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Article

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FINANCIAL ECONOMICS | RESEARCH ARTICLE

The impact of the corona epidemic on working capital management for jordanian companies listed on the amman stock exchange

Yaser Mohd Hamshari^{1*}, Mohammad Ahmad Alqam¹ and Haitham Yousef Ali¹

Abstract: The purpose of this study is to examine how the COVID-19 epidemic has affected the working capital management practices of Amman Stock Exchange (ASE) companies. From 2012 to 2021, 101 firms were studied in the financial sector. The data was also examined using a Multiple Regression Model in the study. The results revealed that Covid-19 Pandemic has significant and negative effect on working capital management. According to the results, companies tended to take a relatively conservative approach to managing their working capital. More importantly, the data demonstrated that the COVID-19 pandemic crisis drove changes in working capital management practices. Companies with a high FL, QR, and CCC have attempted to increase their client base by prolonging the average age of their accounts receivable and decreasing the turnover rate of their liabilities, respectively. Companies with a greater CCC, as well as those whose principal current assets are accounts receivable, outperformed the other working capital management strategies.

Subjects: Production, Operations & Information Management; Risk Management; Strategic Management; Critical Management Studies; Organizational Studies; Educational Research

Keywords: Amman Stock Exchange; COVID-19 epidemic; multiple regression model; working capital management

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Dr. Yaser Hamshari is an assistant professor of accounting within the Faculty of Administrative and Financial Sciences at Petra University/ Jordan. Yaser completed his bachelor's and master's degrees in accounting from Poona University/India and his Ph.D. in accounting from the University of Poona/India. His research addresses issues related to Financial Accounting (development of rural banking systems). Yaser published different research in highly ranked journals such as the Academy of Strategic Management Journal- UK. Dr. Yaser Hamshari conducted the research, wrote and supervised research progress, and approved the submission of the article. Mohammad Ahmad Alqam sourced the data from the databases and did the analysis. Haitham Yousef Ali revised the paper and proofread the whole work

PUBLIC INTEREST STATEMENT

This study examines how the COVID-19 epidemic has affected the working capital management practices of Amman Stock Exchange (ASE) companies from 2012-2021. According to the results, companies tended to take a relatively conservative approach to manage their working capital. Companies with high Financial liquidity, Quick ratio, and cash conversion cycle have attempted to increase their client base by prolonging the average age of their accounts receivable and decreasing the turnover rate of their liabilities. In contrast, companies with a greater cash conversion cycle and those whose principal current assets are accounts receivable outperformed the other working capital management strategies.

