

# Tweeter Sentiment and its Effect on The Egyptian Stock Market Sectors Profitability During COVID-19

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## Abstract

December 2019 witnessed the beginning of the first appearance of the Covid 19 coming from the Chinese city of Wuhan, and then it began to spread throughout the world, with more than 38 million confirmed cases in different parts of the world, while more than one hundred thousand confirmed cases were infected in Egypt by the end of October 2020.

With the confusion happened in all stock markets, we make a research to highlight the effect of covid 19 on the Egyptian stock market profitability .

## 1. Introduction

December 2019 witnessed the beginning of the first appearance of the Covid 19 coming from the Chinese city of Wuhan, and then it began to spread throughout the world, with more than 38 million confirmed cases in different parts of the world, while more than one hundred thousand confirmed cases were infected in Egypt by the end of October 2020.

Covid 19 has caused an imminent threat to human health on a large scale with the advent of December 2020, as it seriously infected the human respiratory system, ranging from symptoms of the common cold to more serious diseases such as MARS, SARS, and with this rapid spread through contact between people On January 30, 2020, the World Health Organization declared a worldwide public health emergency, and then recognized the outbreak of the Corona pandemic on March 11, 2020.

The consequences of this virus and its severity increased when the numbers related to the Covid 19 began **to come in successively**, as it was announced on June 27, 2021 that a confirmed infection of 181.87 million people, and the death of 3.94 million people due to the spread of this virus in 220 countries, has caused severe damage to many countries of the world, economically, socially and financially.

In an attempt to control the spread of COVID-19, most countries of the world have taken many control procedures for the possibility of dealing with this virus, starting with people awareness, the proper use of masks and sterilization methods, ensuring social distancing, and imposing restrictions on gatherings and non-essential travel.

In addition to the above, and with the rapid spread of this virus intensifying (**rapid increase in severity**), some countries of the world have begun to take more severe precautionary procedures, such as the comprehensive ban (PERRA,2021), whether for a short or long period, and most countries of the world have announced complete or partial closure for several times. (Bakhshi and Chaudhary, 2020) indicated that the lock down of a country results in huge financial and economic losses, as a result of the severe impact on all economic and financial activities **as a result of** these restrictions.

All of the above have been reflected in the financial markets around the world, which was confirmed by (Bahrini and Filfilan, 2020). At the same time, the spread of this virus led to the decline of most of the stock market indices in the world, such as the markets of America, Europe, Asia and Africa, as the prominent stock market indices in the United States such as such as the Dow Jones Industrial Average (DJIA) and Standard & Poor's 500 Index (S&P500) have dropped significantly. Industrial Average (Wagner, 2020).

## **2. Literature review**

According to (Dhar, 2020; Fernandes, 2020; Ferrantino et al., 2020). the COVID-19 virus has negatively affected all activities that generate income for individuals, which has led to a decrease in the gross domestic product of all countries of the world.

In the same context, indicated (Maliszewska, Mattoo, and Van Der Mensbrugge 2020) indicated that some people are forced to reduce consumption for losing income source or reducing income. And many markets, shopping centers, retail stores, and small business units were closed for several times due to lockdown, and as investors expect achieving the highest return on investments on the basis that the positive rate of return is the primary objective of the investment, while the potential investors and creditors always seek to ensure the recovery of their original investments with the expected return (Hussain, 2020), and they always want to compensate for the acceptable risks they took with the expected return.

On the other hand, (SANSA, 2020) discussed singular shareholder willingness is strongly related to stock returns when making investment decisions, as investors always want **reassurance and ensure the ability and strength of the company to make profits**, such as investing in stocks. Accordingly, in case that investors are not satisfied with the performance of a company, they will automatically switch to alternative investment opportunities, which is reflected in the decrease in the demand for the shares of that company.

