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Effect of Covid- 19 Pandemic on Stock Market Performance in Tanzania: A case of Dar es Salaam Stock Exchange

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Abstract

The COVID 19 pandemic has threatened the world in this 21st century. Despite taking millions of lives, the pandemic affected several economic activities as well. Financial markets, being among the key economic activities that facilitate economic development of a country are not left out. This study aims at examining the effect of COVID 19 pandemic on stock market performance in Tanzania: A case of Dar es Salaam Stock Exchange. Descriptive statistics was used to analyze data collected. Trends of the weekly stock prices calculated from the historical prices of the listed companies at DSE were used to understand the performance of the stock market before and during COVID 19 pandemic. A sample of 21 listed companies based in Tanzania was used out of the population of the 28 listed companies. Companies were stratified basing on their sectors as listed in DSE to ensure representativeness of the sample from the heterogonous population to form homogeneous sector. Findings represented from line graphs revealed that during the COVID 19 pandemic, stock market performance was affected negatively as the weekly stock prices were declining. The researcher recommends that the leading stakeholders of stock market exchange should provide awareness to the public on opportunities available in the financial markets. And also, they should use media and other visibility forums to lay a platform for awareness provision to the public concerning opportunities available in financial markets both before and during pandemic periods.

Key words: ***Covid- 19 Pandemic, Stock Market Performance***

Introduction

Uncertainties normally occur unaware. Among them are world pandemics like diseases, floods, draught and just to mention a few. All of these affect the world socially, economically, politically and physically. Financial markets among the key economic activities that facilitate economic development of a country is also being affected. Thus, the emergence of world pandemics destabilizes the economic development of several countries. For instance, the COVID 19 pandemic which emerged from 2019 is still hitting the world to date though not at the same severity as the moment it first occurred. Due to this world pandemic, Stock markets have declined over 30% (OECD, 2020). Several studies have been conducted to understand the effect of COVID 19 pandemic on stock market performance in various parts of the world. To understand the COVID 19 pandemic, how the spread and transmission occur and how the stock market performance is being affected; the following paragraphs will explain in detail;

COVID-19, Corona Virus Disease-2019, is an infectious disease caused by SARS-CoV-2, (World Health Organization, and 2020a). On 29th December 2019 a cluster of cases of viral pneumonia of unknown etiology were reported to health authorities in Wuhan, Hubei Province, the viral pneumonia is currently known as SARS-CoV-2 pneumonia (Wenjie et al., 2020). This outbreak was associated with a large seafood and animal market. Despite the infection having unclear origin, researchers found that the SARS-CoV-2 showed a higher sequence homology to Bat-CoV-RaTG13 that was previously detected in Rhinolophusaffinis from Yunnan Province than Bat-SL-CoVZC21 and Bat-SL-CoVZC45, which suggested that the Chinese chrysanthemum bat is the origin of SARS-CoV-2, (Yang, et al., 2020). World Health Organization (WHO) established the COVID-19 as a global pandemic that affected many countries on 12th March, 2020. WHO (2020b) noticed that COVID-19 spreads between people through direct, indirect (through contaminated objects or surfaces), or close contact with infected people via mouth and nose secretions. These include saliva, respiratory secretions, or secretion droplets.

Corona virus, COVID-19 pandemic, which is accepted as the third serious corona virus outbreak in less than 20 years (Yang, et al., 2020), it has caused a global pandemic, with approximately 3.1 million confirmed cases and 227,000 deaths as of April 30, 2020 (Roser et al., 2020). The harsh measures imposed, such as closing borders, sealing off cities, stay-at-home orders and lockdowns severely hit many countries' economies and financial markets. Countries have been announcing their number of cases and deaths since the onset of the pandemic. According to Worldometer, until May 1st, 2022, COVID-19 has spread in 228 countries, with a total of 513,312,529 cases, 6,260,672 deaths, 39,811,869 current infected patients, and 467,239,988 recovered patients, (Worldometer, 2022).

According to Massele et al., (2015), stock market is a regulated and standardized market of financial capital which is essential in an economical world whereby people, corporations, firms, companies, and governments are either investing their funds or raising funds by using this formal financial system and organized capital market. Stock market emergency can be

traced back around 1602 where the Dutch East India Company was launched. The launching initiated Amsterdam's transformation from a regional market town into a dominant financial center. The Company introduced easily transferable shares, and within days buyers had begun to trade them. Soon the public was engaging in a variety of complex transactions, including forwards, futures, options, and bear raids, and by 1680 the techniques deployed in the Amsterdam market were as sophisticated as any we practice today (Lodewijk, 2014).

