The impact of working capital management on firm performance before, during, and after COVID-19 pandemic: evidence from New Zealand-listed companies

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Presentation Outline

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- Research Problem
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Background of the Study

Working Capital Management strategically manages companies' short-term liabilities and assets to promote liquidity, economic stability, and operational efficiency. An effective WCM enhances profitability, increases the cash flow, and reduces financial risk.

In recent years, the COVID-19 pandemic highlighted the need for strong WCM. The companies that suffered from economic disruption during the pandemic were tested for their strength and working capital strategies.

Research Problem

This research aims to investigate the impact of WCM on the firm performance of New Zealand-listed companies during different stages of the pandemic: pre-pandemic, pandemic, and post-pandemic.

By focusing on New Zealand-listed companies, the study sheds light on how WCM has adapted to these pandemic challenges and how these challenges have influenced the firm's performance.

Research Questions & Hypotheses

Central Research Question	
"How effectively does WCM impact New Zealand-listed companies' performance during pre-pandemic, pandemic, and post-pandemic periods?"	
Sub Research Questions	
"How does WCM impact the performance of New Zealand-listed companies before the COVID-19 pandemic?"	
"How does WCM impact the performance of New Zealand-listed companies during the COVID-19 pandemic?"	
"How does WCM impact the performance of New Zealand-listed companies after the COVID-19 pandemic?"	

Research Questions & Hypotheses

Before COVID-19	H_0: WCM has no significant impact on the performance of New Zealand-listed companies.	H_1: WCM has a significant impact on the performance of New Zealand-listed companies.
During COVID-19	H_0: WCM has no significant impact on the performance of New Zealand-listed companies.	H_1: WCM has a significant impact on the performance of New Zealand-listed companies.
After COVID-19	H_0: WCM has no significant impact on the performance of New Zealand-listed companies.	H_1: WCM has a significant impact on the performance of New Zealand-listed companies.

Literature Review

No.	Sub Section	Related Articles
2.0	**WORKING CAPITAL MANAGEMENT AND FIRM PERFORMANCE**	Hogerle, Charifzadeh, Ferencz, and Kostin (2020), Deloof (2003), Kieschnick, Laplante, and Moussawi (2011), Forghani, Shirazipor, and Hosseini (2013), Weerasekara (2021)
2.1	**IMPACT OF WCM ON FIRM PERFORMANCE BEFORE THE COVID-19 PANDEMIC**	Mathuva (2010) , Mumtaz, Rehan, Rizwan, Murtaza, Jahanger, and Khan (2013) , Nguyen (2020)
2.2	**IMPACT OF WCM ON FIRM PERFORMANCE DURING THE COVID-19 PANDEMIC**	Hossain and Zariyawati (2022), Ahmad, Bashir, and Waqas (2022) , Satoto, Nurrohim, and Budiwati (2022) , Ruhadi, Mai, and Sudradjat (2023)

GAP IN LITERATURE: Sufficient research is available on WCM. However, there is a paucity of research on the impact of working capital management during and post-pandemic. This area needs more academic attention.

Methodology

- The study leans on a quantitative approach.
- independent variable: Working capital management
- dependent variable: Firm performance
- Participants: NZ- listed companies
- Sample: 40 NZ listed companies, no of years 6 (2018-2023)
- Total number of observation=240(40*6)
- Source of data: financial statements and annual reports of the NZ-listed companies.

Methodology (Cont.)

Data Analysis Techniques

No.	Purpose	Data Analysis Techniques
1	Summarizes data trends in working capital management and firm performance.	**Descriptive Analysis**
2	Examines the relationship between working capital management and firm performance.	**Correlation Analysis**
3	Analyzes the impact of working capital management on firm performance over time.	**Panel Regression Analysis**

Findings of the Study

Descriptive Analysis

- ROA had positive results before and during the pandemic, but it had negative results after the pandemic. However, ROE stays positive during the pandemic, but before and after the pandemic, it shows negative results. TQs show a positive effect on all three stages of the pandemic period.
- DIO, DPO, and DSO showed average results before the pandemic period. DPO remains higher than DIO and DSO during and after the pandemic period.
- CR and QR showed results near 1.00, indicating that companies had covered their short-term liabilities from short-term assets before, during, and after the pandemic period.

Findings of the Study (Cont.)

Correlation Analysis

- ROA has a negative correlation with all independent variables before and during the pandemic and has a positive correlation with CR, QR, DIO, and CCC variables after the pandemic period.
- DPO and DSO positively correlate in all three stages (before, during, and after the pandemic).
- DIO and DPO negatively correlate during and after the pandemic periods.

Findings of the Study (Cont.)

Panel Regression Analysis

- ROA: The adjusted R-square is negative in all three periods (before, during, and after), indicating that the results are unacceptable and suggesting the predictive power of the model is poor. Even all the independent variables are statistically insignificant in all periods.

- ROE: The adjusted R-square is high in the pre-pandemic period at 95.3%, and in the pandemic, it is 38.2%. However, in the post-pandemic period, the adjusted R-square is negative, which suggests poor predictive power of the model. DER is significant in the pre-pandemic period. DSO and DIO have significant positive coefficients during the pandemic. DPO, CCC, and DER have significant negative coefficients during the pandemic. all independent variables are insignificant in the after-pandemic period.

- TQ: The adjusted R-square is 35.9% before the pandemic, whereas during and after the pandemic period, it is negative, which means the suitability power of the model is poor. CR is significant and has a negative coefficient. all the independent variables are insignificant during and after a pandemic.

Summary of Hypotheses Testing

Findings of the Study (Cont.)

	Hypotheses	Accepted/ Rejected	Rationale for Dependent Variables
Before Covid-19	H_0	Partially Accepted	ROA, ROE
	H_1	Partially Accepted	TQ
During Covid-19	H_0	Partially Accepted	ROA, TQ
	H_1	Partially Accepted	ROE
After Covid-19	H_0	Accepted	ROA, ROE, TQ
	H_1	Rejected	ROA, ROE, TQ

Conclusions

- COVID-19 has had a significant impact on ROE during the pandemic.
- The time to settle the payable period (DPO) has increased during the pandemic.
- CCC hurts ROE during the pandemic, indicating that a high cash conversion cycle leads to lower equity return.
- DPO hurts ROE during the pandemic. This reflects that if a company takes more time to pay its suppliers, its return on equity decreases.
- DIO was high during the pandemic due to uncertainty of demand and supply chain disruption.
- The time taken to receive the payment has increased during the pandemic due to lockdowns worldwide.
- DER hurts ROE before and during the pandemic. This reflects that a company with a low debt level had more equity return.

Recommendations

- DPO has a significant and negative impact on ROE. It is recommended that companies decrease payables periods to the minimum possible level during the pandemic period to increase their return on equity.
- DSO has a significant and positive impact on ROE. It is recommended that receivables periods be increased to the maximum possible level during the pandemic, like COVID-19, to increase return on equity.
- DIO has a significant and positive impact on ROE. It is recommended that inventory periods be increased to the maximum possible level during the pandemic to increase return on equity.
- CCC has a significant and negative impact on ROE. It is recommended that companies reduce the cash conversion cycle to the maximum possible level during the pandemic to improve return on equity and operation efficiency.

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Thank you!