working capital are managed which affect company's financial health. Therefore, this research is predicted to considerably solve working capital-induced financial distress in textile and garment family-owned firms. This research should also help stakeholders make decisions. This research presents a literature review with signaling and agency theory as its hypothetical framework, followed by financial distress, family business, working capital, operating cash flows, gross domestic product, asset tangibility, leverage, and interest rate as its conceptual framework, and described with hypotheses.

Variable selection, model design, data sources, and sample selection follow. The empirical analysis portion uses descriptive statistics, outer, inner, and hypothesis testing. Conclusions include limitations and future research topics. Spence (1973) explains that a signal occurs when the owner of the information tries to provide it so that the recipient can use it. Signaling theory describes a company's management that acts as an agent, motivated to provide financial information to external parties. Financial statements that have been reported can serve as indicators of both positive (good news) and negative (bad news) information for interested parties to predict potential bankruptcy situations (Rokhayati et al., 2024).

An agency relationship arises when a contract or agreement exists between a principal and a role, and an agent can carry out tasks in line with the principal's interests (Jensen and Meckling, 1976). Owners and managers are parties with conflicting interests (Scott, 2012). Platt and Platt (2002) define financial distress as a decline in a company's financial condition before it enters a phase of bankruptcy or liquidation. There are several signs of distressed companies, for example, low liquidity, inability to pay liabilities, limited access to external funding sources, and lower credit ratings (Kebede et al., 2024).

One of the popular models used to measure whether a company is in financial distress is the Altman Z-Score. The model was first developed by Altman (1968) by collecting data of 33 companies in bankruptcy and another 33 companies not in bankruptcy, in his study during 1946-1965. Family businesses remain the dominant and oldest form of business organization and are vital in economies (Comi and Eppler, 2014). Family businesses have a crucial role in macroeconomic development in most countries, including workforce engagement.

Chua et al., (1999) suggested the meaning of a family business as "a business governed and managed to shape and pursue the vision of the business held by a dominant coalition controlled by members of the same family or a small number of families in a manner that is potentially sustainable across generations of the family or families". Davis and Tagiuri (1982) define it as a business where two or more family members influence the direction of the business through the exercise of management roles, kinship ties or ownership rights.

In order to keep the family business sustain, there are three important things, Parenting, Harmonizing, and Collaborating, also known as PHC Triangle. This approach includes the parenting process to provide the next generation with particular skills, character, and values they need to become the next leader. In addition, they collaborate

with non-family members to attain optimal performance (Cahyadi, 2022). The risk of financial distress increases when companies experience adverse cash flows conditions, so operating cash flows negatively affects financial distress (Phan et al., 2022). Financial distress is characterized by financial troubles and insufficient cash flows to meet existing obligations (Bukalska and Maziarczyk, 2023).

(H₁: Operating Cash Flow negatively affect Financial Distress). Companies' operations are influenced by various aspects such as suppliers, competitors, customers, macroeconomic conditions, technology, politics, law, and other social factors. Research by Arianto and Kurniasih (2023) shows that GDP positively influences Financial Distress, while research by Ece and Sayilgan (2020) shows that GDP negatively influences financial distress. (H₂: Gross Domestic Product negatively affects Financial Distress). A higher ratio of assets tangibility suggests an inefficient use of working capital, which could potentially lead to financial distress, therefore assets tangibility positively affects financial distress (Isayas, 2021).

Research by Kebede et al., (2024) shows positive relationship, as companies with high proportion of fixed asset increase the risk to become distressed. (H₃: Asset Tangibility positively affects Financial Distress). One characteristic of a financially distressed company is cannot meet its debt obligations to its creditors, leading to bankruptcy or restructuring (Zelie, 2019). Research by Kebede et al., (2024) shows leverage positively influence financial distress, so need to maintain optimum capital structure. Research by Bui and Thach (2023) also shows positive relationship between leverage and financial distress. (H₄: Leverage positively affects Financial Distress).

Bank of Indonesia, in its capacity as a regulator, determines the interest rate in Indonesia (BI rate). If BI rate rises, interest rate rises, a company's interest burden also rises. The rise might affect the ability of a company to meet its debt obligations and might lead the company into a financial distress condition. Studies by Arianto and Kurniasih (2023) shows that interest rate negatively influence financial distress, while studies by Refni et al., (2021); and Budhidharma et al., (2023) show that interest rate positively influence financial distress. (H₅: Interest Rate positively affects Financial Distress).