As for Africa, the growth of the stock market improved in the 1990s compared to 1980s where there were only eight (8) stock exchanges on the entire African continent (Ihejirika, 2015). Currently, there are more than 50 percent of the 54 nations on the African continent established stock exchanges. The rise in the stock exchange in Africa was a result of the development and modification of the business sector of African nations to develop the economic situation (Senbet & Otchere, 2008).

In Tanzania, stock exchange activities are conducted by DSE. It enables stock brokers and traders to buy and sell securities such as shares of stock and bonds and other financial instruments. The Dar Es Salaam Stock Exchange (DSE) was incorporated in September 1996 as a private company under the Capital Market and Securities Act (CMSA) of 1994.Trading activities commenced on 15th April 1998 after two years of background preparatory work under the stewardship of the Government through the CMSA. With effect from 15th December 2006, trading has been conducted at the DSE trading floor through an automated electronic trading system which matches bids and offers (DSE, 2008). The matched orders are being displayed on computer terminal in the trading room and projected in the public gallery. The DSE started as a result of the government effort to transform the economy from a government-led economy to a private sector-led economy (Millinga & Raphael, 2018)

DSE is a member of the African Stock Exchanges Association with 28 listed companies, 10 licensed brokers and 3 custodian banks, (DSE, 2022). The DSE operates in close association with the Nairobi Securities Exchange in Kenya and the Uganda Securities Exchange in Uganda. Plans are underway to integrate the three to form a single East African bourse (DSE, 2022).The listed companies at DSE include TOL Gases Limited, Tanzania Breweries Limited, Tanzania Cigarette Company Limited, Tanga Cement Company Limited, Swiss port Tanzania PLC, National Microfinance Bank PLC, Kenya Airways Limited, East African Breweries PLC, Jubilee Holdings Limited, Kenya Commercial Bank Limited, CRDB Bank PLC, DCB Commercial Bank PLC, JATU PLC, Maendeleo Bank PLC, Mkombozi Commercial Bank PLC, MUCOBA Bank PLC, Mwalimu Commercial Bank PLC, National Investments Company Limited, The Nation Media Group Limited, Precision Air Services PLC, The Dar es Salaam Stock Exchange, Swala Oil and Gas (Tanzania) PLC, Tanzania Portland Cement Company Limited, TATEPA Limited, TCCIA Investment PLC, Uchumi Supermarket Limited, Vodacom Tanzania Limited and Yetu Microfinance Bank PLC.

The COVID 19 pandemic is not only a global health emergency but also a significant global economic downturn too. The emergence of the COVID 19 pandemic made governments to take unprecedented measures to protect the population's health and business operations. For example, European states provided significant funds to support companies in difficulty, and

additionally, delayed tax payments with no interest or fees for the delays, temporarily cut taxes and implemented measures for the most affected sectors, such as paid leaves due to unemployment (EY, 2022). On top of that, many countries adopted strict quarantine policies to fight the unseen pandemic leading to suddenly shutdown of their economic activities. Transports being limited and even restricted among countries have slowed down global economic activities. Most importantly, consumers and firms have prevented their usual consumption patterns due to the creation of panic among them and created market abnormality both in advanced and developing economies, (Bora & Basistha, 2021). In this context, the financial market has responded with dramatic movement and adversely affected. The effects might have not pass by the DSE of Tanzania since it is not an isolated island despite of not adopting some control measures in full. This study aims at examining the effect of COVID 19 on stock market performance in Tanzania.

The general objective of this study was to examine the effect of COVID 19 pandemic on stock market performance in Tanzania; Case of Dar es salaam stock exchange. The study had three specific objectives which were; to examine the stock market performance before the COVID-19 pandemic, to examine the stock market performance during the COVID-19 pandemic and to examine the contribution of investors' behavior and attitude to stock market performance during the COVID-19 pandemic. In this article one objective will be presented which is to examine the stock market performance during the COVID-19 pandemic.

Literature review

This part aims at selecting appropriate theory/models that inform the researcher on the variables to be included in the development of a conceptual model in the process of examining the effect of COVID 19 pandemic on stock market performance in Tanzania. Theories guiding this study are explained below:

Theoretical literature review

Emergent Norm Theory

This is the major theory of this study as it was originally proposed by Turner and Killian in 1972. The theory hypothesizes that nontraditional behavior (such as that associated with collective action) develops in crowds as a result of the emergence of new behavioral norms in response to a precipitating crisis. Turner & Killian (1987) added that for proponents of emergent norm theory, collective action includes all types of social behavior in which the conventional norms stop functioning as guides to social action and instead people collectively overturn or go beyond the normal institutional practices and frameworks of society. And therefore, new conventions must form as part of the collective action. The basic suppositions of emergent norm theory are that collective action is rational, that collective action is a response to an ambiguous precipitating event, and that new norms of behavior appropriate to the collective action situation emerge through group processes without prior coordination and planning, (Arthur, 2013).

