The Effectiveness of Monetary Policy Implementation (Credit Policy) on Supporting Small and Medium-Sized Enterprises

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Abstract. The SMEs (small and medium-sized enterprises) have always been an important part in economy but facing difficulties in finance. In this article, we discussed the evidence and reasons of their difficulties. Then the article will focus on five monetary policies implemented from 2018 to 2020 in support of SMEs in China, and their difference compared to conventional monetary policies.

Keywords: SMEs, monetary policy, shadow banking

1   Introduction

Compared with large enterprises, small and medium-sized enterprises are often difficult to obtain financial support from commercial banks, especially during the economic downturn. In order to support SMEs, the Chinese government has introduced in structural monetary policies and adjusted conventional aggregate monetary policies, to specifically channel funds to SMEs and awaken their vitality.

In the following article, both quantitative and survey data to show environment for SMEs is very unfriendly. The reasons can be concluded with respect to both sides of the enterprises and the bank. However, the SMEs play an important role in economy, so the government carry out inclusive finance plan to improve the invest environment. During 2018 to 2020, the People's bank of China basically implemented five monetary policies or tools to support SMEs survive through the economic turndown and pandemic. Three of them are innovative structural monetary policies and two of them are aggregate policies, but in 2020 the central bank has made some adjustments to improve the conventional aggregate monetary policies, making them more targeted at SMEs. To verify the effectiveness of the policies, we use indicators like outstanding loans to SMEs and related yield to maturity of one-year debt. As a fact of the substitution effect between commercial banks' loans and shadow banking, the size of shadow banking can also be used as indirect evidence to illustrate the effectiveness of monetary policy.

Although a large number of papers discusses on the topic of monetary policy, and analyzed specific cases, few have analyzed how monetary policy can help small and medium-sized enterprises. To support our statement, this essay will use the following indicators: loan amount of small and medium-sized enterprises, the amount of non-performing loans, etc.

2 Literature Review

Small and micro businesses have always been a vital part of the economy, contributing over 60% of GDP, over 40% of tax and a huge labor market. However, financing is not easy for them, due to complex audit work [1], incomplete financial management in SMEs and higher risk to default, and as a result, they often turned to shadow banking. Shadow banking is indeed an effective way to finance SMEs due to large amount of information [2], but it is also argued that shadow banking is only effective in short term [3] and will bring systemic risks. It is believed that there is a substitution effect between the scale of commercial banks' credit loans and scale of shadow banking [4]. In 2018 when the economy turned down, conventional aggregate monetary policy increased liquidity, but did not adjust the credit preference, which did not achieve the goal of inclusive finance and left SMEs worse off [5]. In 2020 when COVID-19 broke out, the central bank implemented both aggregated and structural monetary policy to support the productive economy, showing positive effect in bailing out SMEs [6]. But it is argued that the loan to SMEs during the pandemic has changed the traditional loan management of commercial banks and generated new risks.

3 Discussion

3.1 Financing problems of small, medium and micro enterprises

The Small and Medium sized Enterprises (SMEs) always face financing difficulties. Below, we will discuss what causes the phenomenon and then extent to which SME's financing is difficult for both enterprise and the bank.

3.1.1. Definition.

SMEs are defined as enterprises that are usually founded by a small number of people. This kind of company hires relatively few employees and has modest business volume. As a result, the operations of SMEs are usually managed by the enterprise owner, which are less influenced by the outside powers. In China, the standards for the classification of SMEs are formulated by the relevant departments of The State Council on the basis of such indicators as the number of employees, operating income and total assets of the enterprises.

3.1.2. Data Indication.

In order to truly reflect the severity of financing difficulties of SMEs, we gathered different index data varying as time flows.

