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Research on the New Format of Stock Market and Risk Management in the "Post-epidemic" Period

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ABSTRACT

In the "Post-epidemic" period, the public health crisis influences a lot to finance market and change some indexes. Therefore, what creates the change will have a different impact on the industry finance in the 21st century when the world faces a really different situation compared to the historical health crisis or finance repression. Thus, the article provides evidence for the change in stock market as well as talks about risk management in this case. Meanwhile, the article also will compare the historical crisis data (2008 finance crisis) from Bloomberg, and give a basic judgement for the stock market under this crisis and predict the future trend. This paper provides the evidence, and compare the historical crisis data. It can be concluded that in the "post-epidemic", the industries finance tends to be more various, which has a large effect on market environment. The spread for underlying assets between intentional and technology industry increased a lot. Through studying the Microsoft stock and Nasdaq, S&P500 indexes changes and regress the GDP and underlying total trend, the spread is able to be analyzed in concrete amounts and it offers risk management of portfolio fantastic instruction. When the dot-com stock rapidly increases and "online-work corporation" apparently affects finance, risk management not only needs to be more early and adjust technology stock proportion in portfolio, but also investors should look for the new investment project for the industry appearing in "post-epidemic" like online healthy treating (no person touching) under "the health and finance crisis" environment. In this case， Studying the new period change and fix the financial model is essential for investment research .Therefore, this article will analyse the current global financial market and offer new instruction and advice for investment and risk management. Also, applying US finance to be the sample, the end of article provides useful method for solving portfolio problems under new period.

Keywords: *"after corona" period, stock market, economic change , crisis risk management , future trend*

1. INTRODUCTION

Human is in an "After corona" period. As the epidemic has basically ended, there have been quite a few papers published on economic and financial directions, but they are still not enough to clearly demonstrate the current new industry situation, stock market and risk control. In order to demonstrate clearly the relevant changes in this era, this article combines the research of some previous documents to further analyze how the current changes in the stock market industry in the post-epidemic era are reflected. It is better to conduct research using data regression analysis, quantitative expansion and chart comparison and other related research methods. The current post-epidemic era financial market changes and stock price and financial derivatives market trends are industry changes and the industry is in a new era. The situation of the financial market under the current situation and the new form of risk control carried out under the current situation are different from that of the previous era. It is mainly divided into three aspects to study the major issues in the post-epidemic era. They are the first, the current economic and financial situation, and the trend of stock prices. The second is the comparison and conversion of financial forces in capital flows and changes in interest rates, and the resulting changes. Stock market volatility market analysis and financial changes. The third is to carry out further data discussions and theoretical proofs on the future new industrial financial forms and risk control industry changes and different operating methods. It provides a relatively good analysis to solve financial problems in the post-epidemic era. This paper provides a better judgment of the economic situation in the future.

2. CURRENT FINANCIAL CASE AND ANALYSIS

2.1. The environment and relevant indexes analysis

After the corona period, as many people know, this year's crisis is the largest health crisis in recent years. To figure the finance situation out, give the following data for the main index on the stock market. All in all, it has been about a year and a half since the epidemic that began in 2020. During this other time, the financial market has experienced very large turbulence, and the economic situation has always been different before it happened. Therefore, the value of the stock will be directly reflected in the process. People's expectations of the future market and the current economic situation can also be used as a very good future standard. Judging the future economy by a professional organization based on the many indexes of the stock market is full of logic and validity.

Figure1:S&P500-trend(5years)