Turner & Killian (1987) proposed that the norms that develop within crowds are not strict rules for behavior. Rather, they are more like overarching frameworks for behavior that set limits on what is appropriate. These norms develop through either emergent or pre-existing social relationships. Turner and Killian (1987) suggested that anything which facilitates communication among crowd participants facilitates the emergence of norms, and they called this process "milling." In addition, though the emergent norm theory perspective does contest the notion that crowd behavior is particularly irrational, it suggests that many crowd participants are suggestible and that this suggestibility contributes to the spread of emergent norms, (Arthur, 2013).In particular, emergent norm theory has gained a strong foothold in disaster research, as it is used to understand the behavior of groups who experience a precipitating crisis (a disaster) and then are forced to find new ways to respond that will help to ensure the safety and survival of as many people as possible, (Arthur 2013). Therefore, this theory was useful in this study mainly to understand the reactions of stock market stakeholders before and during the COVID 19 pandemic through the stock market performance. Thus, this theory was useful to the researcher on exploring the stock market performance during the COVID 19 pandemic.

Empirical literature review

This part explores several empirical studies reviewed basing on this study's specific objective which is to examine the stock market performance during the COVID-19 pandemic.

Stock market performance during the COVID-19 pandemic

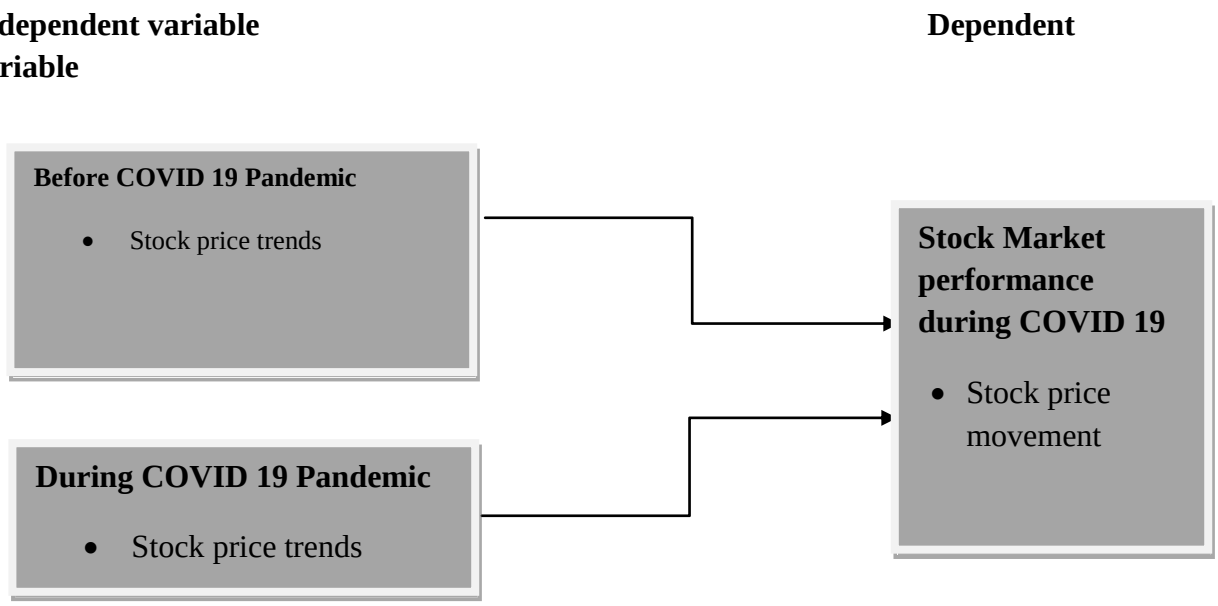
The study of Dospatliev, et al., (2022) provided the first empirical research that analyzed the effects of the COVID-19 pandemic on the Bulgarian stock market before its onset and in the four pandemic waves. The researchers used a fixed effect panel data regression model for the stock returns of 23 companies listed on the Bulgarian Stock Exchange from 2 January 2020 to 16 November 2021. The study showed that the growth rate of COVID-19 deaths per day in Bulgaria had a negative effect on the stock returns and had the strongest influence on them in the fourth pandemic wave. In addition, their results showed that stock returns in healthcare, IT, utilities, and real estate sectors were negatively affected before the COVID-19 pandemic while the first COVID-19 pandemic wave had a positive effect on healthcare and consumer staples sectors. During the second COVID-19 wave, the stock returns of the IT sector had a positive effect, while Utilities sector had a negative effect. The third COVID-19 wave had a positive effect on industrials and consumer staples sectors, while healthcare, real estate, and IT sectors showed a negative effect. During the fourth COVID-19 wave, the stock returns of the IT sector had a positive effect and consumer staples sector had a negative effect. Also, Khan, et al., (2020) investigated the impact of COVID-19 pandemic on the stock markets of sixteen countries. Pooled OLS regression, conventional t-test and Mann-Whitney test were used to estimate the results of the study. The researchers constructed a weekly panel data of COVID-19 new cases and stock returns. Pooled OLS estimation result showed that the growth rate of weekly new cases of COVID-19 negatively predicts the return in stock market. Next, the returns on leading stock indices of these countries during the COVID-19 outbreak period were compared with returns during the non-COVID period. The researchers used a t-

