A Review on Monetary Measurements Taken Under the Circumstance of COVID-19 Compared Between China and the United States

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ABSTRACT
The global spread of COVID-19 has triggered turbulence in international financial markets and severe economic recession. China and the US have adopted large-scale rescue and stimulus policies in light of their respective epidemic prevention and control situations and the economic and financial environment. This paper analyzes the similarities and differences between monetary policies introduced in China and the United States during the pandemic. On the whole, the two economies have come out of the trough of the epidemic and are back on the road of recovery. However, given the differences in the process of economic recovery and the needs for economic and social recovery and development, it is expected that the paths of macroeconomic policies and the prospects for the exit of the easing policies will show a relatively distinct trend in the future.

Keywords: *Monetary measurements，COVID-19，China，United States*

1. INTRODUCTION

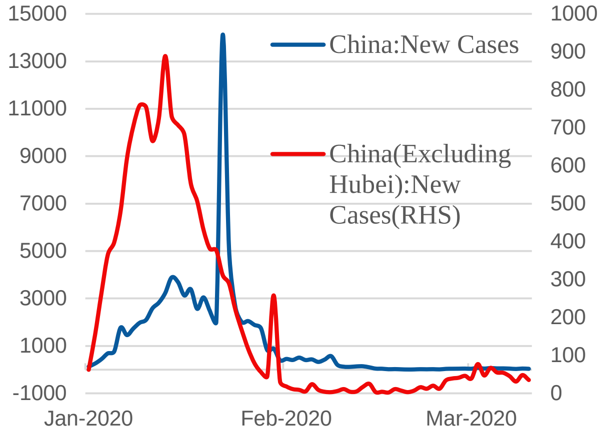
The Coronavirus (COVID-19) originated in Wuhan, Hubei Province, China, has rapidly spread around the world, causing huge casualties and economic losses while attracting worldwide attention. The pandemic resulted in a slowdown in economic activities and largely affected the economic growth the many countries [1]. According to the early projections of the International Monetary Fund (2020), the global economy will contract by about 3% in 2020. The contraction is expected to be much larger than during the 2008-2009 global financial crisis [2]. In this paper, I attempt to review the progress of the COVID-19 outbreak in China and the United States, briefly realize the impact of the epidemic on the economies of the two countries and compare their response measures and the results. I analyzed the available data on confirmed COVID-19 cases in China and the U.S. I evaluated the impact of COVID-19 on China and the U.S. economy. After that, I analyzed and compared the actions taken by both countries and tried to evaluate their effectiveness on the economy. Using these methods, I hope this paper could help analyze the different policies and provide thoughts in comparing economic measurements in real-world cases.

2. THE PROCESS OF COVID-19

2.1. Evolution of COVID-19 in China

Being the first country to report COVID-19 cases, China faces the challenge of the pandemic in the first place. In November and December 2019, cases started emerging in Wuhan hospitals.

The turning point of China's epidemic occurred in early February, with the highest number of newly confirmed cases in Hubei on February 4. Strict measures have been put in place, including an extension of the national Spring Festival holiday, a lockdown in Hubei province, mass travel restrictions across the country, social distancing and a 14-day quarantine for migrant workers returning to their hometowns [3]. In China, the epidemic was effectively controlled in February and March 2020, with new domestic cases lowered to zero. China's economy also recovered largely in May, gradually returning to a normal state. The whole COVID-19 process in China lasted approximately 5 months. Figure 1 below shows a line chart of newly confirmed COVID-19 cases in China.