3.1.3. Entrepreneur Confidence Index.

The first index is the entrepreneur confidence index, which is compiled from the survey of entrepreneurs' opinions, judgments and expectations of the enterprise's external market economic environment and of the macro policies (usually the choice of "optimistic", "general" and "not optimistic") Since we specifically focus on the situation of company financing throughout the covid-19 pandemic, Macro statistical data collected by the *State Statistical Bureau* of three kinds (big, medium, small) of enterprise confidence index from 2012 to 2021 are gathered and shown below.

According to the data, we can make two graphs which indicate the spot index and expectation index of confidence index of three kinds of companies respectively.
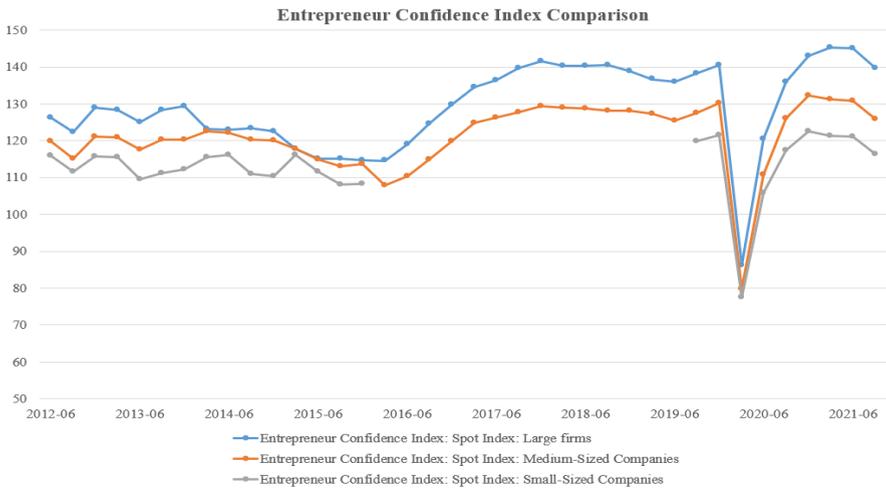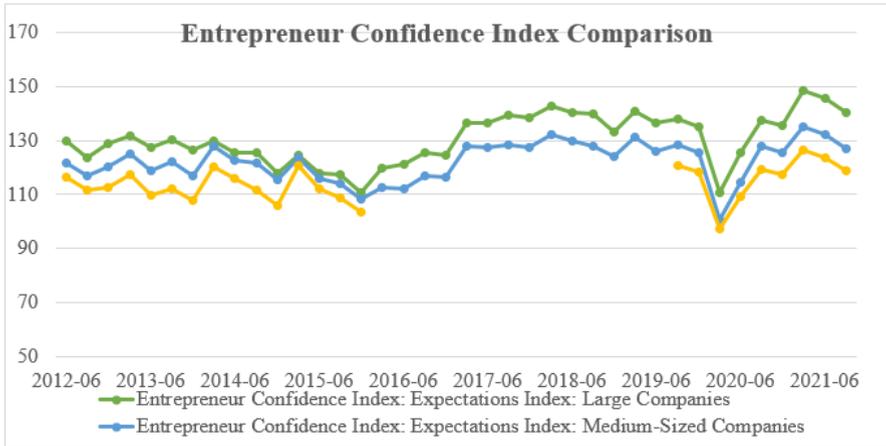

Fig. 1. Spot confidence index

Fig. 2. Expectation confidence index

The graphs above illustrate the spot and expected confidence indexed of three different kinds of enterprises. Though patterns vary, these indexes follow the rule that Entrepreneurs' confidence in their businesses increases as the size of their companies grow, with Small-sized company owners have the lowest status of confidence.