Research by Tjandra et al., (2022) found that if a company does not have sufficient working capital, it is prone to financial distress. Other research by Vu et al., (2023) found that working capital shows negative relationship with financial distress. While studies by Ogachi et al., (2020); and Thach and Dan (2024) shows that working capital positively impacts financial distress. (H₆: Working Capital positively affects Financial Distress). Maintaining cash as working capital is essential to facilitate daily and routine transactions. Operating cash flows negatively influence working capital (Sharma et al., 2020).

Companies that generate positive operating cash flows tend to have higher cash and working capital positions (Tjandra et al., 2022). (H₇: Operating Cash Flow positively affects Working Capital). Research from Tiwari et al., (2023) shows negative relationship between GDP and working capital on which during economic downturn, companies tend to have high inventory levels and receivables. In contrary, during good economic conditions, companies tend to invest in fixed asset rather than working capital (Czerwonka and Jaworski, 2022). (H₈: Gross Domestic Product negatively affects Working Capital).

Companies will invest in profit-generating things, however resource constraint forces companies to prioritize their investment decisions. If companies choose to have higher expenditure in fixed asset, then the working capital are lower (Sharma et al., 2020). Research by Korent and Orsag (2022) also shows negative relationship between asset tangibility and working capital. (H₉: Asset Tangibility negatively affects Working Capital). Companies with high leverage ratios tend to have problems in financing their

operational needs, as the working capital is more limited. Therefore, one step to minimize credit problems is to limit external borrowing according to capacity (Tiwari et al., 2023; Tjandra et al., 2022).

While research by Seth et al., (2020) shows positive relationship between leverage and working capital as high leveraged companies keep current assets level high. (H₁₀: Leverage positively affects Working Capital). Changes in interest rates can affect working capital. Research by Seth et al., (2020) reveals a positive effect of interest rates to working capital, necessitating more time to convert into cash for working capital. While research by Gooneratne and Jayasinghe (2022) reveals a negative relationship of interest rates to working capital. When interest rate is rising, the need of working capital is decreasing. (H₁₁: Interest Rate positively affects Working Capital).

Zuhrianto et al., (2020) found that operating cash flows positively affect Z-Score, which means that the higher the operating cash flows position, the higher the Z-Score value, the safer a company from financial distress. A more robust cash flows situation provides more security for a company Tjandra et al., (2022) ensuring sufficient working capital to support daily operations. (H₁₂: Working Capital mediates Operating Cash Flow on Financial Distress). An expanding macroeconomic (for example GDP) is expected to enhance individuals' purchasing power, hence augmenting public expenditures on textile and garment products, which would influence company sales (Arianto and Kurniasih, 2023).

However, if company's sales are too low and/or receivable collection process takes too long time, the working capital would not sufficient to funding daily operations and prone to financial distress. (H₁₃: Working Capital mediates Gross Domestic Product on Financial Distress). Companies must prioritize their financial decisions, such as investing in fixed assets or providing sufficient finances for daily operations Sharma et al., (2020) to avoid falling into financial turmoil. (H₁₄: Working Capital mediates Asset Tangibility on Financial Distress). Syamsuddin (2023) states that companies with high debt levels tend to have high working capital which measured by long cash conversion period.

If cash conversion time is long, companies might suffer financial distress due to lack of working capital. Akbar et al., (2020) state that companies take more debt as a result of longer time to sell inventories and collecting receivables to raise cash. (H₁₅: Working Capital mediates Leverage on Financial Distress). When interest rate increases, it takes more time to get payment from debtors because they tend to delay payment until the interest rate decreases (Seth et al., 2020). Cash collection difficulties directly impact the availability of working capital and could lead to financial difficulties. (H₁₆: Working Capital mediates Leverage on Financial Distress).

Method

This research investigates the determinants of financial distress with working capital as a mediating variable in the textile and garment family-owned business, within the period of 2019-2024 obtained through www.idx.co.id according to particular criteria as illustrated. This research also conducted an online interview, with a finance director from one of the biggest textile companies in Indonesia to get confirmations from practitioners about real situations in textile industry. Financial reports from 2019 to 2024 are included in the data, and literature reviews are included to support the research foundation. Companies in the textile and garment sector that were listed on the IDX between 2019 and 2024 make up the population. Samples are chosen using the purposive sampling approach according to particular standards: (1) Textile and garment companies listed on the IDX for 2019-2024, (2) Companies whose financial reports are complete,

(3) Companies which are family owned, and (4) Take out outlier data. The research variables consist of dependent, independent, and mediating variables, where the dependent variable is Financial Distress, the independent variables are Operating Cash Flow, Gross Domestic Product, Asset Tangibility, Leverage, and Interest Rate. The mediating variable is Working Capital.