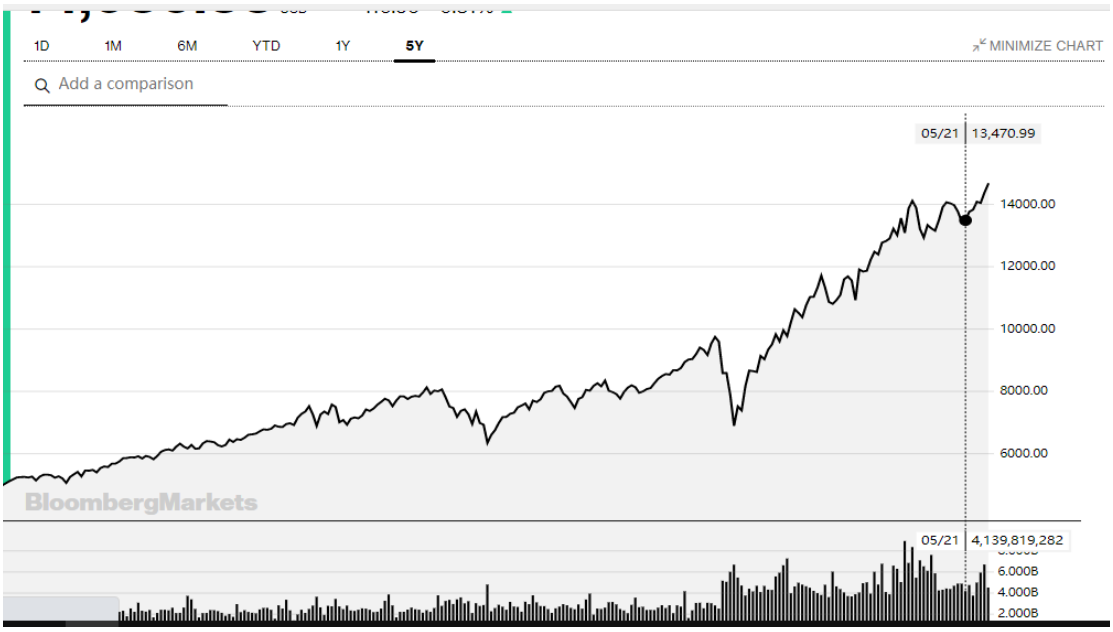

Figure2:Nasdaq-trend(5years)[1]

2.2. Case study and comparison with the Great Depression and 2008 financial crisis.

Under the conditions of the new economic situation in the 21st century, the entire world is facing different challenges and risks. The changes in the economic order have particularly affected the changes in financial markets in the face of health crises and the impact of the epidemic. If you want to analyze the world market stock market and risk management related to the current situation, it is necessary to adopt different research methods. 2020 financial crisis is really different from the Great Depression and the financial crisis in 2008. Associating with these crisises.The industrial transformation and risk management methods brought about by the epidemic are hugely different. The very significant feature is the brush time. The epidemic occurred in 2020, which has been relatively complete in the information age, as the second decade of the 21st century. The highly developed Internet technology and the comprehensive upgrade of the cloud service experience in the 5g era. There is enough evidence to believe the impact of this epidemic will bring another revolution in information technology, which is reflected in stocks. In the next few years, emerging concept stocks of technology stocks will still become the main driving force on the S&P 500 and the Nasdaq index, and the main driving force for the return of the market to rationality and normalization. As is shown in the charts 1 and 2 showing, the impact and specific risks caused by this operational shock at the beginning of 2020, a group of cloud services, cloud technology and electronic payment methods, although they have achieved relatively large developments, have not yet been popularized, especially in Western countries where credit card payment is very convenient. Cash payment via credit card still accounts for a very large proportion.[2]

The evidence comes from the development of the Nasdaq Index and the S&P 500 in the past 5 years. The above chart 1 and 2 shows the form that these two important stock market indicators tell us from before the beginning of the epidemic to the present post-epidemic era. It can be seen that the turbulence of the entire market at the beginning of 2020 is very negative. The expectation of entering the future is obviously very negative. However, after the adjustment in mid-2020, the two indexes have seen a very large increase at the same time and in the subsequent time. There is a greater growth rate than before. The reason is that the Fed's policy to revitalize the market in 2020 has achieved very great results. The federal funds rate has been reduced to zero. The last time it appeared in history was mainly traced back to the 2008 financial crisis. What is different from the financial crisis is that the stock market turmoil is in a different form. Looking back on the 2008 financial crisis, housing prices were at a relatively high level. The entire subprime mortgage market and the real estate financial industry were firmly tied to a huge economic bubble. Contained in junk debt and the so-called booming real estate price growth. Now, as mentioned above, in the post-epidemic era, many important industries have undergone tremendous changes. The order of the financial market is relatively more regulated. The risk of stock market turbulence is smaller and smaller than before. It is relatively easy to adopt policy and macro-control operations on the currency.

