

# The Economic Impact of Covid-19 on Investment Strategies and Related Government's Measures

Yuxuan Han<sup>1,†</sup> Yu Liu<sup>2,\*</sup> Zihan Qiu<sup>3,†</sup>

<sup>1</sup> Department of Finance, Beijing Technology and Business University, Beijing, 100000, China

<sup>2</sup> Department of Finance and Economic, Guangdong Polytechnic Normal University, Guangdong, 510450, China

<sup>3</sup> Department of Finance and Economic, Zhejiang Gongshang University, Hangzhou, 310000, China

\*Corresponding author. Email: zsxsc@gpnu.edu.cn

† These authors contributed equally

## ABSTRACT

COVID-19 spread globally in 2020, with confirmed cases still increasing in many countries. Human investment activities also suffer when life, health, and safety are at great risk. The outbreak of the virus has also caused a huge impact on the economy, global financial markets have seen great turbulence, the US stock index even had an unprecedented three circuit breakers. The impact on the global economy of even rare but potentially fatal "black swan events" cannot be accurately assessed. Faced with such a severe epidemic, people tried to find ways to hedge their risks in various ways. Based on the analysis of various industries and the safe-haven assets, some solutions were found to gain profits from the epidemic by shorting the stocks of the affected industries. The government offering the release of some protection and welfare measures, the economic loss can also be redeemed to a certain extent.

**Keywords:** Covid-19, Investment Strategies, Risk measurement, Economic response, Economic recovery.

## 1. INTRODUCTION

The COVID-19 pandemic has had a big impact on the global economy, but also on different regions, with stock market volatility particularly strong. COVID-19 has greatly affected the market, and how to reduce losses and gain profits through various investment strategies is a particular concern. Stocks like natural gas, food, health care, and software have posted high returns, while travel, entertainment, hotels, and hardware technology stocks have fallen sharply in value. People can get it by actively shorting stocks in these industries. Safe-haven assets such as gold are also a hedge against the pandemic. In the event of an outbreak, the government will adopt a home quarantine policy, which can be predicted based on relevant data. Some post-covid-19 recovery policies have also focused on and implemented effective responsive and reconstructive socio-economic programs and frameworks to mitigate the impact of COVID-19 and boost employment opportunities in many ways. At the same time, some special economic tools will be adopted to minimize investment risk, and some adjustments will be made. In addition, a large number of welfare policies to improve

jobs can also alleviate economic pressure under epidemic conditions.

## 2. ECONOMIC IMPACT OF COVID-19

### 2.1. Impact of the epidemic on the macroeconomy

COVID-19 was affecting all parts of the world, and Wuhan, as the worst-hit city, had a big impact on its economy, even across the globe.

Foster et al. studied the impact of the outbreak on Wuhan and the global economy[1]. As Wuhan is the main financial center in central China, the outbreak has disrupted some global trade and supply chains. The impact on the stock market was fairly clear, with China, the world's second-largest economy, down 32% for a year. Other industries were also having a huge impact, with more than 70,000 cinemas closed in the mainland, retail, hotel, and tourism. As far as auto parts suppliers were concerned, if the manufacturing industry remains idle, the loss will be huge. Many foreign manufacturers depend on China for supplies. In addition to the automobile industry, tourism around the world has also

been severely affected by the epidemic. As the leading source market of tourists, the rate of Chinese outbound tourism has dropped significantly. So tourism outside China has also been hit hard.

## **2.2. Impact of COVID-19 on different areas**

The epidemic has affected the economies of different regions in different degrees, and some of the economic impacts have even threatened lives.

The epidemic has hit different areas hard, so investment in these areas needs to be cautious. Mohamed et al. researched the Socio-Economic Impacts of COVID-19 on the Communities[2]. And used some examples to show that. India is representative of developing countries whose impact could be life-threatening. Many workers lost their jobs, farmers had to give up their crops to pay off their loans, and the entertainment industry had no income. Even before the coronavirus pandemic, Latin American countries like Brazil and Argentina were already facing political and economic crises on their soil that left Brazil stuck in historical debt. COVID-19 had left their country amid a high unemployment rate. By far the most common economic activity in European history had been trading. The European continent was considered one of the richest in the world, but it still faces financial poverty, severe material deprivation, and unemployment during the COVID-19. The state of the world economy and rising unemployment.

