The Analysis of Chinese Monetary Policies in Asian Financial Crisis and the COVID-19 Period and the Policy Forecast

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Abstract. In July 1997, the Asian Financial Crisis significantly impacted regional and global economies, particularly in Asia. Similarly, two decades later, the COVID-19 has had a great influence on the Chinese economy as an exogenous element of the demand shock. Bothe the two issues were linked to the contagion effect and asset bubbles. This article discusses the monetary policies used during the two periods and compares and forecasts the monetary strategy based on the current economic status. The Chinese government is suggested to continuously carry out expansionary monetary policy for enterprises and household consumption and helps establish a wider range of digital economy, and helps establish a wider range of digital economy including rural areas.

Keywords: Chinese Monetary Policy, the Asian Financial Crisis, the COVID-19 Pandemic.

1. Introduction

The 1997 Asian Financial Crisis began in Thailand, ravaged the economy of the whole Asian region, and had repercussions on the Hong Kong stock market in the following years. This incident resulted in a significant demand shock for the Asian area, leading to the devaluation of several national currencies and the bankruptcy of numerous banks. The misoperation of monetary policies by the International Monetary Fund (IMF) and the internal problems such as corruption and weak governance in the deeply affected countries' financial systems [1].

Covid-19 broke out firstly in Wuhan, China, in 2020, which trailed behind China's economic growth and consumption. The unanticipated epidemic abruptly crippled Wuhan's healthcare system within two months. As a transportation center, Wuhan executed an immediate lockdown, which precipitated a significant decline in economic activity. As International Monetary Fund (IMF) suggested, the Covid-19 had led the global economy into a recession and possibly been more harmful than the Global Financial Crisis [2]. The economy in China decreased by 6.8% at the beginning of three months that the pandemic spread in Wuhan city, which experienced the first contraction in 28 years [3].

The economic impacts of these crises were related to the concept of "economic contagion". Various studies had defined 'contagion', concentrating mostly on the financial sector. This essay accepted Forbes and Rigobon's definition of contagion as a rapid increase in cross-market ties caused by a shock to one region (or group of countries) [4]. In the context of the Covid-19 shock, this term is used at the level of individual cities, indicating that the contagion effect occurred when the lockdown of Wuhan city affected the regional economy significantly and exerted economic pressure on the national economy.

The problems of the two periods were associated with asset bubbles. The Thai baht's devaluation marked the beginning of the Asian financial crisis. The crisis of the Thai baht triggered a great economic shock in Thailand and the asset bubble as the Thai baht fell largely in value. Hong Kong stock exchange market was hit hard, and the asset bubble occurred with extremely high housing prices. During the Covid-19 period, the complete lockdown of Wuhan city and the sluggish economy led to the cessation of manufacturing businesses. The domestic and overseas expectations of the Chinese economy dropped severely, resulting in a smaller range of asset bubbles compared with the AFC.

This paper analyses and compares the monetary policies of the People's Bank of China (PBC) between two periods and generates the monetary policy suggestions according to the current Covid-19 prevention and control in China.

2. Monetary policies done by the Chinese government in the Asian Financial Crisis

Hong Kong's economy shifted from high inflation in the early 1990s to heavy deflation after the Asian financial crisis. All product and real estate prices, rentals, and incomes have decreased during the first five years. These changes shocked the public deeply. Particularly in the housing market, numerous individuals who acquired houses at inflated prices suffered substantial capital losses. As a result of Hong Kong's economic stagnation, the government experienced falling income and a massive budget imbalance. To mitigate the impact of the Asian Financial Crisis on the Chinese economy, the government undertook the following expansionary monetary policies, as shown in Table.1.

Table.1. Chinese monetary policies in Asian Financial Crisis

	The Macroeconomic Monetary Policies during the AFC
1	Commercial banks gained full autonomy of issuing loans.
2	The required reserve ratio had been cut from 13% to 8%.
3	The interest rate continued decreasing for three times in one year.
4	The exchange rate of Renminbi stayed unchanged.

The Chinese government abolished lending restrictions on state commercial banks, granting them complete control over loan issuance. The HKD was less competitive against the USD in the face of significant deflation and a massive housing bubble. The Chinese government's primary objective was to stimulate the whole economy. It provided complete autonomy for state-owned commercial banks in terms of loan issuance, which aided the financial industry and businesses recover from the crisis. In this case, the Hong Kong economy can leverage loan lending flexibility to enhance aggregate demand, while liberalizing lending by state-owned commercial banks has enabled the Hong Kong economy to infuse liquidity. The PBC launched a notice of stimulating credit loans, confirming the guidance loan plan for 900 billion yuan, an increase of 81 billion yuan over 1997 [5].