Result and Discussion

Table 1 shows the descriptive statistical results of critical variables, which are obtained from 97 observation data points. These descriptive statistic offers a comprehensive understanding of the characteristic and distribution of the variables under investigation and the results are presented below:

Table 1. Financial Distress Descriptive Statistical Results

Criteria	Item	Percent
Financially safe	10	10.31%
Financially distressed	54	55.67%
Grey zone	33	34.02%
N total	97	100%

Source: Data Collected and Processed (2026)

Table 2 shows the descriptive statistical results of critical variables, which are obtained from 100 observation data points. These descriptive statistic offers a comprehensive understanding of the characteristic and distribution of the variables under investigation and the results are presented below:

Table 2. Descriptive Statistics

Variables	Mean	Median	Min	Max
OCF	0.019	0.016	-0.362	0.221
GDP	0.037	0.050	-0.021	0.053
AT	0.515	0.495	0.104	0.956
LEV	0.537	1.029	-30.153	22.321
INT	0.048	0.043	0.035	0.060
FD	-0.807	-0.962	-9.072	7.511
WC	167.765	151.704	12.058	668.807

Source: Data Collected and Processed (2026)

The operating cash flows (OCF), which is measured by total operating cash flows divided by total assets shows a mean value of 0.019, suggesting that the amount of operating cash flows is lower than the amount of assets as the mean value is less than 1. The maximum value of operating cash flow is 0.221 for PT Sunson Textile Manufacturer, Tbk., while the minimum value of cash flow is -0.362 for PT Sri Rejeki Isman, Tbk. Gross domestic Product (GDP) is represented by Indonesia's annual GDP growth 2019-2024 which shows a mean value of 0.036 or 3.6%. The maximum value of GDP is 0.053 or 5.3%, while the minimum value of GDP is -0.021 or -2.1% which means economic growth is negative.

Asset tangibility (AT) is assessed by dividing fixed assets by total assets. The mean value is 0.514, suggesting that the fixed asset amount in the textile and garment sub-sector covers more than half of the total assets. The maximum value of asset tangibility is 0.956 for PT Pania Indonesia Resources, Tbk., while the minimum value of asset tangibility is 0.076 for PT Pan Brothers, Tbk., which means fixed asset proportion is less than its current asset. Leverage (LEV) is represented by DER which is measured by dividing total debt by total equity. The mean value is 0.301, suggesting that the companies' debt are less than their equity or companies rely on internal resources to finance their operations.

The maximum value of leverage is 114.290 for PT Asia Pacific Investama, Tbk., while the minimum value of leverage is -137.420 for PT Century Textile Industry, Tbk. Interest rate (INT) is represented by BI rate period 2019-2024 with a mean value of 0.048 or 4.8%. The maximum value of interest rate is 6%, while the minimum value of interest rate is 3.5%. The average financial distress (FD) score this study is 0.786, which means, on average, the companies used in the study suffering financial distress, as the safe score is higher than 2.9 (Altman, 2000).

The maximum value of financial distress is 9.072 for PT Sri Rejeki Isman, Tbk., which indicates the highest Z-Score and the safest from financial distress, while the minimum value of financial distress is -7.511 for PT Pania Indo Resources, Tbk., which indicates the most prone from financial distress and the equity is negative. Working capital (WC) is calculated by cash conversion cycle (CCC), a metric used to measure the time required by a business to convert its investments in inventory and other resources into cash. The mean value is 180.581, which means the companies' CCC is 180 days.

The maximum value of working capital is 1535.1000 for PT Pan Brothers, Tbk., which indicates the longest time needed to convert to cash money, while the minimum value of working capital is 12.058 for PT Indorama Synthetics, Tbk. The researchers have conducted validity and reliability tests for each variable in this research. The data satisfies the criteria for validity and reliability, as evidenced by outer loading, composite reliability, and Cronbach's Alpha on table 3.

Table 3. Construct Validity and Reliability Test

	OCF	GDP	AT	LEV	INT	WC	FD
Cronbach's Alpha	1	1	1	1	1	1	1
Rho A	1	1	1	1	1	1	1
Composite Reliability	1	1	1	1	1	1	1
Average Variance Extracted	1	1	1	1	1	1	1

Source: Data Collected and Processed (2026)

From the table 3, it can be inferred that the test results show Cronbach's Alpha and Composite Reliability values exceed 0.70. It can be concluded that the variables used in this research are reliable. This is accomplished by assessing the average variance extracted (AVE) of each construct to evaluate their convergent validity. An AVE of 0.50 signifies that the construct accounts for over 50% of the variance in the indicators (Hair et al., 2022).