This effect was not limited to the decline in the demand for shares, but was also reflected in the market indices, which declined significantly. Liu, Manzoor, Wang, Zhang, and Manzoor (2020) concluded that during the Covid-19 pandemic the overall **sentiment** of the investors declined which is What led to lower returns on related stocks, and the final result of this virus outbreak is a decelerate of the country's economy, either due to restrictions imposed by governments, or because of fear that has gripped people's minds (Baig, Butt, Haroon, & Rizvi, 2020).

This, and since the stock market represents the heart of the country's economy, as most of the capital of any economy moves to any country through the stock market. Hence, the financial market of a particular country affects positively or negatively and significantly on the economy of this country, and perhaps what happened, for example, in Bangladesh after the appearance of the first three cases of COVID - 19 is the greatest evidence of this, as the general index of the DSE market has massively declined by 6.51 %, while the total market capitalization shrank by 5.5%, Experts have unanimously agreed that the current time requires controlling and managing the outbreak of the COVID-19 epidemic, in a manner that ensures sustainable stability of the economy. If it is not managed properly and effectively, the outbreak of this virus may obliterate any economy (Anjorin, 2020).

Despite the recent emergence of Covid-19, its suddenness, the increasing pace of its spread, and its negative repercussions on other societies in general, and the financial markets in particular, have made Covid-19 a **fertile material** for many researchers to study and analyze the dimensions of this virus, its effects, and its consequences. Its spread over global economies in general, and the efficient performance of financial markets in particular.

Through the researchers' follow-up to the interpretations and visions of researchers on the topic of the research. The two researchers noted that the majority of previous research focused on the direct relationship between COVID-19 and the performance of financial markets, while there are a number of researchers that dealt

with the indirect relationship between COVID-19 and financial markets, such as the relationship between gross product and the economy in general and some industrial and commercial sectors, from the point of view that any impact of this virus will reflect positively or negatively on the shares of those organizations and the consequent impact on the stock market.

In the following, the two researchers present the most important findings of previous researchers, and **the aspects** of the connection and differences between them, starting with the studies that dealt with the direct relationship between Covid-19 and the performance of the financial markets, followed by the studies that dealt with the indirect relationship between them.

Where (Balboula.M, Metawea. M, 2020) compared two stages, before and during the Covid 19 period, and came out with the conclusion that the returns of Egyptian banks' shares before Covid 19 is better than during the period of the emergence of this virus, at the same time (khan, k , Jahanger, A, 2020) referred to the impact of the Corona pandemic on stock exchanges in 16 countries, his study confirmed that the new weekly cases have a negative impact on the stock market return, despite **the lack of response by investors in these countries** to media information about Covid-19 in the early stages of the emergence of the epidemic.

In the same context, (Alber, 2020) concluded in his study on the reaction of financial stock exchanges to the Covid 19 pandemic in 64 countries during the period from January 22 to April 17, 2020, where the results of that study showed that financial stock exchanges responded contrarily to the increase in cases of Covid-19. That is, that Stock market returns have declined as the number of cases reported has increased. Moreover, the study showed that stock markets respond more proactively to an increase in the number of reported cases, than to an increase in the number of deaths.

While (Ramelli, S., & Wagner, A. F. ,2020) examined the impact of the Covid-19 pandemic on stock price reactions in American companies, and concluded that the epidemic led to extremely negative and volatile market reactions.

As for Liu et al. (2020) came out of his study with a conclusion confirming that the epidemic caused major negative shocks in global stock markets.

In the same context and in one of the pioneering studies, (Goodell, 2020) highlighted that Covid-19 may have a wide impact on financial sectors, including stock markets, this is supported by the empirical evidence inspired by the data of the applied study, including for example: data for 64 countries (advanced and emerging) during the period from January 22, 2020 to April 12, 2020, (Hasan, Mahi, Sarker, and Amin, 2021) agreed with him, who confirmed from the results of his study that the performance of the stock market is significantly negatively affected by COVID-19 cases.

(Zeren and Hizarci, 2020) found that total and new cases by Covid-19 have a significant correlation with the performance of the regional capital market.

(Zhang, Hu, and Ji, 2020) agreed with him that the spread of COVID-19 has dramatically influenced the stock market all over the world.