The central bank's reserve ratio had been cut to 8% from 13%. In contrast to western countries, commercial banks in China were restricted from using the required deposit reserve. Commercial banks manage interbank money clearing, cash inflow, and outflow through PBC's "Deposit with the People's Bank" accounts, also known as reserve accounts. The reserve account and the cash reserve account may be moved to and from one another in accordance with applicable legislation. Institutions were able to raise their accessible finances by around $57 billion over the year as a result of this approach [5]. The considerable fall in the reserve ratio enticed financial sectors and businesses to operate by loosening the restrictions on reserve payments imposed on commercial banks. A high-street commercial bank, for example, runs thousands of branches around the country. Prior to the policy's implementation, each branch was required to pay a legal reserve equal to 13% of its deposits to PBC's local branch. As a result, commercial bank branches were required to file thousands of money transfer applications (Figure 1). On the other hand, commercial banks pay reserves to PBC on a legal entity basis following the publication of the new regulation published. There was only one restriction on statutory reserves in this case (Figure 2). Through the PBC, excess reserves served as a minimum balance (for liquidity) for commercial banks. Commercial banks were permitted to utilize the money freely as long as the excess reserves were not overdrawn. This innovation significantly boosted the efficiency of commercial banks in mobilizing funds.

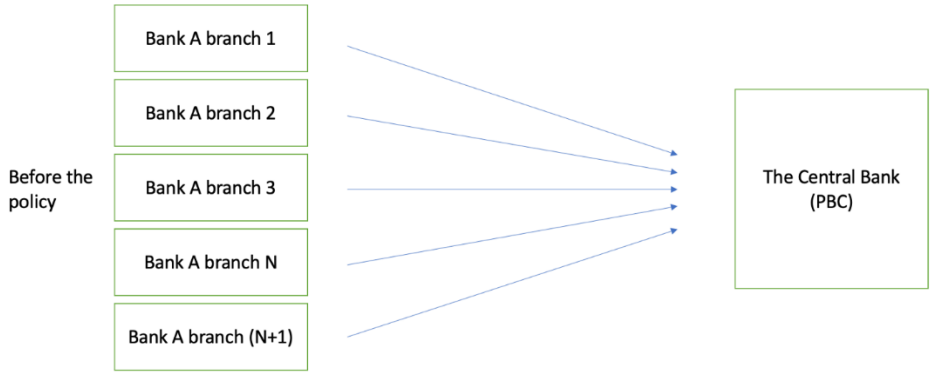

Figure 1. The applications of money transfer before the policy

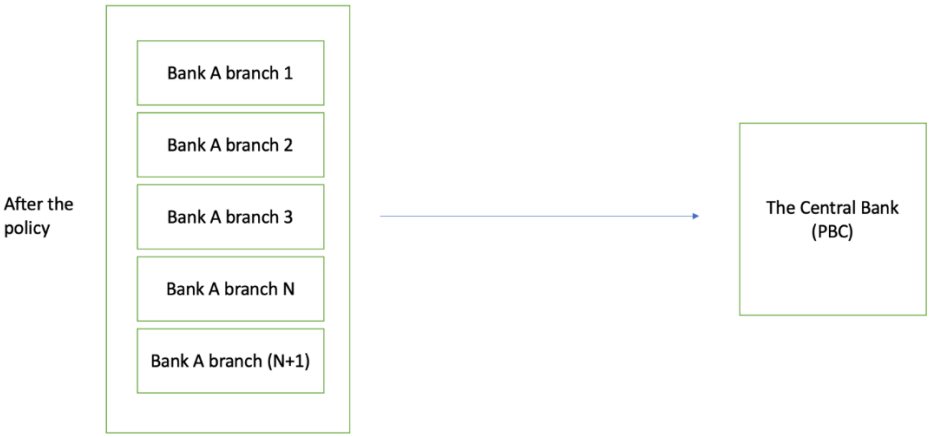

Figure 2. The applications of money transfer after the policy

The central bank decreased the interest rate continuously three times. Interest rates on savings and loans were cut three times in succession in less than nine months. The central bank initiated interest rate reductions for financial institutions, lowering deposit and lending rates by an average of 1.15 percent. Additionally, the interest rate fluctuation range for loans to small and medium-sized businesses had been expanded to commercial banks and municipal credit unions. The maximum fluctuation was increased from 10% to 20%, but the minimum remained constant. These expansionary measures had a substantial financial impact, resulting in a reduction of over RMB 60 billion in interest payments to firms and a reduction of RMB 30-40 billion in interest payments on the national debt. On the other hand, although the loan interest rate declined dramatically, the effect on stimulating the economy was not efficient as the PBC expected because the retail price index decreased either [6]. Theoretically, aggregate demand was increased, resulting in a rebound in investment and consumption.

