Economic policy tools based on reserve commodities, printing and destroying money

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Abstract: Paper [1] proposed a method for pricing monetary commodities to explain economic crises and suggested the use of commodity reserve bonds as a way to address such crises. In this paper, we propose another economic policy tool using reserve commodities: printing money and destroying money.

Keywords: economic crisis, reserve goods, printing money and destroying money.

1. Problem formulation

1.1 Pricing methods for monetary commodities

The paper [1] proposes a monetary commodity pricing method to explain economic crises. The specific content is as follows.

The initial stage of the economy. In the early stages of the economy (e.g., post-war reconstruction), individuals create goods through labor, and these goods are exchanged via currency. This process establishes a balanced relationship between production and consumption.

The emergence of the problem. As the economy develops, production of goods increases, and laborers accumulate substantial amounts of currency. However, the pricing of goods is not based on the total supply of currency and goods, but rather on a smaller portion of circulating currency relative to the total supply of goods. This results in an insufficiency of circulating currency (relative to the total amount of goods), which triggers deflation (a decline in the prices of goods).

Consequences of deflation. When the prices of goods fall excessively, producers are unable to recover their production costs, leading to stagnation in production. Even if resources, technology, and other production factors remain intact, production cannot continue due to flaws in the pricing mechanism.

Triggering conditions. Economic crises are often triggered by the bursting of economic bubbles, leading to significant losses for many individuals, reduced consumer demand, and a decrease in circulating currency. The shortage of circulating currency further drives down prices, causing producers to incur losses and, ultimately, cease production.

The fundamental problem. The root cause of the crisis lies in the pricing mechanism. The production cost exceeds the price of goods determined by the amount of circulating currency, rather than a shortage of objective material conditions.

1.2 Changes in demand and economic crisis

Keynesianism argues that a decline in aggregate demand is the root cause of economic crises. A reduction in aggregate demand leads to an oversupply of goods in the market, resulting in the quantity of circulating currency exceeding the quantity of goods. This, in turn, causes a decline in prices. When the prices of goods produced by workers fall below their production costs, production stagnates.

In the theory of monetary pricing, greater emphasis is placed on the pricing mechanism as the cause of economic crises. When external factors lead to fluctuations in aggregate demand, a decline in aggregate demand results in an oversupply of goods and falling prices. Theoretically, regardless of how aggregate demand changes (e.g., from zero to extremely high), the total quantity of money and the total quantity of goods are perfectly matched. Under such circumstances, the prices of goods should remain unchanged. Whether individuals exchange goods for money or money for goods, they would not perceive any loss in value. However, this theory is based on a critical assumption: all money in circulation must participate in the pricing of goods, or all money must be used to purchase goods rather than being stored or hoarded. Alternatively, any surplus goods exceeding the capacity of circulating currency must be removed from the market and fixed in a non-circulating state.

Therefore, the method of using reserve commodity bonds suggests that the government should borrow all idle currency in society to purchase goods. These purchased goods must then be fixed and withdrawn from the market. By doing so, the quantity of circulating currency matches the quantity of goods in the market, allowing prices to return to normal levels.

The money used by the government to purchase goods must come from the existing money stored in society, rather than being newly printed currency. This is because the total amount of money and goods in the economy are originally in a one-to-one correspondence. If the government increases the money supply, it will inevitably lead to an actual devaluation of the currency. Although market reactions may be relatively slow, greater inflation will occur after the economic crisis subsides.

The government's approach involves borrowing money from the wealth held by the rich to purchase goods in the market and then fixing these goods or withdrawing them from circulation. In this process, the government can choose to issue reserve commodity bonds or not. If reserve commodity bonds are issued, the government borrows money from the wealthy and provides them with bonds backed by goods. If no bonds are issued, the government borrows money from the wealthy and issues them IOUs instead.

1.3 Reserve commodity bonds

The paper [1] proposes an economic policy tool to address deflationary economic crises, with the specific content as follows.

Based on the mechanisms of monetary and commodity pricing, during an economic crisis, the amount of circulating currency in the market decreases while the quantity of goods increases, leading to deflation. If we use all available currency and goods for pricing, the prices of goods remain stable. One potential measure to address this issue is to utilize idle currency to purchase goods, ensuring that both currency and goods fully participate in the pricing process.