Why would entrepreneurs of smaller companies expect less optimistically? Certainly, small-sized enterprises face lots of difficulties. One thing worth mentioning is that during the period from 2015 to 2017, when the domestic economy had just been stabilized from the shock of financial crisis, though the confidence index boosted for large and medium-sized companies, small companies showed a steady but small increase, suggesting that they are less enjoying the benefits of the recovery policies. Moreover, as the breakout of covid-19, all enterprises are hit hard, thus the confidence index decimated. From the graph, we can find that the spot data of that of medium and small companies have bene lowered to even below 80, which is approximately two-thirds of the situation before pandemic. In this case, due to the negative economic shock, the future expectation of investors fell sharply and lots of people who are terrified by the investment risk choose to withdraw capital investments. Consequently, this action made financing for SMEs even harder. On the other hand, although large companies are also affected, the confidence index remained above 85, which indicates that large companies are more resilient to economic shocks while medium and small enterprises do not.

3.2   The profit growth of SMEs

SMEs (SME) have always been in a tough situation to finance for their poor credit rating. However, they are important for a country. They meet the special demand of the minority, play an important role in labor market and often have the incentive to innovate. There is no doubt that the amount of loan a company can get will put a huge effect

on its profit and operation. The graph above illustrates the growth of different size companies. It vividly reveals that the SMEs have a large deficit in recent years because they have more difficulties on financing and operation. The more capital they own, the more available source they can use to produce and make a profit. Based on this, the firms will turn to shadow banking for more loans and capital. No wonder why there is such an extremely massive scale of shadow banking in China, it posts a systemic risk in banking system.

Fig. 3. Profit growth index

3.3   Reasons for why SMEs have financing problem

3.3.1. Direct finance.

As for direct financing, due to the strict requirements of IPO, it is generally difficult for SMEs to meet the requirements of the IPO sector (for example, the profit has increased year after year) in order to sell shares to get financed. In terms of debt and financing, due to the restrictions on the size of issuance, low amount of production, low confidence index of SMEs. Thus, it is unlikely for small and medium-sized enterprises to be favored by investors. Therefore, obtaining funds through debt financing is not an easy task for SMEs.

3.3.2. Bank Side.

Compared with large enterprises, small enterprises have smaller size of production and profits, and the cost of bank lending is relatively high:

Compared with large enterprises, small enterprises are smaller in scale and profit. However, for banks, their loan procedures and personnel requirements are basically the same. Overall, the operating costs and supervision costs of lending to small and medium-sized enterprises will increase, and bank lending income is not cost-effective. SMEs lack economies of scale and are not attractive to banks.   Banks are reluctant to lend to SMEs. Bankers lack confidence in SMEs (Confidence index can be used).

As the assets of SMEs are relatively small, there are few mortgageable assets, and the level of operation and profitability is not guaranteed. The associated loan risk is high, and the bank will refuse to approve it in order to reduce the risk of bad debt.

4　Monetary policy implied by the government

2018 is an important year when Chinese government decided to fully implement the policy of inclusive finance, and SMEs is one of the targets. During this year, the People's Bank of China followed two conventional monetary policies--central bank lending and central bank discount, and created a new instrument called Targeted Medium-term Lending Facility (TMLF), in order to support SMEs. In 2019, TMLF came into fully use.

In 2020 when the pandemic struck China, the productive economy was severely damaged, and SMEs were going through a hard time. Chinese government followed the central bank lending and discount as a convention. In addition, Chinese government also introduced delayed repayment of principal and interest of loans, and purchase of credit loans of SMEs as innovation.

Table 1. Monetary Policies implemented to support SMEs

Policy	Definition
Targeted medium-term lending facility	Central banks inject money into local financial institutions to offer collateralized loans to SMEs at a low interest rate.
Central bank lending	Central bank offer loans via commercial banks to the public.
Central bank discount	Central bank provides financial support by buying discounted commercial papers haven't expired held by banking financial institutions.
Purchase of credit loans of SMEs	The People's Bank of China purchase partial of the loans lent to SMEs from local banks and after one year, the banks return the funds to People's Bank of China.
Delayed repayment of principal and interest of loans	Allow SMEs to postpone the repayment of principal and interest.

