

# ***Study the Impact of the Epidemic on the Stock Market from the Perspective of Behavioral Economic***

**Li Wenbo<sup>1,a,\*</sup>**

<sup>1</sup>Macau University of Science and Technology, Taipa 999078, Macau  
a. 1035050225@qq.com

*\*corresponding author*

**Abstract:** Since the successful development of COVID-19 vaccine and the launch of some related drugs. The epidemic has gradually become less terrible and let us see the hope of economic recovery. In the past three years, quite a few industries in China have suffered losses or even closures due to the epidemic. Does the normalization of the epidemic represent the gradual improvement of the market? Similarly, will the stock market also be affected and fluctuate accordingly? If you know the im-pact parameters of the stock market and the epidemic situation, can you make profits in the stock market? After generating these questions, we first analyze the current investors and summarize the characteristics of age, occupation and marital status, which is an important part of the analysis of the stock market. Then, the relationship between the epidemic and enterprises concluded that the tertiary industry was most closely related to the epidemic situation. Put forward a concept of "epidemic stock" that is to say, the stock that affected obviously by the epidemic situation. In the use of behavior financial knowledge, I will have no rich investment experience of retail investors, outbreak reference, and suit the remedy to the case at the same time, keep a result will never just a factor decision attitude. For example, "epidemic stock" analysis about the model and supplement of professional knowledge, to introduce the analysis of outbreak. In order to help you grasp the proportion of the epidemic impact on the epidemic stocks, convenient for investment reference.

**Keywords:** Epidemic normalized, Shareholders, Epidemic stock, Behavior economic model

## **1. Introduction**

After looking for the relevant information, I found a large number of papers about how to invest. For example, Wang Zhenhu focuses on the research of investor psychology " [1]. Dr. Iris Mack's Book Shows Novice Investors How to Make Money by "Renting" Stocks[2] proposed the new idea of renting, Frederik J. Riar; Christoph Hienerth; Morten Berg Jensen's Digital due diligence activities and goal setting in equity crowdfunding: exploring the differences between novice and experienced investors [3]notes the difference between novice investors and experienced people, all very worth reference, but no idea has been found of the impact of the epidemic on the stock market. The epidemic is a very hot topic, so there is no lack of research on the epidemic. Li Jintao published the study on risk spillover effects of major global stock markets in the context of COVID-19 [4]in 2022, noting that the economic impact of the pandemic was greater than the average of the 2008 economic crisis. But combined with the financial behavior only found in 2020 Cui Huiying "virtual

simulation experiment teaching in the application of behavior financial course —— based on COVID-19 outbreak period teaching practice" [5], that is to say, the outbreak of behavior financial research is not much, also has not found to invest epidemic stocks. So I will on the basis of previous research, contact factors, analysis of investor behavior, and study the impact of the epidemic on the stock market from the perspective of behavioral economic.

## 2. Analysis of the Environment of Investor

### 2.1. Investor Characters

Qin Rong of Hebei University of Economics and Trade's "Investor Behavior Analysis from the perspective of behavioral Finance"[6] proves that investors pursue the most satisfactory solution rather than the optimal solution. At present, China's securities market is dominated by small and medium investors. Due to the big difference between the cognitive ability and the investment ability of small and medium investors, the irrational behavior of investors is more prominent. Meanwhile, a Baidu certified author with the online name of Jiangbeizui Ranger has published a research report titled "Six Characteristics of Shareholders," with the following data on the basis of 200 million Chinese investors.

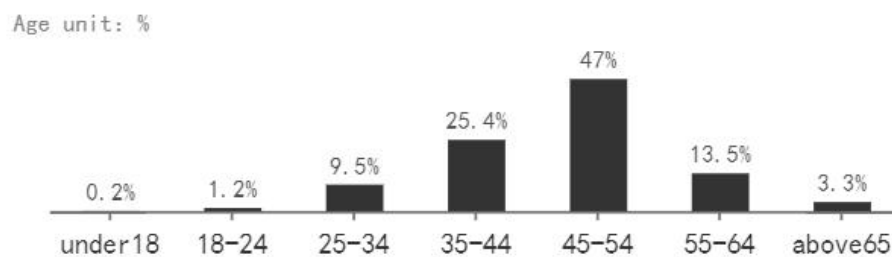


Figure 1: Age proportion.