The paper introduces a mechanism called Reserve Commodity Bonds to achieve this goal. Reserve Commodity Bonds are a type of bond issued based on actual reserves of physical goods. Their basic function is similar to government bonds, but their value is underpinned by tangible goods (such as energy, food, precious metals, etc.) rather than solely relying on government credit. The main characteristics of Reserve Commodity Bonds are as follows:

Commodity pegging. The value of the bond is linked to a predetermined basket of reserve commodities (such as oil, gold, and food). Bondholders can choose to redeem the bond at maturity either in currency or in the equivalent quantity of goods.

Fixed Returns. The bonds offer fixed returns similar to government bonds (e.g., an annual interest rate of 2%-3%) as compensation for wealthy individuals holding the bonds.

Value Preservation. Since the bonds are backed by tangible reserves, they provide a hedge against inflation or economic crises, serving as a risk-resistant asset allocation tool for wealthy individuals.

Flexibility: Bondholders can freely trade the bonds on secondary markets, thus meeting liquidity needs.

1.4 Problem formulation

In this paper, we propose an alternative economic policy tool using reserve commodities: printing money and destroying money.

2. Economic policy tools, printing money and destroying money

2.1 Details

We believe that economic crises are not caused by changes in demand but rather by issues within the pricing mechanism of goods. Since the total amount of currency issued by the government is equal to the total amount of goods in society, the actual price of goods should not fluctuate at any time. The reason why prices change is that only a small portion of circulating currency participates in the pricing of all goods, resulting in a decline in the prices of goods.

What the government needs to do is to borrow the stored currency and use it to purchase the surplus goods in the market, effectively fixing these goods and removing them from circulation. The purpose of this action is to align the amount of circulating currency with the quantity of goods available on the market. The overall societal demand can fluctuate freely (ranging from zero to extremely high), but as long as the total amount of currency and the total quantity of goods correspond one-to-one, the prices of goods should remain stable. The government's role, therefore, is to ensure that the amount of circulating currency matches the quantity of goods in the market.

Paper [1] proposed the tool of reserve commodity bonds. In this section, we introduce another tool: printing and destroying money. The rationale stems from the observation that deflation occurs when a significant amount of money is hoarded, causing a mismatch between the quantity of circulating money and the quantity of goods available in the market, thereby leading to a decline in prices. Under normal circumstances, if the government wants to purchase surplus goods in the market, it cannot directly print money; instead, it needs to borrow the hoarded money to buy up the remaining goods in the market. This is because the total amount of currency issued by the government should correspond to the total amount of goods available. If the government directly prints money for such purchases, it inevitably leads to an actual devaluation of the currency.

The new tool we propose, "printing and destroying money," operates as follows. The government needs to ensure that the amount of circulating money aligns with the quantity of goods in the market to stabilize prices. During deflation, the government can directly print money to purchase the surplus goods in the market. While this action results in an immediate devaluation of the currency, the market's reaction and transmission take time. During this period, the prices of goods gradually rise. Once prices return to normal levels or begin to rise excessively, the government can sell the previously purchased goods back into the market, recovering an amount of money approximately equal to or slightly greater than the amount initially printed. The recovered money is then destroyed, ensuring the total amount of money and goods remains balanced.

2.2 Adtantages and disadvantages

The advantages of using the policy tool of printing and destroying money, as opposed to reserve commodity bonds, are as follows: Reserve commodity bonds require the wealthy to purchase bonds or lend money to the government. If the wealthy choose to hoard their money at home, the government is unable to access the stored currency to purchase goods from the market. Another scenario arises in international trade: if currency is held in foreign countries, such currency may not be readily borrowed, analogous to the situation of wealthy individuals hoarding money at home. By utilizing the method of printing and destroying money, the government can achieve a balance between the quantity of circulating money and the quantity of goods without the need to borrow funds.

The disadvantages of this approach are as follows: The government must ensure that the amount of money printed equals the amount of money destroyed, and such operations must be transparent and subject to public oversight. Otherwise, the public may lose confidence in the value of the currency. Additionally, this tool should generally be used only after the reserve commodity currency system has been established. Arbitrary printing and destruction of money can erode public trust in the currency, leading to its abandonment and triggering inflation.

REFERENCES

[1] Zhitao Wu. A new economic policy tool, reserve commodity bonds. 10.5281/zenodo.14332884.