4.1　Targeted medium-term lending facility

Targeted medium-term lending facility was created in 2018 and came to implement in 2019 to offer support to SMEs. In 2019, the People's Bank of China offer 257, 267, 297-billion-yuan quota of TMLF respectively in January, April and July [7].

4.2　Inclusive central bank lending and central bank discount

Central bank lending and discount are conventional monetary policies used in China. During the COVID-19, the People's Bank of China expanded the magnitude of central

bank lending and discount and adjust the discount rate for commercial papers. We will explain in detail in the following paragraphs.

In 2020, in order to cope with the impact of the epidemic, the central bank has carried out three batches of central bank lending and discount, namely, 300-billion-yuan special central bank lending, 500-billion-yuan central bank lending and discount quota and 1 trillion-yuan central bank lending and discount quota. It is required that among the 1 trillion central bank lending and discount, the loans made to and the commercial paper bought form SMEs should take up at least 50%, which directly offer financial support to the SMEs. The central bank mentioned in its report that by the end of June 2020, 300 billion yuan and 500 billion yuan had been basically distributed respectively. By December 2020, 1 trillion yuan had also been distributed. The 1.8 trillion central bank lending and discount have effectively recovered the economy in the epidemic situation in 2020, especially for SMEs.

Also, the People's Bank of China decided to reduce the interest rate on central bank lending and discount from July 1st, 2020. Among them, the interest rate of central bank lending to support agriculture and small enterprises loans was reduced by 0.25 percentage points. After adjustment, the interest rates of three-months, six-months and one-year agricultural central bank lending and small enterprises central bank lending were 1.95%, 2.15% and 2.25% respectively. Financial stability central bank lending interest rate was cut by 0.5 percentage points. After adjustment, financial stability central bank lending interest rate is 1.75%, the discount rate is 2%, and the interest rate of financial stability central bank lending during the extension period is 3.77%.

The implementation of central bank lending and discount interest rate enables commercial banks to obtain funds from the people's Bank of China and then lend to small and medium-sized enterprises at a lower cost, so that small and medium-sized enterprises can resume work quickly.

To support SMEs, financial institutions are required to realize the "three not less than" loans of SMEs:

- The loan growth rate of SMEs is not lower than the average growth rate of various loans
- The number of loan households of SMEs is not lower than the number of households in the same period last year
- The rate of obtaining loans from SMEs is not lower than that of the same period last year

4.3   Delayed repayment of principal and interest and purchase of inclusive loans

During the pandemic, the government also implemented two policies which directly reach the real economy as innovation.

The first policy is the purchase of credit loans of SMEs. The People's Bank of China purchase 40% of the loans lent to SMEs from local banks and return the funds to People's Bank of China after a year [8]. The interest rate paid by SMEs will received by local banks, but the bad loans are at their own expense. The policy is equivalent to

lending money to local bank of zero interest rate, relieving their liquidity pressure and enabling their ability to make more loans.

The second is delayed repayment of capital and interest. For the loans lent out to SMEs by local banks that matures between June 1st and December 31st, 2020, financial institutions should extend the repayment date if necessary [9]. The repayment date for the principal and interest can at most be extend to March 31st, 2021, which meant to relieve the financial pressure for SMEs. To fully mobilize and compensate for the loss of local banks, the People's Bank of China and the Ministry of Finance will offer 1% of the principal. Due to the reason that directly handing over the 1% of principal of extended loans are not allowed, the government develop a support tool of delayed repayment of principal and interest. Through special purpose vehicle, local banks sign a rate swap agreement with People's Bank of China. The People's Bank of China pays a fixed interest rate of 2.62% to local banks and charge a floating interest rate which equals to required reserve ratio. Through the spread of interest rates, the central bank offered the incentive for local banks to delay the repayment of SMEs.