Agreed with him, (Chowdhury et al. , 2021) which concluded that Covid-19 pandemic has a negative impact on the stock market due to the increased risks.

While (Sansa, 2020) examined an applied case on the Shanghai Stock Exchange and New York Dow Jones, during the period from March 1 to March 25, 2020, where the result of the study was a positive relationship between COVID-19 cases and the performance of financial markets.

As for (Zeren and Hizarci, 2020), it was confirmed in the results of his study that the total and new cases of COVID-19 have a significant correlation with the performance of the regional capital market.

(Zhang, Hu, and Ji, 2020) agreed that the spread of COVID-19 has dramatically affected the stock market worldwide.

Whereas (Hui Hong, et al., 2021) found that COVID-19 was a significant factor for market inefficiency, creating profitable opportunities for traders and speculators. Rational investors who seek to maximize returns may need to pay close attention to insider trading before making any decisions in the stock market, on the other hand, such crises may also lead to inequality of income and wealth as market participants who have much of Liquidity at hand can seek for profitability in the stock market.

And on the sensitivity of the financial markets' response to indicators of injuries and deaths to Covid 19. (Elsayed. A, Abd Elrhim. M, 2020) indicated that stock market sector returns appear to be more sensitive to indicators of cumulative deaths than daily deaths from the Covid 19. The new cases are more than the cumulative cases.

While (Hossain. T, et al., 2021) concluded that the new daily confirmed cases of Covid 19 in the world have a significant negative impact on both the DSE 30 and DSEX index. It also indicates that higher daily new confirmed COVID-19 cases negatively affect the DSE indicators. While the daily deaths in the world due to Covid 19 do not negatively affect the DSE indicators. In his study on (Bangladesh), he approved that the daily new confirmed cases of COVID-19 are significantly negatively correlated with the DSEX and DSE30 indices, and this is very alarming for the economy to ensure the sustainable development of the country. Here, the competent authorities should expedite taking the necessary precautions to control the outbreak of Covid 19 in light of the expectation of a significant decline in the performance of the stock market and the economy in general in (Bangladesh), noting that the daily deaths due to Covid 19 through the results of the study in (Bangladesh). It does not adversely affect the DSE indicators.

The results of the study revealed that the interest rates on bank deposits are negatively related to the performance of the stock market, while the interest rate on loans and the price of gold are positively related to the indicators of the Dubai Stock Exchange. And, if the exchange rate is insignificant, but it is positively related to the performance of the stock market. Also, the inflation rate has a significant relationship with the DSE 30 and an insignificant negative relationship with the DSEX index.

(Bakhshi and Chaudhary, 2020) explained that closing a country faces huge financial and economic losses, as global economic and financial activities are seriously affected by these restrictions. The pandemic created by Covid-19 has particularly affected the financial markets around the world, and this has entailed the decline of most stock market indices in financial markets around the world.

Prominent stock market indices in the US such as the Dow Jones Industrial Average (DJIA) and Standard Index 500 (S&P 500) have fallen significantly (Wagner, 2020).

It is evident from the results of previous studies, which were referred to earlier, that Covid-19 has a negative and direct impact on the performance of financial markets. In addition, the researchers found that there are some previous studies whose results showed an indirect correlation between Covid-19 and the financial markets (through the negative impact on the country's economy in general, or the gross domestic product, or some industries or companies).

(Alber. N, Refaat. A, 2020) show that there are negative industrial impacts not only on banking sector, but also on various sectors such as the food, beverages and tobacco sector (FOBT) and the health care and pharmaceutical sector (HLTH)

On the contrary, the results of the study showed positive impacts on other large industrial sectors, such as the contracting and construction engineering (COCE) sector. The energy and support services sector (ENGY), the information technology sector, the media and communications sector, the shipping and transportation sector (SHTS), the trade and distributors sector.

