

DOES THE BAILOUT OF BANKS IMPLY HIGHER FUTURE TAXES: THE FISCAL IMPLICATION OF REPLACING ONE BUBBLE ASSET WITH ANOTHER

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Most people (economists and non economists) predict a future rise in taxes as a result of the massive bailout spending. They also think that the current crisis was caused by a collapse in bubble assets like mortgage-backed securities. The two views on the cause of the crisis and the fiscal implication of the bailout are not consistent with basic monetary economics: Replacing one bubble asset (mortgage backed securities) with another (money) is neutral and does not require any future tax increase.

To illustrate this point, I consider an economy in which the representative agent lives for two periods. He starts with some financial wealth and then allocate his portfolio between two assets: bonds and money. The real rate of return on bonds is r . The real rate of return on money is $r_m < r$. The representative agent chooses consumption (C_t), labor (L_t), the real amounts of bonds (b) and money (m). The real value of his initial financial wealth is A_0 . His before tax labor income is equal to his labor input (L_t) and his after tax labor income is $(1 - \tau)L_t$. Thus, τ is the proportional tax rate.

The representative consumer's first period consumption is:

$$(1) \quad C_1 = (1 - \tau)L_1 - b - m + A_0$$

His second period consumption is:

$$(2) \quad C_2 = (1 - \tau)L_2 + b(1 + r) + m(1 + r_m)$$

We can now write (1) as $b = (1 - \tau)L_1 - C_1 + (A_0 - m)$ and substitute it in (2). This leads to the present value formulation:

$$(3) \quad C_1 + \frac{C_2}{1 + r} = (1 - \tau)L_1 + \frac{(1 - \tau)L_2}{1 + r} + A_0 - \frac{m(r - r_m)}{1 + r}$$

In equilibrium the budget constraint (3) must hold. In addition the following market conditions must hold:

$$(4) \quad C_1 + G_1 = L_1 \quad \text{and} \quad C_2 + G_2 = L_2,$$

where G_t is real government spending.

There is a question of how to derive the real value of the initial financial wealth. Here I do not commit to any particular assumption. Thus, A_0 can reflect the real value of an initial holding of money or the real value of mortgage-backed securities. In what follows I derive the so called "government budget constraint" under the assumption that both (3) and (4) hold and treat A_0 as a given parameter.

I start by substituting the market clearing condition in the consumer's budget constraint to get:

$$(L_1 - G_1) + \frac{L_2 - G_2}{1+r} = \frac{(1-\tau)L_2}{1+r} + (1-\tau)L_1 + A_0 - \frac{m(r-r_m)}{1+r}$$

Rearranging leads to:

$$(5) \quad G_1 + \frac{G_2}{1+r} - \tau L_1 - \frac{\tau L_2}{1+r} = \frac{m(r-r_m)}{1+r} - A_0$$

On the left hand side we have the present value of the primary deficit: The present value of government spending $G_1 + \frac{G_2}{1+r}$ minus the present value of revenue from direct taxation $\tau L_1 + \frac{\tau L_2}{1+r}$. On the right hand side we have the present value of seigniorage revenues: $\frac{m(r-r_m)}{1+r} - A_0$. Equation (5) thus says that the present value of the primary deficit must equal the present value of seigniorage revenues.

The importance of the seigniorage term has been realized since the pioneering work of Sargent and Wallace and the literature on the fiscal approach to the price level. I now elaborate on this somewhat elusive term that is so important to the understanding of the fiscal implication of the bailout.

The first term on the right hand side of (5), $\frac{m(r-r_m)}{1+r}$, is the present value of the interest cost of holding money. From this we subtract the initial financial wealth. The initial

financial wealth is usually interpreted as the initial holding of money or government bonds. But a closer look at the derivation of (5) may allow for the mortgage-backed securities interpretation. Initially everyone thought that these securities are worth A_0 and planned accordingly. This is true both for the consumers and the government. Now after the crisis everyone change the valuation of the mortgage-backed securities say to zero.

After the collapse of the mortgage-backed securities, plans will change unless there is a change in policy. The government can restore the previous equilibrium by bailing out banks and creating another bubble asset that is called money. No change in government spending or in taxes is required if the real value of the newly created money m_0 is equal to the pre-crisis real value of the mortgage-backed securities.

Suppose that the government adopt this policy and inject $m_0 = A_0$ into the economy. For an accounting point of view the injection of money by bailing out banks is likely to be viewed as an increase in government spending. But there is also an immediate response to an increase in seigniorage revenues by the same amount. Therefore there is no need to change direct tax rates.

In general, there is widely held expectations that new regulations on the financial industry will restrict the ability of this industry to create “money substitutes”. These new regulations imply large seigniorage type payments to the government. A factor that is largely ignored in the current policy discussions.