The next step will be to conduct the inner model analysis namely: multicollinearity (Variance Inflation Factor/VIF) and F^2 . Based on Table 4, the correlation analysis reveals no multicollinearity among the investigated independent variables. The ideal VIF value is less than 3. If the VIF is higher than 5, it indicates a multicollinearity problem in the research model that can affect its estimation of path coefficients.

Table 4. Multicollinearity Test

Variables	OCF	GDP	AT	LEV	INT
FD	1.023	1.148	1.171	1.129	1.174
WC	1.012	1.146	1.064	1.075	1.071

Source: Data Collected and Processed (2026)

The next step involves an effect size (F^2) test to determine the magnitude of the influence when an exogenous variable is removed from the research model and to measure the extent of the impact of an exogenous variable on an endogenous variable. F^2 values can be classified into three categories: $F^2 > 0.35$ (large category), F^2 between 0.15 to 0.35 (medium category), and F^2 between 0.02 to 0.15 (small category) (Hair, 2019).

Based on Table 5, it was found that AT has F^2 values of 0.296 and 0.101 against FD and WC, respectively. Therefore AT has medium effect on financial distress and small effect on working capital.

Table 5. Effect Size (F^2)

Variables	OCF	GDP	AT	LEV	INT
FD	0.079	0.001	0.296	0.001	0.009
WC	0.011	0.002	0.101	0.050	0.002

Source: Data Collected and Processed (2026)

Table 6. Regression Analysis and Results

Hypothesis	Path Coefficients	T Statistics	P Values	Results
OCF → FD (H1-)	-0.238	3.468	0.000	Accepted
GDP → FD (H2-)	-0.025	0.343	0.366	Rejected
AT → FD (H3+)	0.493	4.825	0.000	Accepted
LEV → FD (H4+)	-0.029	0.407	0.342	Rejected
INT → FD (H5+)	-0.084	0.932	0.176	Rejected
WC → FD (H6-)	0.202	2.259	0.012	Accepted
OCF → WC (H7+)	0.093	1.199	0.115	Rejected
GDP → WC (H8-)	-0.041	0.482	0.315	Rejected
AT → WC (H9-)	-0.296	3.774	0.000	Accepted
LEV → WC (H10+)	0.210	3.443	0.000	Rejected
INT → WC (H11+)	0.048	0.485	0.314	Rejected

Source: Data Collected and Processed (2026)

The path coefficient of operating cash flows on financial distress is -0.238 and the significance level (P value) is 0.000. The negative coefficient means inverse relationship between operating cash flows and financial distress. The significance level less than 0.05 means the result is statistically significant. Therefore, H1 is accepted. The higher the operating cash flows, the higher the Z-Score, means possibility of financial distress is lower. The more efficient a business in using assets to raise cash from sales, the safer the company is from the risk of financial distress because with sufficient cash flows, it can also meet its financial obligations to its creditors (Phan et al., 2022).

The path coefficient of gross domestic product on financial distress is -0.025 and the significance level (P value) is 0.366. The negative coefficient indicates the inverse relationship between GDP and financial distress. The significance level more than 0.05 means the result is not statistically significant. Therefore, H2 is rejected. The increase in GDP is expected to boost purchasing power and encourage people to buy textile products, thereby increasing company sales and preventing financial distress. However, the reality is that the increase in GDP may not always lead to an increase in sales, as the textile industry is currently experiencing thrifting, a phenomenon where consumers prefer imported products from abroad due to their lower prices.

According to an interview with the finance director of one of Indonesia's largest textile companies, Chinese textile products are making their way to Indonesia due to inadequate regulations protecting local products from imports, and the price of these products can often be lower than that of Indonesian products. In the end, consumers choose more affordable import products, which caused sales for local textile industry decreasing and more prone to financial distress. The path coefficient of asset tangibility on financial distress is 0.493 and the significance level (P value) is 0.000.

The positive coefficient means the linear relationship between asset tangibility and financial distress. If the fixed asset ratio higher, then it is more prone to financial distress. The significance level is less than 0.05 means the result is statistically significant. Therefore, H3 is accepted, The higher the proportion of fixed assets to total assets this indicates that the company is more susceptible to financial distress due to inefficient use of working capital, reducing the number of liquid assets and profits. The results align with previous research from (Kebede et al., 2024).

The path coefficient of leverage on financial distress is -0.029 and the significance level (P value) is 0.342. The negative coefficient signifies an inverse relationship between leverage and financial distress. The significance level is more than 0.05 means the result is not statistically significant. Therefore, H4 is rejected. The results are in line with Suranta et al., (2023) that states companies with financial difficulties must prioritize the settlement of short-term commitments to avert financial distress, as issues with short-term liabilities can lead to long-term repercussions, including potential bankruptcy.