The central bank announced that the RMB exchange rate would always remain fixed and not convertible for the capital account but current account transactions only in the AFC. In contrast to the majority of nations operating floating exchange rates, China has pegged its currency to the US dollar since 1994. The partial convertibility prevented the speculation from foreign capitals because there is no forward market that speculators may utilize to attack the RMB. Short positions against the RMB beard the great difficulty to be implied [7]. If China undertook the floating exchange rate, the speculation would drive the RMB downwards significantly, repeating the economic shock that occurred in Thailand and further spreading the Asian Financial Crisis. This situation has been averted by the PBC's approach to exchange rate stability.

3. Monetary policies done by the Chinese government during the COVID-19

The outbreak of the Covid-19 in 2020, a serious public health emergency, had brought heavy calamity to the world. Until now, the Covid-19 spread has been relatively controlled domestically through the joint efforts of the entire healthcare system and the people, while the pandemic grows fast abroad continuously. In the face of the Covid-19 pandemic, the Chinese government carried the dual pressure from healthcare and economic development. This part generates a series of macroeconomic monetary policies implemented during the Covid-19 by the Chinese government. Note that because the suggested monetary policies will be evaluated in the next part based on the most recent bunch of policies, this section selects the monetary strategies implied in the third quarter of 2021.

Table.2. Chinese Monetary policies during the COVID-19

	The Macroeconomic Monetary Policies in the Covid-19 period 2021
1	The PBC lowers the required ration and released the long-term funds.
2	The PBC released 300 billion RMB small scale re-financial loan.
3	The PBC promotes the reform of standing lending facility (SLF).
4	The LPR remains unchanged.

The people's Bank of China lowered the required ratio for financial institutions by 0.5% and released the long-term funds of about one trillion RMB from the 15th of July 2021. After the cuts, the required ratio for financial institutions was 8.4%. This method supported the development of the real economy and promoted a steady reduction in the cost of financing. A part of the released funds was used to return financial institutions' maturing medium-term lending facilities (MLF). The rest of the funds supplemented long-term projects, which can better meet market players' needs. The PBC stated that to maintain sustainable economic development, it adopted a stable way to adjust the monetary fluctuation, providing supply-side structural reform with a suitable and low-risk financial environment [8]. To be specific, there were three main expectations for implementing the strategy. Firstly, the downgrade of the required ratio effectively increased the long-term funds for financial institutions. While maintaining sufficient liquidity, this policy would support the economic entity and enhances financial institutions' fund allocation capacity. Secondly, the small and medium-sized enterprises can merit approximately one trillion long-term loans. Thirdly, the downgrade reduced the cost of funds for financial institutions by about 15 billion RMB per year, promoting the reduction of total social financing costs through the transmission of financial institutions.

The PBC released a 300 billion RMB small-scale re-financing loan, which primarily benefited small and medium-sized enterprises. Small-scale re-financing loan was granted to four types of local corporate financial institutions, including small urban commercial banks, rural commercial banks, rural cooperative banks, and village banks. According to the People's Bank of China's announcement in September 9, the People's Bank of China added 300 billion yuan of small-scale re-financing loan limits, giving out at a preferential interest rate within four months of 2021 [9]. It required an average interest rate of about 5.5% on loans to help reduce financing costs for small and micro-enterprises. In recent years, the small-scale re-financing loan, the primary approach that the PBC took as monetary policy, effectively mobilized the enthusiasm for loan issuing for local corporate banks and stimulated the growth of small and medium-sized enterprises. From the second half of 2021 onwards, the strategy had progressed significantly for small and medium-sized companies. A large number of similar-types companies had emerged in the market and improved their internal structures and production chains. Also, the prices generally decreased as companies' debt burdens had been reduced a lot.

