The advantages and disadvantages of relying solely on currency financing to fund government expenditures

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Abstract. The traditional way to ensure enough government funding is raising taxes. Another alternative option is relying solely on currency financing to fund government expenditures, which is mostly discussed by economists and policy makers. The article introduces some advantages and disadvantages about it and seeks to provide a comprehensive understanding of the matter for the readers. On the one hand, currency financing increases the government's flexibility, alleviates economic inequality, reduces citizens' tax burden, improves the innovation capacity of small and medium-sized enterprises, and helps economic recovery. On the other hand, it exerts some negative impacts on the economy, such as inflation, reduction in central bank independence, and trade imbalances. Therefore, both advantages and disadvantages of currency financing should be taken into account before the government makes a decision.

Keywords: government expenditures, currency financing, advantages, disadvantages.

1. Introduction

The financing of public goods and services constitutes a fundamental obligation for governments, yet it often presents significant challenges. The conventional method employed to ensure an adequate level of government funding involves raising taxes, but an alternative option is to utilize newly created currency from the central bank. However, the exclusive reliance on newly created currency for government spending has been a subject of extensive debate among economists and policy makers. The debate surrounding this issue stems, in part, from the inherent uncertainty in evaluating the tradeoff between the benefits and consequences of this approach. During the Great Depression, Keynes [1] strongly encouraged the government to stimulate demand by directly creating currency. Lerner [2] also believes that a sovereign country with Fiat money should create enough money to support full employment without restrictions. In contrast, critics tended to describe such policies as damaging to free market growth, such as financial repression [3, 4]. In the presence of conventional monetary policy, the adverse impact of the COVID-19 pandemic on stock markets does not disappear, which have intensified the discourse surrounding monetary financing [5]. Governments worldwide have heavily relied on this method to alleviate the pandemic's severe economic consequences, prompting apprehension regarding its long-term feasibility. Russia-Ukraine war will also add about 2% to global inflation in 2022 and 1% in 2023, compared with NIESR's inflation projection at the beginning of 2022 [6]. By analyzing each approach's potential benefits and drawbacks, our analysis seeks to provide a comprehensive understanding of the matter.

2. The advantages of relying solely on currency financing

One of the primary advantages of relying solely on currency financing to fund government expenditures is increased flexibility. American economist Milton Friedman [7] attributed the primary cause of the Great Depression to a reduction in the money supply. According to his theory, the money stock M is jointly determined by the basic money H, the deposit-to-reserve ratio of banks $\frac{D}{R}$, and the deposit-to-cash ratio of private sectors $\frac{D}{C}$:

$$M = H^{\frac{\frac{D}{R}(1+\frac{D}{C})}{\frac{D}{C}+\frac{D}{R}}}$$

During the Great Depression, the simultaneous decrease in the $\frac{D}{R}$ and $\frac{D}{C}$ ratios triggered a wave of bank runs and bankruptcies. The Federal Reserve's misjudgment of the situation further contracted the money supply, intensifying the severity of the Depression. Canada used currency financing to overcome the economic crisis and maintained high economic growth, high employment rate, and controllable inflation from 1930 to 1975[8]. Monetary financing is particularly beneficial during economic downturns, as governments can increase spending to stimulate the economy without worrying about funding sources. In response to the economic crisis, governments globally turned to it as a crucial strategy to alleviate the severe economic consequences. The US Federal Reserve created trillions of dollars in new currency through purchasing government bonds and targeted the integrated housing finance market as a monetary transmission strategy to stimulate core elements of the US growth model: credit, demand, and consumption [9].