1. Introduction

Wuhan, China, the capital of Hubei Province, has been in a lot of turmoil since December 2019. Wuhan was the first location where a novel virus was discovered. It spread fast around the world (Zhang et al., 2022). On 6 October 2021, less than a year after a COVID-19 outbreak, the World Health Organization (WHO) reported about 235 million confirmed cases of COVID-19 and more than 4 million deaths (Steele et al., 2022). Aside from the significant health risk it poses to people worldwide, the pandemic is expected to have the worst economic consequences ever. According to recent research, the COVID-19 pandemic harmed the world economy the most when compared to past health pandemics (such as Ebola, the Influenza A, and SARS) and economic crises (such as the 2007–2009 financial crisis; Shehzad et al., 2021). The recession harmed both wealthy and developing countries. GDP, production, and supply chain activity all slowed, while inflation and unemployment rates rose. Because the equities markets were so unpredictable, the pandemic also had an impact on financial markets and changed the way investors behaved, making them more concerned and less ready to take risks (Priem, 2021). Since then, various financial and economic scholars from around the world have focused on the financial implications of the COVID-19 outbreak. Making solid selections about working capital management plans is one of the finest methods to get out of financial difficulty during a financial crisis (Pavlicko et al., 2021). Businesses require a strategy for managing their working capital, or “working capital management,” in order to pay off short-term debt and operating expenses (Zimon & Tarighi, 2021). In the past, working capital management was proven to have both beneficial and negative effects on corporate performance, with contradictory findings in the literature (Akbar et al., 2021; Haralayya, 2021; Sibindi & Mandipa, 2022). Furthermore, it has been stated that the global economic collapse has moved focus and possibly altered viewpoint on working capital management as a technique to increase firm profitability (Wang et al., 2021). Decisions on working capital management methods are among the most significant and difficult responsibilities for corporate executives in today’s complicated and changing economic world, as they can play a critical part in improving a company’s financial status during a crisis (Sensini & Vazquez, 2021). This is especially relevant during the important COVID-19 phase. Because even little errors in working capital management can result in a company losing cash, this component of financial management demands special attention during times of crisis (Byrnes et al., 2022). Jordan, which is a part of this planet, announced the first case of COVID-19 on 3 March 2020. Jordan’s government, like other countries, has utilized a variety of measures to cope with the pandemic and slow its spread. Jordan’s economy is modest; hence the COVID-19 epidemic had a significant impact. The World Bank reports a sharp increase in the rate of unemployment rapidly to 24.7 percent in the fourth quarter of 2020, with young people accounting for 50 percent of the unemployed. Jordan’s economy has declined by 1.5 percent by the third quarter of 2020, owing primarily to losses in the travel and tourism sectors. At the outset of the pandemic, Jordan’s primary and sole financial market, ASE, was also closed down. By the end of 2020, the market value had fallen by more than 33%. (ASE 2020 Report) Furthermore, Jordanian banks have a high level of sovereignty, which implies they place a great value on the quality of their assets. The current crisis will put pressure on government expenditure and may make it more difficult for money to go from one area to another. The advantages of becoming an oil tanker are dependent on the price of oil reducing more than the negative impacts of the epidemic, such as lowering foreign interest and lower settlements, which are easily transferable to Gulf Cooperation Council (GCC) countries and the eurozone. Jordan’s landlord has little space for speculation because full-fledged obligations and inadequate state finances make predicting what will happen next difficult. We do, however, accept outside assistance from the local community, which benefits many different organizations and partners throughout the world who continue to support Jordan’s macroeconomic determination. This includes, for example, the recent \$1.3 billion IMF agreement and sustained financial help from the US, EU, and GCC countries. Taking into account the pertinent considerations raised, the purpose of this research is to examine the impact of the covid-19 epidemic on working capital management for Jordanian enterprises listed on the Amman stock exchange.

2. Literature review

2.1. Working capital management

Results from many researches on the optimal level of working capital are conflicting. According to some studies, a big positive net working capital diminishes a company's financial liquidity because it delivers additional financial costs that increase a company's insolvency risk (Alvarez et al., 2021; Haralayya, 2021). However, some researchers believe that a significant quantity of working capital is an indicative of a financially solid organization (Abdulnafia et al., 2022; Achim et al., 2021; Ibrahim & Isiaka, 2021). During a crisis, all businesses' liquidity management practices will be affected (Eke & Ringin, 2022), but those with less financial capabilities will experience the repercussions more strongly since financial institutions are less likely to lend to them (Pérez-Rivera, 2022). Banks have dramatically limited the quantity of loans they are ready to provide as a result of the financial crisis (Chen et al., 2022; Zubair et al., 2020). This is because the lack of clarity and the unpredictable character of emerging markets inhibit investment and new company endeavors, according to Shahzad et al. (2022). Investing during times of economic insecurity can be profitable despite the higher risk due to the increased number of investment possibilities available. Capturing a larger share of the market can increase business earnings. The unwillingness of financial institutions to offer loans to firms during the crisis appears to be the primary driver of the steep reduction in business investment witnessed at the time. When the cost of capital rises, it has an impact on planned projects by lowering their net present value and making future cash flows of plans and innovations more difficult to estimate (Dobrowolski & Drozdowski, 2022). Companies with limited financial resources can considerably benefit from diligent working capital management, and these tactics also work well for developing enterprises investing in economic recovery (Khidirov, 2021). Consequently, managers should adopt efficient working capital practices to avoid financial problems during times of crisis. Generally, the WCM approach can be divided into three categories: extreme, moderate, and safe (De Andrade et al., 2021; Ciccarelli et al., 2022; Zhao et al., 2022). An aggressive strategy is connected with a higher risk and a higher return, whereas a more conservative strategy is associated with a lower risk and a lower return (Safi et al., 2022). Compared to a more conservative approach, an aggressive one has a far higher ratio of receivables and liabilities to stock, inventory, and short-term investments (Sibindi & Mandipa, 2022; Zimon et al., 2021). The conservative policy, on the other hand, seeks to remove any risk of consumer insolvency (Walter & Krenchel, 2021). The conservative strategy emphasizes reducing customer receivables, maintaining high inventory levels, and timely loan repayment (Huan & Huy, 2020). Last but not least, the moderate strategy attempts to balance the advantages and disadvantages of the conservative and aggressive approaches. There are two types of moderate approaches: one that is moderately aggressive and one that is moderately conservative (Zimon, 2021; Zimon & Zimon, 2020). As enough liquidity may be the key to a company's long-term financial performance, the moderate-conservative strategy is based on conservative strategy concepts, whereas the moderate-aggressive approach is based on aggressive strategy principles (Miano, 2020). The WCM plan a company creates will have a significant impact on the minimum amount of cash it will need. There is no telling when difficulties like financial crises will appear in today's corporate sector. Since the business environment is always changing, it is critical for companies to have adequate cash on hand to weather any storms.