test and Mann-Whitney test to compare the returns. The results reveal that investors in the sixteen countries did not react to the media news of COVID-19 at the early stage of the pandemic. However, once the human-to-human transmissibility had been confirmed, all of the stock market indices negatively reacted to the news in the short- and long-event window. Interestingly, the researchers noticed that the Shanghai Composite Index, which was severely affected during the short-event window, bounced back during the long-event window. This indicates that the Chinese government's drastic measures to contain the spread of the pandemic regained the confidence of investors in the Shanghai Stock Market. And also, Insaidoo, et al., (2021), assessed the extent to which the Ghana stock market performance had been impacted by the novel COVID-19 pandemic. The study used the exponential generalized autoregressive conditional heteroscedasticity (EGARCH) model, by using daily time series data from 2 January 2015 to 13 October 2020. Both pre-estimation (Augmented Dickey-Fuller and Phillips-Perron) and post-estimation tests (Jarque-Bera) were conducted to validate the results. The study results show a statistically insignificant negative relationship between the COVID-19 pandemic and the Ghana stock returns. Their results confirmed that the COVID-19 pandemic had occasioned an increase in the Ghana stock returns volatility by 8.23%. Furthermore, the study confirmed the presence of volatility clustering and asymmetric effect, with the latter implying that worthy news tends to affect volatility more than unwelcome news of equal size. The researchers recommended that, to dampen uncertainties that trigger stock market volatility, the government should surgically target worse affected COVID-19 pandemic businesses and households to check the drop in profits and demand. Also, rigidities associated with stock market operations must be addressed to make it attractive to investors even in the midst of a pandemic.

Conceptual Framework

This frame was composed of two independent variables namely Before COVID 19 and During COVID 19 and one dependent variable namely Stock market performance just as discussed in the empirical literature in the section above and diagrammatically described below;

Figure 1: Conceptual Framework



Source: Researcher 2022

Methodology

The post-positivism philosophy was used in this investigation. As a branch of philosophy, the post-positivist paradigm evolved from the positivist paradigm. It is concerned with the subjectivity of reality and moves away from the purely objective stance adopted by the logical positivists (Hallebone and Priest, 2009). The researcher used post-positivism philosophy because post-positivism offers a fresh perspective here through acknowledgement of such built-in partiality. The knowledge that develops through a positivist understanding is based on careful observation and measurement of the objective reality that exists "out there" in the world. The quantitative approach was used in this study, hence data collection was through observation of weekly stock prices during the period of COVID 19 pandemic.

The researcher adopted the descriptive research design, a scientific method which involves observing and describing the behavior of a subject without influencing it in any way. Descriptive research includes collecting information, describing the phenomenon and then organizing, tabulating, depicting and describing data collected in the form of graphs and charts to assist the reader to know how information is distributed. (Cooper and Schindler, 2011).

In order to ensure fair representation and generalization of finding to the general population, simple random sampling technique was used in which 21 listed companies at DSE, basing in Tanzania were used in this study. Companies were stratified basing on their sectors as listed in DSE to ensure representativeness of the sample from the heterogonous population to form homogeneous sector.