Epidemic (s)	Fatalities	Studies	Studies and methods	Economic losses
Influenza pandemic, 1918–19	Up to 50 million	[2]	Cross-country panel regressions	Six ppt lower GDP growth and eight ppt lower consumption growth overall
		[4]	US states data	Mortality significantly lowers growth over following decade
		[10]	US states data	18% decline in manufacturing activity per year; prompter and more aggressive containment helped cushion the impact
SARS, 2003	774	[18]	CGE model	0.1% loss in global GDP in 2003
		[13]	Chinese surveys	1–2 ppt lower GDP growth in China
H5N1 avian influenza, 2003–19	455	[23]	Socio-economic analysis using structured interviewed scheduling process	Nigeria rural and urban communities have caused serious threat on poultry industry, food security and livelihoods. 75% poultry farms found stopped ordering and 80% households stopped purchase and consumption
		[7]	Input–Output (IO) Analysis Model and Computable General Equilibrium (CGE)	The possible damage brought by lowering domestic consumption that impact on real GDP is around − 0.1% ~ − 0.4%, and labor demand would decrease 4.9% ~ 6.4%
		[5]	World Bank estimate	0.1% loss in annual global GDP 0.4% for Asia
Ebola, 2014–16	11,323	[15]	reports produced by non-profit or nongovernmental organizations, government, or industry	Loss of GDP, estimated economic burden of the outbreak range from $2.8 to $32.6 billion
		[12]	CGE model	2.1 ppt lower GDP growth in Guinea, 3.4 ppt in Liberia, and 3.3 ppt for Sierra Leone in the first year of the epidemic
H1N1	13	[17]	Ecomod one-country CGE model	GDP losses from the disease of approximately 0.5% of GDP for a mild pandemic to just over 2% for a severe pandemic
		[25]	Single linear regressions	Mexican tourism and pork sectors losses of around $US2.8bn. Pork trade deficit of $US27m with H1N1 incidence (p = 0.048, r = 0.37)
MERS	780	[16]	Interconnected sector analysis	Approx. 0.2% of GDP fall that estimated US$2.6 billion in lost revenue for the tourism
ZIKA	3489	[22]	Linear regression mode	GDP reach 1.6% and -0.90% average return because of decreasing tourism
Hypothetical influenza pandemics		[3]	A 1918-type pandemic	4.8% loss in annual global GDP
		[11]	A 1918-type pandemic; Includes the intrinsic cost of mortality to GDP loss	0.4–1% of GDP loss per year due to exante prospects of a pandemic, 86% of which is due to mortality and 14% to income loss. For moderate pandemics, the share of income loss is larger at 40%
		[1]	A 1918-type pandemic	4.25% loss in annual GDP 2.25 ppt from the supply side; two ppt from the demand side

Figure3: The GDP fluctuating for recent crisises[3]

Through this epidemic in western developed countries, we can see several notable features. One is the reduction of cash payment and credit card payment. Online payment methods like Apple Wallet Apple Pay have gradually replaced the previous traditional payment mode. Cloud office cloud gaming technology giants such as Microsoft, Apple, Google have made great progress in the direction of cloud services. The following shows Microsoft's annual report data in 2020. This iconic technology giant is now compared to other companies during the epidemic. In terms of industrial companies, not only did profits have not declined, but they have achieved the greatest increase.