3. Prior studies

Scholars are deeply concerned about the causes and spread of the coronavirus epidemic. Giuliani et al. (2020) and Nelson et al. (2020) discussed its relationship to pollution. Ali et al. (2021) studied the link between coronavirus transmission and air pollution. The ANN results show that COVID-19 can change the inflammatory regulation of the respiratory system, rendering it more susceptible to infection. These findings show that COVID-19 can be induced to increase resistance to infection in the respiratory tract by a predisposed condition of contamination, such as that prevalent in economically developed countries. Financial specialists and academics are at odds about how to interpret investor behavior and stock price swings in the financial markets. Two opposing hypotheses dominate the field. Fama and French's efficient market hypothesis (EMH) is the oldest and

most established financial theory (Abdullahi, 2021). According to the Efficient Markets Hypothesis (EMH), stock prices respond quickly to new information, vary randomly, and investors are rational and not swayed by bias. Despite much earlier research, the second finance theory, known as behavioral finance, questions this premise. For example, Silassie et al. (2021) set the framework for what is now known as behavioral finance theory. They focused on obnoxious traders who constantly exhibit the same pattern of behavior. Škrinjaric (2018), Mahfouz (2021), among others, have demonstrated that investors frequently replicate the activities of people around them, a phenomenon known as “herding.” The three behavioral models proposed by Mushinada and Veluri (2018), Subrahmanyam (2018), and Fong rely on market reaction, overstatement, pessimism, optimism, and consciousness distortion (2021). These models show that investors make illogical decisions due to the influence of psychological variables, resulting in anomalous pricing distortions. According to Talwar et al. (2021), the three most significant psychological biases that influence investor decisions are self-deception, heuristic simplification, and emotional loss of control. According to Hong and Ryu (2021), during a downward market trend, investors’ pessimism rises, causing a temporary reversal in their behavioral tendencies. According to Zi-Long et al. (2021), investor mood volatility can have a direct impact on asset prices and predicted returns. We investigated the impact of investor attitude on the Amman Stock Exchange (ASE) during the COVID-19 epidemic, not just at the level of the general market index, but also at the level of sector sub-indices and Jordanian enterprises, using insights from behavioral finance theory. The World Health Organization (WHO) discovered the first case of COVID-19 on 31 December 2019, in the Chinese city of Wuhan. According to Sadiq et al. (2021), the disease quickly spread over the world, infecting millions of people in over 200 countries. The ramifications of COVID-19 were expected to pose a frightening and unprecedented threat to investors and stock markets. According to Ferragina and Iandolo (2022), enterprises with significant debt, insufficient liquidity, and a small size are raising concern among analysts and investors. Stock market indices around the world fell as investors felt the terror brought on by the Corona epidemic. Takyi and Bentum-Ennin (2021), for example, employed an event research approach to show that COVID-19 cases had a significant and unfavorable impact on short-term stock market returns at the level of 21 important stock market indices. They found that Asian countries had higher levels of negative anomalous returns and responded to the outbreak faster than other industrialized countries. Rocha (2022) discovered that the Vietnamese stock market had the greatest impact on the financial sector, indicating that this was a worldwide phenomenon. Liu et al. (2022), on the other hand, discovered that the companies most impacted in Chinese stock markets are those in industries sensitive to the COVID-19 epidemic and those with strong institutional investors. Similarly, Ashraf et al. (2022) examined the effects of COVID-19 across Chinese industries and discovered that it had a bigger influence on mining, transportation, environment, energy, and heating than on information technology, healthcare, education, and manufacturing. According to (Sumathy & Das, 2021), the market and average abnormal return in India reacted favorably during the present lockdown period, while investors reacted positively to the expected lockdown. However, investors panicked during the pre-lockdown period, which harmed the average abnormal return. The preceding assessment shows that there are considerable gaps in the current literature. Despite the accessibility of data from underdeveloped countries, relatively little research has examined the influence in growing rising economies such as Jordan’s. Most previous study looked at the impact of COVID-19 at the level of key indices, such as (Bollyky et al., 2022; Fraser et al., 2022), or at the level of industries and enterprises, such as (Scarpin et al., 2022; Wang & Liu, 2022), but none of these studies looked at the impact of COVID-19 at the sector level. Furthermore, none of the preceding studies investigated how the financial features of firms might affect their resistance to this epidemic. Consequently, the purpose of this study is to examine how the COVID-19 outbreak has influenced the working capital management of Jordanian companies listed on the Amman Stock Exchange.