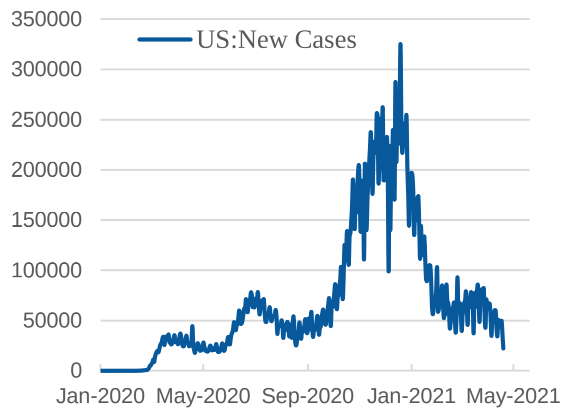
Data Source: Wind

Figure 1 Newly Confirmed COVID-19 Cases in China

2.2. Evolution of COVID-19 in the United States

Pandemic in the United States started spreading in mid-January, approximately 90 days later than in China. The first case in the U.S. was reported on January 21, 2020, straight after China started reporting situations to public. The first death in the U.S. was on February 29, 2020, only a month after the first case has been reported.

The COVID-19 outbreak first peaked in March and April 2020. Followed by several iterations along the reopening of the economy, the newly confirmed cases reached the highest level in February 2020 with over 5,000 new deaths a day, before falling back as the outbreak was brought under control with the introduction of vaccines. Figure 2 below shows a line chart of newly confirmed COVID-19 cases in the U.S..



Data Source: Wind

Figure 2 Newly Confirmed COVID-19 Cases in the U.S

Compared to China, the COVID-19 process in the US started later and lasted longer. Meanwhile, the outbreak in the United States experienced several iterations in early 2021 as the economy reopened.

3. The Economic Impact of COVID-19 on China and the U.S. Economy

3.1. The Economic Impact of COVID-19 on China

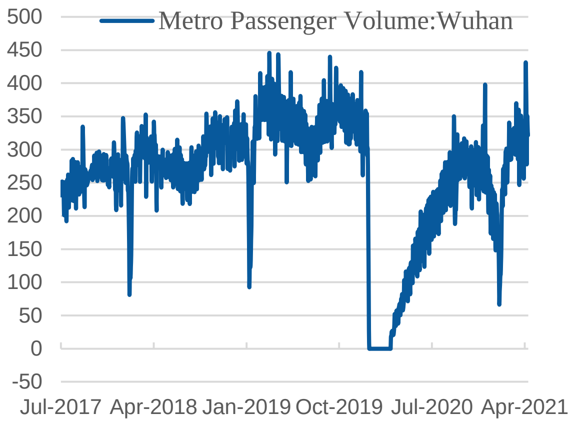
COVID-19 has led to negative impacts on economic activities and slows the economic growth of China, resulting in a severe drop in China’s GDP (Figure 3). According to data from the China National Bureau of Statistics (NBS), China’s GDP fell 6.8% in the first quarter of 2019. GDP then returned to 3.2% year-on-year growth in the second quarter. In the first half of 2020, however, China's GDP was still down 1.6% from a year earlier. China's rebound from the lockdown has been impressive, but it is not back to normal.

Data Source: Wind

Figure 3 China’s GDP Growth - GDP: constant price: quarter on year (Jan, 2004-Mar ,2021)

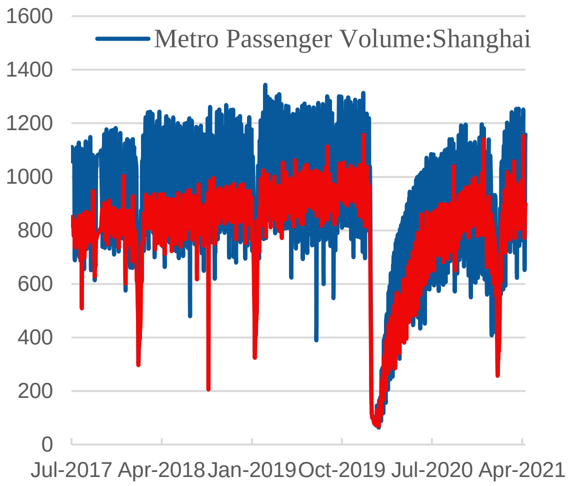
The impact of the epidemic on China's economy is mainly due to epidemic prevention and control.