Both economically developed countries and countries with a high degree of extreme poverty have brought different degrees of crisis to the country.

## **2.3. Impact of COVID-19 on the stock market**

COVID-19 has had a big impact on the stock market, affecting a wide range of industries.

Niels et al. reviewed the changes in stock markets and dividend futures under the COVID-19 pandemic[3]. This is a study that talks about what are growth expectations and asset pricing data from other markets by reading the movements of the stock market and growth. It is difficult to identify the economic shocks that caused asset prices to move. So Niels and Ralph developed a simple asset pricing model of pandemics. So it can understand the joint dynamics of short-term dividend prices, the aggregate stock market, and bond prices during the crisis.

Stefano Ramelli et al. researched the impact of COVID-19 on the market and how financial policies provide corporate value[4]. Ramelli et al. studied the impact of COVID-19 on businesses, asking how the real impact spreads through financial channels. And then they divided it into three phases, incubation period, outbreak period, and fever. Ramelli et al. research

shows that the stock price of international-oriented enterprises is significantly affected by market changes.

Julia et al. used a broad definition of the 'food supply chain' that covers the entire supply chain from farm equipment and supplies, agriculture, trading, processing, distribution, and retail[5]. The 71 companies surveyed were based in the United States, Europe, or Japan. The results showed that stock markets have responded with increased price volatility, with particular volatility in the stocks of manufacturers of fertilizers and agrochemicals, and grain distributors. Low price volatility was observed, in-stock food retailers. A regression analysis model was then used to show that stocks of more profitable companies showed higher cumulative returns during the outbreak. In the later stages, riskier stocks receive higher returns.

## **3. INVESTMENT STRATEGIES**

The pandemic is having a significant impact on public health and the global economy. Countries such as Greece, Portugal, and Spain, which are more dependent on tourism (over 15% of GDP), will be more affected by the crisis [6]. The stock market has also been hit by the pandemic. But when combined with the stock market data from previous virus outbreaks, such as the 1918 Spanish flu outbreak, the stock market did not suffer a big shock. Instead, it was an upward trend in general. The Dow Jones Industrial Average was up 7% from the start of the year. In 1919, the market was up nearly 50%. While the Spanish flu isn't exactly an analogy to COVID-19 (there was also The impact of World War II, which helped drive the market back up), it's a reminder that it doesn't have to be a bad impact in the long term.

Mazur et al. found that natural gas, food, health care, and software stocks enjoyed high returns, while travel, entertainment, hospitality, and hardware technology stocks fell sharply in value. People can take the initiative to short the stocks of these industries and get a return[7].

### **3.1. Short stocks of industries hit by COVID-19**

#### **3.1.1. The travel industry**

Due to the mass cancellations of people's plans, public transportation companies have been greatly affected. In terms of flight reservation volume, the reservation volume in China has decreased by 56% year on year, while the reservation volume in the US has decreased by 63.29%, which can be said to be a great impact. To confirm this idea, Heather Yan et al. Looked at data from the SARS era and found 305 U.S. airline stocks fell. An analogy can be drawn as the level of investment in the airline industry during the COVID-19 pandemic has not changed much from that during

SARS. Combining the stock closing price, the 10 days moving average, and the 10 days momentum of Cathay Pacific Airways (CP), China Eastern Airlines (CEA), and China Airlines (CA), it can be found that the stock price dropped sharply from the beginning of 2003, but began to recover in April with a clear turning point, so it can be considered as Heather Yan et al. The idea is right.

Therefore, in the period of COVID-19, people should short these stocks and try to catch turning points.

### *3.1.2. The entertainment industry*

The entertainment industry was also suffered a huge attack in this epidemic. Because of the closure of amusement parks and the postponement of movies, this industry was in crisis. Disneyland, for example, was greatly affected. So Heather Yan et al. target The Walt Disney Company and Universal, shorting them and buying them back as soon as we think the market will stabilize. For now, shorting both stocks is profitable.