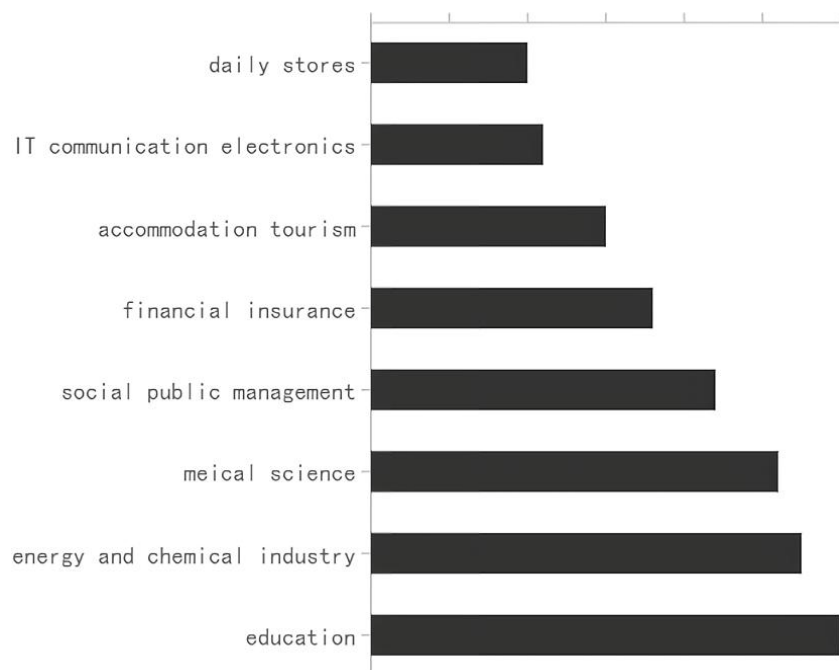


Figure 4: Industry quantity.

### record of formal schooling

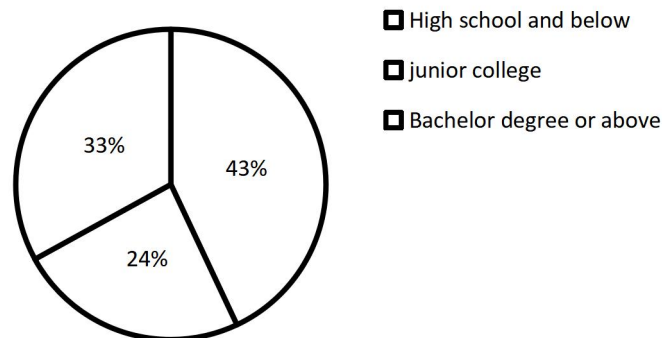


Figure 2: Education proportion.

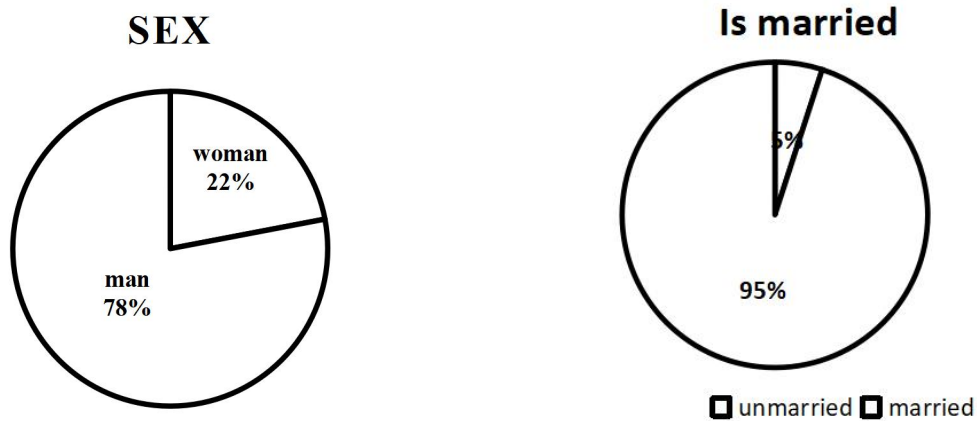


Figure 3: Sex proportion.

