asian academic accounting association

Available online at
www.foura.org

ASIAN ACADEMIC ACCOUNTING ASSOCIATION
20th annual conference
26-28 NOVEMBER 2023. KHON KAEN, THAILAND

The Financial Impact of COVID-19 on South African Companies: An Industry Perspective

K.E. Maponya, L.E. Derbyshire, D.P. Schutte*

North-West University, South Africa

Abstract

COVID-19 is not just a health crisis but affects every economic sector worldwide. To analyse the impact of COVID-19 on the financial performance of the top 40 JSE-listed companies in South Africa to determine the industries most negatively impacted by COVID-19. There is limited evidence-based research on the impact of COVID-19 on the financial performance of JSE-listed companies using performance measures other than the share price. This study used a mixed-method research approach. A content analysis was performed on the quantitative and qualitative information extracted from the annual financial reports of the top 40 JSE-listed companies. Results revealed that the telecommunications, industrials and consumer goods industries reported the worst deterioration in their financial ratios. The results reported by the telecommunications industry were startling because it was anticipated that this industry would benefit from the pandemic given the increase in demand for network services during the pandemic. This study focused on determining which industry was the most negatively impacted by COVID-19 using empirical research. The results will inform government and policymakers regarding which industries require more financial and other support on their road to recovery post-COVID-19 since the South African government's support is to be based on equity and inclusive growth which is concerned with allocating resources and opportunities among different groups with different circumstances to reach an equal outcome for all.

Keywords: COVID-19; pandemic; financial performance; JSE-listed; industry

1. INTRODUCTION

COVID-19, lockdown and social distancing are some of the terms that we have become accustomed to and are forming part of our daily vocabulary worldwide. Since the outbreak of COVID-19 in December 2019, its impact has been witnessed to be beyond mortality and morbidity (McKibbin & Fernando, 2020). The outbreak rapidly changed from being a health emergency into an economic crisis because of the measures taken to contain the virus. These measures include the mandatory closure of non-essential businesses, lockdown regulations and travel bans being implemented by numerous countries around the world, resulting in the disruption of economic activities (Chen & Yeh, 2021). This disruption was further confirmed by evidence from the global stock (or share) markets, where the pandemic caused the markets to fall sharply because investors were faced with uncertainty regarding the uncertain economic effects brought about by COVID-19 (Açikgöz & Günay, 2020). It became clear that a solution was necessary to address the economic crisis.

According to a study by Phan and Narayan (2020), many countries across the globe supplied stimulus packages to cushion the slowdown in economic activity brought about by the pandemic. Other relief measures implemented by governments worldwide include providing support packages to citizens and businesses in the form of tax relief and rent reductions (Açikgöz & Günay, 2020). The International Monetary Fund (IMF) made available one trillion U.S. dollars of its lending capacity to assist countries in distress and committed to replenishing the Catastrophe Containment and Relief Trust to help developing countries (IMF, 2020a). The IMF's attention on developing countries is because of globalisation where developing countries depend on developed countries. Therefore, there was an expectation that there would be spillover effects of the economic crisis on emerging and developing

*Corresponding author.
E-mail: danie.schutte@nwu.ac.za

countries (Ozili, 2020). This expectation was confirmed by a study by Açikgöz & Günay (2020), where it was seen that emerging economies' net portfolio flows and the value of their currencies against the dollar saw a significant drop since the start of 2020.

The purpose of this study is to analyse the impact of the COVID-19 pandemic on the financial performance of companies within a developing country context by making an industry comparison regarding which industries were impacted the most by the pandemic. This was done through the exploration of the phenomena within a South African JSE-listed company context. South Africa is considered to be an intermediate power in international affairs and it maintains significant regional influence on the African continent (Ogunnubi & Amao, 2016). This industry comparison could prove valuable, since it provides evidence-based research to governments and policymakers in terms of which industries were affected more than others to provide guidelines as to which industries require more financial and other support on their road to recovery post-COVID-19. Due to limited resources, the industries the pandemic most negatively impacts should receive priority when resources and other support measures are allocated to assist with the recovery plan for those companies in distress.

2. LITERATURE REVIEW

2.1. The South African economy

South Africa was not spared from this economic crisis, as evidenced by projections by the IMF, where it was projected that the South African economy was expected to decrease by 8% in 2020 (IMF, 2020b). The closure of many businesses in South Africa resulted in an increase in the unemployment rate from 38% to 57% for people who are conventionally classified as unemployed, between March and April of 2020 (Ranchod & Daniels, 2020). The response of the South African Government to address the challenges resulting from COVID-19 was the announcement of the support and economic relief fund of R500billion on 21 April 2020 (De Villiers *et al*., 2020), in the form of tax relief, credit guarantees, and direct financial support (Bhorat *et al.*, 2020). The South African Government further announced an economic reconstruction and recovery plan, the purpose of which is to stimulate equitable and inclusive growth (National Government, 2020), which is concerned with allocating resources and opportunities among different groups with different circumstances to reach an equal outcome for all (namely based on equity).

It was expected that different industries would respond differently to the effects of the COVID-19 pandemic. The industries expected to be least affected by the pandemic are business sectors that benefit from social restrictions, such as the telecommunications industry. This is because many people were expected to work from home, demanding network services, online shopping and utilising web-based entertainment (Seetharaman, 2020). Similarly, the health sector, due to the expected increase in demand for healthcare, masks, hand sanitisers and other related products, was expected to see benefits from this pandemic (Devi *et al.,* 2020). The entertainment industry (other than web-based entertainment) and tourism-based industries, such as hotels, were estimated to be severely affected due to their closure and travel restrictions (Rababah *et al*., 2020:163). The next section outlines the analytical framework, which includes what this study operationalises as financial performance as well as key financial metrics to be employed to measure financial performance.