The path coefficient of interest rate on financial distress is -0.084 and the significance level (P value) is 0.176. The negative coefficient means an inverse relationship between interest rate and financial distress means more prone to financial distress. The significance level is more than 0.05 means the result is not statistically significant. Therefore, H5 is rejected. The results are in line with Refni et al., (2021); and Budhidharma et al., (2023) that states the higher interest rates, measured using the BI rate, the lower Z-score, which put companies in an increasingly vulnerable position to financial distress because of the more significant amount of interest to be paid.

The path coefficient of working capital on financial distress is 0.202 and the significance level (P value) is 0.012. The positive coefficient signifies a linear relationship between working capital and financial distress. The significance level is less than 0.05 means the result is statistically significant. Therefore, H6 is accepted. The results are in line with (Sari et al., 2021). The longer the time for cash conversion cycle process means more vulnerable to financial distress, which may be caused by longer time to collect payment from customers, inventory hold by company, or earlier payment to vendor.

The path coefficient of operating cash flows on working capital is 0.093, and the significance level (P value) is 0.115. The positive coefficient indicates the linear relationship between operating cash flows and working capital. The significance level is more than 0.05 means the result is not statistically significant. Therefore, H7 is rejected. The results are in line with (Tjandra et al., 2022). Operating cash flow has no significant effect on working capital as the available cash may be allocated for other kind of expense so that is not wholly used for working capital.

The path coefficient of gross domestic product is -0.041 and the significance level (P value) is 0.315. The negative coefficient indicates an inverse relationship between gross domestic product and working capital. The significance level is more than 0.05 means the result is not statistically significant. Therefore, H8 is rejected. The results are in line with the findings by (Czerwonka and Jaworski, 2023; and Tiwari et al., 2023). It is expected that sales of textile products will increase when the country's macroeconomic grows, so companies also expect collecting cash quickly.

However, other factor like geo-politic might give a negative effect. The Russia-Ukraine War has caused a significant decline in textiles sales as confirmed by the CFO of one of the largest textile companies in Indonesia. This has resulted in people postponing the purchase of textile products and gaining less cash, thereby reducing their working capital. The path coefficient of asset tangibility is -0.296, and the significance level (P value) is 0.000. The negative coefficient indicates an inverse relationship between asset tangibility and working capital.

The significance level is less than 0.05 means the result is statistically significant. Therefore, H9 is accepted. The results are in line with (Sharma et al., 2020; and Korent and Orsag, 2022). Companies that have a high fixed asset ratio have shorter cash conversion cycle times because the assets are more accessible to sell when in need of emergency cash compared to other assets, such as intangible assets. The path coefficient of leverage is 0.210, and the significance level (P value) is 0.000. The positive coefficient indicates a linear relationship between leverage and working capital.

The significance level is less than 0.05 means the result is statistically significant. Therefore, the tenth H10 is accepted. The results are in line with (Tiwari et al., 2023). Companies which have high level of debt, especially for business expansion tend to keep the current asset for working capital as high as possible, for example keeping inventory so the cash conversion cycle time are also longer. The interest rate path coefficient is 0.048 and the significance level (P value) is 0.314. The positive coefficient indicates a linear relationship between interest rate and working capital. The significance level is more than 0.05 means the result is statistically insignificant. Therefore, H11 is rejected.

The results are in line with (Seth et al., (2019). When interest rates rise, companies are under pressure to maintain sufficient cash reserves to cover increased loan interest payments while also financing daily working capital. By expediting the collection of payments from clients, organizations can enhance liquidity to service debt while maintaining sufficient operational money. After finishing the hypothesis test, the next step is examining working capital as an intervening variable. The analysis evaluates specific indirect effects using the bootstrapping method in the SmartPLS software. Table 7 shows the analysis of mediation or specific-indirect effects with financial distress as a variable dependent on this study.

Table 7. Direct and Indirect Effect Significance

Hypothesis	Direct Effect Significance	Indirect Effect Significance	Results
OCF → WC → FD (H12)	0.000	0.167	Rejected
GDP → WC → FD (H13)	0.366	0.327	Rejected
AT → WC → FD (H14)	0.000	0.044	Accepted
LEV → WC → FD (H15)	0.342	0.050	Rejected
INT → WC → FD (H16)	0.176	0.335	Rejected

Source: Data Collected and Processed (2026)

The direct effect relationship between operating cash flow and financial distress has a significance level of 0.000, whereas the significance level of the indirect effect is 0.167. The direct effect is significant at less than 0.05, indicating that working capital does not mediate the relationship between operating cash flow and financial distress. Therefore, H12 is rejected. Working capital does not have significant effect for relationship between operating cash flow and financial distress. The increase in working capital is expected to boost operating cash flow. However, the reality is that the increase in working capital may not always lead to an increase in operating cash flow. There are another factors, such as tax (Udeh and Eze, 2021).