And (Maliszewska, Mattoo, Van Der Mensbrugge, 2020) agreed with him that due to the Corona pandemic, many people lost or faced a crucial decrease in their income leads to a decrease in their consumption caused the closure of many markets, shopping centers, retail stores and a number of small projects, which resulted in a fatal decrease in the business organizations' turnover

In the same context, (Liew and Pua, 2020) mentioned that investors' response to Covid 19 differs from one country to another, and from one industry to another, and they also indicated that some sectors such as: consumables, information and communications technology, infrastructure and non-manufacturing medical structure performed better than other sectors.

This result is also supported by (Al-Awadhi, Alsaifi, Al-Awadhi, and Alhammadi, 2020), that the IT and pharmaceutical industries performed better during the Covid-19 epidemic compared to other industries. It's also noticed a significant negative correlation during COVID-19 and the share (stock) index value of the Hong Song Stock Exchange Composite, SSE.

(Baker et al., 2020) also noticed a significant negative correlation during Covid-19 and the DowJones industrial index, as they estimated that if the daily average of Covid-19 cases in USA increased by 1% that will cause a decline of approximately 0.01% in the S&P 500 index after the first day, approximately a 03:0% contraction after one month.

(Sun, Wu, Zeng, and Peng, 2021) found that more confirmed cases of Covid 19 will cause more and more losses, because the activities of commercial companies will be weakened, and thus stock returns will decrease.

Although there are previous studies that confirmed the absence of a negative impact on economic events and then the GDP and the performance of financial markets, such as (Ozili and Arun, 2020), who presented a different result stating that the increasing amount of infected Covid-19 cases did not significantly affect economic events. (Cookson, Engelberg, and Mullins, 2020) agreed with him in this opinion, who found that money markets in China continued to be strong and stable and were not affected by the Covid-19 epidemic. (Sansa, 2020) supported this opinion.

Opposing to this view, a number of researchers have conducted a study on the impact of Covid 19 on stock price fluctuations and its reflection on the performance of financial markets.

(Baker et al., 2020) pointed out that COVID-19 led to the highest stock market instability among all modern diseases, including the Spanish flu of 1918.

This view is also supported by (Baig et al., 2020), where (Sharma, 2020) states that COVID-19 has a statistically significant effect on stock instability, but the effect differs from reality in different countries concerned, as markets in high-



income countries initially overreact, and recovered more quickly than low-income countries.

In the same vein, (Engelhardt, et al. , 2020) have argued that the size of market instability in response to COVID-19 depends on confidence, with instability being much less than high confidence (including societal confidence and trust in government). (Topcu, Gulal, 2020) reached a similar conclusion when focusing only on emerging markets, as it depends on whether the impact of Covid-19 is temporary or permanent on the nature of the markets.

(Ashraf 2020) also conducted a comprehensive analysis of 64 countries' data on COVID-19 information such as new cases, daily deaths and stock market performance, and concluded that stock markets respond more quickly to daily new cases in relation to new deaths.

On the other hand, a number of researchers have been interested in studying the link between Covid 19 and the GDP in terms of what will result from the closure process approved by many governments, during 2020, as many commercial establishments reduced the number of their employees and their salaries, and thus many people lost their jobs and became unemployed due to Covid 19, and thus those income-generating activities of individuals were negatively affected, which led to a decrease in the world's gross domestic product (Fernandes, 2020; Ferrantino et al., 2020).

(Machmuddah, et al., 2020) conducted a research, in which he collected data from ninety days before the Covid 19 pandemic and the same after the pandemic, where he found great differences from the closing of the stock market and the volume of stock trading, and they suggested that investors choose companies that provide much-needed commodities to customers, such as medicines, foods and beverages.

(Odhiambo, et al., 2020), studied the case of Kenya where he concluded that since the attack of the Coronavirus, Kenya's economy has faced a decline in GDP, increased unemployment and other economic damage. This view was supported by (Karungu, et al., 2020) which indicated that in the Nairobi Stock Exchange in Kenya, most foreign investors began to dispose of their investments from the stock market, by conducting a comprehensive research on the stock exchanges of seven severely affected countries.

