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The Influence Of Cash Conversion Cycle Toward Bankruptcy Risk Using Altman Z-Score

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ABSTRACT

This study investigates the impact of the cash conversion cycle (CCC) on bankruptcy risk in manufacturing companies listed on the Indonesia Stock Exchange (BEI) from 2019 to 2023, using Altman Z-Score as a measure of bankruptcy risk. The sample, selected through purposive sampling, includes 231 observations from companies meeting specific criteria. Multiple linear regression analysis is employed, with CCC as the main independent variable and control variables including current ratio (CR), return on assets (ROA), company size (SIZE), and debt-to-equity ratio (DER). Classical assumption tests ensure the reliability of the regression model. The findings indicate that CCC significantly affects bankruptcy risk, suggesting that effective CCC management can reduce bankruptcy likelihood. ROA, SIZE, and DER also significantly influence bankruptcy risk, while CR shows no effect. This research highlights the importance of optimizing CCC through improved inventory and receivables management to maintain financial stability. CCC is also a valuable indicator for investors in assessing a company's financial health. Future studies should explore additional variables and adopt alternative analytical methods to enhance insights.

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INTRODUCTION

Indonesia was comprised of numerous islands, which provides it with abundant natural resources. Moreover, Indonesia's strategic location which is situated at the crossroads of two continents (Asia and Australia) and two oceans (the Indian and the Pacific), offers significant economic and geopolitical advantages (Figlioli et al., 2024). This position not only strengthens Indonesia's role in global trade relations but also places it in the spotlight as a central hub for international commerce (Savino, 2020). This environment has driven the establishment of numerous companies in Indonesia, from start-ups and small enterprises to large corporations (Attari & Raza, 2012). However, the business world itself is fraught with uncertainties, especially in today's increasingly modern and competitive landscape. Bankruptcy is one of the greatest risks faced by both large and small companies, particularly start-ups. When a company goes bankrupt, it not only affects the company itself but also impacts stakeholders such as

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creditors, investors, suppliers, and employees (Angellita et al., 2023). To protect themselves from a possible financial collapse, businesses must thus be aware of the variables that may affect their likelihood of filing for bankruptcy (Nobanee et al., 2011).

Financial statement analysis is obviously crucial in the business world for evaluating company health and the performance (Grosse-Ruyken et al., 2011). The use of financial ratios such as cash conversion cycle, current ratio, return on assets, firm size, and debt to equity ratio is the most common and useful method of providing insight the operational and strategic aspects of a company (Jafari et al., 2014). These methods are used by investors, managers, and financial analysts in making informed decisions. In anticipation of bankruptcy, prediction models such as Altman Z-score are also applied to the Company (Lestari, 2021). Despite the fact that this topic has been the subject of numerous studies in the past, there are still differing opinions (Zeidan & Shapir, 2017). A number of earlier investigations, including those by (Amaliah & Darmawan, 2019; Hanafie et al., 2023). According to (Amaliah & Darmawan, 2019) bankruptcy risk is significantly impacted by the cash conversion cycle. This contrasts with Hadriana's research findings, which indicate that the cash conversion cycle has no discernible impact on the likelihood of bankruptcy.

Table 1. Phenomenon Table

CODE	YEAR	CASH CONVERSION CYCLE	ALTMAN Z-SCORE
ADES	2019	86	3.12
	2020	78	3.29
	2021	93	4.69
	2022	67	9.24
	2023	73	11.82
DMND	2019	107	2.48
	2020	126	7.66
	2021	100	6.28
	2022	93	5.83
	2023	104	6.15
SMSM	2019	141	11.42
	2020	150	9.18
	2021	144	8.20
	2022	145	7.98
	2023	160	10.34
EKAD	2019	158	5.57
	2020	134	5.82
	2021	142	6.50
	2022	161	7.62
	2023	207	7.64
TKIM	2019	124	1.67
	2020	99	1.35
	2021	102	1.78
	2022	130	1.70
	2023	126	1.77
CPIN	2019	52	10.64
	2020	66	10.71