4. Research methodology

A total of 101 financial sector companies were studied from 2012 to 2021. Because of the heightened likelihood of insolvency among Jordanian financial organizations during the recent financial crisis, it

was decided to focus on the banking industry. Researchers in this field may find it useful to investigate the consequences of various working capital management policies. The ten years from 2012 to 2021 constitute the pre-COVID-19 era in our analysis, while the COVID-19 pandemic is characterized as occurring between March and June 2020. There is a scarcity of data for the entire year of 2020. It is difficult to extract data from financial statements since most financial organizations issue only partial financial statements and many of their financial reports are not obtainable for further analysis. As a result, it appears that the Jordanian market makes it slightly more difficult and time consuming to obtain data on company financial statements than other markets. People were unable to directly ask firms for more information due to the global distribution of the COVID; as a result, we acquired data for 2021 by analyzing published data for internal control reports (COVID-19 pandemic period). Crucial accounting metrics for working capital management strategy were included in this study which are; Quick ratio (QR), Financial liquidity (FL), short-term liability turnover ratio (SLTR), short-term receivables turnover ratio (SRTR), cash conversion cycle (CCC) and inventory turnover ratio (ITR; Zimon & Tarighi, 2021). In addition, the Covid-19 Pandemic in this study was used as dummy variable. This study used 0 when there is no covid-19 Pandemic and 1 otherwise. Furthermore, this study added GDP, firm size, and inflation as other control variables (Buthiena et al., 2022).

5. Panel regression model

Panel data are a mix of cross-sectional units (such as states, countries, corporations, families, individuals, and so on) and time series (e.g., years, quarters, months, weeks, etc.). Each cross-sectional unit repeats itself across time, and each period repeats itself across cross-sectional units. We get a larger data set by combining time series and cross-sectional data. The study allows for comparisons across sectors as well as across all sectors combined. As a result, the current study looked at how the COVID-19 outbreak has influenced the working capital management of Jordanian companies listed on the Amman Stock Exchange. Because it was discovered to be appropriate for the data analysis, a Multiple Regression technique was used as the analysis tool. A multiple regression equation is then created to evaluate the hypothesized links between the dependent and independent variables. The following equations are taken into account:

$$WCM_{it} = \beta_0 + \beta_1 Covid19_{it} + \beta_2 GDP_{it} + \beta_3 INF_{it} + \beta_4 FS_{it} + \varepsilon_{it}$$

$$CCC_{it} = \beta_0 + \beta_1 Covid19_{it} + \beta_2 GDP_{it} + \beta_3 INF_{it} + \beta_4 FS_{it} + \varepsilon_{it} \quad ModelI$$