i) Due to China’s strict lockdown measurement at hotspots, many economic activities are restricted. Take metro ridership as an example. As a result of social distancing policies and home quarantine, metro passenger volume in some Chinese cities decreased significantly during the epidemic. According to Figure 4 below showing metro passenger volume in Wuhan from January 2019 to April 2021, the passenger volume experienced a significant drop in February 2020 as a consequence of the lockdown policy executed in Wuhan, proving that strict containment measures nationwide in February 2020 brought economic activity to a near standstill [4]. With the gradual stabilization of the epidemic, subway ridership has gradually returned to the pre-epidemic level. Later in February 2021, it experienced another rapid fall in response to repeated COVID-19 outbreak. Similarly, in some other cities in China, such as Shanghai and Suzhou, metro passenger volume has also fluctuated sharply in response to the outbreak (Figure 5).



Data Source: Wind

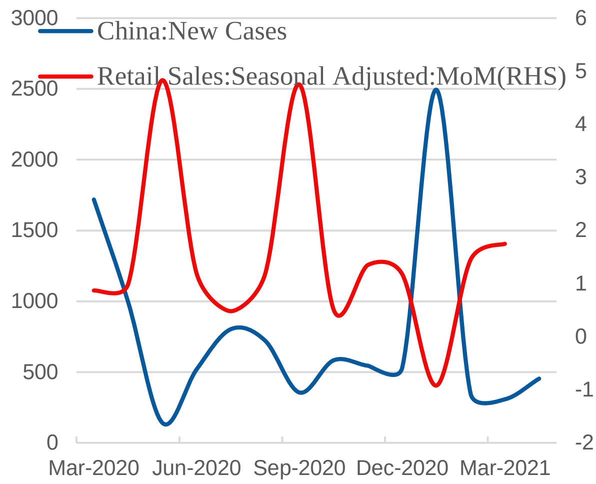
Figure 4 Metro Passenger Volume in Wuhan (Jan 2019-Apr 2021)



Data Source: Wind

Figure 5 Metro Passenger Volume in Shanghai and Guangzhou (Jan 2019-Apr *2021*)

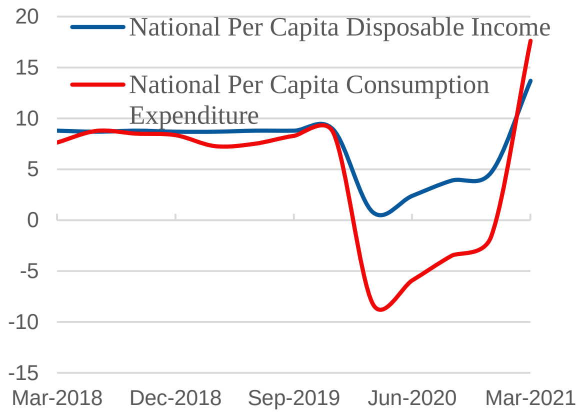
ii) China's economy is also affected by the subsequent sporadic outbreaks and the impact of local prevention and control measures on local demand. Since the pandemic outbreak, the Chinese government's distancing policies aimed at containing infections and saving lives prevented firms from operating and consumers from consuming. Starting February 2020, most firms in China are gradually restricted to stop production and people in hotspots are forbidden to leave home. As a result, consumption fell sharply in China. According to figure 6 below, since March 2020, there has been a clear negative correlation between new diagnoses and consumption data in China.



Data Source: Wind

Figure 6 New Diagnoses and Retail Sales in China (Mar 2020-Mar 2021)

iii）The declining income of households leads to sluggish consumer demand. Production has been forced to halt as a result of the outbreak, causing people to temporarily stop working. As a result, some workers are no longer earning. At the same time, many people lost their jobs as consumption fell sharply and many small businesses went bankrupt because they could not make ends meet. Figure 7 below shows the National Per Capita Disposable Income and National Per Capita Consumption Expenditure in China from March 2017 till March 2021. They both experienced a severe drop during the pandemic.