The same result was reached by (Kotishwar, 2020), where he conducted a study using VECM to estimate the impact of Covid 19 caused by the spread of the virus in stock markets in six countries (the United States, Spain, France, Italy, China, and India) and found a significant negative long-term effect on the Covid 19 relationship with stock indices in those selected countries.

In addition, (Ayittey, 2020) indicated that the severe closure imposed by various countries led to the contraction of the economy, and he was also alarmed that the global gross domestic product may decrease by 0.5% due to the numerous closures imposed by governments. Also, this decrease in GDP will increase depending on the duration of the closure.

Moreover, many other researchers have also found similar results in different countries, some of them are in China (Ruiz & Arturo, 2020), Germany (Michelsen et al., 2020), the United States (Alfaro, et al., 2020), and Saudi Arabia (Albulescu, 2020).

(Rabhi et al., 2020) also indicated that the long period of the epidemic, makes government intervention a greater impact on economic uncertainty than cases of Covid 19. Since stock markets reflect the economic situation of any country, and therefore the decline in the country's GDP will negatively affect the performance of the market Stock have. (Chaudhary, et al., 2020).

(Wren-Lewis, 2020) also claimed and based on certain assumptions, that the Corona pandemic will significantly affect the gross domestic product, due to the decrease in production and the change in consumer demands.

Moreover, the pandemic will make the situation worse if banks fail to meet the financing needs of companies as a result of the sudden drop in demand, which ultimately leads to the collapse of stock markets around the world.

### **3. Description of Data and Sample**

To test the effect of information versus investor sentiment, we develop this model to illustrate the different effects of the information and investor sentiment on the stock market sectors profit, to understand how investor sentiment affect the profitability of stock market sectors during covid-19 pandemic, figure 1 will illustrate the research model.