Findings and discussion

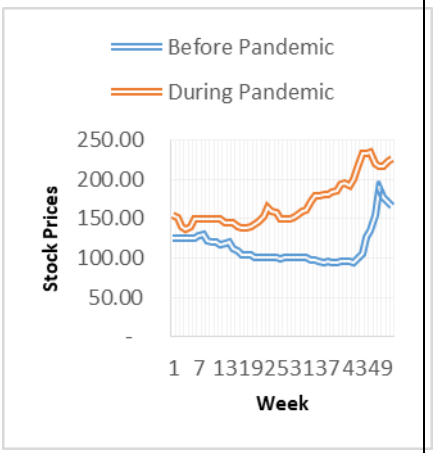
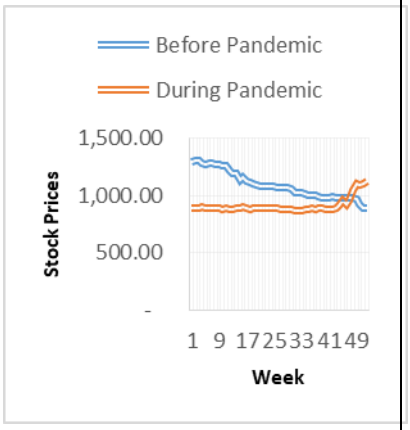
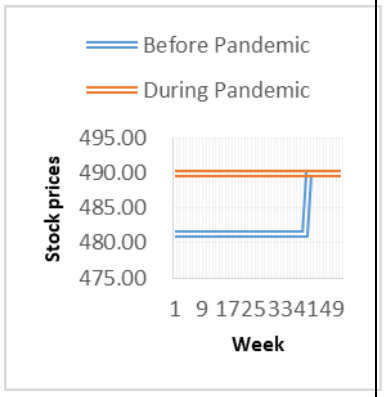
Findings have been interpreted in light of literature reviewed and data collected from field as follows:

Stock market performance during the COVID-19 pandemic

This objective aimed at examining the stock market performance during COVID 19 pandemic through observation of weekly stock price trends. The results will be discussed according to sector as classified by DSE.

Bank, finance and investment sector has 11 listed companies that base in Tanzania where the study's main focus is. Out of eleven companies, three companies (CRDB, DSE and MBP) had upward movement of weekly stock prices stock prices during the COVID 19 pandemic, six companies (DCB, JHL, NMB, TICL, MKCB and YETU) had downward weekly stock price movement during the pandemic and two companies (MCB and MUCOB) had fixed weekly stock price movement (as shown in figures below). Since the majority companies in this sector had prices steadily trending downwards, then the bank, finance and investment sector had downward weekly stock prices during the pandemic.

Figure 2: Graphical comparison of the average weekly stock prices before and during the COVID - 19 pandemifor CRDB, DSE and MBP