Figure 5: Married proportion.

From the above data can be analyzed that the majority of shareholders in the middle prime age, and the majority of male. Moreover, more information shows that the average age of new investors entering the stock market in 2020 is 31.2 years old, and the overall trend is younger, which is related to the information age. "Stock market novice" in the level of investment knowledge has obvious deficiencies. According to the Shenzhen Stock [8] Exchange report, the average score of the investors entering the market in 2020 was 73.9 points, 4.7 points higher than the new players. Investors with low scores have insufficient knowledge of shareholder rights and trading rules and financial professional terms. The figure on the right shows more than 50% below a bachelor degree, with the largest number of people in education, energy, mining, chemical industry, medical and health care, and a large number of married. Most of the education industry and medical and health industry have a high cultural level and are more confident in their professional knowledge. There might as well appear some overconfident phenomenon, but there is no denying that the relevant knowledge of the stock market master's degree is high. Most energy and chemical industries have strong economic strength and may have strong risk tolerance. That's why most of the people are in these industries. But generally speaking, there are not many people with a high level of education in the stock market, so mentioning professional knowledge is even more important in this article. And need to consider the situation of investors married, 80,70 for the main investment group. In addition, let's get some relevant information on the national data website [9].

## 2.2. The Internet Environment

Table 1: internet information.

metric	In 2021,
Internet access number (ten thousand people)	103195
Internet Broadband Access Port (ten thousand)	101784.67
Mobile Internet Access Traffic (ten thousand GB)	22160000
Internet broadband access users (ten thousand households)	53579

At the same time, the rapid development of the contemporary Internet. In addition to learning this knowledge in school, there will also be many people to share relevant knowledge on the short video platform, so as to improve the understanding of the people who are interested in the stock market. At the same time, in the era of information explosion, it is easy to obtain the public information from many companies, and even say that some media or insiders will take the initiative to obtain some information and publish it on the platform. So in general, the current information environment is at a semi-strong or above.

To sum up, more convenient information access is one of the biggest characteristics of this era. It not only makes it easier for many investors to obtain information, but also attracts some young novice investors who have no deep study of the stock market and want to try it. Most people lack professional knowledge, and there is no lack of high-quality shareholders with high education. Most of the resident shareholders are born after 80s and 70s and married, and the majority are men, but also not lack of women.

## 3. Analysis of the Impact on the Industry Under the Epidemic Situation

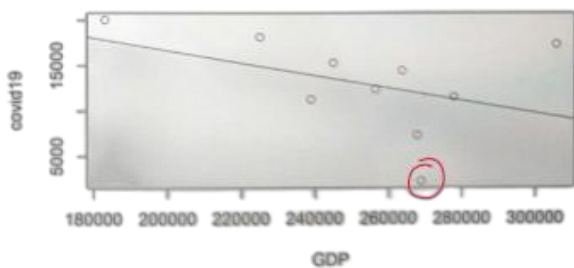


Figure 6: COVID-19 situation-GDP diagram.

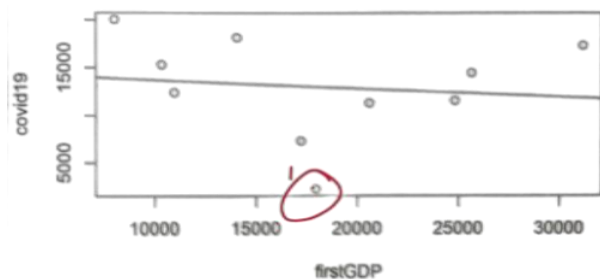


Figure 7: COVID-19 situation-first industry GDP diagram.

