# Discussion of Christiano-Eichenbaum-Rebelo's "When is the Government Spending Mulitplier Large?"

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A representative agent maximizes

$$E_0 \sum_{t=0}^{\infty} \beta^t \left\{ \frac{[C_t^{\gamma}(1 - N_t)^{1-\gamma}]^{1-\sigma}}{1 - \sigma} + v(G_t) \right\}, \ \gamma \in (0, 1)$$

$$st. \ P_t C_t + B_{t+1} = W_t N_t + T_t + B_t(1 + R_t)$$

Prices are sticky under monopolistic competition and

$$N_t = Y_t = C_t + G_t$$

Argue that government spending multiplier is large when

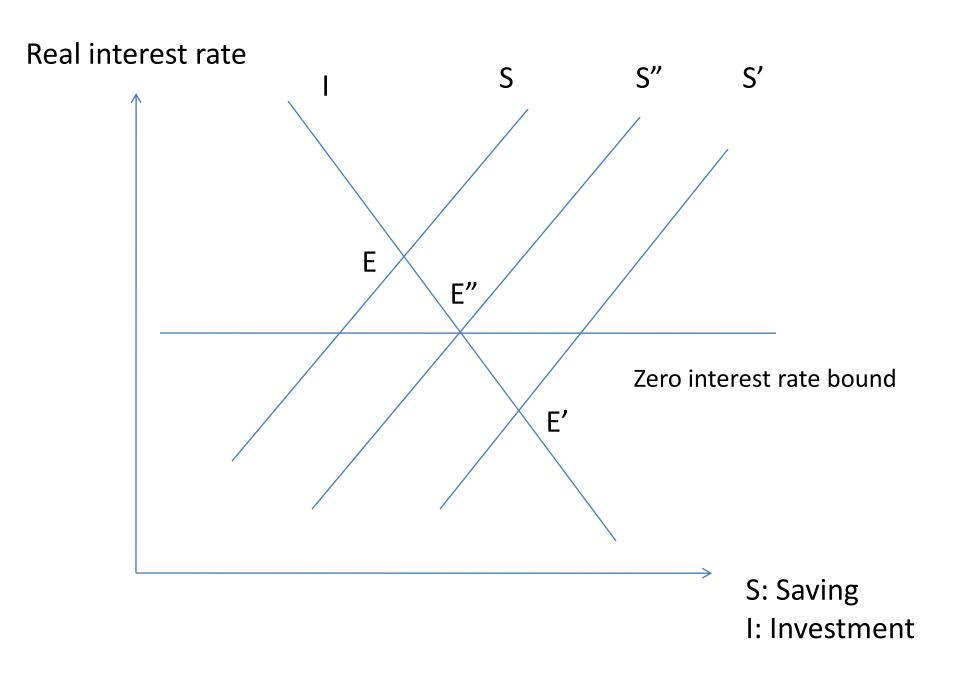consumption and labor supply are complement $(\sigma > 1)$ and/or

nominal interest rate stays zero

$$MU\left(\underset{-}{C_t}, \underset{+}{N_t}\right) = \beta E_t\left[\frac{1+R_{t+1}}{1+\pi_{t+1}}MU\left(\underset{-}{C_{t+1}}, \underset{+}{N_{t+1}}\right)\right]$$

$$1 \cdot \mu(\underset{-}{N_t}) = MRS(1-N_t, C_t) = \frac{1-\gamma}{\gamma}\frac{C_t}{1-N_t}$$

$$\pi_t = \beta E_t(\pi_{t+1}) + \kappa MRS(1-N_t, C_t)$$

$G_t \Uparrow \longrightarrow C_t \Downarrow \ N_t \Uparrow$ due to wealth effect $\longrightarrow MU_t \Uparrow \longrightarrow C_t \Uparrow$

due to complement effect

If the complement effect is larger, consumption increases and the multiplier is larger than 1

Increase in patience or temporary $\Uparrow$ of TFP $\longrightarrow$ Saving$\Uparrow$ $\longrightarrow$ Nominal interest hits zero $\longrightarrow Y_t \Downarrow \pi_{t+1} \Downarrow \longrightarrow G_t \Uparrow$ can recover output loss without crowding out

Real interest rate

I          S          S"          S'

E
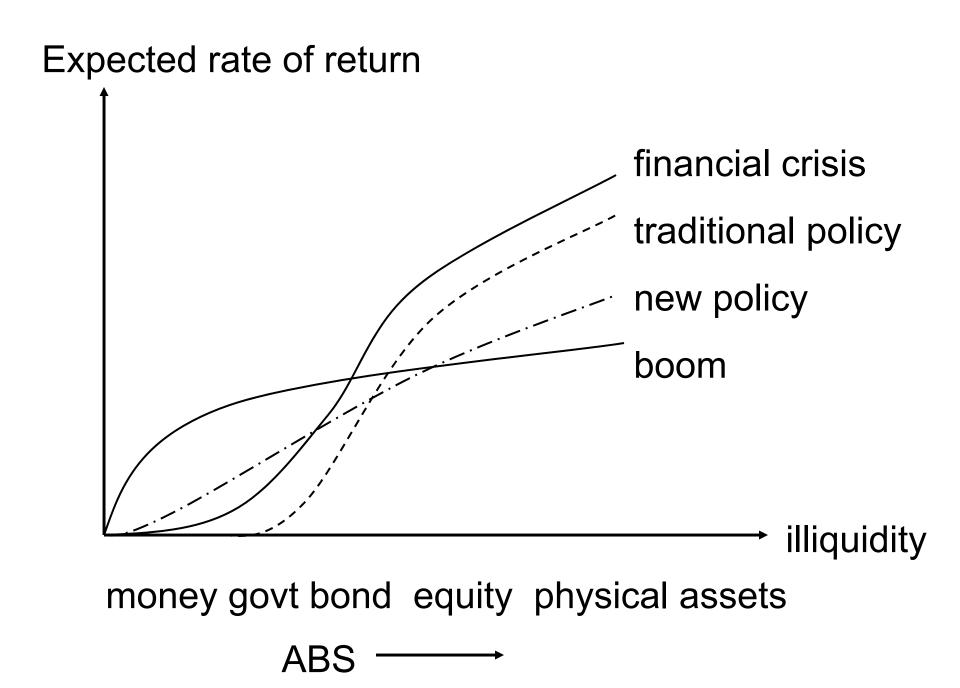
E"