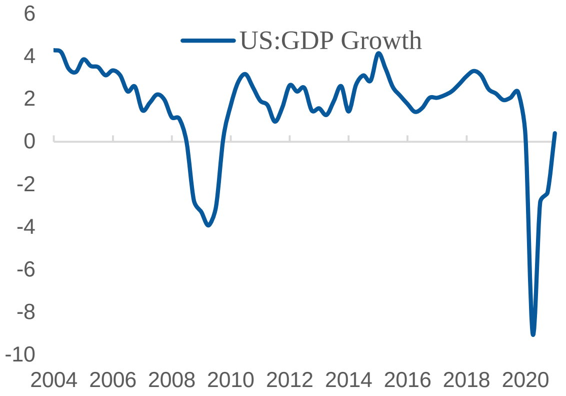


Data Source: Wind

Figure 7 National Per Capita Disposable Income and National Per Capita Consumption Expenditure in China (Mar 2017-Mar 2021)

3.2. The Economic Impact of COVID-19 on the U.S.

Similar to China, the epidemic prevention and control measures also had a severe impact on the economy (Figure 8), but the U.S. epidemic lasted longer and the negative impact was more severe.



Data Source: Wind

Figure 8 US GDP Growth - GDP: constant price: quarter on year (Mar, 2004-Mar ,2021)

Moreover, as the global financial center, the great uncertainty caused by the outbreak has triggered severe financial turmoil in the United States, with the stock market in the United States falling sharply due to the fear of financial crisis (Figure 9).

Data Source: Wind

Figure 9 The Stock Market in The United States (Jan 2020-May 2021)

However, the U.S. economy gradually recovers after actions are taken and the introduction of vaccines that to a large extent helped in controlling the pandemic.

4. MONETARY POLICY MEASURES IN RESPONSE

4.1. The People's Bank of China's Policy Response (China)

Faced with the impact of the epidemic, both China and the U.S. have taken certain monetary policy measures to respond. Starting in mid-February 2020, China's government phased out liquidity and activity restrictions and reopened most businesses and schools across the country [5]. However, social distancing rules remain in place and the entry of foreigners is still restricted. Even so, the economy gradually started to reopen and recover from COVID-19. In face of the impacts on the economy due to the pandemic, the People's Bank of China introduced several monetary policy operations, mainly divided into the following three categories.

i) Providing sufficient liquidity to the banking system. This was achieved through open market operations and cutting the reserve requirement ratio. Based on PBoC/State Council announcements, on February 3, 2020, PBoC injects 1.2 trillion RMB in liquidity into the banking sector through reserve repo operations, lowering repo rates by 10 bp. After that, PBoC injected 500 billion, 900 billion and 100 billion respectively on February 4, 10 and 11 [6]. Meanwhile, China has cut the reserve requirement ratio for financial institutions three times in early 2020 and lowered the interest rate on excess deposits on reserve to support economic recovery. In January 2020, PBoC cut the reserve requirement ratio for financial institutions (excluding finance companies, financial leasing companies and auto finance companies) by 0.5 % point, releasing more than 800 billion RMB in long-term funds. In March, PBoc implemented a targeted cut in the reserve requirement ratio for financial inclusion, giving 0.5 or 1.5% basis points of preferential reserve requirement ratio to banks whose loans in the financial inclusion field meet the standards in 2019. In addition, the reserve requirement ratio will be lowered by an additional 1% basis point for joint-stock commercial banks that have received preferential treatment from the 0.5% point reserve requirement ratio, releasing about 550 billion RMB in long-term funds, and guiding financial institutions to increase lending in the field of inclusive finance. In April, the government announced 1% points cut in the reserve requirement ratio for rural commercial banks, rural cooperative banks, rural credit cooperatives, village banks and city commercial banks operating only in provincial administrative areas, which was implemented in two phases on April 15 and May 15, releasing a total of about 400 billion RMB in long-term funds [3].

ii) Lowering interest rate. The interest rate of open market operation and Medium-term Lending Facility was lowered by 30BP, and the excess deposit reserve interest rate of financial institutions in the central bank was cut to 0.35% from 0.72%.

The main measurements mentioned above have increased the long-term and stable funding sources of financial institutions, promoted financial institutions to use funds more efficiently, and increased credit support for micro, small and medium-sized enterprises and enterprises in industries more severely affected by the COVID-19 outbreak.