The PBC promoted the reform of the standing lending facility (SLF), helping implement 300 billion RMB support for small-scale refinancing loans. This reform enhanced the efficiency of SLF, which met the local corporate financial institution's liquidity needs in time and effectively prevented the liquidity risks. Financial institutions initiated SLF operations. They can apply for available funds according to their needs, and the central bank provided them with short-term liquidity support. According to the data, in August, the central bank conducted a total of 0.6 billion RMB of SLF operations to financial institutions overnight. Among them, the overnight, 7-day, and 1-month standing lending facility interest rates were 3.05%, 3.2%, and 3.55%, respectively. The SLF always has a multiplier effect on intermediary financial indicators, and the funds released by SLF will not affect the market interest rate [10]. This study strengthened the feasibility of the monetary strategy. The promotion of SLF operation reform and the SLF electronization help improve operational efficiency, which can further enhance the stability of banking system liquidity and maintain the smooth operation of money market interest rates.

The LPR (Loan Market Price Rate) has remained unchanged for the 19th consecutive month. The competition in China's deposit market was relatively drastic. Certain banks claimed high-interest rates for deposits due to their high-risk investment projects and scale expansion. Following the trend, most banks started to chair high-interest rates as well. This circumstance obstructs the transmission of market interest rates to deposit interest rates and, to some extent, affects the effect of deposit rates marketization. Thus, the PBC established the market interest rate pricing self-regulatory mechanism to regulate the financial institutions' interest rate pricing. In June 2021, the PBC improved the mechanism by changing the self-regulatory cap from a floating multiple of the benchmark deposit rate to be determined by adding points. After comparing the market interest rate pricing self-regulatory mechanism in the United States, the United Kingdom, and Japan, financial institutions generally adjust their interest rate in the money and credit markets according to the monetary policies, thus transmitting the effect of monetary policies to the real economy [11].

4. Comparison of the monetary implementations during the two periods and the forecast

Both periods faced the deflation challenge, and monetary policies adhered to the principle of boosting economic dynamics. In general, the PBC achieved economic expansion by lowering interest rates and improving the efficiency of lending. However, the details of monetary policy used in different periods were various. This section compares the differences in the economic environment, monetary policy, and effects between the two periods mentioned above.

First of all, theoretically, Chinese monetary policies were less effective on the Hong Kong market during the Asian Financial crisis. Around the time of the Asian financial crisis in 1997, the reform of China's state-owned enterprise (SOE) fell into a dilemma, with the majority of the bad loans in the banking system. Monetary policies acted with fewer effects on the loans from SOEs because they were less likely to worry about their revenues and costs as long as the government owned them. The real effect of monetary policies will diminish if the state-owned sector declines, as the price in SOEs is stickier [12]. Thus, the intense monetary strategies were inactive on those bad loans in the banking system. However, in 2021, with loads of large SOEs privatized, the private companies cared more about their revenues, and the production efficiency rose a lot. Enterprises are much more sensitive to monetary policy. On the other hand, residents held more diverse forms of financial assets. They had more flexible investment options, thus increasing the sensitivity of their consumption and investment behavior to changes in monetary policy.

The reduction in the required reserve ratio during the Asian financial crisis was more severe than China's Covid-19 (2021, for example) period. Since 1998, the PBC has implemented robust monetary policies, targeting the Asian Financial crisis more aggressively. In 2021, China's monetary policy was relatively moderate. For example, the PBC cut the reserve ratio only twice in 2021 by 0.5 percent in July and December. In contrast, China reduced its deposit and lending rates, legal reserve ratio,

and excess reserve ratio three times in a row in 1998, with the most considerable reduction (March 1998) being a one-time 5% reduction, which had been five times the total reduction in 2021. According to CEIC data [13], the monetary expansion policy that began in March 1998 caused money supply M2 to rise 13%, from 73.05 trillion yuan in March 1998 to 82.75 trillion yuan at the end of 1998. In contrast, in 2021, the money supply M2 in China rose to 234.3 trillion yuan in September, with a year-on-year growth of 6% (The Monetary Policy Analysis Group of the PBC, 2021).

From the perspective of exchange rates, during the Asian financial crisis in 1997, the Chinese government insisted that the RMB would not be devalued, but the RMB was deprecated in April 2022. The RMB appreciated slightly against the US dollar from 8.2898 in 1997 to 8.2791 in 1998, and the exchange rate remained unchanged until 2004. The total exports from 1997 to 2000 were US$182.79 billion, US$183.709 billion, US$19.931 billion, and US$249.203 billion, respectively [14]. It can be seen that the total exports did not decline after the Asian financial crisis but resumed rapid growth from 1999 to 2000 after a short period of stagnant growth. In 2021, the RMB's exchange rate was stable overall. However, on April 29, 2022, after the opening quotation at 6.6080, the RMB spot rate against the USD fell below the 6.61, 6.62, 6.63, 6.64, and 6.65 marks in succession, depreciating by more than 300 basis points to an intraday low of 5.6520 as of press time, which created the lowest value since November 2020. For now, this looks good for Chinese exports.