4.4 Data

There is an economic downturn during 2018. The default risk of loans made to SMEs increased and most of commercial banks prefer to lend to large companies, and there was a sharp decrease in outstanding loans to SMEs. However, during 2019 three batches of loans targeted to SMEs were allocated via TMLF, which contributes to the rebound of the indicator.
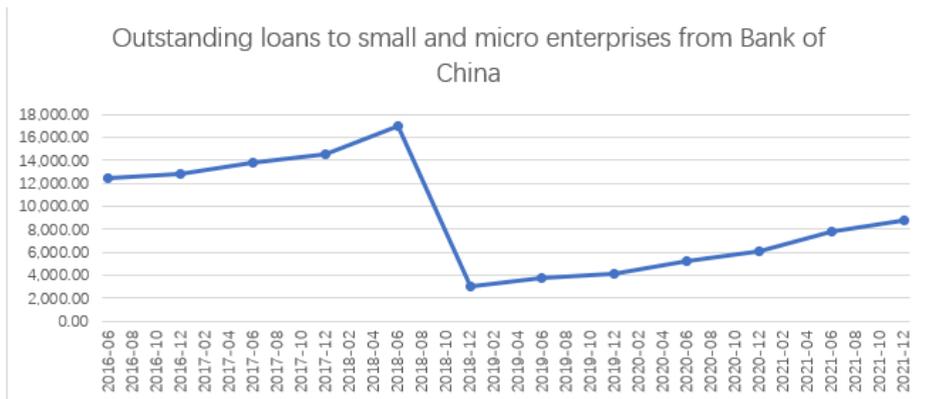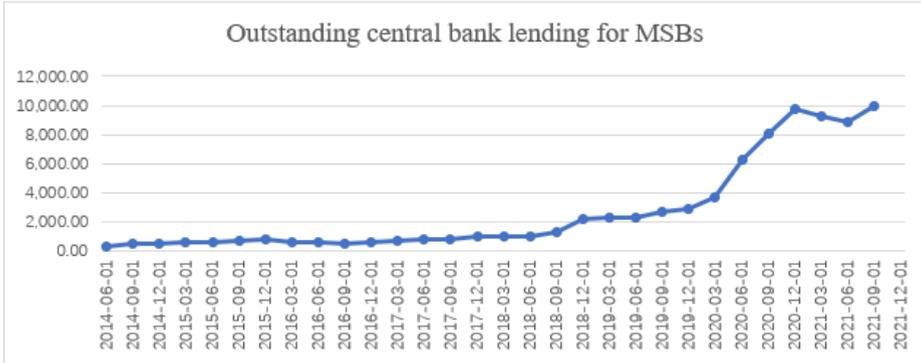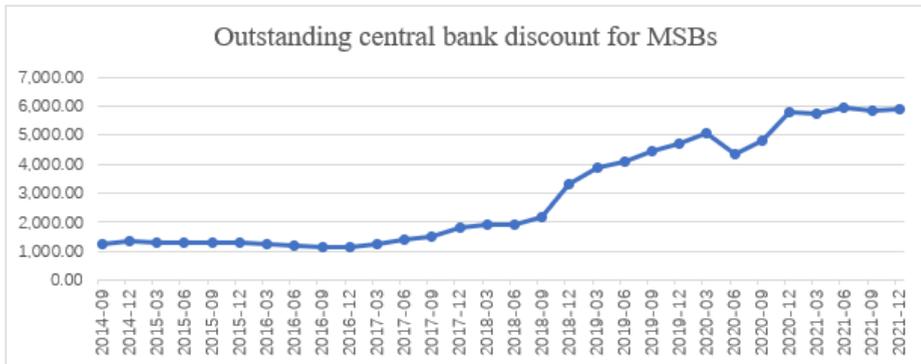

Fig. 4. Outstanding loans to SMEs from Bank of China (unit: a hundred million)

Fig. 5. Outstanding central bank lending for micro and small businesses (unit: hundred million)

Fig. 6. Outstanding central bank discount for micro and small businesses (unit: hundred million)