In order to further explore the relationship between monetary financing and economic growth, we select the time series data of China's relevant monetary indicators and economic growth indicators from 1990 to 2010 for empirical analysis (data source: http://www.stats.gov.cn/). We believe that the most representative indicator of economic growth is GDP, so nominal GDP is used as the dependent variable. The central bank regards the Money supply as the most important intermediate target of monetary policy, so we choose the growth rate of Money supply M2 as the independent variable. To begin with, a static relational model between economic growth and money supply must be established, as indicated by the following formula:

$$lgdp = c(1) + c(2)LM2 \tag{1}$$

Here, lgdp denotes the natural logarithm of GDP over a given period, while LM2 represents the natural logarithm of the money supply. To address the time lag between changes in the money supply M2 and their impact on economic growth, this article proposes a further adjustment to the aforementioned formula:

$$lgdp = c(1)+ c(2)LM2 + c(3)LM2(-1) \tag{2}$$

$$lgdp = c(1) + c(2)LM2 + c(3)LM2(-1) + c(4)LM2(-2) \tag{3}$$

$$lgdp = c(1) + c(2)LM2 + c(3)LM2(-1) + c(4)LM2(-2) + c(5)LM2(-3) \tag{4}$$

The regression results are as follows:

Table 1. Model regression results

Variable	(1)	(2)	(3)	(4)
LM2	0.803	0.926	1.336	1.019
LM2(-1)		-0.118	0.005	0.678
LM2(-2)			-0.527	0.042
LM2(-3)				-0.926
constant	0.393	0.307	0.100	-0.058
N	21	20	19	18
R^2	0.989	0.988	0.987	0.986
D.W.	0.352	0.37	0.439	0.482

As depicted in Figure 1, when the money supply generates a positive pulse on GDP, GDP shows a growth trend and continues to do so. We can conclude that there is a close relationship between economic growth and currency issuance.

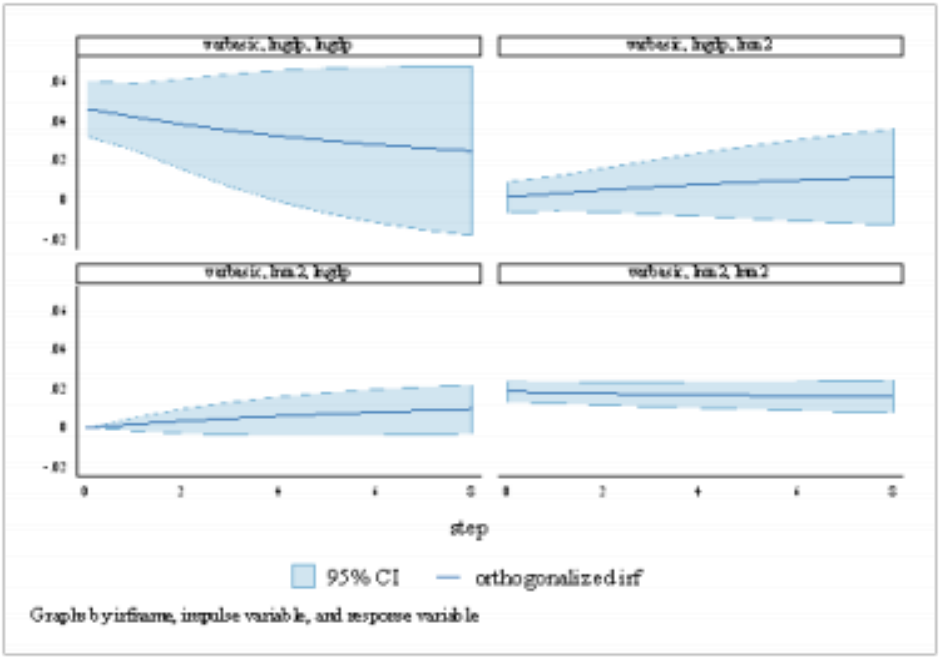


Figure 1. Pulse response function curve

Another advantage of relying solely on currency financing is the potential to address economic inequality. Governments can target their expenditures to benefit those who need the most support, such as low-income families, the unemployed, small businesses, etc. Lower interest rates can impact income distribution by benefiting labor income through lower borrowing costs for businesses, while potentially affecting rentier income as returns on interest-bearing assets may decline [10]. The Bank of Japan's quantitative easing policy has not only attracted domestic and foreign investment, but also improved the issue of income inequality [11]. Ref. [12] compares the distributional effects of conventional monetary policy and quantitative easing (QE) within an estimated open-economy DSGE model of the euro area. Except for the short term, expansionary conventional policy and QE shocks tend to mitigate income and wealth inequality between the two population groups.