$$QR_{it} = \beta_0 + \beta_1 Covid19_{it} + \beta_2 GDP_{it} + \beta_3 INF_{it} + \beta_4 FS_{it} + \varepsilon_{it} \quad ModelII$$

$$ITR_{it} = \beta_0 + \beta_1 Covid19_{it} + \beta_2 GDP_{it} + \beta_3 INF_{it} + \beta_4 FS_{it} + \varepsilon_{it} \quad ModelIII$$

$$SLTR_{it} = \beta_0 + \beta_1 Covid19_{it} + \beta_2 GDP_{it} + \beta_3 INF_{it} + \beta_4 FS_{it} + \varepsilon_{it} \quad ModelIV$$

$$SRTR_{it} = \beta_0 + \beta_1 Covid19_{it} + \beta_2 GDP_{it} + \beta_3 INF_{it} + \beta_4 FS_{it} + \varepsilon_{it} \quad ModelV$$

$$FL_{it} = \beta_0 + \beta_1 Covid19_{it} + \beta_2 GDP_{it} + \beta_3 INF_{it} + \beta_4 FS_{it} + \varepsilon_{it} \quad ModelVI$$

Table 1. Descriptive statistics

Variables	Mean	Median	Maximum	Minimum
CCC	0.202473	0.175495	0.905635	0.000205
SRTR	0.624635	0.654009	1.115048	0.043131
SLTR	0.75655	0.557492	3.592888	0.034622
FL	0.301628	0.252193	0.921051	0.007107
ITR	0.013793	0.014211	0.411456	0.27588
QR	0.151439	0.12159	0.520821	1.86E-05
Covid-19	0.285714	0.0000	1.00000	0.0000
FS	17.49615	17.12211	21.27039	15.21337
GDP	0.026905	0.024294	0.072323	0.01551
INFL	0.03251	0.033239	0.139712	-0.00877

6. Findings

6.1. Descriptive statistics

Descriptive statistics are used to summarize and quantify the characteristics of a dataset. The table below contains descriptive statistics such as minimum, maximum, mean, and median that can be used to interpret the data. In fact, descriptive statistics are provided in Table 1 comparing the time period prior to COVID-19 to the time period of the COVID-19 pandemic. Based on the data in Table 1, it showed that the financial companies in ASE, which play a large role in the Jordanian market's evolution, have, in general, chosen a moderate-conservative approach in terms of working capital management from 2012 to 2021, notwithstanding the COVID-19 pandemic crisis. The large numbers obtained for the FL, QR, and CCC ratios suggested that these enterprises were financially stable. Furthermore, the collection period for receivables is shorter than the turnover period for liabilities, and the turnover period for inventory is shorter than the collection period for receivables, all of which indicate to the possibility of such enterprises employing a moderate to conservative policy. However, it is important to realize that the moderate-conservative approach includes limitations, such as high costs and inefficient current asset management. However, following the COVID crisis, firms adopted a more moderate-to-aggressive approach, with inventory accounting for a higher portion of their receivables declining in importance. Businesses were also less financially secure during the COVID-19 outbreak as a result of the crisis, as the FL, QR, and CCC ratios all declined relative to their pre-crisis norms. In keeping with the aggressive strategy, businesses raised their receivables turnover in order to win over more market clients, while deferring debt payments to suppliers wherever possible. However, the correlation coefficient of the variables also presented in Table 2. It observed that all the coefficients are less than 0.8, which signifying less multicollinear problems. Yoshikawa and Phan (2003) mentioned that the model had no issues with multicollinearity, which generally requires 80% or more to confirmed that the correlations between variables exist. Hence, the correlation analysis displays that multicollinearity is not a problem.