2.2. Analytical framework

Operationalising financial performance metrics
A company's financial performance is the way in which one can measure how effectively a company has utilised its assets to generate profit (Peters & Bagshaw, 2014; Schutte & Buys, 2011). Empirical studies have primarily employed market-based and accounting-based measures to determine the financial performance of companies (Wasara & Ganda, 2019). Market-based measures include Tobin's Q and the Sharpe ratios, while accounting-based measures include financial ratios (Wasara & Ganda, 2019). Financial performance analysis in the form of ratio analysis provides a holistic perspective of the company's performance (Gunay & Ecer, 2020) and was adopted for this study as a financial performance metric.

Key financial performance metrics
The adoption of ratio analysis as a financial performance metric implies that there is a wide range of financial ratios to consider, some of which may not be relevant key financial ratios to be used as a financial performance metric for this study. Devi *et al.* (2020) analysed the impact of the COVID-19 pandemic on the financial performance of companies listed on the Indonesian Stock Exchange. The key ratios used in that study were the liquidity ratio (current ratio), solvency ratio (debt-equity ratio), return on assets and return on equity ratio. The study found that the profitability and activity ratios differed significantly before and during the pandemic for listed

companies (Devi *et al.,* 2020). The study also noted that some sectors (property, real estate, construction, finance and investment) saw a deterioration in the liquidity and profitability ratios, while other sectors (consumer goods) saw an improvement in the liquidity and profitability ratios.

In another study by Nguyen (2022), the effect of the COVID-19 pandemic on the financial performance of logistics companies listed on the Vietnam Stock Exchange was conducted. That study used the current ratio, debt-equity ratio, return on assets, return on equity and return on sales ratios as financial performance metrics. The study found that the financial performance of the logistics companies listed on the Vietnam Stock Exchange has not improved. The return on assets, leverage and the receivable turnover ratios decreased, attributed to the disruption in the supply chain, where export activity and international transportation were negatively impacted (Nguyen, 2022).

The importance of cash flow during a crisis was emphasised in a study conducted by Song *et al.* (2021), where the impact of COVID-19 on the restaurant industry in the United States was conducted. The study noted that the cashflow of a company is a good predictor of the company's ability to react to COVID-19 and may be an indication that the company has the capacity to endure the shock (Song *et al.,* 2021:4). The results from the study showed that companies with more cash are likely to tolerate the COVID-19 pandemic period by funding themselves (Song *et al.,* 2021:6). In a study by Gunay and Ecer (2020), it was found that the inclusion of cashflow-based ratios with traditional ratios provides an accurate picture of the financial performance and position of a company. Cashflow ratios are also used to assess ongoing company strength (Deo, 2016).

Based on the literature review conducted on similar studies, the current ratio, debt-equity ratio, return on assets, return on equity and cashflow ratios seemed appropriate for this study and were adopted to measure financial performance. The next section outlines the methodology applied to conduct this study.

3. METHODOLOGY

3.1. Research design

The research design for this study is a mixed-method research design. According to Johnson *et al*. (2007), mixed-method research is defined as a type of research whereby the researcher uses a combination of qualitative and quantitative research methods, techniques, concepts or languages in conducting the research. This study used financial ratio computations and analysis as a quantitative research method. The interpretation of the ratios as well as the content analysis of annual reports, constitute qualitative procedures in data collection and analysis.

3.2. Financial ratios

This study employed accounting-based measures (ratio analysis) as a financial performance metric because of the credibility and reliability of data emanating from audited financial statements, and market forces do not affect accounting-based measures.

The selection of the appropriate ratios to use for this study was based on literature, where similar studies were identified through literature (Deo, 2016; Devi *et al.,* 2020; Mirza *et al.,* 2020; Nguyen, 2022; Song *et al*., 2021). Table 1 provides a summary of the financial ratios that were used as metrics to measure the financial performance of the top 40 JSE-listed companies for this study.

Table 1: Financial ratio formulae

Ratio	Measurement
Current	Current asset ÷ current liabilities
Debt-equity	Total debt ÷ total equity
Return on assets	Profit after tax ÷ total assets
Return on equity	Profit after tax ÷ total equity
Cash flow	Cash flows from operations ÷ total assets

Source: Correia, 2019

3.3. Population and sampling

The population for this study consisted of companies listed on the JSE. The JSE is divided into ten industries: financials, consumer services, oil and gas, industrials, basic materials, consumer goods, healthcare, telecommunications, technology and utilities (Listcorp, 2021). Although the sample contains only 40 out of an estimated 400 shares listed on the JSE, it is a representation of over 80% of the total market capitalisation of all

companies listed on the JSE (S.A. Shares, 2021).

3.4. Data collection

The study acknowledges that the top 40 JSE-listed companies have different financial year-ends, resulting in the COVID-19 pandemic affecting companies to varying degrees. For instance, lockdown measures were implemented on 26 March 2020, and therefore, a company with a February 2020 year-end would not have been affected by the COVID-19 pandemic, unlike a company with a March 2020 year-end (affected a few days), June 2020 year-end (affected three months), August 2020 year-end (affected five months), September 2020 year-end (affected six months) and a December 2020 year-end (affected nine months). To cater for this, the top 40 JSE-listed companies were grouped according to financial year-ends and were classified as either group A companies or group B companies. Group A companies are those companies that have a February or March financial year-end, and the year 2021 is their pandemic year, while group B companies are those companies that have a financial year-end other than February or March, and the year 2020 is their pandemic year. Information gathered on the top 40 JSE-listed companies indicated that 19 companies have a December year-end (representing four industries), 12 have a June year-end (representing five industries), six companies have a March year-end (representing five industries), and three companies have February, August and September year-ends (each representing one industry).

The annual financial statements for the last four years covering the one period of the pandemic (referred to as the pandemic year) and the preceding three years were collected and analysed. Three years' worth of financial information preceding the pandemic year was used to determine the average ratio results of the three years prior to the pandemic year to get an overall picture of the financial performance of the companies over the last three years before the pandemic. The resulting average was compared to the pandemic year to determine the change in the financial ratios. The four years' worth of available financial reports comprised the annual financial reports of the top 40 JSE-listed companies for the 2017, 2018, 2019, and 2020 financial year-ends (Group B), as well as the 2018, 2019, 2020 and 2021 financial year-ends (Group A).