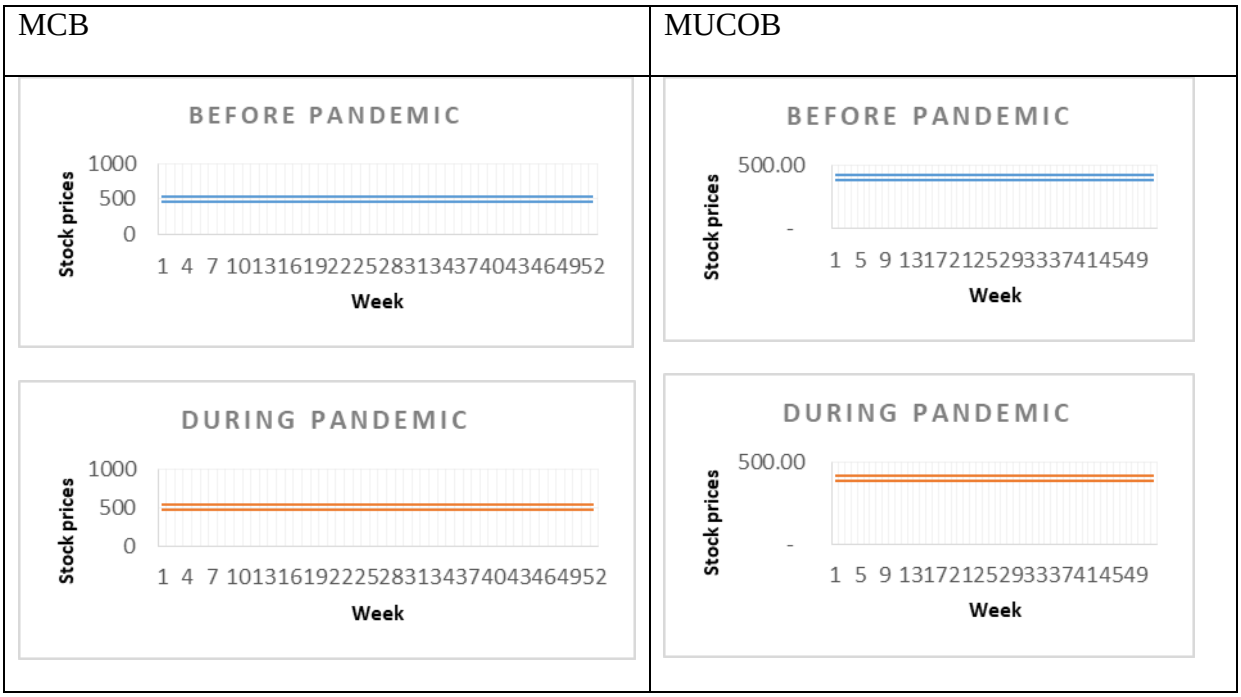
CRDB	DSE	MBP
		

Source: Field data, (2022)

Figure 3: Graphical comparison of the average weekly stock prices before and during the COVID19 pandemic for DCB, JHL, NMB, TICL, MKCB and YETU

Source: Field data, (2022)

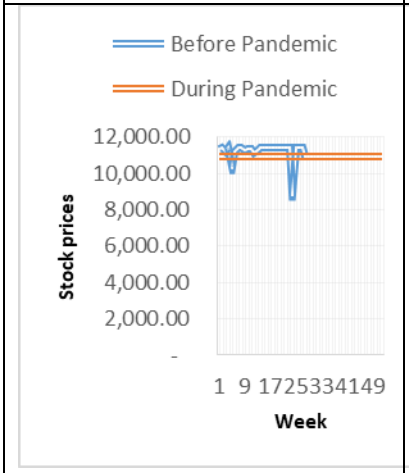
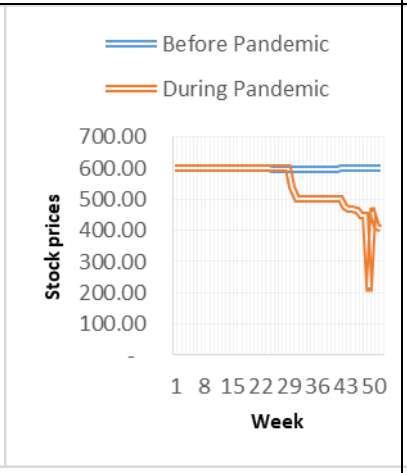
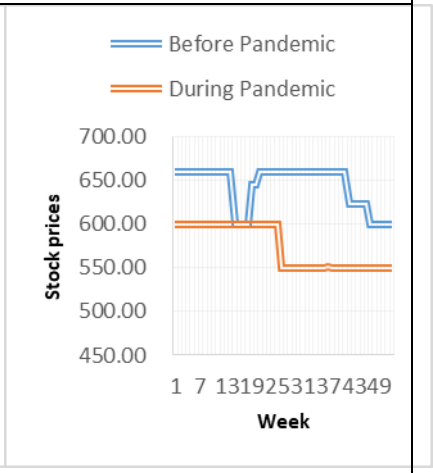
Figure 4: Graphical comparison of the average weekly stock prices before and during the COVID 19 pandemic for MCB and MUCOB



Source: Field data, (2022)

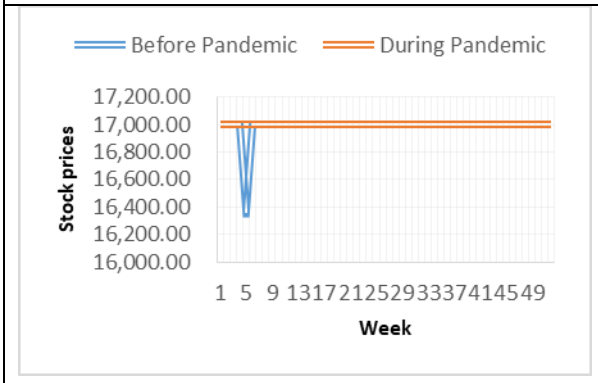
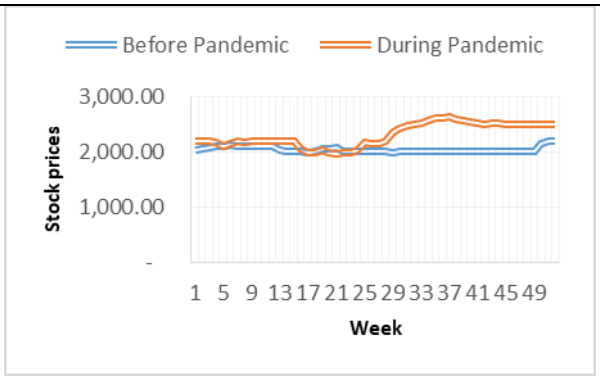
Industrial and allied sector has 7 listed companies in which only six companies were considered in this study because one of the companies had missing data. Out of the six companies, three companies (TBL, TCCL and TOL) had weekly stock prices that were steadily trending downwards, two companies (TCC and TPCC) had weekly stock prices that were steadily trending upwards and one company (TTP) had a constant weekly stock price movement (As shown in figures below). Since the majority companies had stock prices that were steadily trending downwards, then the industrial and allied sector had downward stock price movement during the pandemic.