The direct effect of gross domestic product on financial distress has a significance level of 0.366, while the significance level of the indirect effect is 0.327. Both direct and indirect levels exhibit significance levels less than 0.05, suggesting that working capital does not mediate the relationship between asset tangibility and financial distress. Therefore, H13 is rejected. Gross domestic product is macroeconomic factor that is not influenced significantly by working capital which is company's internal factors. All the determinants are macroeconomic level (Ali and Jonas, 2025).

The direct effect of asset tangibility on financial distress has a significance level of 0.000, while the significance level of the indirect effect is 0.044. Both direct and indirect levels exhibit significance levels less than 0.05, suggesting that working capital mediates the relationship between asset tangibility and financial distress. Therefore, H14 is accepted. Working capital levels could affect asset structure as companies have to choose the priority with resources limitation. The direct effect of leverage on financial distress has a significance level of 0.342, while the significance level of the indirect effect is 0.050, indicating that working capital does not mediate the relationship between leverage and financial distress. Therefore, H15 is rejected. Companies' decision on debt equity structure not only based on working capital condition, but there is another factor such as tax by utilizing deductible expense to achieve tax-saving (Ali et al., 2022). The direct effect of interest rate on financial distress has a significance level of 0.176, while the significance level of the indirect effect is 0.335. Both direct and indirect levels exhibit significance levels exceeding 0.05, suggesting that working capital does not mediate the relationship between asset tangibility and financial distress. Therefore, H16 is rejected. There is another factor affecting interest rate, such as GDP (Wijaya et al., 2020).

Conclusions

Based on the findings and discussion, this study concludes that financial distress is influenced by operating cash flow, asset tangibility, and working capital which are company's internal factors rather than macroeconomic factors such as GDP and interest rate. To prevent financial distress, company has to pay attention on composition between fixed assets and daily operational fund as they can affect how much money paid for operational. If too much money paid for fixed asset acquisition, then cash flow for operational matters will be not enough and company can be financially distressed. Given the research limitations before, future researchers should consider refining, expanding, and deepening this study to broaden its geographical scope and yield more comprehensive results. Furthermore, subsequent research could also use extended time frames to capture more phenomenon.

References

- Abdioğlu, N. (2019). The Impact of Firm Specific Characteristics on The Relation Between Financial Distress and Capital Structure Decisions. *Journal of Business Research-Turk*, 11(2), 1057-1067.
- Akbar, A., Jiang, X., & Akbar, M. (2020). Do Working Capital Management Practices Influence Investment and Financing Patterns of Firms?. *Journal of Economic and Administrative Sciences*, 38(1), 91-109.
- Ali, I., & Jonas, A. (2025). Determinants of China's GDP Growth: An Empirical Analysis of Macroeconomic Variables. *Theory and Practice of Management*, 15(1), 20-35.
- Ali, S., Rangone, A., & Farooq, M. (2022). Corporate Taxation and Firm-Specific Determinants of Capital Structure: Evidence from the UK and US Multinational Firms. *Journal of Risk and Financial Management*, 15(2), 1-17.
- Altman, E. I. (1968). Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy. *The Journal of Finance*, 23(4), 589-609.
- Altman, E. I. (2000). *Predicting Financial Distress of Companies: Revisiting the Z-score and ZETA® Models*. Cheltenham: Edward Elgar Publishing.
- Arianto, H., & Kurniasih, A. (2023). The Influence of Financial Performance and Macroeconomic Factors on the Financial Distress of Textile and Garment Companies Listed on the Stock Exchange: Empirical studies in Indonesia. *Journal of Economics, Finance and Management Studies*, 6(7), 3305-3318.