doi.org/10.54209/jasmien.v5i02.1035 Hal. 477-486

2021	63	9.29
2022	54	7.02
2023	57	6.63

Based on the previous research by (Amaliah & Darmawan, 2019) research findings indicate that a shorter cash conversion cycle enables companies to reduce the risk of bankruptcy. In contrast to the phenomenon in the table above, the phenomenon in the table above shows the irregular impact of the cash conversion cycle on the risk of bankruptcy. There are times when the cash conversion cycle has a negative influence on bankruptcy risk, there are times when it has a positive impact on bankruptcy risk. Let's examine the ADES case using the data provided. In 2020, ADES's Altman Z-score increased from 3.12 to 3.29 while its cash conversion cycle decreased from 86 days to 78 days. This implies that the company was able to avoid bankruptcy thanks to the lessen in the cash conversion cycle. But in 2021, the Altman Z-score climbed dramatically from 3.29 to 4.69, and the cash conversion cycle grew from 78 to 93 days. This demonstrates that the company continued to be departed from bankruptcy despite the rise in the cash conversion period. According to earlier study by (Amaliah & Darmawan, 2019) a lengthier cash conversion cycle generally raises the probability of bankruptcy; this discovery runs counter to that finding.

Bankruptcy is a familiar concept in the business world (Youssef, 2024). Many companies have experienced bankruptcy, ranging from start-up, small and large companies (Sathyamoorthi et al., 2023). PT Sepatu Bata Tbk is one such example. BATA, a large company in manufacturing, officially ceased operations on April 30, 2024, as reported by GoodStats. This decision was likely due to a decline in profits over recent years. Considering The financial report that was released by the Indonesia Stock Exchange (IDX), in 2021, BATA managed to achieve net sales of IDR 438.48 billion. However, despite this revenue, BATA recorded a net loss of IDR 51.23 billion. In 2022, BATA's net sales increased to IDR 643.45 billion, but losses worsened to IDR 190.56 billion. By 2023, net sales had fallen to IDR 609.61 billion, and losses remained high at IDR 190.56 billion (John, 2001). The present research targets companies in the manufacturing sector listed on the IDX. This focus brings distinct characteristics and challenges compared to other sectors. The study examines the period from 2019 to 2024, providing the most recent and relevant data. With this temporal focus, the findings are ensured to be applicable to current conditions. Although previous studies have examined the effects of factors such as profitability, leverage, company size, and others on company risk, The present research specifically investigates how the cash conversion cycle can influence bankruptcy risk within the manufacturing sector.

METHODS

Population plays an essential role in research because it is a source of information for research. Population is the whole element used in research. Population is not only the amount contained in the research but also includes the characteristics possessed by the research subject. For example, research conducted on manufacturing sector companies, all companies in the manufacturing sector are the population. In this present research, applying a population of 190 companies which listed on the Indonesia Stock Exchange in manufacturing sector. Sampling technique used Purposive sample using the subsequent standards: Manufacturing companies that are still listed on the Indonesia stock exchange in 2019-2023, Manufacturing companies that generate profit in 2019-2023, Manufacturing companies that consistently publish financial statements in 2019-2023, Manufacturing companies that have positive cash conversion cycle in 2019-2023.

doi.org/10.54209/jasmien.v5i02.1035 Hal. 477-486

Table 2. Sample Criteria

No	Criteria	Total
1	Manufacturing companies listed on IDX for the 2019-2023 period	171
2	Manufacturing companies listed on IDX that reported negative net income during 2019-2023	(84)
3	Manufacturing companies listed on IDX with inconsistent financial statements from 2019 to 2023	(17)
4	Manufacturing companies listed on IDX with a negative cash conversion cycle	(6)
	Total Eligible Companies	**64**
	Observation Period	**5**
	Total Observations	**320**

To support the study object in quantitative research, precise and targeted data selection is required. The information was extracted from the 2019–2023 financial reports of manufacturing companies listed on IDX. Other databases, like S&P Capital IO, can facilitate data retrieval. Researchers employ data gathering strategies to obtain the information required to test hypotheses or find answers to research questions. Choosing the right techniques is essential to guaranteeing the accuracy and consistency of the information gathered. Information written alongside primary data is referred to as supplemental data. When primary data is easily accessible, secondary data is used as supplementary information. The data that is considered include documents or archives that are derived from various sources, existing supporting photos, or self-taken photos of the results of one's own work. The financial statements of manufacturing companies registered on Indonesian stock exchange for the years 2020–2023 provide secondary data used in the present research.