3.5 Data analysis

Ratio analysis: Quantitative
Five financial ratios, as depicted in Table 1, were used for this study. The ratios were calculated by applying the formulas described in Table 1. The resultant 2020 (Group B) and 2021 (Group A) pandemic year ratios were compared to the average for Group A and Group B to establish how the ratios have changed for each of the top 40 JSE-listed companies.

Content analysis: Qualitative
Content analysis is a systematic method that categorises the content of the text (Steenkamp & Northcott, 2008). Content analysis involves coding quantitative and qualitative information into categories so that themes in presentation and information reporting may be derived (Peters & Bagshaw, 2014). The basic coding process can be defined as the organisation of large quantities of text into fewer content categories (Hsieh & Shannon, 2005). Categories are derived from the analysis of the patterns or themes in the text, after which relationships among categories are identified (Hsieh & Shannon, 2005).

The descriptive information contained in the annual financial statements was analysed. The use of the word COVID-19 was highlighted and allocated a number, for instance, COV1, COV2, COV3 and so forth. The highlighted COVID-19 text was summarised and put next to its related COV number and thereafter categorised into themes. For instance, any description or explanation that describes or explains how COVID-19 has affected a company's revenue was categorised under the profitability theme. Similarly, any explanation or description relating to how COVID-19 has affected the current liabilities, such as trade payables, was categorised under the liquidity theme. The categorised themes were matched to the financial ratios calculated to corroborate the change in the ratio that is attributed to COVID-19.

4. RESULTS AND DISCUSSION

The findings and discussion from this study are presented in two sections, as described in Table 2 below. Section 1 represents Group A companies, which were exposed to COVID-19 for 12 months, and section 2, which is Group B companies, which had been exposed to COVID-19 for less than 12 months.

Table 2: Layout of the section discussions

Section	Cohort	Description
Section 1.1	Group A	Findings and discussion for February year-end companies
Section 1.2	Group A	Findings and discussion for March year-end companies
Section 2.1	Group B	Findings and discussion for June year-end companies
Section 2.2	Group B	Findings and discussion for August year-end companies
Section 2.3	Group B	Findings and discussion for September year-end companies
Section 2.4	Group B	Findings and discussion for December year-end companies
Section 3	All	Summary of results from section 1.1 to section 2.4

Source: Self-constructed

Section 1.1: Companies with February year-end

There was only one company from the sample with a February year-end and this company trades in the financial industry. This company was exposed to COVID-19 for twelve months since the year 2021 is referred to as its pandemic year. Table 3 depicts the change in the financial ratios for C1 which is the only company from the sample with a February year-end. This company reported a deterioration in the return on assets and return on equity ratio (Table 3). The company also reported a deterioration in the current ratio as well as the debt-equity ratio. The cashflow ratio improved slightly (Table 3). The results from this study are consistent with the literature, where it was found that the pandemic put the banking system around the world under stress (Demirgüç-Kunt *et al*., 2021). In another study, by Devi *et al.*, (2020), it was found that the liquidity and profitability ratio decreased for the finance industry during the COVID-19 pandemic.

Table 3: Financial industry change in the financial ratios: February year-end

Company	Industry	Current ratio	Debt-equity ratio	Return on assets ratio	Return on equity ratio	Operating cashflow ratio
C1	Financials	-0.02	0.43	-2%	-8%	0.06

Source: Researcher's synthesis of field data

Section 1.2: Companies with March year-end

1.2.1 Results discussion

Table 4 depicts the change in the financial ratios for companies with a March year-end. There were six companies from the sample with a March year-end, representing five different industries (see Table 4). These companies were exposed to COVID-19 for twelve months since 2021 is their pandemic year. Table 5 groups companies in the same industry and depicts the average change in the ratio per industry.

Table 4: Change in the financial ratios for all the March year-end companies

Company	Industry	Current ratio	Debt-equity ratio	Return on assets ratio	Return on equity ratio	Operating cashflow ratio
C4	Telecommunications	-0.65	0.61	-5%	0%	0.16
C6	Consumer goods	-0.28	0.26	-2%	-3%	0.02
C2	Technology	-3.5	0.08	3%	4%	0.01
C7	Financials	0.13	0	28%	28%	0
C3	Technology	-2.93	-0.02	-7%	-9%	0
C5	Consumer services	-0.02	-1.33	7%	55%	0.08

Source: Researcher's synthesis of field data

Table 5: Average change in the ratio per industry: March year-end

Industry	Current ratio	Debt-equity ratio	Return on assets ratio	Return on equity ratio	Operating cashflow ratio
Financials	0.13	0	28%	28%	0
Telecommunications	-0.65	0.61	-5%	0%	0.16
Consumer goods	-0.28	0.26	-2%	-3%	0.02
Technology	-3.21	0.03	-2%	-2%	0
Consumer services	-0.02	-1.33	7%	55%	0.08

Source: Researcher's synthesis of field data

Technology industry

The results from the ratio analysis indicate that the technology industry reported a deterioration in the current ratio, debt-equity ratio, return on assets and return on equity ratios (see Table 5). The content analysis revealed that the current ratio for the companies deteriorated due to the significant impairments being recognised on the companies' short-term investments as well as inventory allowance calculations that considered the effects of COVID-19. The findings from this study support a study by Afridi *et al.* (2021), where the study found that lower customer buying behaviour brought about by the pandemic resulted in the lowering of inventory valuation due to

a lack of shipping and supply.

On average, the return on asset and return on equity ratio declined for these companies, which came as a surprise given the COVID-19 environment that resulted in an increase in demand for technology services. The content analysis performed revealed that there are only two companies trading within this industry, namely a subsidiary and its parent company. The subsidiary company reported an increase in the return on asset and return on equity ratio because the pandemic has accelerated activity in the consumer internet space, benefiting these companies. The results are consistent with what was found in a study by Urazbaeva *et al.* (2020), where the study found that the COVID-19 pandemic was a positive shock for companies in the information and communications technology (ICT) sector (Urazbaeva *et al.*, 2020). The consolidated results, however, are not consistent with what was anticipated for this industry.