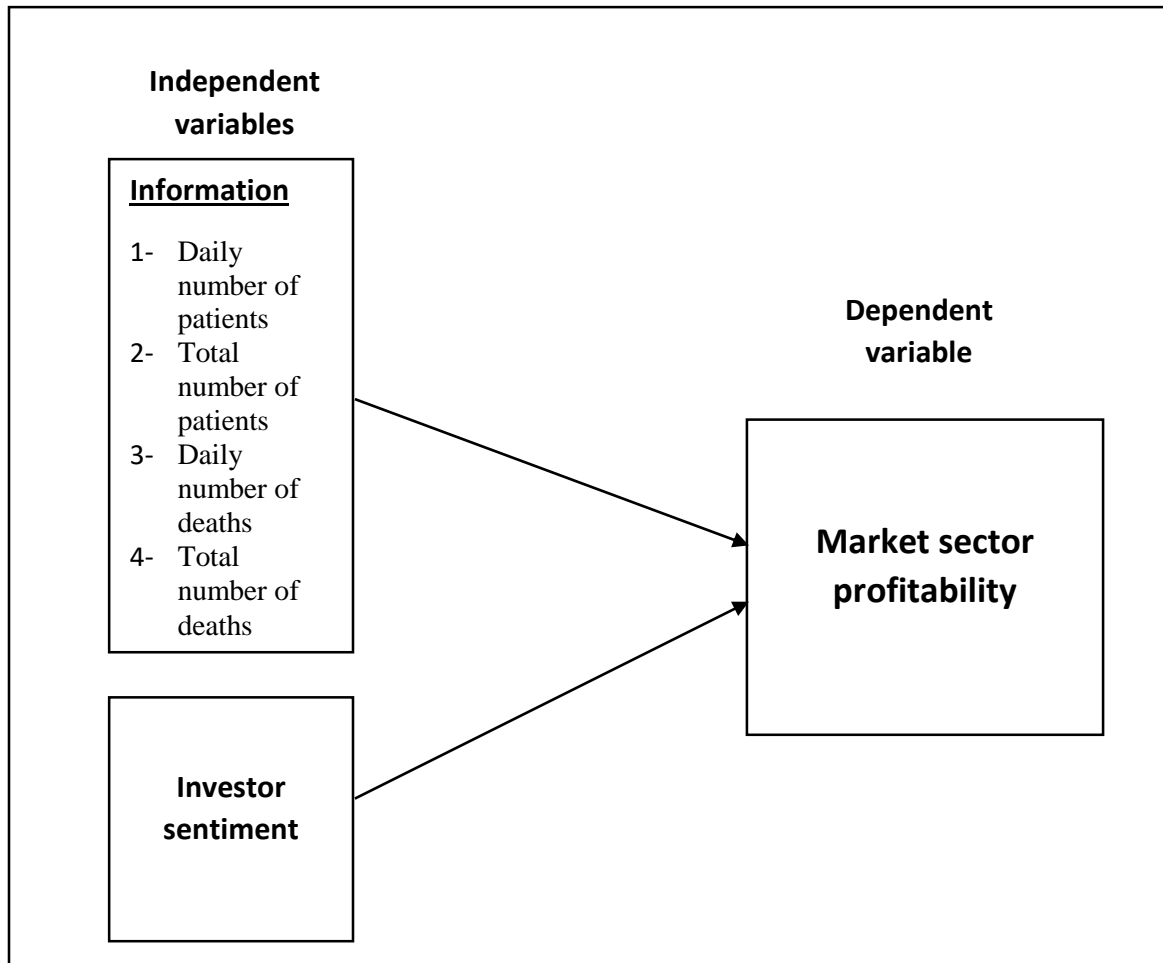


Figure 1. Research model

The researcher relied on a sample of 579 observation form the first wave of covid 19, during the period from the appearance of the first patient in 03/18/2020 to 07/28/2020 with 34 observation for each sector, this 34 days have been chosen randomly.

We test the effect of covid 19 on 17 sector in the Egyptian stock market, this sectors are banking sector, Real Estate sector, Travel and Leisure sector, Basic Resources sector, Healthcare and Pharmaceuticals sector, Industrial Goods and Services and Automobiles sector, information technology, Media and Communication Services sector, Food, Beverages and Tobacco sector, Energy and Support Services sector, Trade and Distributors sector, Shipping and Transportation Services sector, Education Services sector, Non-bank financial services sector, Contracting and Construction Engineering sector, Textile and Durables sector, Building Materials sector and Paper and Packaging sector

### **3.1 Dependent variable**

The dependent variable is the daily profit of the 17 market sectors, we calculate daily profit using the following equation:

$$\text{Sector daily profit} = \frac{\text{closing price} - \text{opening price}}{\text{opening price}} \times 100$$

### **3.2 Independent variables**

#### **3.2.1 Information variables**

All the information that was available to investors in the first wave of the Covid 19 pandemic is the daily number of patients, the total number of patients, the daily number of deaths and the total number of deaths, and it was obtained from the database of the World Health Organization for egypt, the following table shows the information variables and its symbols in the research.

Table 1. Information variables

Variables	Symbols
Daily number of patients	New_cases
Total number of patients	Cumulative_cases
Daily number of deaths	New_deaths
Total number of deaths	Cumulative_deaths

### 3.2.2 investor sentiment

Researchers relied to measure investor sentiment on tweeter sentiment, we take number of tweets in a daily basis for 34 day, the main search key for mining in the tweets is the word Covid-19, then we analyze the text sentiment for every tweet, after analyzing each tweet we will have three types of sentiment positive, negative and neutral, then we count for every day the number of positive tweets and the number of negative tweets to calculate the sentiment index for each day, we used Zang and Skiena (2010) equation to calculate the sentiment index as follow:

$$\text{Sentiment index} = \frac{\text{Number of Positive tweets} - \text{Number of negative tweets}}{\text{Number of Positive tweets} + \text{Number of negative tweets}}$$

The number of all tweets the research depends in calculating the sentiment index on analyzing 8331 tweets.

## 4. Methodology

We use stepwise regression because its ability to manage large amounts of potential predictor variables, fine-tuning the model to choose the best predictor variables from the available options, and we use stepwise regression to measure the effect of all

independent variables on the market sectors prices , In addition to know which sectors are the most affected from covid 19.