Outstanding central bank lending and central bank discount grew stably since 2018 when the inclusive finance was carried out. Outstanding central bank lending grew sharply during the pandemic.
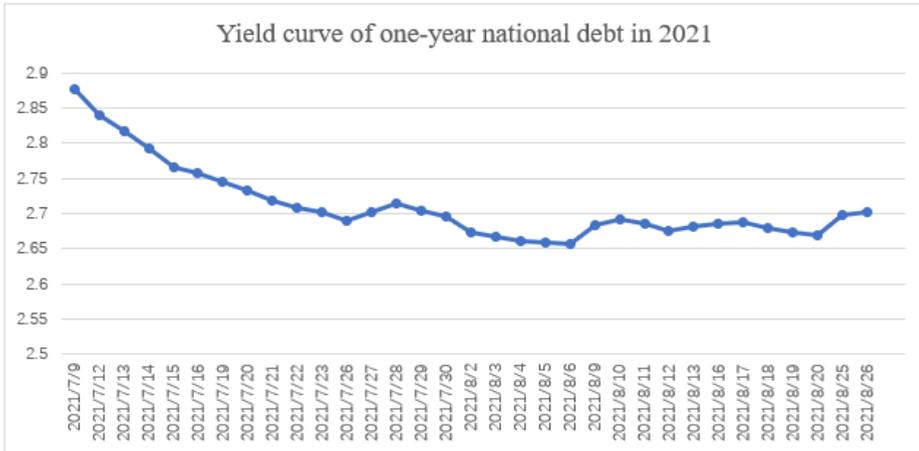
Fig. 7. Yield curve of one-year national debt in 2021

When the initial loan quota of central bank lending was not enough, the government issued national debt. The rate of return obviously fell in late July 2021, and rebounded in the beginning of August, but then began to decline quickly. Until the 23rd it bottomed out. Judging from the upward trend in bill yields, demand for bills has fallen. Since August 23rd, banks have invested in more loans than usual to collect bills on a larger scale. This shows that the central bank lending policy is gradually taking effect.

5   Conclusion

Before 2018, central bank's mainly focused on conventional aggregate monetary policy to support enterprises. However, the cash flowed to SMEs is limited. In 2018 the economy began to turn down, making the financial environment for SMEs worse off. The central bank followed conventional monetary policies as well as created some structural monetary policy as innovation.

The central bank lending and discount policy still focus on liquidity adjustment, enabling local banks to make more loans to the public. However, by adding several requirements in 2020, that the loans made to SMEs should take up to 50%, the loans were made more targeted to help SMEs. The newly created monetary tools like TMLF, delayed repayment of principal and interest, central bank directly offered help to small and micro businesses, which is far more efficient and proved to be useful.

6   Structural monetary policies help SME to better financing Evidence of the shrinking of shadow banking

6.1   Shadow banking is a major source of financing for SME

SMEs are in great need of financial support in the long-term competition, but for a long time, large enterprises are more favored by financial institutions because of their good reputation [11]. In this case, it is difficult for SMEs to get financial support from traditional commercial banks. So, they turn to shadow banking for financing, which has become an important financing channel for SMEs.

First of all, as a supplement to traditional credit channels, shadow banking can provide financial help to enterprises that cannot meet their financing needs through bank credit. However, in addition to being a supplement to traditional bank credit, it also competes with traditional bank credit business [13].

6.2   The slowdown in shadow banking growth shows that structural monetary policies provide a better financing channel for SMEs

Cheng (2021) believes that there is a certain "substitution effect" between the scale of shadow banking and the scale of commercial bank credit, that is, when the scale of shadow banking expands, the credit scale of commercial banks decreases [4].

The short-term "substitution effect" is caused by the high degree of overlap between shadow banking and commercial banks in terms of capital sources. Most of the funds of shadow banking come from commercial banks. The main reason for the emergence and development of shadow banking is the regulatory arbitrage of commercial banks. In the short term, when the scale of shadow banking expands, while the overall financing scale demand is unchanged, the choice of shadow banking credit channel will inevitably squeeze out the bank credit and reduce the credit scale of commercial banks.