7. Diagnostic tests

This section focused on the diagnostic analysis of the significant variable's aspects in this study. Diagnostic analyses are useful because they provide empirical data regarding the research. It begins with a discussion of the normalcy test, then moves on to the heteroskedasticity test, the serial correlation test, and lastly the multicollinearity test. As a result, the diagnostic analyses are explained in detail in the following sub-sections. Table 3 displayed the Heteroskedasticity test findings for the six models based on the indicator of working capital management. Furthermore, the results showed that the probability values were smaller than the 1% and 5% significance levels. It implied that the model lacked heteroscedasticity. Moreover, the results do not reject the null hypothesis, which states that the model has no heteroscedasticity problem. Also, it

Table 2. Correlation analysis

	CCC	QR	ITR	SLTR	SRTR	FL	COVID_19	FSIZE	GDP	INF
CCC	1.0000									
QR	0.0666 (0.2665)	1.0000								
ITR	-0.2368* (0.0001)	-0.2600* (0.0000)	1.0000							
SLTR	-0.1631** (0.0062)	-0.1406** (0.0185)	-0.1411** (0.0181)	1.0000						
SRTR	-0.2781* (0.0000)	-0.3491* (0.0000)	0.4065* (0.0000)	-0.0035 (0.9533)	1.0000					
FL	0.5676* (0.0000)	0.3893* (0.0000)	-0.3190 (0.0000)	0.0109 (0.8554)	-0.3875* (0.0000)	1.0000				
COVID_19	-0.0301 (0.6151)	-0.0152 (0.7996)	0.1152 (0.0540)	-0.0312 (0.6029)	0.0041 (0.9443)	-0.0641 (0.2846)	1.0000			
FSIZE	-0.2406* (0.0000)	-0.2370* (0.0001)	0.2343* (0.0001)	0.3399 (0.0000)	0.3363* (0.0000)	-0.1860** (0.0018)	-0.0019 (0.9736)	1.0000 ---		
GDP	-0.0347 (0.5621)	-0.0233 (0.6977)	0.1416** (0.0177)	0.0205 (0.7318)	0.1524** (0.0106)	-0.0469 (0.4343)	-0.0056 (0.9249)	-0.0112 (0.8510)	1.0000	
INF	-0.0173 (0.7732)	0.0086 (0.8854)	0.0438 (0.4648)	0.0340 (0.5700)	0.1068 (0.0743)	-0.0155 (0.7959)	-0.0044 (0.9415)	-0.0167 (0.7802)	0.5875* (0.0000)	1.0000

Table 3. Heteroskedasticity Test: Breusch-Pagan-Godfrey

Model I: CCC as Dependent Variable	F-statist	0.5824	Prob.	0.6756
Model II: QR as Dependent Variable	F-statist	0.7421	Prob.	0.5640
Model III: ITR as Dependent Variable	F-statist	0.2227	Prob.	0.3014
Model IV: SLTR as Dependent Variable	F-statist	0.7954	Prob.	0.5876
Model V: SRTR as Dependent Variable	F-statist	0.4853	Prob.	0.7712
Model VI: FL as Dependent Variable	F-statist	0.5336	Prob.	0.7111

Table 4. Breusch-godfrey serial correlation LM test

Model I: CCC as Dependent Variable	F-statist	0.2772	Prob.	0.1887
Model II: QR as Dependent Variable	F-statist	0.8879	Prob.	0.6984
Model III: ITR as Dependent Variable	F-statist	0.4521	Prob.	0.2078
Model IV: SLTR as Dependent Variable	F-statist	0.7104	Prob.	0.5007
Model V: SRTR as Dependent Variable	F-statist	0.4147	Prob.	0.3878
Model VI: FL as Dependent Variable	F-statist	0.6991	Prob.	0.4761

demonstrated that the models are free of heteroscedasticity. Furthermore, Table 4 showed the serial correlation analysis used in different Phases evaluated. This research used a 5% significance level for the Breusch-Godfrey test as a marker for the presence of serial correlations in the models under consideration. As a result, the results demonstrated that there was no serial correlation between the models investigated in this study. The VIF statistics were shown in Table 5. VIF readings are quite low, with a mean VIF of 1.05. This indicates that there is no multicollinearity among the variables because, as a matter of thumb, the presence of multicollinearity is ignored when the VIF value is less than 5. Furthermore, as shown in Table 2, the findings of the pairwise correlation indicated that multicollinearity is not important in the study because the values of pairwise correlation for all variables are less than 80%. The Hausman test is used to select the best model from the two-panel data models. Table 6 displays the results of the Hausman test. The Hausman test rejects the fixed effect model in favor of the random effect model as a working capital management indicator.