Table 1. Microsoft main financial indexs in recent 5 years

FINANCIAL HIGHLIGHTS

(In millions, except per share amounts)

Year Ended June 30,	2020	2019 (a)	2018	2017 (d)(e)	2016 (d)
Revenue	$ 143,015	$ 125,843	$ 110,360	$ 96,571	$ 91,154
Gross margin	96,937	82,933	72,007	62,310	58,374
Operating income	52,959	42,959	35,058	29,025 (f)	26,078 (g)
Net income	44,281	39,240 (b)	16,571 (c)	25,489 (f)	20,539 (g)
Diluted earnings per share	5.76	5.06 (b)	2.13 (c)	3.25 (f)	2.56 (g)
Cash dividends declared per common share	2.04	1.84	1.68	1.56	1.44
Cash, cash equivalents, and short-term investments	136,527	133,819	133,768	132,981	113,240
Total assets	301,311	286,556	258,848	250,312	202,897
Long-term obligations	110,697	114,806	117,642	106,856	66,705
Stockholders' equity	118,304	102,330	82,718	87,711	83,090

(In millions, except per share amounts)

Year Ended June 30,	2020	2019	2018
Revenue:			
Product	$ 68,041	$ 66,069	$ 64,497
Service and other	74,974	59,774	45,863
Total revenue	143,015	125,843	110,360

In recent years, blockchain, Bitcoin, financial decentralization models, and Internet financial links have generated huge benefits for risk management.[4]

Compared with the financial crisis of 2008, this health crisis may become an important driving force for industrial transformation. In traditional society, we still distinguish between two different modes, online and offline, but everything has been done since one line. Can be changed to online. This has greatly promoted the progress of the online mode operation. "Everything is available online" is no longer a slogan but a fact as the development direction of the new era. After the epidemic, we can see more and more company stocks launched. Online services and this impact on the financial market has two aspects. On the one hand, the valuation of companies whose main business is online has made rapid progress, such as various technology companies and Internet companies. Countries are developing online service business sectors in 2020. Promoting the corresponding stock prices, so the Nasdaq index, which is dominated by technology and Internet concept stocks, has been particularly noticeable in growth, while also surpassing other indicators. The second aspect is that the epidemic crisis has further promoted the development of Internet finance. After about 20 to 30 years of accumulation, Internet finance, which has been accumulated and developed, has gradually become complete, and its reliability and robustness have been correspondingly proven in this epidemic. The comprehensive online financial model or the completeness of the relatively automated financial system is let people see. At the dawn of the new era of finance.

3.THE FINANCIAL POWER EXCHANGE BETWEEN CAPITAL FLOW VALUE AND INTEREST RATE IN THE “AFTER CORONA” PERIOD

Compared with the past financial crises, the impact of this epidemic on the financial crisis to this society, including this society under the new economic situation, will be even more different because in the current society, such revolutionary technologies include some Information and related things that will get a more comprehensive development. We don't think he will be able to successfully change the world. The most important thing is how to ensure financial stability and soundness in the new situation. The Fed last year was 2020. In the middle of the year, not only the federal funds rate was adjusted to zero, but also a series of monetary policies were adopted to increase the attractiveness of capital. Therefore, maintaining a certain interest rate in this era cannot solve the relationship between the economic situation and promote the economic stock market. The most important thing for a rapid rebound is to be able to successfully attract world capital. So now the financial goal of all countries in the world is to attract capital. So if interest rates are abandoned for the attraction of capital, the abundance of new capital will have a huge advantage in this economic situation. The following will analyze the relationship between the recent capital flow and economic trend in the past two years (using a stock market index to represent the economy for analysis).

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. reg A B
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Source	SS	df	MS
Model	1.6704e-06	1	1.6704e-06
Residual	.658752437	26	.025336632
Total	.658754107	27	.0243983

Number of obs	=	28
F(1, 26)	=	0.00
Prob > F	=	0.9936
R-squared	=	0.0000
Adj R-squared	=	-0.0385
Root MSE	=	.15917

A	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
B	-.0046749	.5757505	-0.01	0.994	-1.188147	1.178797
_cons	.0167592	.031679	0.53	0.601	-.0483579	.0818764