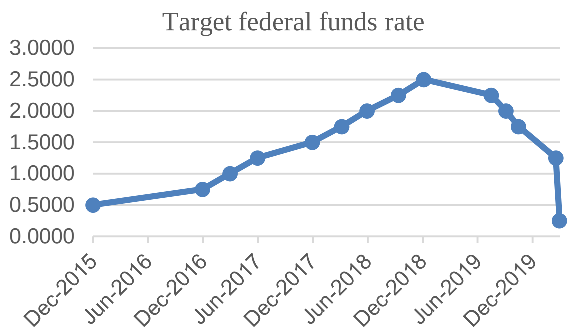
iii) Introducing policies that support credit growth, including the expansion of re-lending and re-discounting facilities by 1.8 trillion RMB to support manufacturers of medical supplies and daily necessities, micro-, small- and medium-sized firms and the agricultural sector and reduction of their interest rates by 50 bps (re-lending facilities) and 25 bps (re-discounting facility). In addition, two new monetary policy instruments were set up to directly channel funds into the real economy.

These policies introduced and actions taken successfully reopened China's economy. According to a CRS In Focus, China was the first major country to announce a return to economic growth since the outbreak of the COVID-19 pandemic in June 2020.

4.2. The Federal Reserve's Policy Response (U.S.)

The Fed's policy response is pretty different from China's. Their main measurements also fall into three categories.

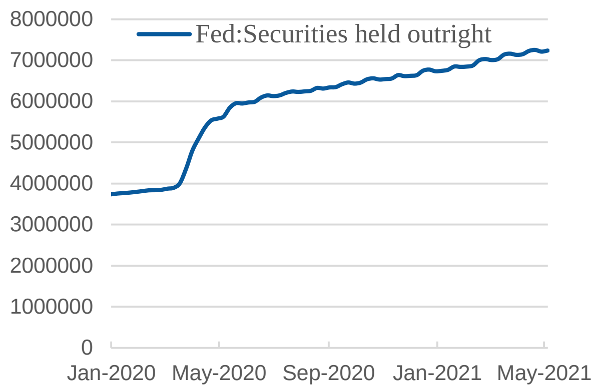
i) Traditional measurements: the Federal funds rate was cut by 150BP to zero. As shown in Figure 10 below, the target Federal funds rate reached-0-0.25 bp on March 15, 2020, at the lowest point in four years.



Data Source: Wind

Figure 10 United States Target Federal Funds Rate

ii) Quantitative Easing. On March 23, 2020, the purchases were made open-ended, saying it would buy securities "in the amounts needed to support smooth market functioning and effective transmission of monetary policy to broader financial conditions." On March 23, 2020, the Fed decided to buy bonds indefinitely, claiming that they would buy securities "in such quantities as are necessary to support the smooth functioning of markets and the effective transmission of monetary policy to broader financial conditions." [3] As a result, market functioning subsequently improved and the Fed scaled back its purchases in April and May. (Figure 11)



Data Source: Wind

Figure 11 The Federal Reserve - Securities held outright (Jan 2020-May 2021)

iii) Introducing policies that stabilizes the financial system. The Fed reduced existing cost of swap lines with major central banks and extended the maturity of FX operations, broadened U.S. dollar swap lines to more central banks and at the same time offered temporary repo facility for foreign and international monetary authorities [7].

5. Comparison between China's Actions and the United States'

Focusing on the results, both the monetary policies of China and the United States have had a positive impact on the economic recovery under the epidemic, but there are still big differences in the degree of stimulus and measures.

i) China's monetary policy has been relatively constrained: firstly, interest rates have fallen by only 30BP; secondly, the scale is relatively small since the most important measures to deal with the epidemic are refinancing and rediscounting, totaling 1.7 trillion RMB. In contrast, the Fed's monetary policy was significantly more aggressive: firstly, it cut interest rates more aggressively, by 150BP, and was lowered to zero; secondly, the scale is larger. Take quantitative easing as an example. From the beginning of March to the end of December, the Fed's holdings of securities grew from \$3.9 trillion to \$6.7 trillion.

ii) China's monetary policy mainly works through the banking system, such as refinancing and discounting policies; in the U.S., monetary policy works primarily through financial markets.