To improve hypothesis testing, the empirical model will be used to identify and explain the link between the variables in the study. Multiple linear regression models will be employed in this present research to Analyse the variables influencing the likelihood of bankruptcy. The formulation of the empirical model used in this present research based previous research:

$$AZ = \alpha - \beta_1 CCC + \beta_2 CR + \beta_3 ROA + \beta_4 SIZE - \beta_5 DER + \varepsilon$$

Notes:

AZ	: Bankruptcy Risk – Dependent Variable
α	: Constant
β	: Coefficient Regression
CCC	: Cash Conversion Cycle – Main Variable
CR	: Cash Ratio – Control Variable
ROA	: Return on Asset – Control Variable
SIZE	: Firm Size – Control Variable
DER	: Debt to Equity Ratio – Control Variable

AZ is significantly impacted negatively by CCC and DER ($-\beta_{1,5}<0.05$). We can conclude that AZ decreases as CCC increases. AZ is significantly impacted positively by CR, ROA, and SIZE ($\beta_{2,3,4}<0.05$). We can conclude that AZ decreases as CCC and DER increases. Otherwise, if AZ increases as CR, ROA, and SIZE decreases. Bankruptcy risk rises if AZ declines. Concrete definitions of the variables used in research that outline how they will be measured or observed are known as operational variables. This is crucial to measure more abstract topics in a research setting. Independent variables are causes or factors that influence dependent variables in a research study. In experimental research, this variable is changed or manipulated to see how it impacts the dependent variable. The risk of bankruptcy as Y variable

doi.org/10.54209/jasmien.v5i02.1035 Hal. 477-486

in this present research. started in 1983 and 1984, Altman developed this model into a new formula known as the Z-score. This formula has a validity rate of up to 95% in analyzing the bankruptcy of a company. Following formulation:

$$Z= 1,2X1 + 1,4X2 + 3,3X3 + 0,6X4 + 1,0X5$$

Notes:
Z : Altman Z-Score
X1 : Working Capital /Total Assets
X2 : Retained Earnings / Total Assets
X3 : Earnings Before Interest and Taxes / Total Assets
X4 : Market Value of Equity / Book Value of Total Liabilities
X5 : Sales / Total Assets

A variable that is altered or modified by the researcher in order to ascertain if the alteration results in or is connected to a change in another variable is known as an independent variable. The currency conversion cycle is one of the independent variables in the present research. Because cash is the most current asset, then in its management, special management is needed such as cash conversion cycle so that the Company can run smoothly and effectively. Formulated as follows:

$$CCC = DIO + DSO – DPO$$

Notes:
CCC : Cash Conversion Cycle
DIO : Days Inventory Outstanding
DSO : Days Sales Outstanding
DPO : Days Payable Outstanding

Methods of data analysis are various methods and procedures used to process, evaluate, and conclude information from the data collected. These techniques are essential in various fields of science to gain insights that can be used for decision-making, research, and development. Here are some commonly used data analysis techniques: Descriptive Statistic, Classical Assumption Test, Normality Test, Multicollinearity Test, Heteroscedasticity Test, Autocorrelation Test, Test Model Specification, Simultaneous Significance Test (F-Test), Partial T-Test.

RESULTS AND DISCUSSION

Classical Assumption Test

Normality Test

This present research used Kolmogorov-Smirnov normality test to ascertain if the collected data is normally distributed. Data can be regarded as regularly distributed if the Kolmogorov-Smirnov test significance value is more than 0.05.

doi.org/10.54209/jasmien.v5i02.1035 Hal. 477-486

Table 1. Normality Test Output

		Unstandardized Residual
N		231
Normal Parameters	Mean	.0000000
	Std. Deviation	.86750976
Most Extreme Differences	Absolute	.056
	Positive	.056
	Negative	-.039
Test Statistic		.056
Asymp. Sig (2-tailed)		.074

The data utilized in the research are normally distributed, as indicated by the Kolmogorov-Smirnov test findings in table 3, which show that 0.74 > 0.05.

Multicollinearity Test

Objective the multicollinearity test in research is to demonstrate if two or more independent variables in a regression model are related.

Table 4. Multicollianearity Test Output

Model		Collinearity Statistics	
		Tolerance	VIF
1	CCC	.934	1.071
	CR	.941	1.063
	ROA	.857	1.167
	SIZE	.834	1.199
	DER	.733	1.364

The results of the multicollinearity test in table 4, obtained tolerance values of CCC (0.934), CR (0.941), ROA (0.857), SIZE (0.834), DER (0.733) and VIF values of CCC (1.071), CR (1.063), ROA (1.167), SIZE (1.199), DER (1.364). From these results, the VIF and tolerance values of all variables used in the present research show VIF values < 10 and tolerance values > 0.10. Therefore, it can be concluded that all variables from the regression model in this present research are free from indications of multicollinearity.