Figure 4. regression for USA GDP and S&P500

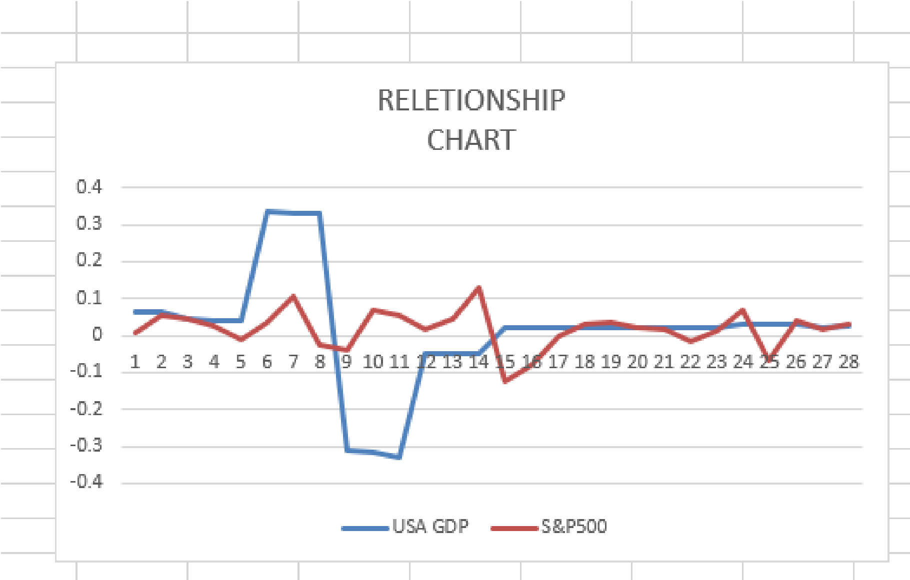

Figure 5. delay-type co-action for two indexes

Another very important aspect is the international status of the U.S. dollar. After the Federal Reserve implemented a series of plans, the U.S. dollar index has achieved a strong rebound. The euro still holds an important position in international payments, and it is even higher than the euro. Therefore, it is in international payments and currencies. The U.S. dollar dominates the credit system at this moment, whether it is from the Federal Reserve's interest rate cut to zero or a series of market stimulus policies, the total money supply has achieved corresponding growth. Generally speaking, according to the relative principle of economics, the Great Depression or the During the economic recession, the total amount of money should be reduced accordingly. However, in this covid-19 incident, we did not find relevant evidence. In contrast to historical data, each time the corresponding monetary policy triggers a capital change, it can be concluded that when capital is at a certain level. A relatively stable state and always in the process of attracting international capital does not cause a significant decrease in the money supply, but on the contrary, it mostly increases. The strong rise of the U.S. dollar and its strength make the future international capital will continue to flow from developing countries to developed countries, and its total amount will not only be abundant but also continue to increase.

In the current financial situation, we cannot find more business opportunities and investors often take this opportunity to test the effectiveness of the market. This is very interesting. Investors do not know whether the market has arbitrage opportunities. During the practice of the bid-ask spread, it was explored that the relevant profits occupied and the effectiveness of a reforming financial market has yet to be tested. Inquiry about the fluctuation of the financial market spread in recent years. In addition to the rise of new industries and the flow of capital during the operation period Arbitrage space provides opportunities for existence.

Technological innovation requires a long process of accumulation. In the process of long-term accumulation, technological innovation has reached a mature point. In the past 20 years, there was a book called <<Great Stagnation>> from the beginning of the 21st century to the present. There will not be too many technological advances in the past 20 years, but the long-term accumulation of the past broke out, and the new crown epidemic is the fuse.[2] The accumulation of technology accumulated for more than 20 years broke out in an instant and became a change in industry, economy, and finance. A driving force has thus realized the conversion of old and new kinetic energy. At this moment, it is not only bubbles that are driving the economic market and the financial stock market forward, but also the qualitative changes and revolutions brought about by the accumulation of technology and technology.Old industry leaded the currency change that makes the aribitrage space expand,while new industries create a scale effect.