### *3.1.3. The hardware technology companies*

As a result of the pandemic, many companies have had factories shut down, hardware cannot be produced and supply chains will be disrupted. Take Apple and Tesla, for example. Both these two companies need a plentiful supply of hardware to survive. When Heather Yan et al. looked at the total production completed in China, they found that in January and February 2019, it fell by 13.5% year on year, the first decline in 1990, but in March, it dropped by only 1.8%, indicating that there was already a trend of recovery. They guess that these two stocks will fall in the short term, and certainly recover and reach new highs after some time. So people can short their stocks until there's some good news, like resuming people's normal activities. [8]

## **3.2. Passive investment strategies in COVID-19**

The strategies above are all active investment strategies for profit, but there are passive strategies besides active strategies, such as buying Treasury bonds and gold. Based on experience, Harvey et al. concluded that there is no definite correlation between Treasury bond yield and stock yield, which makes it difficult for us to benefit from it. So gold is more valuable to analyze.

Overall, seven out of eight retrenching were positive. During the SARS epidemic, the change of gold price was negatively correlated with the return of the SP500 index, so people could find the pattern, find the lowest value of SP500 and the highest value of gold price, sell gold at that time, and re-enter the stock market. The method of Heather Yan et al. was that to buy gold ETFs and hold them until the gold price peaks.

Gold prices have been rising since March 19 as U.S. stocks have fallen sharply and many investors have had to cash in gold to maintain their investments.[9]

## **4. MONITORING AND POSSIBLE MEASURES**

### ***4.1. The impact of stay-at-home policy on market volatility***

The response of international financial markets and their related market indices to stay-at-home policies is small but statistically significant and therefore predictable. The COVID-19 outbreak has affected almost all countries, highlighting significant differences in approaches and successes to contain and contain the virus.

A variety of governments have been quick to establish strict control measures in many ways but have also an impact on the economy, the banking and insurance system, or the global financial market, in particular, due to COVID-19's unique global scope as a pandemic. Widespread media coverage of COVID-19 has proven to increase volatility in the stock market and sectors considered most at risks, such as tourism, hospitality, and retail. As a result, the risk of global stock markets has increased rapidly, which is related to the government's restrictions on the movement of residents. For example, Zaremba et al. have shown that government social distancing interventions consistently increase stock market volatility in international markets.

From January 1, 2020, until the end of June 2020 daily trading volume of the New York stock exchange at the end of the log, as well as a variety of 2019 coronary virus disease statistics, including diagnosis of death and infection, the data representation as to the growth in the number of confirmed cases, trade value shows the tendency of some positive relationship[13]. Between February and March, the volume of transactions rose sharply, then fell during April and May, while the number of cases and deaths continued to rise until June when the volume of transactions began to rise again. This is closely related to the stay-at-home policies of these countries. The notable exception was China, which saw its first increase in transactions in early January, possibly because it had passed the worst of its epidemic before other countries. The examination of structural discontinuities in transaction value is consistent with previous findings. That said, the vast majority of markets experienced a statistically significant structural break in trading activity on February 24, consistent with the peak in trading activity seen in the earlier charts.

Interestingly, China saw a breakthrough in the Shenzhen Composite index as early as February 4. And, for countries with more than one stay-at-home policy,

structural interruption tests will be conducted separately and collectively at each stage if the country has adopted multiple stay-at-home measures during COVID-19. There is a high degree of variability in market movements in the 28 countries and their market indices. In some cases, policy decisions seem to increase multifractals, thus improving the efficiency of markets. In other cases, stay-at-home policies appear to have increased market volatility. Current financial market activity in response to different stages of the country's establishment of a stay-at-home policy. Financial market indices in several countries have been shown to correlate with country-specific COVID-19 variables, such as population movements, epidemic severity, and established policy interventions.