These differences are mainly due to the following three factors.

i) The difference in the effect of epidemic prevention. In China, where the outbreak was quickly contained, the stimulus was significantly milder compared to the U.S.

ii) Having learned the lessons of 2008, China is more cautious about monetary stimulus.

iii) China has a stronger grip on its banking system, and its actions can be fully co-operated with by the banking system, whereas the Fed's actions, which work indirectly through financial markets, require greater force.

6. CONCLUSION

In conclusion, China and the United States both faced a huge impact of the epidemic on the economy. While the monetary policies taken in the two countries both worked effectively on helping the recovery of the economy after COVID-19, there remain differences due to the different facts and situations in the two countries.

The pandemic resulted in a slowdown in economic activities and largely affected the economic growth of China and the U.S.. As for China, impact of the epidemic on China's economy is mainly because of epidemic prevention and strict control policies. First of all, due to China’s strict lockdown measurement at hot spots, many economic activities are restricted, leading to a negative impact on economic growth. Secondly, the economy is also affected by the subsequent sporadic outbreaks and the impact of local prevention and control measures on local demand. Finally, the epidemic had a severe impact on household incomes.

Compared to China, the U.S. economy is also affected by prevention measures on COVID-19. In addition, the great uncertainty caused by the epidemic in the US, the global financial center, has caused severe financial turmoil.

In terms of monetary measurements, China’s policy responses according to the People’s Bank of China are mainly providing sufficient liquidity to the banking system, lowering interest rate and introducing policies that support credit growth. These measurements successfully made China the first major country to announce a return to economic growth. However, the United States’ responses made by the Federal Reserve are mainly traditional measurements, quantitative easing and introducing policies that stabilizes the financial system.

The monetary policies introduced in the two countries are mainly different in the following two aspects:

i) China's monetary policy has been relatively constrained whereas the Fed's monetary policy was significantly more aggressive;

ii) China's monetary policy mainly works through the banking system whereas the U.S. monetary policy works primarily through financial markets.

Overall, both countries have implemented policies that suit their national conditions, and gradually started to recover from COVID-19 situation.

REFERENCES

[1] E. Barzani, S. Maital, The Global Economic Impact of COVID-19: A Summary of Research, in Samuel Neaman Institute for National Policy Research, 2020. DOI: https://www.neaman.org.il/EN/Files/Global%20Economic%20Impact%20of%20COVID-19_20200322163553.399.pdf6

[2] A.B. Schwarzenberg, J.K. Jackson, K.M. Sutter, M.A. Weiss, M.D. Sutherland, R.M. Nelson, Global Economic Effects of COVID-19, in Congressional Research Service, 2021. DOI: https://crsreports.congress.gov/product/pdf/R/R4627

[3] International Monetary Fund, Policy Responses to COVID-19, IMF, 2021. DOI: https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19

[4] Mikolajczyk, H. Lau, J. Bania, J. Schubert, P. Kocbach, T. Khosrawipour, and V. Khosrawipour, The Positive Impact of Lockdown in Wuhan on Containing the COVID-19 Outbreak in China, in Journal of Travel Medicine, 2020. DOI: https://academic.oup.com/jtm/article/27/3/taaa037/5

[5] A. Brodeur, A. Islam, D. Gray, S.J. Bhuiyan. A Literature Review of the Economics of COVID-19(IZA DP No.13411), in Institute of Labor Economics, 2020. DOI: http://ftp.iza.org/dp13411.pdf

[6] A.Tsang, M. Funke, The People’s Bank of China’s response to the coronavirus pandemic: A quantitative assessment, in Economic Modeling, 2020. DOI: https://ideas.repec.org/p/bof/bofitp/2020_012.html

[7] D. Skidmore, D. Wessel, J. Cheng, T. Powell, What’s the Fed Doing in Response to the COVID-19 Crisis? What More Could It Do?, in Brookings, 2021. DOI： https://www.brookings.edu/research/fed-response-