Telecommunications industry
On average, the telecommunications industry reported a deterioration in the current ratio, debt-equity ratio and return on assets ratio (see Table 5). There was no change in the return to equity ratio, while an improvement was noted in the cashflow ratio (see Table 5). The content analysis performed revealed that the outbreak of COVID-19 significantly increased the demand for broadband at home, thereby resulting in an increase in sales volumes. The results from this study support what was anticipated from the literature review where the COVID-19 pandemic was a worthwhile shock for companies in the ICT sector (Urazbaeva *et al*., 2020). Although there was an increase in demand for technology services, the overall profitability declined for this company due to a prior year's once-off gain as well as the increase in COVID-19 related provisions. The deterioration in the debt-equity ratio is attributable to increases in borrowings to fund their capital projects, which are unrelated to COVID-19.

Financials industry
The financials industry reported an improvement in all the financial ratios under consideration (see Table 5). The company representing this industry is an investment company that specialises in acquiring holdings in listed and unlisted companies. Despite the COVID-19 pandemic, the company's portfolio companies have been able to operate and develop during 2020 following the same solid trajectories of 2018 and 2019.

Consumer goods industry
The consumer goods industry reported a deterioration in the current ratio, debt-to-equity ratio, return on assets and return on equity ratios (see Table 5). The content analysis performed revealed that due to the closure of logistics centres, points of sale, manufacturing sites, and the halt in international tourism resulting from the pandemic, sales contracted significantly, affecting the profitability and liquidity ratios. The company trading in this industry is a provider of prestigious jewellery. The results from this study are not consistent with what was found by Pang *et al.* (2021), where the sales of luxury products such as leather and jewellery were found to have increased significantly.

Consumer services industry
This industry reported a deterioration in the current ratio, while the solvency ratio, return on asset, return on equity and cashflow ratio reported an improvement (see Table 5). The company operating in this industry is a provider of entertainment and streaming services. The results from this study are consistent with what was found by Urazbaeva *et al*. (2020), where it was found that the pandemic presented great opportunities for companies in certain industries like online shopping, online communication and web-based entertainment. The deterioration in the current ratio is attributable to COVID-19, which has resulted in large, expected credit losses being recognised.

Table 6: Summary of industries with the worst change in the financial ratios: March year-end

Current ratio	Debt-equity ratio	Return on assets ratio	Return on equity ratio	Operating cashflow ratio
Technology	Telecommunications	Telecommunications	Consumer goods	Financials

Source: Researcher's synthesis of field data

1.2.2 Overall worst performing industry(s)
Table 6 depicts the industries reporting the worst deterioration in the financial ratios for March year-end companies. The telecommunications industry is the most negatively impacted by the COVID-19 pandemic for March year-end companies. This is because it is the industry that reported the most (two out of five) deterioration in the financial ratios under consideration (see Table 6). Although there was no industry that reported a deterioration in the cashflow ratio, the financials industry is listed as the one with the worst-performing cashflow ratio, because it reported the lowest increase in the operating cashflow ratio.

Section 2.1: Companies with June year-end

2.1.1 Results discussion

Table 7 depicts the change in the financial ratios for companies with a June year-end. There were 12 companies from the sample with a June year-end, representing five different industries (see Table 7). These companies were exposed to COVID-19 for three months since the year 2020 is their pandemic year. Table 8 groups companies in the same industry and depicts the average change in the ratio per industry.

Table 7: Change in the financial ratios for all the June year-end companies

Company	Industry	Current ratio	Debt-equity ratio	Return on assets ratio	Return on equity ratio	Operating cashflow ratio
C19	Industrials	-0.02	1.14	-7%	-15%	-0.04
C17	Healthcare	0.62	0.33	-7%	-8%	-0.03
C12	Basic materials	-0.47	1.19	-22%	-63%	-0.02
C11	Basic materials	-0.37	0	-7%	-10%	-0.02
C8	Basic materials	-0.64	0.12	2%	5%	-0.01
C9	Financials	0.04	-0.77	-1%	-12%	0
C18	Basic materials	1.48	-0.03	2%	2%	0.01
C14	Consumer services	-0.13	0.31	-5%	-11%	0.02
C16	Financials	-0.25	0.57	-3%	-14%	0.03
C15	Consumer services	0.08	1.89	-4%	-1%	0.07
C10	Basic materials	0.94	-0.11	26%	39%	0.12
C13	Basic materials	-2.67	0.09	9%	28%	0.16

Source: Researcher's synthesis of field data

Table 8: Average change in the ratio per industry: June year-end

Industry	Current ratio	Debt-equity ratio	Return on assets ratio	Return on equity ratio	Operating cashflow ratio
Industrials	-0.02	1.14	-7%	-15%	-0.04
Healthcare	0.62	0.33	-7%	-8%	-0.03
Consumer services	-0.03	1.1	-5%	-13%	0.05
Financials	0.11	-0.1	-2%	-13%	0.02
Basic materials	-0.29	0.21	2%	0%	0.04

Source: Researcher's synthesis of field data

Basic materials industry

On average, the basic materials industry reported a deterioration in the current ratio and debt-equity ratio. There was an improvement in the return on assets and cashflow ratio. The return on equity ratio remained unchanged (see Table 8). The deterioration in the current ratio is because of unfavourable movement in the prices of basic materials within the first few months since the start of the pandemic. The content analysis revealed that the global economy witnessed a shock in demand as a result of COVID-19 that initially caused commodity prices to be lower, mainly in energy products. In addition, the decision taken by Russia and Saudi Arabia to not reduce the production of oil, thereby creating excess supply, negatively affected oil prices (Jowitt, 2020). This led to a decrease in sales, resulting in decreases in receivables and cash. Steadily, the global prices of basic materials began to rise, resulting in improved profit numbers being recorded by those companies operating in this industry. The decrease in production volumes was offset by the significant rise in global prices, thereby resulting in an increase in profitability ratios.