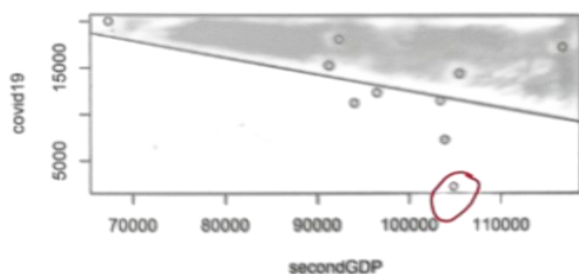


Figure 8: COVID-19 situation-second industry GDP diagram.

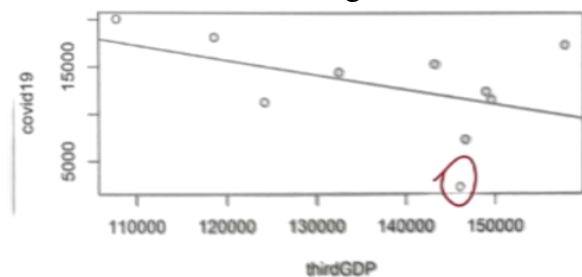


Figure 9: COVID-19 situation-third industry GDP diagram.

IT is well known that the stock operates based on the condition of the business. In the epidemic environment, many enterprises have experienced poor management, and even gone bankrupt. Therefore, I have analyzed the GDP of various industries and the number of people in the midst of

the epidemic in each quarter. The following results were obtained by using the R language data analysis.

Fig.6 is the relationship between the epidemic and the total GDP in each quarter since 2020, so an obvious negative correlation was found after the R language analysis. In addition to the overall GDP, Fig.7, Fig.8 and Fig.9 respectively analyzed the primary industry, secondary industry, tertiary industry and the epidemic respectively. In addition, each part of the GDP of the epidemic affected the G D P, which was more serious than before. This further shows that the influence of the epidemic on various industries cannot be ignored. The secondary and tertiary industries have been greatly affected by the epidemic, so let's focus on the secondary and tertiary industries.

Zhongnan University of Economics and Law published a research report [10], which mainly studied all aspects of the secondary and tertiary industry affected by the epidemic: 1. Due to the closed management of the epidemic, many orders were cancelled and their revenue dropped significantly.2. Enterprises generally face large comprehensive cost pressure such as rent, wages and taxes.3. The pressure of resignation is stable but great.4. Raw materials generally rose.5. Enterprises are faced with insufficient inventory and difficulty to find alternative suppliers.6. The epidemic will promote enterprises to improve their digital innovation level.7. The global spread of the epidemic has had a severe impact on the raw material supply for some enterprises.

After the analysis of the above factors, the decline of business operating conditions, is the reduction of assets, and the existence of debt. The health ratio has changed. So I will quote the amount of current assets to further analyze the impact of the epidemic. Current assets show the enterprise's operating conditions and the ability to resist risks. Therefore, under the condition of controlling current assets, the secondary and tertiary industries are further analyzed to confirm the impact of the epidemic on enterprises.

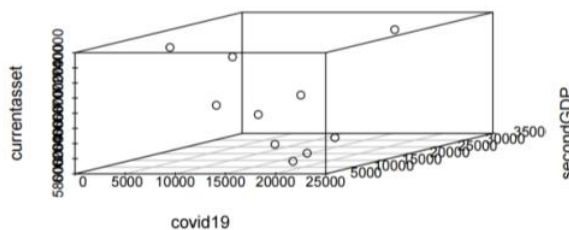


Figure 10: COVID-19 situation-current asset-second industry GDP diagram.

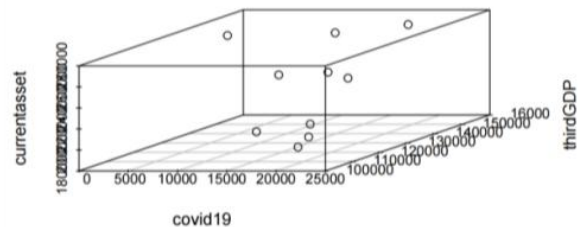


Figure 11: COVID-19 situation-current asset-third industry GDP diagram.

Thus, the currentasset of the tertiary industry even has a positive correlation with GDP, but still maintains a negative correlation with the epidemic situation. The impact of the currentasset through the secondary industry with the epidemic seems to become no longer significant. Thus, the epidemic has an obvious effect on the GDP change of the tertiary industry. We don't pay more attention to the enterprises in the secondary industry first.