Moreover, monetary financing can promote innovation and investment, especially through providing targeted support in key areas, such as small and medium-sized enterprises. Small and medium-sized enterprises (SMEs) account for two-thirds of employment in the euro area which makes them a priority for the transmission of monetary policy to the real economy. Due to the inherent challenges faced by SMEs in obtaining financing through traditional channels such as commercial banks, when economic crises erupt, they are prone to interruption of their funding chain and ultimately face the risk of bankruptcy. However, central bank financing programs provides them with another source of support, allowing them to weather the crisis and invest more funds in research and development [13]. For example, the European Central Bank's Targeted Longer-Term Refinancing Operations program (TLTRO) provides long- term financing to banks with favorable terms if they lend t0o SMEs. The research result of the Ref. [14] indicates that TLTRO has indeed had a significant impact on economic activity and has significant benefits for the real economy. Besides, central bank financing can incentivize investment in sustainable and socially responsible initiatives, including healthcare, affordable housing, and renewable energy. This helps to address urgent social issues and promote long-term economic growth. Easy monetary policy can increase the investment opportunities of renewable energy enterprises in general and then ease their external financing constraints [15].

3. The risks of relying on currency financing

While monetary financing can offer additional fiscal policy tools, particularly during economic crises, serious downside risks still remain. If the Money supply exceeds the demand of real economic growth and the equilibrium amount of money required for normal economic activities, there will be

excess liquidity. Excess liquidity will have serious negative impacts on macroeconomic operations, central bank monetary regulation, and bank operations, including triggering inflation and currency crises, increasing the difficulty of monetary regulation, and exacerbating credit risks for commercial banks. Moreover, such financing can erode confidence towards the economy and currency, exacerbating both inflationary pressures and macroeconomic instability [16]. Zimbabwe serves as an illustration of this phenomenon, as its monetary financing led to hyperinflation in the late 2000s, causing a sharp depreciation of its currency and, in turn, economic hardship for its citizens [17]. Additionally, central bank financing entails the risk of compromising central bank independence and credibility. Maintaining central bank independence is pivotal for macroeconomic stability, as it enables the institution to prioritize its core objective of maintaining price stability. Inappropriate central bank financing of government expenditures can undermine its independence, potentially leading to a loss of credibility, as these monetary policy decisions may appear to be influenced by the government's fiscal goals. For example, the US 'Continentals' that were used to raise funds to fight the War of Independence against the British and which fell to one-thousandth of their nominal value by the end of the War [18]. A third potential risk of central bank financing is its negative impact on international trade and financial stability. The monetary financing undertaken by central banks can lead to an excessive supply of money, resulting in currency devaluation. This can enhance the competitiveness of exports to a certain degree, but it comes at the expense of higher import costs, potentially causing trade imbalances. Additionally, such financing can generate instability in financial markets, triggering capital outflows and reducing confidence in the economy. This is exemplified by Turkey's over reliance on such financing, which contributed to a significant economic contraction in 2018 [19].

4. Summary

Central bank financing can enhance the government's flexibility in financing public goods and services, alleviate economic inequality, reduce citizens' tax burden, enhance the innovation capacity of small and medium-sized enterprises, and stimulate economic recovery. Additionally, historical instances such as Japan's implementation of quantitative easing and the Federal Reserve's role in mitigating the 2008 financial crisis demonstrate the effective utilization of central bank financing in specific contexts. But the consequences of inflation, currency crises, and central banks caused by currency overload are catastrophic. In conclusion, the answer to the question of whether a government should solely rely on central bank financing or taxation to fund public goods and services is nuanced, as both advantages and disadvantages require careful consideration. While central bank financing can offer flexibility, encourage innovation and investment, and support macroeconomic stability, it also poses risks such as inflation, reduction in central bank independence, and trade imbalances. Therefore, the independence of the central bank is a prerequisite for policy implementation.

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