Healthcare industry

The healthcare industry reported a deterioration in the solvency, return on assets, return on equity and cashflow ratio. There was an improvement in the current ratio. There is one company trading within this industry and both the return on assets and the return on equity ratios declined. COVID-19 negatively impacted the demand for some of the company's products because the company provides products to be used for elective surgeries and these have been postponed because of COVID-19. Although other products provided by the company (commercial pharmaceuticals) resulted in increased demand, the overall performance declined. The findings from this study are contrary to the findings from the study by Urazbaeva *et al.* (2020), where it was concluded that the pandemic was a positive shock for the medicines sector as well as the finding from Devi *et al.* (2020), where the health sector saw profit from the sale of masks, sanitisers, soaps and so forth.

Industrials industry
The industrials industry reported a deterioration in all the ratios under consideration (see Table 8). There is one company trading within this industry and revenues were significantly impacted due to lost trading caused by the implementation of lockdown measures. Expenses were significantly higher than in prior periods, which include direct COVID-19-related operating costs such as retrenchment and restructuring costs, funds established to support employees, as well as additional provisions raised on debtors' expected credit losses. The debt-equity ratio decreased due to additional funding obtained by the company to keep operations running. This finding supports what was found by the IMF (2020b) that some companies finance their operations by obtaining additional debt during the pandemic.

Consumer services
The consumer services industry reported a deterioration in all four ratios under consideration, except for the cashflow ratio, which has improved. The effect of the COVID-19 pandemic had a significant impact on companies' trading performance, as most of the retail stores were not able to trade during the lockdown. The results from this study partially support the findings from a study by Panzone *et al.* (2021), where the study found that some retailers, such as supermarkets, benefitted from the disruption caused by COVID-19, where a substantial increase in sales was witnessed, while others such as restaurants witnessed significant losses in revenues. This study supports the finding that non-food retailers (such as clothing retailers) experienced decreases in sales because of the COVID-19 pandemic. Some companies in this industry reported a deterioration in the debt-equity ratio. The disclosure contained in the annual financial statement did not attribute the increase in the debt-equity ratio to the COVID-19 pandemic, but rather to the increase in lease liabilities and other non-COVID-19-related provisions.

Financial industry
On average, the financials industry saw a deterioration in the return on assets and return on equity ratio. The disclosure provided by these companies attributes the deterioration in the ratios to the COVID-19 pandemic. Many of the financial service providers had significant increases in the provision made for expected credit losses. The expected credit losses charged to the income statement (which affects profitability) included the effects of COVID-19 that caused unemployment and increased default. Other financial service providers saw significant increases in insurance claims because of retrenchments, life cover claims, death claims and so forth. The finding from this study supports what was found in a study by Hladika (2021), where the study found that COVID-19 resulted in an increase in expected credit losses in certain banks in Croatia and the banking sector in Croatia witnessed a decrease in profitability because higher levels of provisions were raised for non-performing loans as well as lower levels of revenues (Hladika, 2021). On average, the financials industry reported an improvement in the current ratio, debt-equity ratio and cashflow ratio.

Table 9: Summary of industries with the worst change in the financial ratios: June year-end

Current ratio	**Debt-equity ratio**	**Return on assets ratio**	**Return on equity ratio**	**Operating cashflow ratio**
Basic materials	Industrials	Industrials	Industrials	Industrials

Source: Researcher's synthesis of field data

2.1.2 Overall worst performing industry(s)
Table 9 depicts the industries reporting the worst deterioration in the financial ratios for June year-end companies. The industrials industry is the most negatively impacted by the COVID-19 pandemic for June year-end companies. This is because it is the industry that reported the most (four out of five) deterioration in the financial ratios under consideration (Table 9).

Section 2.2: Companies with August year-end
There was only one company from the sample with an August year-end and this company trades in the consumer services industry and in particular the pharmaceutical and health sector. This company was exposed to COVID-19 for five months. Table 10 depicts the change in the financial ratios for C20 which is the only company from the sample with an August year-end. This company reported a deterioration in four ratios, except for the return on equity ratio (see Table 10), which reported a minor improvement. The deterioration in the ratios was attributable to lower sales because of COVID-19. The company incurred additional COVID-19-related expenditure, such as hygiene and deep cleaning costs, personal protective equipment and consumables, data and transport costs. The results from this study are contrary to what was anticipated from the literature review, where a study by Urazbaeva *et al.* (2020:162) found that the medicines sector experienced an increase in demand for medical services.

Table 10: Consumer services industry change in the financial ratios: August year-end

Company	Year-end	Current ratio	Debt-equity ratio	Return on assets ratio	Return on equity ratio	Operating cashflow ratio
C20	August	-0.03	0.2	-1%	1%	-0.04

Source: Researcher's synthesis of field data

Section 2.3: Companies with September year-end

There was only one company from the sample with a September year-end and this company trades in the consumer services industry and specifically in the clothing retail sector. This company was exposed to COVID-19 for six months. Table 11 depicts the change in the financial ratios for C21 which is the only company from the sample with a September year-end. This company reported a deterioration in the debt-equity ratio, return on assets and return on equity ratio (Table 11). The current ratio and the cashflow ratio improved (Table 11). The findings from this study are consistent with the study by Pang *et al.* (2021), where it was found that most offline retailers faced difficulties where sales of clothing-centred products declined during the pandemic.

Table 11: Consumer services industry change in the financial ratios: September year-end

Company	Year-end	Current ratio	Debt-equity ratio	Return on assets ratio	Return on equity ratio	Operating cashflow ratio
C21	September	0.04	0.27	-6%	-11%	0.07

Source: Researcher's synthesis of field data

Section 2.4: Companies with December year-end

2.4.1: Results discussion

Table 12 depicts the change in the financial ratios for companies with a December year-end. There were 19 companies from the sample with a December year-end, representing four different industries (see Table 12). These companies were exposed to COVID-19 for nine months since the year 2020 is their pandemic year. Table 13 groups companies in the same industry and depicts the average change in the ratio per industry.