It is advisable for China to continuously lower interest rates any further. Lower interest rates are achieved through demand, supply, and financial activities. Low-interest rates encourage people to spend their savings on the demand side. Therefore, the aggregate consumption would increase. Simultaneously, enterprises are willing to invest more as the interest rate is the opportunity cost of saving money on the supply side, which helps enterprises reduce their financial costs and increase their profits. From the perspective of financial activities, lowering interest rates leads to higher bond prices and lower financing costs. The policy effect of declining interest rates is significant when interest rates are very high. When the interest rates decrease continuously over a long period, the impact of the policy will diminish because the problem of a liquidity trap may occur [15]. As a result, the money supply tends to remain at almost the same level as before though the interest rates decrease, indicating the efficacy loss of the monetary policy. The theory suggests that the baseline of the interest rate decrease. In March 2022, China's long-term interest rate had been reduced to 2.945% pa, which can still be decreased further. Compared with the current interest rate in the US, which maintained below 1% for a long time, the PBC can lower the interest rate continuously without the risk of a liquidity trap. Considering that currently, the Chinese economy has adopted the economic activity with Covid-19 compared with the pandemic's initial stage, the interest rates can be lowered gently.

China should vigorously promote the coverage of the digital economy and provide further R&D loan support for typical enterprises. China's central bank took advantage of remote operations in the digital economy to improve the efficiency of its lending during both the Asian financial crisis and the Covid-19. The digital public service infrastructure has brought great convenience to people's lives. However, due to the considerable economic difference between rural and urban areas, people in different places enjoy different levels of infrastructure. As a result, the prior role of the current digital economy is to develop the services in a low economic development area. What is more, further R&D support should be given by the Chinese government. Enterprises and industries can rely on digital systems heavily, maximizing their capital intensive. In industrial development, China can rely on information technology and digitalization for management and operation and integrate human resources, capital, and technology levels to complete the digital transformation of traditional industries. Agriculture is one of the essential industries needing transformation in China. The use of the digital economy in agriculture is relatively small, so there is much room for development. The digital economy in agriculture can solve this problem to a certain extent. The digital economy in agriculture can solve this problem to a certain extent. By introducing advanced equipment with artificial intelligence, advanced technological equipment can replace the manual cultivation of crops, and the growth of crops can be controlled in real-time with sensor systems and monitoring equipment.

5. Conclusions

This report selected two specific financial issues to discuss, the Asian Financial Crisis and the Covid-19 pandemic. The Asian Financial crisis started in Thailand in 1997, causing the Thai baht to devalue significantly. This trend suddenly spread to Asia, including Malaysia, the Philippines, Singapore, and Hong Kong China. Covid-19 was firstly observed in Wuhan city China in 2020. The unexpected pandemic hit the Chinese and global economies dramatically. The Chinese government implemented a lockdown policy to prevent further infection, which lasted about three months. However, this approach can only prevent the spread of the pandemic, but the economy fell into stagnating.

The PBC utilized a series of monetary policies to deal with the economic downturn during the Asian Financial Crisis. Firstly, the PBC decreased the loan requirement and the interest rate to stimulate the economy. Also, the Chinese government offered full control over loan issuance to commercial banks. Thirdly, the required reserve ratio was lowered by 5%. Lastly, the Renminbi exchange rate remained fixed in the AFC.

During the Covid-19 period, the central bank also implemented expansionary monetary policies to help the economy recover. The PBC decreased the required ratio for financial institutions by 0.5% and injected a large number of long-term funds. The small-scale re-financial loan was released with about 300 billion yuan. The PBC also promotes the standing lending facility (SLF) reform, which helped implement financial support. Lastly, the LPR (Loan Market Price Rate) stayed the same as the previous nineteen months.

The last section compared the monetary policy used during the Asian Financial crisis and the Covid-19 period and provided two suggestions for further monetary implications based on the current Covid-19 situation. The Asian Financial Crisis was more serious than the Covid-19 pandemic. The required reserve ratio in Asian Financial Crisis decreased more severely than during the Covid-19 (2021, for example). From the perspective of exchange rates, during the Asian financial crisis in 1997, the Chinese government announced that the RMB exchange rate would remain the same, but the RMB was deprecated in April 2022. The PBC is suggested to lower the interest rate further and develop the digital economic system, including rural areas.

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