Figure 5: Graphical comparison of the average weekly stock prices before and during the COVID19 pandemic for TBL, TCCL and TOL

TBL	TCCL	TOL
		

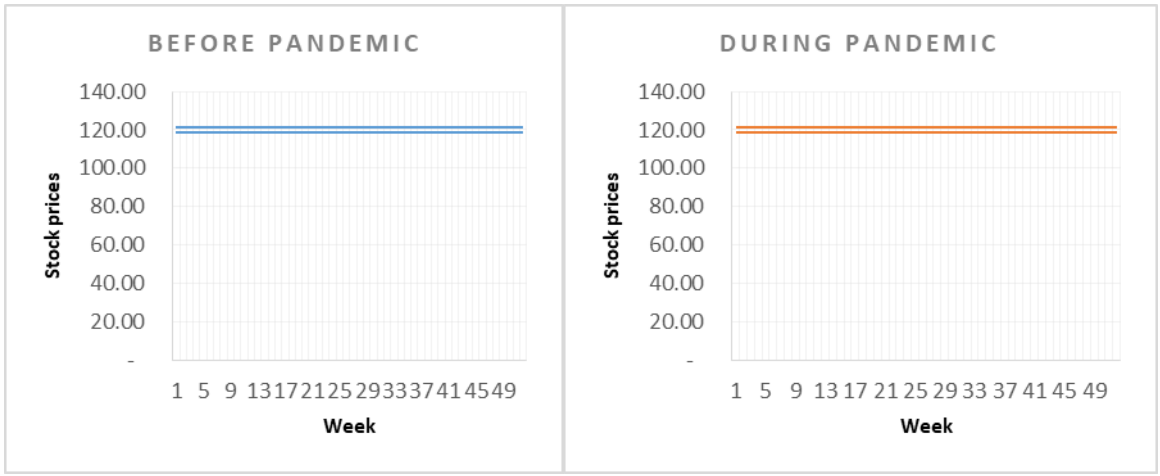
Source: Field data, (2022)

Figure 6: Graphical comparison of the average weekly stock prices before and during the COVID19 pandemic for TCC and TPCC

TCC	TPCC
	

Source: Field data, (2022)

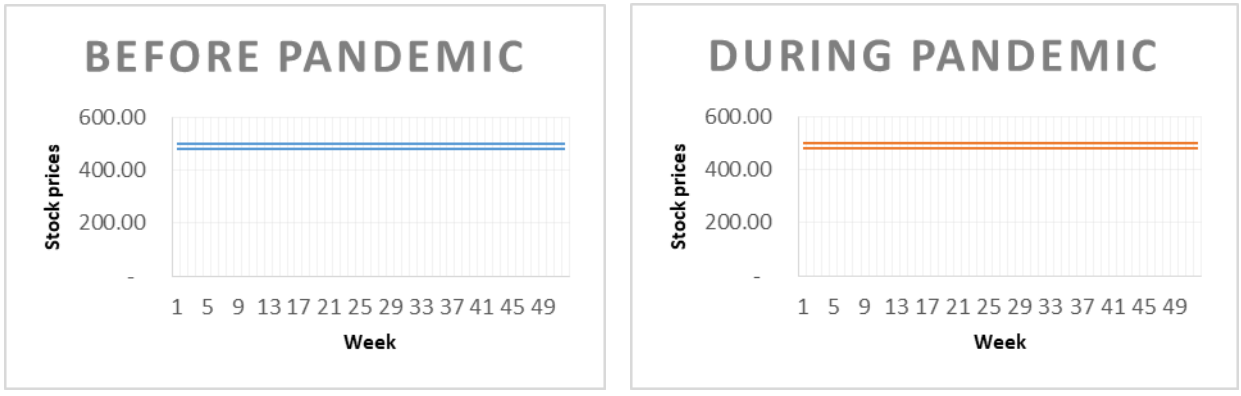
Figure 7: Graphical comparison of the average weekly stock prices before and during the COVID19 pandemic for TTP



Source: Field data, (2022)

Oil and gas sector has one listed company (SWALA), the weekly stock prices at this company were trending at a constant figure (shown in Figure 8 below). Thus, before the pandemic there was a steady situation for this sector.