Table 12: Change in the financial ratios for all the December year-end companies

Company	Industry	Current ratio	Debt-equity ratio	Return on assets ratio	Return on equity ratio	Operating cashflow ratio
C37	Basic materials	-0.96	-0.17	0%	1%	0.06
C36	Financials	-0.91	0.84	2%	-10%	0.1
C32	Financials	-0.39	1.25	-1%	-13%	-0.01
C27	Financials	-0.35	1.03	-1%	-9%	0
C25	Basic materials	-0.03	0.1	-3%	-4%	-0.03
C35	Financials	-0.02	1.15	-1%	-7%	0
C24	Basic materials	0	0.52	-5%	-16%	-0.05
C23	Consumer goods	0.09	-0.06	-7%	-16%	0.02
C26	Basic materials	0.1	-0.02	12%	22%	-0.02
C22	Consumer goods	0.15	-0.14	-3%	-10%	-0.01
C30	Basic materials	0.38	-0.04	-3%	-6%	-0.02
C31	Telecommunication	0.4	0.29	3%	9%	0.06
C39	Financials	0.43	1.71	-3%	-34%	0.01
C40	Financials	0.51	0.33	-3%	-5%	-0.01
C34	Basic materials	0.74	-0.16	11%	22%	0.06
C33	Basic materials	0.95	-0.01	13%	25%	0.08
C29	Basic materials	1.11	-0.05	10%	12%	0.1
C28	Basic materials	1.56	-1.39	4%	12%	0.14
C38	Financials	66.09	-7.15	0%	-11%	0.01

Source: Researcher's synthesis of field data

Table 13: Average change in the ratio per industry: December year-end

Industry	Current ratio	Debt-equity ratio	Return on assets ratio	Return on equity ratio	Operating cashflow ratio
Consumer goods	0.12	-0.1	-5%	-13%	0
Telecommunications	0.4	0.29	3%	9%	0.06
Financials	9.3	-0.12	-1%	-13%	0.01
Basic materials	0.42	-0.14	4%	7%	0.03

Source: Researcher's synthesis of field data

Basic materials industry
On average, the basic materials industry reported an improvement in all the financial ratios under consideration (see Table 13). The decrease in sales volumes resulting from COVID-19 was offset by the significant rise in global prices of commodities and many companies in this sector saw an increase in their profitability ratios. This finding confirms the findings from the study conducted by Jowitt (2020), where it was found that not all metal prices were negatively impacted by COVID-19. During 2020, the world witnessed an increase in the price of gold and palladium (Jowitt, 2020). On average, the impact of COVID-19 on the liquidity ratio of companies within the basic materials industry was positive. The decrease in production levels caused by the pandemic was offset by the favourable changes in global commodity prices, supported by macro- and market sentiments such as favourable foreign exchange movements. Most companies trading in the basic materials industry were in a positive net cash position at the start of the pandemic year, and some companies reduced cash outflow by temporarily trimming certain capital growth projects. This has resulted in an insignificant cashflow ratio deterioration.

Consumer goods
On average, the consumer goods industry reported a deterioration in the return on assets and return on equity ratio. The current ratio and debt-equity ratio improved, while the cashflow ratio remains unchanged (see Table 13). This industry is made up of companies that are suppliers of beverages and tobacco. The overall results in 2020 were significantly impacted by the disruption caused by the pandemic. Volumes and revenue declined due to lockdown measures being implemented. The results from this study support what was found by Adi and Daryanto (2021:10). The study found that there was a decline in the company's profitability ratio (return on asset and return on equity) for companies operating within the beverage industry in Indonesia. Another study by Wijayanto and Seno (2021), where the impact of the financial performance of companies between different sectors in Indonesia was compared, the study found that the financial performance of the household, cosmetics, food, beverages and tobacco sectors in Indonesia decreased during the COVID-19 pandemic.

Financials industry
On average, the financials industry reported a deterioration in the return on assets and return on equity ratio. The current ratio, debt-equity ratio and cashflow ratio improved. The results discussion for June year-end companies (section 2.1.1) in relation to the return on assets and return on equity ratio equally applies to the December year-end companies. See section 2.1.1 for a detailed discussion on the return on assets and return on equity ratios for companies trading in the financial industry.

Telecommunications industry
The telecommunications industry reported an improvement in the financial ratios under consideration, except for the debt-equity ratio, where it deteriorated (see Table 13). The company delivered a strong performance strengthened by solid commercial and operational execution. The company also quickly adapted to the situation brought about by COVID-19 by accelerating its digital strategy in response to the COVID-19 pandemic. This supports Seetharaman (2020), where it was found that the business sectors such as telecommunications would be least negatively affected by COVID-19.

Table 14: Summary of industries with the worst change in the financial ratios: December year-end

Current ratio	Debt-equity ratio	Return on assets ratio	Return on equity ratio	Operating cashflow ratio
Consumer goods	Telecommunications	Consumer goods	Consumer goods	Consumer goods

Source: Researcher's synthesis of field data

2.4.2 Overall worst performing industry(s)
Table 14 depicts the industries reporting the worst deterioration in the financial ratios for December year-end companies. The consumer goods industry is the most negatively impacted by the COVID-19 pandemic for December year-end companies. This is because the industry reported the most (four out of five) deterioration in the financial ratios under consideration (Table 14). Although there was no industry that reported a deterioration in the current ratio and the cashflow ratio, the consumer goods industry is listed as the worst performing for the current ratio and the cashflow ratio because it is the industry that reported the lowest increase in those ratios.