- Bajpai, A., Calabro, A., & McGinness, T. (2021). *Mastering a Comeback: How Family Businesses are Triumphing over COVID-19*. KPMG: United Arab Emirates.
- Brooks, A. (2025). The International Second-Hand Clothing Trade: Contributions to Sustainability and the Circular Economy. *Sustainability*, 17(18), 1-14.
- Bukalska, E., & Maziarczyk, A. (2023). Impact of Financial Constraints and Financial Distress on Cash Holdings. *International Journal of Management and Economics*, 59(3), 13-31.
- Budhidharma, V., Sembel, R., Hulu, E., & Ugut, G. (2023). Early Warning Signs of Financial Distress Using Random Forest and Logit Model. *Corporate and Business Strategy Review*, 4(4), 69-88.
- Bui, T. D., & Thach, N. N. (2023). How Vietnamese Export Firms Faced Financial Distress During COVID-19? A Bayesian Small Sample Analysis. *Economies*, 11(2), 1-12.
- Cahyadi, H. (2022). Beating the Third Generation Curse: A Theory on Intergenerational Perpetuation of Large Family Businesses. *Kindai Management Review*, 10(February), 89-114.
- Cahyadi, H., Wijaya, H., & Ardi, A. (2022). Valuation Determinants of Family Real Estate Business: Empirical Evidence in the Indonesian Stock Exchange. *Central European Management Journal*, 30(4), 1557-1567.
- Chua, J. H., Chrisman, J. J., & Sharma, P. (1999). Defining the Family Business by Behavior. *Entrepreneurship Theory and Practice*, 23(7), 19-39.
- Comi, A., & Eppler, M. J. (2014). Diagnosing Capabilities in Family Firms: An Overview of Visual Research Methods and Suggestions for Future Applications. *Journal of Family Business Strategy*, 5(3), 41-51.
- Curry, K. (2020). The Influence of Leverage, Cash Flow, Tax, R & D, Economic Growth and Inflation on the Financial Distress in the Sub-Sector of Property and Real Estate Companies. *Advance in Economics, Business and Management Research*, 151(1), 397-400.
- Czerwonka, L., & Jaworski, J. (2022). Which Determinants Matter for Working Capital Management in Energy Industry? The Case of European Union Economy. *Energies*, 15(4), 1-18.
- Czerwonka, L., & Jaworski, J. (2023). Determinants of Working Capital Management in Small and Medium Enterprises: Evidence from Central and Eastern Europe. *Journal of International Studies*, 16(6), 162-180.
- Davis, J. A., & Tagiuri, R. (1982). Bivalent Attributes of the Family Firm. *Family Business Review*, 9(2), 62-74.
- Ece, A. & Sayilgan, G. (2020). Macroeconomic Determinants of Financial Distress in Turkey: An Econometric Analysis. *Australasian Accounting, Business and Finance Journal*, 14(5), 86-107.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. 2019. When to Use and How to Report the Results of PLS-SEM. *European Business Review*, 31(1), 2-24.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Thousand Oaks: Sage Publications.
- Isayas, Y. N. (2021). Financial Distress and Its Determinants: Evidence From Insurance Companies in Ethiopia. *Cogent Business and Management*, 8(1), 1-16.
- Jensen, M. & Meckling, W. (1976). The Theory of the Firm: Managerial Behavior, Agency Cost, and Ownership Structure. *Journal of Financial and Economics*, 3(10), 305-360.

- Kebede, T. N., Tesfaye, G. D., & Erana, O. T. (2024). Determinants of Financial Distress: Evidence from Insurance Companies in Ethiopia. *Journal of Innovation and Entrepreneurship*, 13(1), 1-23.
- Korent, D., & Orsag, S. (2022). Determinants of Working Capital Management of Firms in Selected Industries in Croatia. *Management: Journal of Contemporary Management Issues*, 27(2), 129-152.
- Kenneth, T. J., & Ikobo, K. C. (2022). Determinants of Financial Leverage of Selected Public Companies in Nigeria. *Journal of Contemporary Issues in Accounting*, 3(1), 124-146.
- Mahendra, R. I., & Pujiono, P. (2022). The Effect of Operating Cash Flow and Book Value On Financial Distress. *Journal of Economy, Accounting and Management Science*, 4(2), 105-115.
- Ogachi, D., Ndege, R., Gaturu, P., & Zoltan, Z. (2020). Corporate Bankruptcy Prediction Model, a Special Focus on Listed Companies in Kenya. *Journal of Risk and Financial Management*, 13(3), 1-14.
- Phan, T. D., Hoang, T. T., & Tran, N. M. (2022). Cash Flow and Financial Distress of Private Listed Enterprises on the Vietnam Stock Market: A Quantile Regression Approach. *Cogent Business and Management*, 9(1), 1-13.
- Platt, H. D., & Platt, M. B. (2002). Predicting Corporate Financial Distress: Reflections on Choice-Based Sample Bias. *Journal of Economics and Finance*, 26(6), 184-199.
- Rahmawati, R., Qomariyah, N., & Sofiani, T. (2022). Fulfillment of Workers' Rights in The Terminating Employment Relationships During The Covid-19 Pandemic. *Asian Journal of Law and Humanity*, 2(1), 39-64.
- Refni, Z., Haryetti, H., & Fathoni, A. F. (2021). The Effects of Exchange Rate and Interest Sensitivity, Managerial Ownership, and Institutional Ownership on Financial Distress. *IJEBA: International Journal of Economics, Business and Applications*, 6(5), 31-40.
- Rifa'i, A. (2025). The Impact of Import Tariff Protectionism on Indonesia Textile industry: GTAP Model. *The Journal of The Textile Institute*, 116(12), 1-13.
- Rokhayati, I., Muntahanah, S., Achadi, A., & Oktaviani, R. (2024). Why Does Financial Distress Happen to Companies? (Case Study on Primary Consumer Goods Sector Companies Listed on IDX). *Revista de Gestão Social e Ambiental*, 18(4), 1-12.
- Sari, F. I., Damayanti, R. A., & Kusumawati, A. (2021). The Effect Of Cash Conversion Cycle And Chief Executive Officer Power On Financial Distress And Leverage An Intervening Variable. *International Journal of Research and Review*, 8(7), 337-343.
- Scott, W. R. (2012). *Financial Accounting Theory*. Toronto: Pearson Education Canada.
- Seth, H., Sharma, S., & Pilani, S. (2019). Redesigning the Efficiency Process Analysis for Working Capital Models: Evidences from the Determinants. *Journal of Global Operations and Strategic Sourcing*, 13(1), 38-55.
- Seth, H., Chadha, S., Ruparel, N., Arora, P. K., & Sharma, S. K. (2020). Assessing Working Capital Management Efficiency of Indian Manufacturing Exporters. *Managerial Finance*, 46(8), 1061-1079.
- Setiawan, M., & Septiani, B. A. (2025). Firm Performance and the Determinants in the Textile and Textile Product Industry of Indonesia Pre- and Post-COVID-19 Pandemic. *Journal of Risk and Financial Management*, 18(1).