Have the honor to interview Henan outstanding female entrepreneur, Henan Bingfeng Electronic Technology Co., Ltd. LTD. She put forward under the outbreak of many unable to bear risk enterprises were forced to collapse, so the rest is to bear risk ability is relatively strong, this is the outbreak to help people filter out some wrong choices, so, in a smaller choice to choose, not only reduce the risk, will also not affect the outbreak can harvest at the rate of return.

Then we can safely focus on stocks that have been heavily affected by the pandemic. The tertiary industry includes: transportation, warehousing and postal services, information transmission, computer services and software, wholesale and retail, accommodation and catering, finance, real estate, leasing and business services, scientific research, technical services and geological exploration, water conservancy, environment and public facilities management, residents services

and other services, education, health, social security and social welfare, culture, sports and entertainment, public administration and social organizations, international organizations and other industries. So let's pick a few examples from them.

#### 4. Example Proof

Introduce a definition called long-short trade, a long-term short-term portfolio. Do not put eggs in the same basket, which greatly reduces the existence of risks, in this long term and short term is also a certain proportion, as Fig.12, Fig.13, does not necessarily say that the long term investment must be more or less, the existence of this model is to make a more macro decision. We can analyze the historical data of the stock market, and then get the return time images of the two selected industries, which is combined with the long-term and short-term images to get the intersection points P1 and P2. These two points are the best amount of investment. In this context, let us make some observations of the tertiary industry.

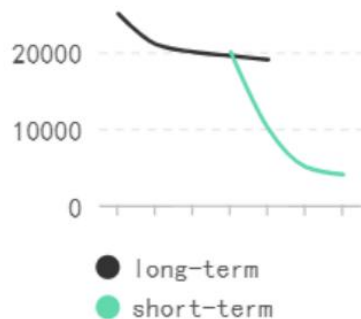


Figure 12: long-term, short-term preference curve.

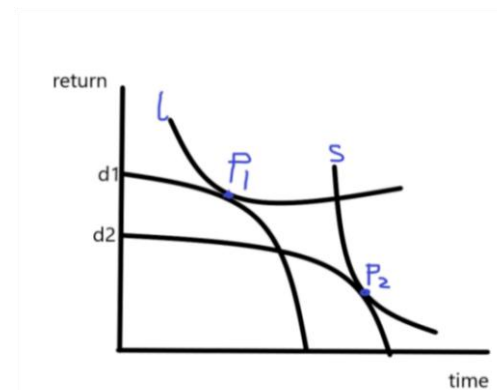


Figure 13: time-return diagram.

After the observation of the tertiary industry in the stock market, it was found that the industries seriously affected by the epidemic include: catering, real estate (medium-and long-term), medical industry (medium-and long-term), and logistics and transportation (short-term). Offline catering services, very few enterprises are listed, listed several enterprises, the epidemic seems to have no particularly obvious impact.

##### 4.1. Line of Real Estate Industry Example Analysis

Now let's focus to real estate.

There is a word speculation, also often have the word speculation, if as a retail investor, then the most important thing is to analyze the opportunity.

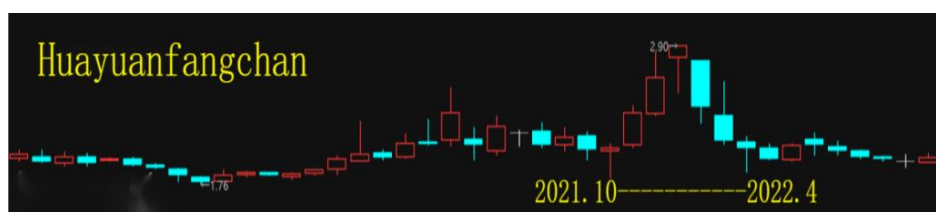


Figure 14: Huayuanfangchan stock chart.