8. Random effect results

The result of the regression analyses as shown in Table 7 showed regression path coefficient (beta) for the effects of Covid-19 Pandemic crisis on Working Capital Management in Jordanian companies. The results showed that Covid-19 Pandemic crisis have a significant negative effect on the Working Capital Management for all the models.

Table 5. Collinearity Statistics (VIF)

	Uncentered	Cantered
Variable	VIF	VIF
QR	3.058936	1.303930
ITR	1.392907	1.366521
SLTR	3.665571	1.238399
SRTR	3.704788	1.481542
LF	3.983278	1.327160
COVID_19	1.426281	1.018772
FSIZE	2.119523	1.362055
GDP	4.735879	1.573852
INF	2.650665	1.536913

Table 6. Hausman Test

Model I: CCC as Dependent Variable	Chi-Sq. Statistic	1.8455	Prob.	0.7641
Model II: QR as Dependent Variable	Chi-Sq. Statistic	2.1760	Prob.	0.8641
Model III: ITR as Dependent Variable	Chi-Sq. Statistic	0.1118	Prob.	0.9985
Model IV: SLTR as Dependent Variable	Chi-Sq. Statistic	0.6512	Prob.	1.7892
Model V: SRTR as Dependent Variable	Chi-Sq. Statistic	0.5431	Prob.	2.4312
Model VI: FL as Dependent Variable	Chi-Sq. Statistic	1.8815	Prob.	0.7575

Table 7. Random Effect Regression Analysis Results

Variables	MODEL I	MODEL 11	MODEL III	MODEL IV	MODEL V	MODEL VI
COVID-19	−0.1031** (0.0182)	−0.4459* (0.0000)	−0.2561* (0.0000)	−0.1857* (0.0000)	−0.7507* (0.0000)	−0.3047 (0.0000)
FSIZE	0.1658* (0.0000)	0.1156* (0.0000)	0.0179** (0.0024)	0.0653* (0.0000)	0.1340* (0.00000)	−0.0138 (0.2736)
GDP	0.2704* (0.0002)	0.1823* (0.0000)	0.6563* (0.0007)	−0.1549* (0.0000)	0.3074** (0.0274)	0.5258* (0.0000)
INF	−0.0958 (0.9639)	0.1407** (0.0023)	−0.1498 (0.2850)	0.1380* (0.0000)	0.5957 (0.1679)	0.0429 (0.8800)
C	0.5031** (0.0018)	0.3353* (0.0004)	−0.3291** (0.0017)	−0.5129* (0.0000)	−0.1704** (0.0026)	0.5639** (0.0114)
R-Square	0.4642	0.3306	0.5410	0.7451	0.4400	0.4972
Adj R-Square	0.4111	0.2783	0.4176	0.6105	0.3807	0.4529

9. Discussion

Maintaining adequate financial liquidity is critical for the success of all sorts of organizations, but it can be difficult due to the interaction between a company's current assets, short-term obligations. Liquidity can be measured by comparing a company's available cash and short-term assets to its short-term debts. The current ratio and the quick ratio are two components of the liquidity ratio (Rudianto, 2022). One sign of liquidity is a company's ability to pay its bills. The complexity of