- Sharma, R. K., Bakshi, A., & Chhabra, S. (2020). Determinants of Behavior of Working Capital Requirements of BSE Listed Companies: An Empirical Study Using co-Integration Techniques and Generalised Method of Moments. *Cogent Economics and Finance*, 8(1), 1-30.
- Spence, M. (1973). Job Market Signaling. *The Quarterly Journal of Economics*, 87(8), 355-374.
- Suranta, E., Satrio, M. A. B., & Midiastuty, P. P. (2023). Effect of Investment, Free Cash Flow, Earnings Management, Interest Coverage Ratio, Liquidity, and Leverage on Financial Distress. *Ilomata International Journal of Tax and Accounting*, 4(4), 283-295.
- Thach, N. N., & Dan, T. B. (2024). A Bayesian MCMC Algorithm with Cauchy Priors for Small Sample Modeling Financial Distress in Covid-19 Times. *Montenegrin Journal of Economics*, 20(1), 127-136.
- Tiwari, S. C., Sayyad, M., Azam, M. S., & Sudesh, N. S. (2023). Determinants of WCM of Indian Listed Firms: A GMM Regression Approach. *Cogent Economics and Finance*, 11(1), 1-20.
- Tjandra, C. K., Murhadi, W. R., & Herlambang A. (2022). The Determinants of Working Capital Management in Indonesia and the Philippines. *Jurnal Siasat Bisnis*, 26(1), 110-121.
- Udeh, F. N., & Eze, M. N. (2021). Effect of Corporate Tax Avoidance on Operating Cash Flow Performance: An Empirical Study on Manufacturing Firms in Nigeria. *International Journal of Advanced Academic Research*, 7(7), 37-54.
- Usmansyah, U., & Pudjiastuty, P. (2023). To Recognize Indication of Financial Distress and or Bankruptcy of Five Textile Company for Five Years Period Using Five Financial Distress Models. *Return: Study of Management, Economic and Business*, 2(1), 24-33.
- Vu, N. T., Nguyen, N. H., Tran, T., Le, B. T., & Vo, D. H. (2023). A LASSO-Based Model for Financial Distress of the Vietnamese Listed Firms: Does the Covid-19 Pandemic Matter?. *Cogent Economics and Finance*, 11(1), 1-17.
- Wijaya, C., Lucianna, Y., & Indriati, F. (2020). Determinants of Interest Rate Spreads of Conventional Banks Listed on the Indonesia Stock Exchange. *Banks and Bank Systems*, 15(4), 69-79.
- Zelie, Z. (2019). Determinants of Financial Distress in Case of Insurance Companies in Ethiopia. *Research Journal of Finance and Accounting*, 10(15), 27-32.
- Zuhrianto, L., Mulyani, S., & Wijayanti, R. D. P. (2020). Impact on Profit, Cash Flow, Company Size, and Financial Distress. *Assets: Jurnal Ilmiah Ilmu Akuntansi, Keuangan Dan Pajak*, 4(1), 21-26.