Therefore, it is reasonable to think that when traditional commercial banks implement more preferential credit policies, SMEs will be more biased towards commercial bank credit financing, and the scale of shadow banking will be better controlled due to the "substitution effect" between the two [12].

The Structured monetary policy is to implement preferential policies for SMEs, so that funds can specifically flow to them. According to the above, the reduction of shadow banking can infer that preferential credit policies help SMEs better finance, so this can also be used as indirect evidence that structural monetary policies support SMEs [5].

This paper uses the total inverted algorithm to calculate the overall scale of shadow banking [4]. The calculation method is as follows: the social financing increment counted by the central bank minus new RMB loans, new foreign currency loans, corporate bonds, and domestic stock financing of non-financial enterprises. The results are used to measure changes in the overall size of shadow banking.
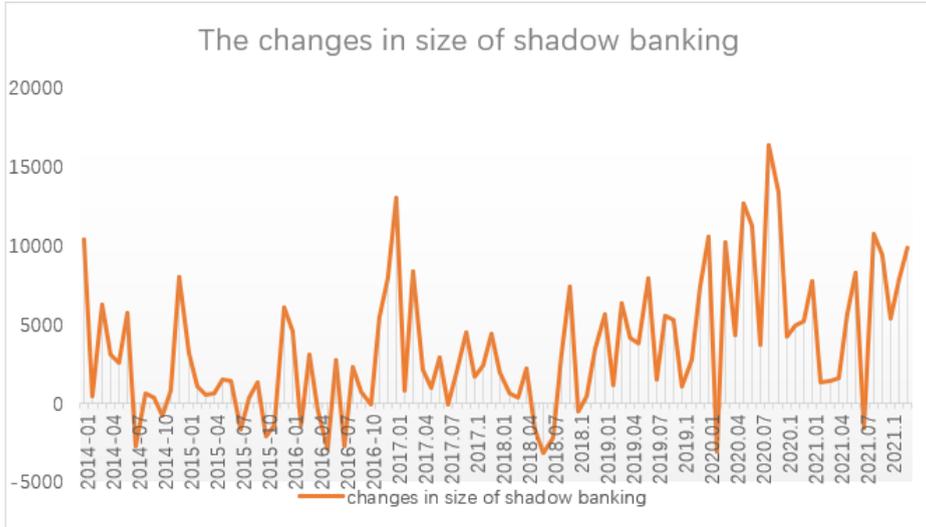
Fig. 8. The *changes in size of shadow banking* (The data in this figure are from the official website of the People's Bank of China)

When the epidemic began to hit China in 2020, the size of shadow banking increased rapidly. This is because the pandemic has damaged the productive economy, making SMEs in a difficult position to finance from commercial banks because of their high risk of default. In order to support SMEs, the central bank has introduced structural monetary policy to enable funds to flow to them specifically by some preferential lending policies. It allows SMEs to borrow more money from commercial banks, so the growth of shadow banking has slowed since the implementation of the new policy.

7 Conclusion

The SMEs are facing various difficulties of finance, both in issuing stocks or bonds and getting credit loans from commercial banks. So, shadow banking as another financing channel, can provide money to SMEs when banks do not meet their financing needs. Before 2019, the conventional monetary policy focus on improving the whole financial environment when the economy turned down, but the help to SMEs are not evident. Later, the Chinese government converted to new structural monetary policies and tools targeted at SMEs, especially during COVID-19. The sharp increase in outstanding loans to SEMs from commercial banks showed the enforcement of policies was efficient, and the shrinking in shadow banking proved the effectiveness of structural monetary policy. Generally speaking, monetary policy and the credit policy implied in recent years have successfully helped the SMEs to finance and bailed them out during the crisis [10].

Acknowledgement

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