## 5. Results

### 5.1 Descriptive Statistics

The table 2 shown that there are some sectors have negative profit (losses) in average during the study period, these sectors are banking sector, basic resource sector, food, beverage and tobacco sector, industrial goods and services and automobiles sector, non-bank financial services sector, real state sector, shipping and transportation service sector, and travel and leisure sector, this means that we have a potential effect form covid 19 on the stock market sectors profitability.

Table 2. Descriptive Statistics

Descriptive Statistics					
Sector		N	Minimum	Maximum	Mean
Banks	PROFIT	34	-3.6234-	2.1020	-.212505-
	Valid N (listwise)	34			
Basic Resources	PROFIT	34	-5.1461-	6.4827	-.136993-
	Valid N (listwise)	34			
Building Materials	PROFIT	34	-4.0912-	3.9496	.067385
	Valid N (listwise)	34			
Contracting & Construction Engineering	PROFIT	34	-5.9292-	7.0976	.302116
	Valid N (listwise)	34			

Education Services	PROFIT	34	-1.2315-	3.4768	.513090
	Valid N (listwise)	34			
Energy & Support Services	PROFIT	34	-4.2773-	2.7518	.064841
	Valid N (listwise)	34			
Food, Beverages and Tobacco	PROFIT	34	-3.3953-	3.5914	-.188865-
	Valid N (listwise)	34			
Healthcare and Pharmaceuticals	PROFIT	34	-2.2314-	3.1724	.153022
	Valid N (listwise)	34			
Industrial Goods and Services and Automobiles	PROFIT	34	-6.6584-	6.9378	-.018115-
	Valid N (listwise)	34			
IT , Media & Communication Services	PROFIT	34	-2.5481-	4.3029	.518043
	Valid N (listwise)	34			
Non-bank financial services	PROFIT	34	-5.5698-	3.7176	-.188338-
	Valid N (listwise)	34			
Paper & Packaging	PROFIT	34	-6.2459-	5.5034	.745364
	Valid N (listwise)	34			
Real Estate	PROFIT	34	-9.6916-	5.3321	-.015219-
	Valid N (listwise)	34			
Shipping & Transportation Services	PROFIT	34	-6.6928-	5.6614	-.068490-
	Valid N (listwise)	34			
Textile & Durables	PROFIT	34	-3.1674-	5.5453	.219748
	Valid N (listwise)	34			
Trade & Distributors	PROFIT	34	-3.1815-	2.9128	.156456
	Valid N (listwise)	34			
Travel & Leisure	PROFIT	34	-4.0184-	2.5441	-.198269-

## 5.2 stepwise regression for stock market sectors

### 5.2.1 banking sector

The following table show the stepwise regression for banking sector

Table 3. stepwise regression for banking sector

stepwise regression for banking sector

Independent variable: **market sector profit**

	Model 1
Adjusted R Square	.114
Model significance	<b>.031**</b>
Sentiment index	<b>.031**</b>
	<b>(-2.263)</b>

Note: \*\*\*, \*\*, \* denote statistical significance at 1%, 5% and 10%, respectively.

As shown in table 3 the stepwise regression generates one significant model, The model have explanatory power with 11%, The model showed that Sentiment index have a significant negative relationship with the banking sector profit, while other information variables excluded from the model.

### 5.2.2 Basic Resources

The following table show the stepwise regression for basic resources sector

Table 4. stepwise regression for basic resources sector

stepwise regression for basic resources sector

Independent variable: **market sector profit**

	Model 1
Adjusted R Square	.097
Model significance	<b>.044**</b>
Sentiment index	<b>.044**</b>
	<b>(-2.104)</b>

Note: \*\*\*, \*\*, \* denote statistical significance at 1%, 5% and 10%, respectively.



As shown in table 4 the stepwise regression generates one significant model, The model have explanatory power with 9%, The model showed that Sentiment index have a significant negative relationship with the basic resources profit, while other information variables excluded from the model.