Zero interest rate bound

E'

S: Saving
I: Investment

Comments

(i) Clear intuition for each extension $\longrightarrow$ easy to learn and teach

(ii) Reminds Mundell model under fixed exchange rates

$\longrightarrow$ Under flexible exchange rates, the effect may be smaller

(iii) In Japan and US, the financial crises leads to zero nominal interest rate of Treasury Bill

$\longrightarrow$ Perhaps policy to reduce the spreads directly is less distortionary

Expected rate of return

financial crisis

traditional policy

new policy

boom

illiquidity

money  govt bond  equity  physical assets

ABS ⟶

# Policy assignment

| policy tools / target | Monetary policy | Credit policy | Fiscal policy |
|---|---|---|---|
| inflation | ○ | △ | △ |
| shortage of liquidity | △ | ○ | X |
| public good | X | X | ○ |

## (iv) In Japan

annual average growth rate of real GDP is 1%, inflation rate is -1%, and personal saving rate drops from over 20% to 3% in the last 20 years

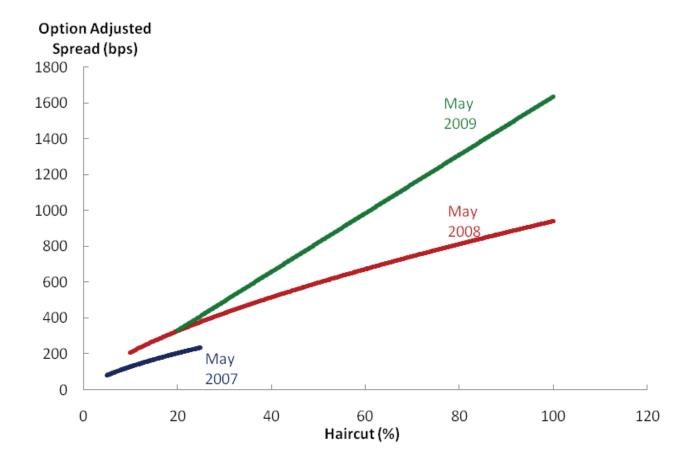discount rate is almost zero in the last 15 years

proposed fiscal deficit exceeds 50% of the expenditure this year

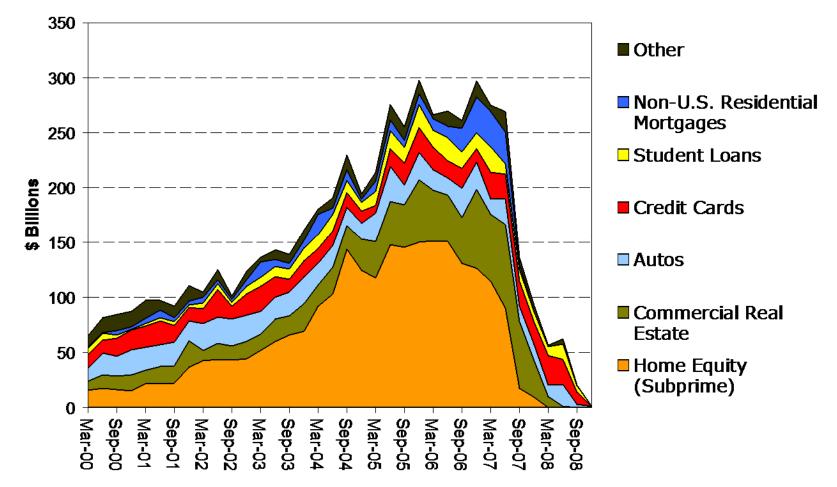Perhaps we should worry more about the long-run growth

Zero nominal interest rate tends to keep zombie banks and firms staying in business

Government fiscal policy tends to subsidize declining industry

$\rightarrow$ Growth rates of TFP and output stagnate in the long-run

# New Issuance of Asset Backed Securities in Previous Three Months



Source: JP Morgan

An example: Term Asset-Backed Securities Loan (TALF)

Treasury provides $20bil subordinate debt to the facility using TARP money

Fed provides non-recourse loans to private financial institutions, using newly-issued ABS and legacy CMBS as collateral (3-5 years, no change of haircut before maturity)

$\rightarrow$ Increase liquidity and reduce risks of ABS for private financial institutions

$\rightarrow$ Encourage new loans and investment

# Impact of TALF in 2009

TALF loans started in March to become $40 bil in September

ABS new issue revived from the mid-year ($95 bil TALF-eligible, $28 bil non-eligible Aaa)

Spread of Auto ABS shrank from 3% in January to less than 1% from September → Private sector took over because TALF loan spread is 1%

Spread of Credit Card ABS remains above 1%

Secondary market spread of Legacy CMBS(AJ) is 0.4% in 1/08, 3% in 9/08, 1.2% from summer/09