Heteroscedasticity Test

Finding out if the linear regression model's error or residual shows non-constant variability was the aim of the study's heteroscedasticity test. Differences in variance (spread) in the error or residual at different levels of the independent variable are indicated by heteroscedasticity.

Table 2. Heteroscedasticity Test Output

Variables	Sig.	Explanation
CCC	.556	Heteroscedasticity not detected
CR	.507	Heteroscedasticity not detected
ROA	.134	Heteroscedasticity not detected
SIZE	.378	Heteroscedasticity not detected
DER	.001	Heteroscedasticity detected

Dependent Variable: ABSRES1

Significant values of CCC 0.556>0.05, CR 0.507>0.05, ROA 0.134>0.05, SIZE 0.378>0.05, and DER 0.001<0.05 are displayed in the outcomes of the heteroscedasticity test

doi.org/10.54209/jasmien.v5i02.1035 Hal. 477-486

in table. These findings suggest that there are no signs of heteroscedasticity in CCC, CR, ROA, or SIZE. In contrast, DER exhibits heteroscedasticity signs.

Autocorrelation Test

In The present research, in order to ascertain whether there was a connection or connection between the variables as a result of time changes in the linear regression model, the autocorrelation test was conducted.

Table 3. Autocorrelation Test Result

	Unstandardized Residual
Test Value	-.08916
Cases < Test Value	115
Cases >= Test Value	116
Total Cases	231
Number of Runs	103
Z	-1.780
Asymp. Sig. (2-tailed)	.075

There are no autocorrelation symptoms in this present research model, according to the autocorrelation test findings in table 6, which indicate that the run test results have a value of 0.075>0.05.

Summary of Classical Assumption Test Results

The Kolmogorov Test yields a significant value of 0.074>0.05, which indicates that the data is regularly distributed, according to the test findings in table 3. According to table 4 test results, every variable has a tolerance value greater than 0.10 and a VIF value less than 10. Therefore, it can be concluded that there are no multicollinearity symptoms present in any of the variables. According to table 5 test findings, every variable has a significant value more than 0.05, except for the DER variable, which has a value of 0.001<0.05. Therefore, it may be said that, except for DER, all variables are no signs of heteroscedasticity. The run test results yield a significant value of 0.075>0.05, as indicated by the test results in table 6. Therefore, it may be said that the sesame variables do not autocorrelated.

Test Model Specifications

Coefficient of Determination (R-Square)

To demonstrate the degree to which the independent variable affects the dependent variable, the R square coefficient of determination test is used.

Table 4. Coefficient of Determination (R-Squared)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.903	.816	.812	.87710

Cash Conversion Cycle (CCC), Current Ratio (CR), Return on Assets (ROA), Firm Size (SIZE), and Debt to Equity Ratio (DER) were able to explain 81.6% of the Bankruptcy Risk (AZ), according to the output of the R square coefficient of determination test in table 7 The remaining 18.4% could not be explained by CCC, CR, ROA, SIZE, and DER, or could be explained by other variables excluded in the research.

doi.org/10.54209/jasmien.v5i02.1035 Hal. 477-486

Simultaneous Hypothesis Testing (F-Test)

Finding out if the independent variable has a significant impact on the dependent variable is the aim of this test. 0.05, or 5%, is the highest significance level that can be maintained in this present research. Because this present research employed a one-way or one-tailed study while the test findings in SPSS are two-tailed, the significance figure is split into two halves.

Table 5. Simultaneous F-Test Output

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	768.130	5	153.626	199.697	.000
	Residual	173.092	225	.769		
	Total	941.222	230			

Table 8 F-test (ANOVA) findings indicate a significant value of 0.000. Therefore, it may be said that the following factors concurrently affect bankruptcy risk (AZ): cash conversion cycle (CCC), debt to equity ratio (DER), current ratio (CR), return on assets (ROA), firm size (SIZE), and the significant value of the research model is less than 0.005, which indicates that this present research is valid.

Hypothesis Testing (T-Test)

To ascertain whether each independent variable's coefficient significantly affects the dependent variable, the t-test is employed. In this present research, the t-value is determined by considering the designated significance level of 0.05 and calculating the coefficient of an independent variable. The variable is deemed to significantly affect the dependent variable if the coefficient value is more than 0.05. Consequently, the t-test aids researchers in identifying the variables that significantly impact the model they employ. Additionally, this test is conducted using a one-tailed technique.