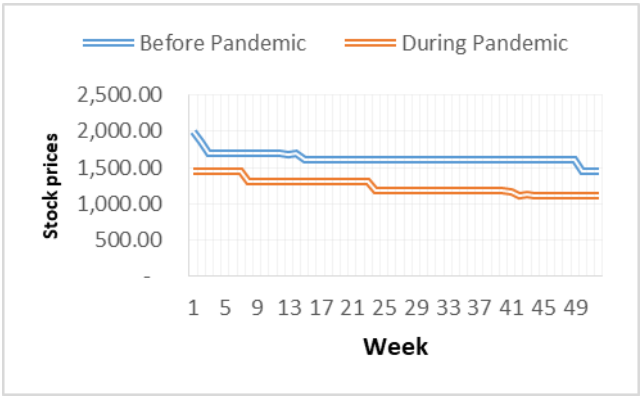
Figure 8: Graphical comparison of the average weekly stock prices before and during the COVID19 pandemic for SWALA



Source: Field data, (2022)

Commercial service sector has one listed company (SWIS). Weekly stock prices for this company were steadily moving downwards during the pandemic as shown in figure 9 below;

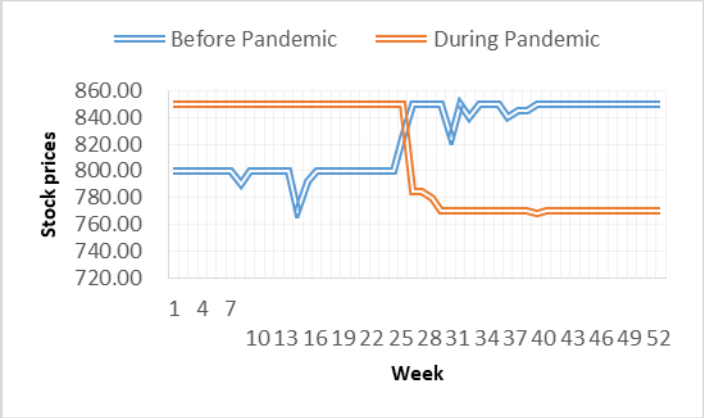
Figure 9: Graphical comparison of the average weekly stock prices before and during the COVID19 pandemic for SWIS



Source: Field data, (2022)

Telecommunication sector has one listed company (VODACOM). In this company, the weekly stock prices were steadily moving downwards during the pandemic. Figure 10 below shows the trends;

Figure 10: Graphical comparison of the average weekly stock prices before and during the COVID19 pandemic for VODACOM



Source: Field data, (2022)

These findings are similar to the study of Bora & Basistha, (2021) who investigated the impact of COVID-19 on the volatility of stock prices in India. The findings revealed that the stock market in India had experienced volatility during the pandemic period. While comparing the result during COVID period with that of the pre-COVID, they found that the return on the indices was higher in the pre-COVID-19 period than during COVID-19.

Recommendation

This part is composed of recommendation for action and recommendation for further studies as shown below;

Recommendations for Action

Considering the finding of this study, the following are recommendations from the researcher:

i. Practitioners of stock market exchange should provide awareness to the public on opportunities available in the financial markets.
ii. Media and other visibility forums should lay a platform for awareness provision to the public concerning financial markets.
iii. Companies being listed at financial markets should provide detailed information so as to enable new investors and academicians to understand their growth for better investment decisions.

Recommendations for Future Research

This study focused on quantitative approach which is limiting the in-depth insight of interpretation, it is therefore recommended that future researches to be carried out should focus on qualitative aspect in order to increase the exploratory aspect of Effect of COVID 19 pandemic on stock market performance. Also, a different study should be conducted covering all listed companies other than those which base in Tanzania as did by the researcher. In addition to that, this study compiled all industrial sectors as listed in DSE, other researchers can be detailed and base only in one sector in the future studies.

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