### 5.2.3 Building Materials

The following table show the stepwise regression for Building Materials sector

Table 5. stepwise regression for Building Materials sector

stepwise regression for Building Materials sector

Independent variable: **market sector profit**

	Model 1
Adjusted R Square	.097
Model significance	<b>.043**</b>
Sentiment index	<b>.043**</b> <b>(-2.109)</b>

Note: \*\*\*, \*\*, \* denote statistical significance at 1%, 5% and 10%, respectively.

As shown in table 5 the stepwise regression generates one significant model, The model have explanatory power with 9%, The model showed that Sentiment index have a significant negative relationship with the Building Materials profit, while other information variables excluded from the model.

### 5.2.4 Contracting and Construction Engineering

The following table show the stepwise regression for Building Materials sector

Table 6. stepwise regression for Contracting and Construction Engineering sector

stepwise regression for Contracting and Construction Engineering sector

Independent variable: **market sector profit**

	Model 1
Adjusted R Square	.111
Model significance	<b>.033**</b>
Sentiment index	<b>.033**</b>
	<b>(-2.234)</b>

Note: \*\*\*, \*\*, \* denote statistical significance at 1%, 5% and 10%, respectively.

As shown in table 6 the stepwise regression generates one significant model, The model have explanatory power with 11%, The model showed that Sentiment index have a significant negative relationship with the Contracting and Construction Engineering profit, while other information variables excluded from the model.

### **5.2.5 Healthcare and Pharmaceuticals**

The following table show the stepwise regression for Healthcare and Pharmaceuticals sector

Table 7. stepwise regression for Healthcare and Pharmaceuticals sector

stepwise regression for Healthcare and Pharmaceuticals sector

Independent variable: **market sector profit**

	Model 1
Adjusted R Square	.113
Model significance	<b>.031**</b>
Sentiment index	<b>.031**</b>

**(-2.256)**

Note: \*\*\*, \*\*, \* denote statistical significance at 1%, 5% and 10%, respectively.

As shown in table 7 the stepwise regression generates one significant model, The model have explanatory power with 11%, The model showed that Sentiment index have a significant negative relationship with the Healthcare and Pharmaceuticals profit, while other information variables excluded from the model.

### **5.2.6 Trade and Distributors**

The following table show the stepwise regression for Trade and Distributors sector

Table 8. stepwise regression for Trade and Distributors sector

stepwise regression for Trade and Distributors sector

Independent variable: **market sector profit**

	Model 1
Adjusted R Square	.184
Model significance	<b>.007***</b>
Sentiment index	<b>.007***</b>
	<b>(-2.869)</b>

Note: \*\*\*, \*\*, \* denote statistical significance at 1%, 5% and 10%, respectively.

As shown in table 8 the stepwise regression generates one significant model, The model have explanatory power with 18%, The model showed that Sentiment index have a significant negative relationship with the Trade and Distributors profit, while other information variables excluded from the model.

### **5.2.7 Travel and Leisure**

The following table show the stepwise regression for Travel and Leisure sector

Table 9. stepwise regression for Travel and Leisure sector

stepwise regression for Travel and Leisure sector

Independent variable: **market sector profit**

	Model 1
Adjusted R Square	.184
Model significance	<b>.091**</b>
Sentiment index	<b>.091**</b> <b>(-2.053)</b>

Note: \*\*\*, \*\*, \* denote statistical significance at 1%, 5% and 10%, respectively.

As shown in table 9 the stepwise regression generates one significant model, The model have explanatory power with 9%, The model showed that Sentiment index have a significant negative relationship with the Travel and Leisure profit, while other information variables excluded from the model.

## 6. Conclusion

We can say that 7 sectors profitability affected from covid 19 pandemic, we can confirm at the end of the research that investor sentiment has a great effect of the stock market sectors profitability during covid 19 pandemic, which means that information have no effect the market profitability due to that Egyptian market is inefficient market a and we can conclude that the Egyptian stock market is effected by other behavioral and cognitive biases rather than what traditional theory determined about the information efficiency.



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