establishing the appropriate liquidity management strategy, particularly during times of financial crisis, is partly due to the intricate nature of the relationship between profitability and liquidity. As a result, the fundamental goal of this paper is to determine if the COVID-19 financial crisis prompted significant changes in the liquidity policies of banking organizations. According to the research, financial liquidity is a dependent variable in the regression model (Puławska, 2021). In order to investigate the impact of the independent variable that COVID-19 processes, we create a dummy variable. If this indicator variable is not related to the COVID-19 pandemic, it has a value of one during the pandemic and a value of zero before the crisis. COVID-19 has a substantial and negative influence on WCM rules, according to the findings. According to the statistics in Table 7, the COVID-19 financial crisis influenced how financial institutions operating inside the ASE in Jordan addressed the usage of liquidity (Tarkom, 2022). The fast ratio is also included in the liquidity area of finance. Current assets as a percentage of current liabilities. This ratio takes a more conservative approach to the company's short-term liquidity requirements, analyzing it solely in terms of its more liquid assets. Our second study model seeks to ascertain whether the COVID-19 global crisis has had an impact on the quick ratio as a working capital management policy. Another research suggests that the COVID-19 pandemic has a significant impact on the fast ratio, implying that management teams are cautious and have a strategy in place even before the crisis occurs. Liquidity management can be more difficult for managers to keep at an optimal level because it includes the management of short-term obligations, inventory, short-term receivables, and cash. Firms that take a conservative approach often limit the turnover of receivables while increasing the turnover of liabilities to increase financial liquidity and improve market responsiveness during volatile economic periods. Furthermore, the number of days it takes to sell off a complete inventory is an important ratio that may be used to investigate different approaches to cash flow management. Inventory increases financial liquidity ratios when security reserves are produced (Struwig & Watson, 2021). The COVID-19 global financial crisis has also had a significant influence on the turnover ratio of short-term receivables. This suggested that such enterprises faced a considerable risk of liquidity shortfall during COVID-19, possibly due to management's earlier assessment of insufficient cash reserves for their businesses. In the earlier model, the COVID-19 crisis significantly boosted the rate at which enterprises collected receivables from customers. This study validated the position of ASE borrowers as a group by indicating an increase in the dates of liability payback to suppliers. As a proxy for the liquidity risk associated with a given expansion strategy, the CCC has found widespread application in the academic literature as a comprehensive indicator of effective working capital management (Habib & Kayani, 2022; Pandiangan & Sihombing, 2022; Tarkom, 2022). The CCC calculated how long a company will be cash-strapped if it invests in inventory to increase consumer sales. Working capital use efficiency is directly tied to financial performance; thus, a low CCC indicates effective operations (Sibindi & Mandipa, 2022). Despite the fact that the CCC has a negative association with profitability, managers must balance the two while managing working capital. As a result, the next research model will examine whether the COVID-19 global crisis has had any discernible impact on Jordanian financial institutions' CCC strategy. According to the data in the table above, the current global disaster caused by the COVID-19 outbreak is significantly tied to CCC. Given the severity of the COVID-19 crisis' variable coefficient, there is ample evidence to suggest that, in the event of the virus's existence, financial institutions partially abbreviate CCC in order to increase their liquidity level and be more flexible.

10. Conclusion

The purpose of this research is to evaluate the influence of daily aggregated substantiated COVID-19 cases on working capital management in the ASE main market index, i.e. the financial sector. Furthermore, using annual panel data analysis from 2012–2021, this study attempts to investigate the impact of COVID-19 pandemic on financial sector working capital management. This study employed many WCM indicators (QR, FL, SLTR, SRTR, CCC and ITR). Working capital optimization typically requires settling for either higher liquidity or increased profitability (Deloof, 2003; Zimon & Zimon, 2020). Several international studies Ardolino et al. (2022), Rahmah and Novianty (2021), and Santos and Caiado (2022) in a variety of industries, including the restaurant and automotive

sectors, demonstrate that Covid-19 Pandemic has significant negative effect on working capital management. Businesses attempted to utilize a somewhat cautious working capital management strategy throughout the epidemic, as evidenced by these signs. A high CCC and low results of receivables turnover in days relative to liabilities turnover ratios in days reflect the application of a conservative strategy. Previous research on the relationship between working capital management, financial liquidity, and profitability discovered that having more working capital was associated with worse profitability (Baños-Caballero et al., 2014; Enqvist et al., 2014; Zimon, 2020a). Larger firms perform best in terms of financial stability (Zimon & Tarighi, 2021). This is because in highly populated areas, such businesses can generate a great deal of revenue and make substantial profits. Further, the absence of data and the short time frame of the investigation into the COVID-19 pandemic are two important problems with the study. Every study on the epidemic has this weakness. In the future, it will be possible to evaluate and analyze whether the authors made the accurate evaluation based on comprehensive financial data from succeeding years of the epidemic.

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