Table 6. Hypothesis Testing (T-Test) Output

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.153	.579		8.897	.000
	CCC	-.002	.001	-.082	-2.778	.006
	CR	.002	.004	.016	.559	.576
	ROA	.315	.013	.768	24.854	.000
	SIZE	-.160	.037	-.135	-4.311	.000
	DER	-1.097	.171	-.214	-6.423	.000
Dependent Variable: AZ						

With a coefficient value of -0.002, the partial test (T-Test) results in table 9 demonstrate that the Cash Conversion Cycle (CCC) has a negative impact on bankruptcy risk (AZ). With a significance threshold of 5%, the test results above demonstrate a significance figure of 0.003<0.05, which is significant. We can conclude that the study's first hypothesis is accepted. With a coefficient value of 0.002, the partial test (T-Test) findings in table 9 demonstrate with a significance threshold of 5%, the test results above indicate a significance figure of 0.288<0.05, which is not significant. Therefore, it may be said that the study's second hypothesis is not supported.

With a coefficient value of 0.315, the partial test (T-Test) findings in table 9 demonstrate

doi.org/10.54209/jasmien.v5i02.1035 Hal. 477-486

that return on assets (ROA) positively affects bankruptcy risk (AZ). With a significance threshold of 5%, the test results above demonstrate a significance value of 0.000<0.05, which is significant. The third hypothesis in this investigation is accepted, it can be said. With a coefficient value of -0.160, the partial test (T-Test) results in table 9 indicate that firm size (SIZE) has a negative impact on bankruptcy risk (AZ). With a significance threshold of 5%, the test results above demonstrate a significance value of 0.000<0.05, which is significant. The fourth hypothesis in this investigation is accepted, it can be said. With a coefficient value of -1.907, the partial test (T-Test) results in table 9 demonstrate that debt to equity (DER) has a negative impact on bankruptcy risk (AZ). With a significance threshold of 5%, the test results above demonstrate a significance value of 0.000<0.05, which is significant. The fifth hypothesis in this investigation is accepted, it can be said.

The Effect of Cash Conversion Cycle on Bankruptcy Risk

The results of the present study indicate a significant negative impact of the cash conversion cycle on bankruptcy risk, measured using the Altman Z-Score. Specifically, the first hypothesis (H1), which postulates a negative relationship between the cash conversion cycle and bankruptcy risk, was confirmed with a significance value of 0.003, which is less than the threshold of 0.05. This finding aligns with previous studies, such as the research conducted by (Amaliah & Darmawan, 2019) which concluded that an extended cash conversion cycle increases the likelihood of bankruptcy.

Efficient management of the cash conversion cycle plays a crucial role in minimizing bankruptcy risk. When companies are able to reduce the time taken to collect receivables, shorten their inventory holding periods, and extend their payment terms, they are more likely to maintain liquidity and stability in their cash flows, which are essential for avoiding bankruptcy (Amaliah & Darmawan, 2019). These results are further supported by other studies. For example, a study by (Suriawinata et al., 2023) found that a shorter cash conversion cycle correlates with a reduction in financial distress, as it enables companies to convert their assets into cash more quickly, thus improving their financial flexibility. Similarly, research by (Johan et al., 2024) highlighted that businesses with a well-managed cash conversion cycle are better positioned to avoid bankruptcy due to the improved efficiency in cash management. In conclusion, this research reinforces the idea that managing the cash conversion cycle effectively is crucial for maintaining financial health and minimizing the risk of bankruptcy. Efficient cash flow management not only enhances liquidity but also provides a buffer against economic downturns and financial challenges.

CONCLUSION

Using the Altman Z-Score, this present research aimed to ascertain if cash conversion cycle affects the bankruptcy risk of manufacturing companies listed on the IDX. The findings of the trials show that a company's likelihood of going bankrupt, as determined by the Z-Score of Altman, is negatively impacted by the cash conversion cycle. So, the H1 is accepted.

REFERENCES

[1] Amaliah, F. F., & Darmawan, A. (2019). The Impact of Cash Conversion Cycle on Financial Distress with Profitability as A Moderating Variable. *Journal of Applied Managerial Accounting*, *3*(2), 214–225.