#### ***4.2. Economic response, recovery, and reconstruction policies in key sectors***

The emergence and spread of COVID-19 have broken the conventional channels of an inclusive economy and have had a devastating impact on the living environment, the economic environment, and the social environment, leading to a global economic recession that could be the world's worst since the 1930s.

During and after the COVID-19 impact on the global socio-economic, it can be mitigated by focusing on and implementing effective responsive and reconstructive socio-economic programs and frameworks covering emergency financing, sound capital markets, central bank independence and a sound banking sector, currency swaps, liquidity facility, tax breaks, and preferential loans extended, extending unemployment insurance, financing, grants, debt relief, and diversified global cooperation, innovation, new technology, work transformation, retraining, redeployment, to set up the corruption watchdog, global cooperation, strengthen resistance and response capacity, the existing supply chain index of reconfigurable to reduce global economic imbalances to the society Important[14]. The global economy cannot follow its natural course. Therefore, it requires a combination of strategies with support and appropriate guidelines. For example, tourism, as a hard-hit industry, also needs to respond to and recover from the Coronavirus pandemic to a certain extent. Economists and researchers are constantly analyzing and studying this issue and developing different socio-economic strategies to mitigate the shock and more severe impact of COVID-19 on the global economy. Printing money would be a good way to mitigate economic collapse, even if inflation is positively correlated with the strategy. The government could issue cash equivalent to 20-30 percent of GDP by the central bank to spend on health care, jobs, critical supplies, and state aid, and to keep banks and other companies from going bust. Five

percent of the total amount will be set aside for developing economies severely affected by the COVID-19. Considering the imbalance between life and economic assets, which would lead to a global economic shutdown, policymakers have proposed cooperative fiscal, monetary, and financial policies, including currency swaps, liquidity arrangements, tax relief, loan forgiveness and extension of unemployment insurance, concessional financing, grants, Debt relief for the poor should be provided by bilateral creditors and international financial institutions. Therefore, all policies should be integrated to eliminate the three spikes of the human suffering, decline, and bankruptcy curve. The following are some possible socio-economic recovery and reconstruction measures.

##### *4.2.1. Special Purpose Vehicle*

In a normal phase, countries and regions can relax their economic policies, strict global coordination, and integration, as enterprises will have adjusted their processes and supply chain systems, but novel coronavirus spreads more through individual mobility, and tourism and tourism is more like an economic transaction. Moreover, to optimize the economic recovery for the Novel Coronavirus shocks, governments must have a sound capital market, an independent central bank, and a sound banking sector that can introduce special purpose vehicles (SPVS). The idea of an SPV would be a public risk-sharing mechanism to support troubled SMEs.

##### *4.2.2. Upgrade job opportunities from all aspects of benefits and investment*

Investors can invest for the long term to offset short-term pain and panic. Capital markets analysts have mentioned stocks like Amazon, Alexion Pharmaceuticals, and Bank of America as possible long-term bets. Working from home, telecommuting and the revival of the online economy can serve as key points for envisioning future courses[14]. New technologies, ideas, and innovations working in remote areas will reduce disruptions and improve efficiency and work times in the future. If the government lifts visa restrictions or simplifies visas, reduces tourism taxes, and introduces incentives once the epidemic control takes ten months to get back to normal levels, but this is a complete dilemma when the government will get relief from this COVID-19 epidemic travel and the tourism industry and reopen because everything is interconnected but uncertain.

In addition, by maintaining a substantial welfare fund, it is possible to implement an active labor market policy to some extent to cope with the impact of COVID-19 on the labor market. Levy Yeyati, Montane, and Sartorio, who developed the ALMP, mainly

accumulated four policy clusters: vocational sector training, help in the search, wage subsidies or public works projects, and support for micro-entrepreneurs or self-employed workers, which is a huge financial amount. COVID-19 has also changed the culture of the Labour market, as front-line workers lose their social security, health, or jobs as automation replaces organizational tasks. Given this situation, the ILO expects about 3 billion people to lose their jobs and livelihoods. Governments should prepare workers for upskilling and reskilling. The COVID-19 pandemic has brought new opportunities to the job market. And technological innovation, artificial intelligence. Cloud computing, product development, and e-commerce will be given greater priority, creating a lot of jobs.