Industry gathering and revolution is a kind of effect that one plus one is greater than two. Thegathering effects shows on the index and sahre premium space on financial markets.This suitable development is especially obvious in the future industry. In the future industry, the biomedicine and high-tech Internet industries in the 21st century have very great development prospects in the future. In the future, the stock market value of the industry will generally increase relatively more and more companies will transform and become more in line with the needs and characteristics of this era. Fragmented operations will gradually disappear and become more of an evolutionary operation just like now "Everything can be solved on the cloud", and various data systems are integrated together to establish a new financial ecology and industry ecology. Under such circumstances, the development of new industries, technology and industry will have a wonderful chemical reaction to further promote the development of the financial market in the post-epidemic era The focus is not on competing with the simple market, but more on the battle of capital flow. Technological progress affects not just that field itself, but the entire life and business mode. In this era of technological integration, the development of the industry is more possible. There will be exponential growth. The huge change brought to mankind by the information revolution is that if a certain technology can be digitalized and used for computer storage and calculation, through the acceleration of strategy, then through the acceleration of calculation power, it will enter a stage of large-scale exponential growth in history. Cases of elimination abound. For example, MP3 eliminated CD cassette tapes and then replaced by cloud music. In addition to capital and computing power, the innovative and cross-cutting industry will become an important driving force for the development of the financial market to support the growth of future financial indicators, so covid The -19 incident not only promoted the revolutionary change of the industry, and its integration, but also used AI computing power and high-tech technology in various industries to achieve a leapfrog development and identification, which is reflected in the Nasdaq Index and S&P. This leapfrog growth on the 500 Index not only comes from the expected optimism, but also from the revolution triggered by the application of AI, new computing power and new forms of high-end technology in various industries.[4]

Therefore, the huge social changes brought about by the epidemic crisis will affect the capital flow of the financial market and the international currency market due to the changes in the stock market and the changes in risks (the corresponding conclusions on how risks will change and how to control will be mentioned later. method) which is the key point.

4.THE FUTURE PREDICTION FOR STOCK MARKET AND FINANCIAL RISK MANAGEMENT

4.1. Risk Management

Forecasts on the future situation Regarding the future situation, the U.S. dollar will maintain a very long-term dominance in the currency, and still occupy an irreplaceable position in the world's mainstream transactions. [5] In the economic and financial related fields, it can be found that the price of the stock market should change. Maintaining sustained growth. Estimates of future interest rates can be found in the Fed's credit policy. We have found that interest rates for a period of time in the future should remain at a low level. In the case of a financial crisis, the policy that will not be too fast to enjoy income can be seen here. The relatively long-term low interest rate policy of the Federal Reserve will stimulate the economic rebound, that is, the growth itself. The economic depression has not lasted for a long time. The financial shock is not In particular, the development of new industries was further promoted by the stock market. The stock price rebounded very quickly. Under such circumstances, low interest rates have stimulated the future economic situation and the stock market forecasts are more positive.[6] In addition to currency, there is also investment in the stock market. The psychological expectation of the readers is that as the stock market rebounds further, the US economy and the world capital market are expected to improve as a result of the Fed's combination of punches. Economic bubbles have long been associated with periodic innovations in communications.[7]Therefore there is US dollars as a strong and dominant position, which further ensures the stability of the US stock market and the trend of the situation. [4] In a good situation, the world ' s people' s judgment on finance is based on the financial center of the United States.[5] On this basis, the people will judge the stock price to be good, the index is relatively positive, and the economic situation will gradually improve and the expectation of investment returns. Taking an optimistic attitude, the scale of investment and the proportion of investment will not decrease, and it will increase.

4.2. Future prediction

The future risk of risk control mainly includes two major aspects. One is the corresponding shock caused by economic fluctuations. Although the stock market price is in the set of the central bank of the Federal Reserve. Under the operation, there was no major decline but a rapid rebound. However, this rapid decline and rise will increase investment risk. According to the portfolio theory, diversified investment can avoid price risk and avoid corresponding stock risk, but it is not effective. To avoid market-level fluctuations, financial investment risks are also increasing when stock market returns are improving, and most of the risks here are reflected in the equity premium. Therefore, the judgment of the actual stock price and its index cannot be a purely highly optimistic view.