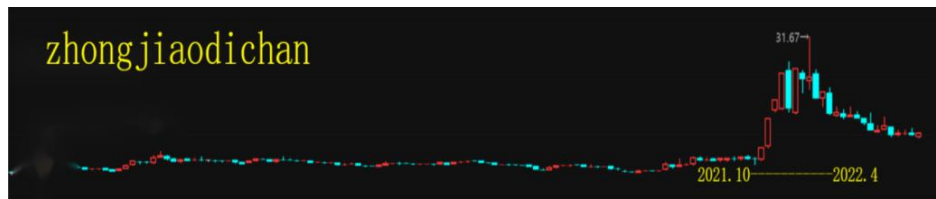


Figure 15: zhongjiaodichan stock chart.



Figure 16: zhongguoguomao stock chart.

After studying the real estate stock market, I found that nearly all the companies had appeared: the stock market growth at the end of 2021 and early 2022. As we all know, since the epidemic, the real estate industry has entered a trough due to the impact of the housing price control policy. But most of the companies that have survived the epidemic will not sit still, — will find someone to speculate in real estate. This does not reflect the current situation, but more importantly, it represents that the real estate industry has such an effect: a stable trough period, there is a high probability of real estate speculation, followed by the growth of the stock market. That said, it's best for short-term investment. For example, in figure16 Huayuanfangchan in a large increase of more than five months before a steady period of trough, that is to say, stable and low prices. After this trough, there is a growth phase with more than 6%, and risk aversion may sell when they grow to around 7%, yielding a return of around 7%.

#### 4.2. Logistics Industry Example Analysis

Then let's focus on the logistics industry.

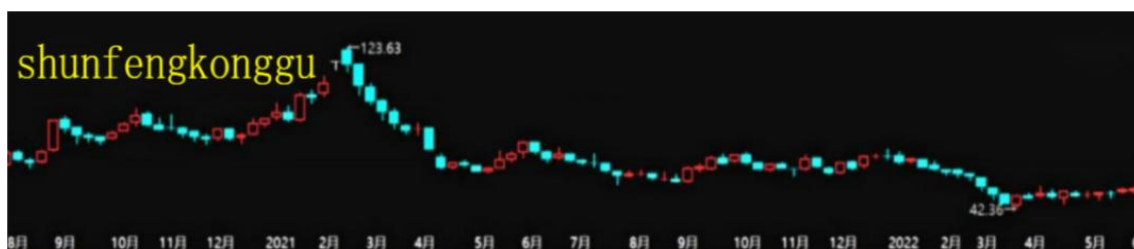


Figure 17: shunfengkonggu stock chart.

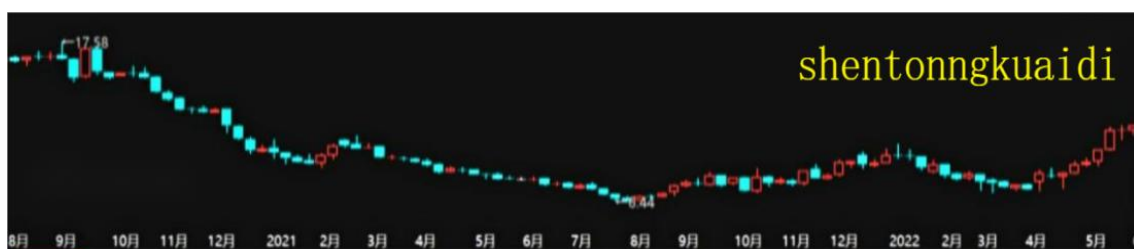


Figure 18: shentongkuaidi stock chart.

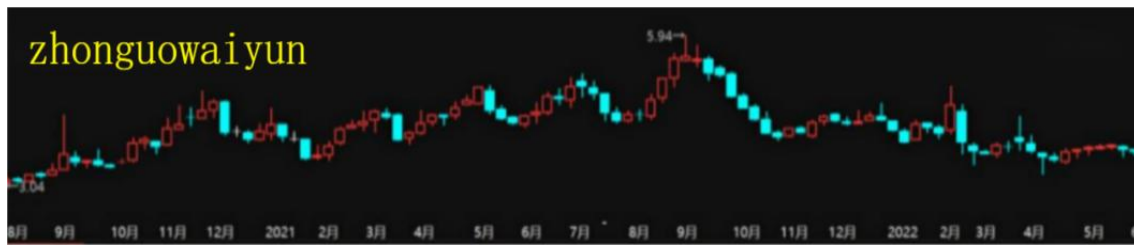


Figure 19: zhongguowaiyun stock chart.