[2] Angellita, P., Bidandari, F. T., & Susianti, D. (2023). Analisa Estimasi Resiko Kebangkrutan Pada Pt Surya Semesta Internusa Tbk Dengan Menggunakan Metode Altman Z-Score Periode Tahun 2017–2019. *Research in Accounting Journal (RAJ)*, *3*(3), 481–490.

[3] Attari, M. A., & Raza, K. (2012). The optimal relationship of cash conversion cycle with

doi.org/10.54209/jasmien.v5i02.1035 Hal. 477-486

firm size and profitability. *International Journal of Academic Research in Business and Social Sciences*, *2*(4), 189.

[4] Figlioli, B., Antônio, R. M., Gatsios, R. C., & Lima, F. G. (2024). Influence of the cash conversion cycle on firm's financial performance: Evidence from publicly traded firms in the Latin American context. *Accounting & Finance*, *64*(3), 2375–2401. https://doi.org/10.1111/acfi.13220

[5] Grosse-Ruyken, P. T., Wagner, S. M., & Jönke, R. (2011). What is the right cash conversion cycle for your supply chain? *International Journal of Services and Operations Management*, *10*(1), 13–29. https://doi.org/10.1504/IJSOM.2011.041987

[6] Hanafie, H., Hikmah, N., Efendi, A., & Abdullah, M. W. (2023). Potensi Earnings Management Memediasi Financial Distress. *Jurnal Ilmiah Akuntansi Peradaban*, *9*(1), 25–40.

[7] Jafari, I. I., Salahinezhad, M., & Jalili, A. (2014). Effects of working capital management on firm's bankruptcy probability. *International SAMANM Journal of Finance and Accounting*, *2*(1), 55–70.

[8] Johan, S., Kayani, U. N., Naeem, M. A., & Karim, S. (2024). How effective is the cash conversion cycle in improving firm performance? Evidence from BRICS. *Emerging Markets Review*, *59*, 101114. https://doi.org/10.1016/j.ememar.2024.101114

[9] John, C. (2001). *A Comparison of the Current Ratio and the Cash Conversion Cycle in Evaluating Working Capital Cash Flows*. http://hdl.handle.net/10919/71545

[10] Lestari, G. A. M. D. (2021). *Pengaruh Prediksi Kebangkrutan Dengan Model Altman Z-Score Dan Fulmer H-Score Terhadap Harga Saham Badan Usaha Milik Negara Non-Perbankan Yang Terdaftar Di Bursa Efek Indonesia* [Undergraduate, Universitas Pendidikan Ganesha]. https://repo.undiksha.ac.id/7674/

[11] Nobanee, H., Abdullatif, M., & AlHajjar, M. (2011). Cash conversion cycle and firm's performance of Japanese firms. *Asian Review of Accounting*, *19*(2), 147–156. https://doi.org/10.1108/13217341111181078

[12] Sathyamoorthi, C. r., Mbekomize, C. J., & Bakwenabatsile, L. (2023). Impact of cash conversion cycle on financial performance: An empirical study of listed companies in Botswana. *Afro-Asian Journal of Finance and Accounting*, *13*(4), 415–433. https://doi.org/10.1504/AAJFA.2023.132956

[13] Savino, B. J. (2020). *Cash Conversion Cycle Strategies to Avoid Business Failure* [PhD Thesis, Walden University]. https://search.proquest.com/openview/69596db7e9d16ef1b4cb61d6cca72e6a/1?pq-origsite=gscholar&cbl=18750&diss=y

[14] Suriawinata, I. S., Budiyani, E. T., Mais, R. G., & Anhar, M. (2023). Cash Conversion Cycle, Asset Turnover, Capital Expenditure and Firm Value: The Mediating Role of Profitability. *Jurnal Reviu Akuntansi Dan Keuangan*, *13*(3), Article 3. https://doi.org/10.22219/jrak.v13i3.25161

[15] Youssef, M. E. M. M. (2024). *Predicting Bankruptcy And Financial Failure In the Egyptian listed companies: The Importance Of Cash Flow Statements* [Thesis, UNS (Sebelas Maret University)]. https://digilib.uns.ac.id/dokumen/120255/Predicting-Bankruptcy-And-Financial-Failure-In-the-Egyptian-listed-companies-The-Importance-Of-Cash-Flow-Statements

[16] Zeidan, R., & Shapir, O. M. (2017). Cash conversion cycle and value-enhancing operations: Theory and evidence for a free lunch. *Journal of Corporate Finance*, *45*, 203–219. https://doi.org/10.1016/j.jcorpfin.2017.04.014