## 5. CONCLUSION

The above-mentioned shows that we can get profits from short stocks. If the market will be hit in the short period, to maximize profits in the short term, people can short the sectors that are affected by the epidemic and are being looked down on. If the stock market is going up in the long run, people should hold it for the long term. They focus on detecting social and economic fluctuations in the context of the pandemic and possible measures to deal with such fluctuations. The policy of home quarantine adopted by the government in the case of the outbreak of the epidemic has a good impact on the international financial market and its related market indexes, but it is still predictable and has great differences in the implementation and success cases. For some post-pandemic recovery policies, this impact can be mitigated by focusing on and implementing effective responsive and reconstructive socio-economic programs and frameworks, as well as protection measures through special vehicles that promote employment opportunities in terms of benefits and investment.

## REFERENCES

- [1]Ayittey, F. K., Ayittey, M. K., Chiwero, N. B., Kamasah, J. S., & Dzuvoor, C. (2020). Economic impacts of Wuhan 2019-nCoV on China and the world. *Journal of Medical Virology*, 92(5), 473 - 475.
- [2]Buheji, M., Cunha, K. da C., Beka, G., Mavrić, B., Souza, Y. L. do C. de, Silva, S. S. da C., ... Yein, T. C. (2020). The Extent of COVID-19 Pandemic Socio-Economic Impact on Global Poverty. *A Global Integrative Multidisciplinary Review. American Journal of Economics*, 10(4), 213 - 224.
- [3]Gormsen, N. J., & Koijen, R. S. J. (2020). Coronavirus: Impact on Stock Prices and Growth Expectations. *The Review of Asset Pricing Studies*, 10(4), 574 - 597.
- [4]Ramelli, S., & Wagner, A. F. (2020). Feverish Stock Price Reactions to COVID-19. *The Review of Corporate Finance Studies*, 9(3), 622 - 655.
- [5]Höhler, J., & Lansink, A. O. (2021). Measuring the impact of COVID-19 on stock prices and profits in the food supply chain. *Agribusiness*, 37(1), 171 - 186.
- [6]Fernandes, N. (2020). Economic Effects of Coronavirus Outbreak (COVID-19) on the World Economy. *Social Science Research Network*.
- [7]Mazur, M., Dang, M., & Vega, M. (2021). COVID-19 and the march 2020 stock market crash. Evidence from S&P1500. *Finance Research Letters*, 38, 101690.
- [8]Yan, B., Stuart, L., Tu, A., & Zhang, T. (2020). Analysis of the Effect of COVID-19 on the Stock Market and Investing Strategies. *Social Science Research Network*.
- [9]Harvey, C. R., Hoyle, E., Rattray, S., Sargaison, M., Taylor, D., & Hemert, O. V. (2019). The Best of Strategies for the Worst of Times: Can Portfolios Be Crisis Proofed? *The Journal of Portfolio Management*, 45(5), 7 - 28.
- [10]Moreira, A., & Muir, T. (2017). Volatility - Managed Portfolios. *Journal of Finance*, 72(4), 1611 - 1644.
- [11]Dash, M., Babu, N., & Kodagi, M. (2007). Speculation Strategies Using Investment in Options. *Indian Journal of Finance*, 1(4), 3 - 8.
- [12]Kocaarslan, B., & Soytaş, U. (2021). The Asymmetric Impact of Funding Liquidity Risk on the Volatility of Stock Portfolios during the COVID-19 Crisis. *Sustainability*, 13(4), 2286.
- [13]Amir, M. K., & Amir, Z. (2020). COVID-19 Pandemic: Socio-economic Response, Recovery and Reconstruction Policies on Major Global Sectors. *MPRA Paper*.
- [14]Braca, P., Gaglione, D., Marano, S., Millefiori, L. M., Willett, P., & Pattipati, K. (2021). Decision support for the quickest detection of critical COVID-19 phases. *Scientific Reports*, 11(1), 8558-8558.