Section 3: Summary of results

Table 15: Summary of worst worst-performing industry

Year-end	Current ratio	Debt-equity ratio	Return on assets ratio	Return on equity ratio	Operating cashflow ratio
March	Technology	Telecommunications	Telecommunications	Consumer goods	Financials
June	Basic materials	Industrials	Industrials	Industrials	Industrials
December	Consumer goods	Telecommunications	Consumer goods	Consumer goods	Consumer goods

Source: Researcher's synthesis field data

Table 15 depicts the summary of results indicating the worst-performing industry for March, June and December year-end companies. This study revealed that the industries reporting the worst deterioration in their financial ratios are the telecommunications (for March year-end companies), industrials (for June year-end companies) and consumer goods (for December year-end companies).

Telecommunications industry
The results from this study are contrary to what was anticipated from the literature review. There was an expectation that the telecommunications industry would perform well given the environment brought about by the COVID-19 pandemic. The implementation of lockdown regulations to contain the spread of the virus created opportunities for certain industries and there was an anticipation that the telecommunications industry would benefit from the pandemic. Lockdown measures implemented resulted in many people working or studying from home and this resulted in an increase in demand for network services, online shopping and utilising web-based entertainment (Seetharaman, 2020). The impact of COVID-19 on the telecommunications industry was both positive (due to the increase in demand for network services) and negative because of large impairments in investments, higher COVID-19-related bad debt provisions, and inventory allowances caused by COVID-19.

Industrials industry
The results from the industrials industry are in line with what was anticipated from the literature review. Industries that provide non-essential goods or services were anticipated to be negatively impacted by COVID-19 (Urazbaeva *et al.,* 2020). The companies in this industry are providers of non-essential goods and services and their performance was significantly impacted by the trading loss because of the implementation of COVID-19 lockdown regulations.

Consumer goods industry
The results for the consumer goods industry are consistent with literature where the financial performance of companies trading in the cosmetics, household, food, beverages and tobacco industries deteriorated (Wijayanto and Seno, 2021). Volumes and revenues for the industrials industry declined due to closures of logistics centres and points of sales resulting from the implementation of lockdown measures.

5. CONCLUSION ON RESULTS

Conclusion 1: The survival of a company during a pandemic is dependent on the resilience and resources of the company

The study revealed that although COVID-19 negatively impacted the financial performance of companies, as evidenced by the deterioration in the financial ratios, some companies did not report significant deterioration in their financial ratios and in some cases, improvements were reported attributable to the financial strength of the companies. For March year-end companies, Table 4 reveals that no industry reported a deterioration in the cashflow ratio. The cashflow ratio either remained unchanged or an improvement was noted. Table 5 reveals that the financials and the consumer services companies reported an improvement in the profitability ratios. For June year-end companies, the basic materials reported an improvement in the profitability ratios (see Table 8), while the rest of the industries reported a deterioration in the ratios. The healthcare and the financials industry reported an improvement in the current ratio. For December year-end companies, all the companies reported an improvement in the current ratios and the operating cashflow ratio. The telecommunications and the basic materials reported an improvement in the profitability ratios.

Conclusion 2: Industries most negatively impacted by COVID-19

The industries most negatively impacted by the pandemic are the telecommunications industry (March year-end

companies), industrials industry (June year-end companies) and consumer goods industry (December year-end companies). The negative impact of COVID-19 (such as the increase in COVID-19-related provisions) on the telecommunications industry as well as other factors (such as prior year once-off gains) outweighed the positive impacts derived from the COVID-19 pandemic, resulting in an overall deterioration in financial performance. The implementation of lockdown regulations to contain the spread of the COVID-19 virus led to a decrease in demand for goods and services and this resulted in a decrease in sales volumes for the consumer goods industry and the industrials industry.

6. RECOMMENDATIONS

The telecommunications industry reported results that are contrary to what was anticipated to happen. In addition, some industries reported improvements in the ratio, while others reported deterioration in the ratios. Based on these findings, the study recommends that the Government and policymakers should adopt a case-by-case approach when it comes to distributive justice. This is because a certain industry might be the most negatively impacted by COVID-19; however, companies trading in that industry could survive the pandemic given their financial resources. This is crucial because the government has limited financial resources. In contrast, an industry might be the best-performing industry, but there could be other companies within the same industry that might not perform well. The support from the government and policymakers should be company-specific and not necessarily industry specific. This will ensure distributive justice is achieved.

The current ratio was a problem for the consumer goods, basic materials and technology industries. Likewise, profitability ratios were a problem for the industrial, telecommunications and consumer goods industries. The deterioration in the profitability ratios was a result of the decrease in demand for goods and services because of the pandemic. Given the limited resources of the South African Government, this study should provide insight to the government and policymakers to assist them in determining the scope and type of support to companies most impacted by the pandemic. The distributive justice principles that Government should adopt should be one of equality, proportionality and fairness. The results from the study are also valuable for providing information to various stakeholders, such as analysts, regulators, the government, shareholders and so forth who have an interest in the performance of JSE-listed companies.

REFERENCES

Açikgöz, Ö. & Günay, A. 2020. The early impact of the COVID-19 pandemic on the global and Turkish economy. *Turkish Journal of Medical Sciences*, *50*(9):520-526.

Adi, B.A. and Daryanto, W.M. 2021. Financial performance analysis of food and beverage public listed companies for the three quarters before and after the COVID-19 pandemic in Indonesia. *Economics and Law*, *24*(2):10-25.

Afridi, F.E.A., Jan, S., Ayaz, B. & Irfan, M. 2021. The impact of COVID-19 on E-business practices and consumer buying behavior in a developing country. *Amazonia Investiga*, *10*(38):97-112.

Bhorat, H., Köhler, T., Oosthuizen, M., Stanwix, B., Steenkamp, F. and Thornton, A. 2020. The economics of COVID-19 in South Africa: Early impressions. *Development Policy Research Unit*

Chen, H.C. and Yeh, C.W. 2021. Global financial crisis and COVID-19: Industrial reactions. *Finance Research Letters*, *42*:1-13.

Correia, C. 2019. *Financial Management*, Juta, South Africa

De Villiers, C., Cerbone, D. & Van Zijl, W. 2020. The South African government's response to COVID-19. *Journal of Public Budgeting, Accounting & Financial Management*:797-811.