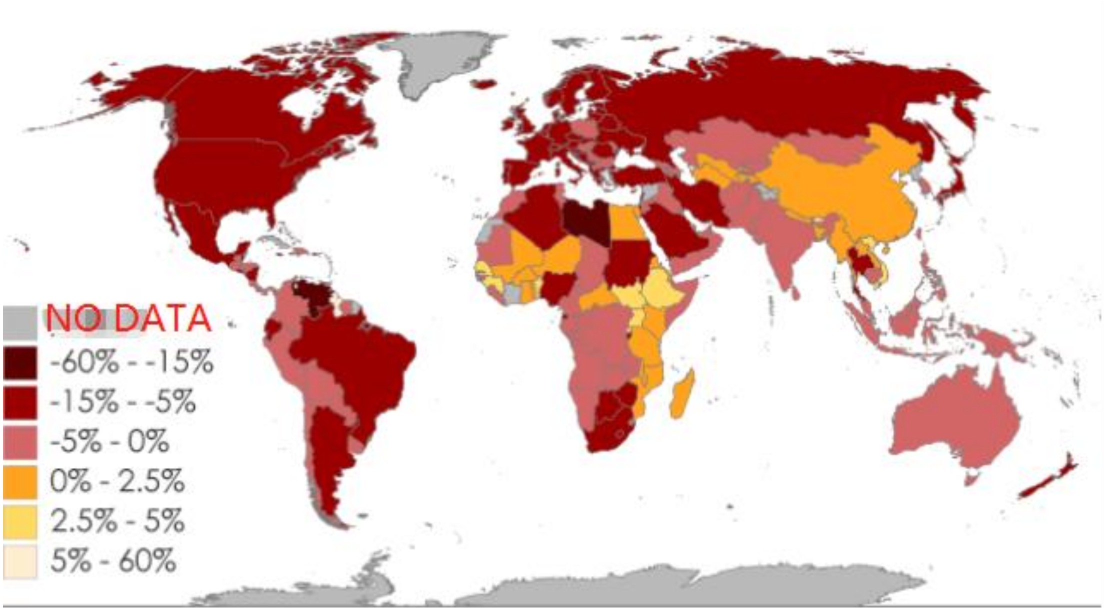

Figure 6.GDP change in 2020 all over the world[5]

Compared with the control of financial risk, the second is that it is very difficult to enter risk control compared to the second of financial control. It is difficult for us to judge the departure time of a group. It is difficult for us to see when a line will pass so as to find the current economy and related investment. The turning point is a very difficult thing. Therefore, if people want to change or reduce investment risk and carry out good risk control, you should moderate the trend of the corresponding head portfolio. If there is a small industry long head, the industry will be reformed or reformed. The prosperous high-tech and online industries in the city. On the other hand, industry changes are also reflected in the fact that medical biology has become the main growth point, which drives the rapid growth of related industries. The industry is an industry worth investing and developing in the long run, so it is used as risk management. Judgments between industries should be clearly inclined to invest in industries that are less affected by the epidemic, and to obtain prosperous, good development, long-term stability, and long-term good sunshine industries.

5. CONCLUSION

To sum up, in the past two years, the change of epidemic situation has gradually changed the industry and affected the turmoil of the financial market and the risk management pattern. Compared with the financial crisis in 2008, the impact of this health crisis event is not so great, and the financial market can be more accelerated and more accurate. The reforms have reduced the negative impact on the economy. The rebound of the stock market and the financial industry and the improvement of the state have also promoted the growth of the psychological expectations of investors, thus gradually realizing the economic recovery and the favorable transformation of the industry and the market brought about by this event. This article offers helpful instruction for the adaptation way for the financial environment. and underlying choice on investment and illustrate the solutions ‘change to hedging risk at the “post-epidemic” period.

Furthermore, the future study also can focus on the indirect and potential influence of Covid-19 crisis, like more people are feeling the world unstable and in a long term have one bad expectation on their “fragile” life, which will have huge impact on the later several decades. Analyse those little but deep influence on people life and society, which maybe leads the new trends in the far future and drives finance structure fluctuating.

Turbulence at the same time catalyzes changes in the financial market and risk control, both in terms of institutional changes and changes in the risk control pattern industry, which are relatively favorable conditions. Therefore, in the future(after the corona period), there will be a relatively good trend and the situation in general.

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