It is a very representative way to restrict travel, but it is also a measure that has a huge impact on the express delivery industry. So, the Chinese mainland's transport industry is a typical example of the epidemic stocks. But of course, there are other factors to consider, such as packaging quality, and more attention to relevant news.

Let's shift our focus to the international express —— zhongguowaiyun. As can be found from figure19, there is a classic "teacup model" shown here, which means that when the historical data has reflected the form of growth after the decline, there will be a greater growth. In addition, many stock markets exist calendar effects, the same, there are some special effects in some special times. As we all know, the shopping festival has the biggest impact on the logistics industry. Before the epidemic, the annual 618 and double 11 activities have brought huge workload and benefits to the logistics industry. According to the analysis of historical data, the shopping festival can no longer be clearly regarded as a key time point. But it is not difficult to find during the Chinese New Year is a clear special period, one is everyone used to prepare necessities, Another address where some people go back to their hometown for the Spring Festival is not there, so they will choose to go back to consumption. In addition, adults with purchasing power during the Spring Festival, namely shareholders, from the above analysis of shareholders are mostly married men, so the New Year will be busy walking relatives or some traditional activities, will neglect the attention of the stock market, so the stock market purchase is difficult to guarantee. In general, the investment in the logistics industry "epidemic stocks", we may avoid buying before the year. At the same time, in the understanding of the trend of the environment, to find the right timing, care about the relevant news and the heat of the final trading is a good way to profit.

These are some examples for me, but the ultimate purpose of what I illustrate is to verify the existence of "epidemic stocks", and shareholders can analyze the stock market by considering the factors of the epidemic. But of course, should also combine the society, the shareholder environment to analyze.

## 5. Conclusion

To sum up, it can be inferred that the trend of epidemic stocks will indeed be affected by the pandemic environment. In addition, considering the epidemic factors when investing in stocks will help us to profit from it more likely. First of all, the epidemic itself has excluded a number of inferior enterprises for us. In addition, by analyzing the basic situation of contemporary shareholders and understanding the Internet environment, the analysis and verification of the tertiary industry have an obvious relationship with the form of the epidemic. Combined with the above information and their own analysis ability, focus on the tertiary industry, select stocks, and then take the epidemic form as the influencing factors, and further accurate analysis.

## References

- [1] Wang Zhenhu. 7 basic laws [J]. *Employment in China*, 2016, (09): 41.
- [2] Dr. Iris Mack's Book Shows Novice Investors How to Make Money by "Renting" Stocks[J]. *M2 Presswire*, 2016.



- [3] Frederik J.Riar, Christoph Hienerth, Morten Berg Jensen. Digital due diligence activities and goal setting in equity crowdfunding: exploring the differences between novice and experienced investors[J]. *International Journal of Entrepreneurial Venturing*, 2021, 13(1).
- [4] Li Jintao. Study on risk spillover effects of major global stock markets in the context of COVID-19 [D]. Shanxi University of Finance and Economics, 2022.
- [5] Cui Huiying. Application of virtual simulation experiment teaching in behavioral finance curriculum —— Based on teaching practice during the COVID-19 outbreak [J]. *Business Economy*, 2020, (11): 189-191.
- [6] Qin Rong. Investor behavior analysis from the perspective of behavioral finance [J]. *Sme in China*, 2021, (12): 197-198.
- [7] Shenzhen Stock Exchange, [www.szse.cn](http://www.szse.cn), last accessed 2022/12/9
- [8] The National Data, [data.stats.gov.cn](http://data.stats.gov.cn), last accessed 2021
- [9] Wenhao, Wei Yongchang, Wang Haisu. Report on the Series of the Epidemic Impact Survey of the Enterprise Value Research Center of Zhongnan University of Economics and Law: Report on the Impact of COVID-19 on Business Operation under COVID-19 [D]. Zhongnan University of Economics and Law, 2020.