Demirgüç-Kunt, A., Pedraza, A. and Ruiz-Ortega, C. 2021. Banking sector performance during the COVID-19 crisis. *Journal of Banking & Finance*, *133*:1-22.

Deo, P. 2016. Evaluating a cash flow statement. *International Journal of Business, Accounting & Finance*, *10*(1):22-43.

Devi, S., Warasniasih, N.M.S., Masdiantini, P.R. and Musmini, L.S. 2020. The impact of COVID-19 pandemic on the financial performance of firms on the Indonesia stock exchange. *Journal of Economics, Business, & Accountancy Ventura*, *23*(2):226-242.

Günay, F. & Fatih, E.C.E.R. 2020. Cash flow based financial performance of Borsa İstanbul tourism companies by Entropy-MAIRCA integrated model. *Journal of Multidisciplinary Academic Tourism, 5*(1):29-37.

Hladika, M. 2021. Impact of COVID-19 Pandemic on The Loans Quality, Provisions and Profitability Of The Banking Sector. *Economic and Social Development: Book of Proceedings:*138-149.

Hsieh, H.F. & Shannon, S.E. 2005. Three approaches to qualitative content analysis. *Qualitative Health Research, 15*(9):1277-1288.

International Monetary Fund. 2020a. "Regional Economic Outlook: Sub-Saharan Africa", available at: https://www.imf.org//media/Files/Publications/REO/AFR/2020/Update/June/English/SREOENG202006.ashx Date of access 16 June 2022.

International Monetary Fund. 2020b. "Debt management responses to the pandemic", available at: https://www.imf.org/~/media/Files/Publications/covid19-special-notes/en-special-series-on-covid-19-debt-management-responses-to-the-pandemic.ashx Date of access 30 April 2022.

Johnson, R.B., Onwuegbuzie, A.J. & Turner, L.A. 2007. Toward a definition of mixed methods research. *Journal of Mixed Methods Research, 1*(2):112-133.

Jowitt, S.M. 2020. COVID-19 and the global mining industry. *SEG Discovery*, (122):33-41.

Listcorp. 2021. JSE sectors. https://www.listcorp.com/jse/sectors/ Date of access: 11 March 2021.

McKibbin, W. & Fernando, R. 2020. The economic impact of COVID-19. *Economics in the Time of COVID-19*:45-52.

Mirza, N., Rahat, B., Naqvi, B. and Rizvi, S.K.A. 2020. Impact of COVID-19 on corporate solvency and possible policy responses in the E.U. *The Quarterly Review of Economics and Finance*, 2-10.

Nguyen, H.T.X. 2022. The effect of COVID-19 pandemic on financial performance of firms: empirical evidence from Vietnamese logistics enterprises. *The Journal of Asian Finance, Economics and Business*, *9*(2):177-183.

Ogunnubi, O. & Amao, O.B. 2016. South Africa's Emerging "Soft Power" Influence in Africa and Its Impending Limitations: Will the Giant Be Able to Weather the Storm? *African Security*, 9(4), 299–319.

Ozili, P.K. & Arun, T. 2020. Spillover of COVID-19: impact on the global economy. Available online: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3562570 Date of access 30 March 2022.

Pang, W., Ko, J., Kim, S.J. and Ko, E. 2021. Impact of COVID-19 pandemic upon fashion consumer behavior: focus on mass and luxury products. *Asia Pacific Journal of Marketing and Logistics*, 2149-2164.

Panzone, L.A., Larcom, S. and She, P.W. 2021. Estimating the impact of the COVID-19 shock on U.K. food retailers and the restaurant sector. *Global Food Security*, 1-23.

Peters, G.T. & Bagshaw, K.B. 2014. Corporate governance mechanisms and financial performance of listed firms in Nigeria: a content analysis. *Global Journal of Contemporary Research in Accounting, Auditing and Business Ethics, 1*(2):103-128.

Rababah, A., Al-Haddad, L., Sial, M.S., Chunmei, Z. and Cherian, J. 2020. Analysing the effects of COVID-19 pandemic on the financial performance of Chinese listed companies. *Journal of Public Affairs*, *20*(4): 1-6.

Ranchhod, V. and Daniels, R.C. 2020. Labour market dynamics in South Africa in the time of COVID-19: Evidence from wave 1 of the NIDS-CRAM survey, working paper 265, University of Cape Town, Cape Town, 15 July.

S.A. Shares. 2021. JSE top 40. https://sashares.co.za/jse-top-40/#gs.xp012s Date of access: 31 March 2021.

Schutte, D.P. & Buys, P.W. 2011. A critical analysis of the contents of the IFRS for SMEs - a South African perspective. *South African Journal of Economic and Management Sciences*, *14*(2):188-209.

Seetharaman, P. 2020. Business models shifts: impact of Covid-19. *International Journal of Information Management, 54*:1-4.

Song, H.J., Yeon, J. and Lee, S. 2021. Impact of the COVID-19 pandemic: Evidence from the U.S. restaurant industry. *International Journal of Hospitality Management*, *92*, 1-7.

Steenkamp, N. & Northcott, D. 2007. Content analysis in accounting research: the practical challenges. *Australian Accounting Review, 17*(43):12-25.

Urazbaeva, A.R., Voytenkov, V.A. & Groznykh, R.I. 2020. The analysis of COVID-19 impact on the internet and telecommunications service sector through modelling the dependence of shares of Russian companies on the American stock market. *R-Economy, 6*(3):162-170.

Wasara, T.M. and Ganda, F. 2019. The relationship between corporate sustainability disclosure and firm financial performance in Johannesburg Stock Exchange (JSE) listed mining companies. *Sustainability*, *11*(16):44-96.

Wijayanto, A. and Seno, A.H.D. 2021. Comparative analysis of company financial performance between sub sectors in the consumer goods industry in Indonesia before and during the COVID-19 pandemic. *Journal of Economics, Finance and Management Studies*:2427-2432.