Practically, we always have monetary equilibrium.
(We travel along LM curve strictly).

Equilibrium Quantities

IS $\Rightarrow$ $Y = \alpha_G (\bar{A} - bi)$

LM $\Rightarrow$ $L = kY - hi = \frac{M}{P}$ $\Rightarrow i = \frac{k}{h} Y - \frac{1}{h} \frac{M}{P}$

$$\Rightarrow Y = \alpha_G \left[\bar{A} - b \left(\frac{k}{h} Y - \frac{1}{h} \frac{M}{P} \right) \right]$$

$$\Rightarrow \boxed{Y = \gamma \left[\bar{A} + \frac{b}{h} \frac{M}{P} \right]}$$

where $\gamma = \dfrac{\alpha_G}{1 + \frac{\alpha_G bk}{h}}$.

Exogenous quantities $\equiv \bar{A}, \frac{M}{P}$ (independently variable)
Indogenous " $\equiv Y, i$ (dependent variables)

$\gamma \bar{A}$ represents impact of fiscal policy on Y (due to $\bar{G}$ or t)
$\frac{\gamma b}{h} \frac{M}{P}$ " " " monetary policy on Y

Fiscal Policy Multiplier $= \dfrac{\partial Y}{\partial \bar{A}} = \gamma$

Monetary Policy Multiplier $= \dfrac{\partial Y}{\partial (M/P)} = \dfrac{\gamma b}{h}$

7/11

- Practically, we always have monetary equilibrium (We travel along LM curve strictly).

A] Equilibrium Quantities

$IS \rightarrow Y = \alpha_G (\bar{A} - bi)$

$LM \rightarrow L = kY - hi = \frac{M}{P} \Rightarrow i = \frac{k}{h} Y - \frac{1}{h}\frac{M}{P}$

$\Rightarrow Y = \alpha_G \left[\bar{A} - b\left(\frac{k}{h}Y - \frac{1}{h}\frac{M}{P}\right)\right]$

$\Rightarrow \boxed{Y = \gamma \left[\bar{A} + \frac{b}{h}\frac{M}{P}\right]}$

where $\gamma = \dfrac{\alpha_G}{1 + \frac{\alpha_G bk}{h}}$.

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- Fiscal Policy Multiplier $= \frac{\partial Y}{\partial \bar{A}} = \gamma$

Monetary Policy Multiplier $= \frac{\partial Y}{\partial (M/P)} = \frac{\gamma b}{h}$

VII Wealth Budget Constraint

"Sum of individual demand for money and demand for bonds has to add up to their total financial wealth."

Nominal wealth

$$\underbrace{\frac{WN}{P}}_{\text{Real wealth}} = L + DB \quad \text{.... for every individual}$$

L: DD for real balances (cash + chequeing deposits)

DB: DD for bond holdings

→ After horizontal summation across individuals, and at equilibrium

$$L = \frac{M}{P} \qquad DB = SB$$

Demand = Supply

VIII Monetary And Fiscal Policies

- Macroeconomic tools of government to boost growth, restrain inflation.
- Used to shorten recessions and prevent booms from getting out of ha

• Fiscal Policy has its initial impact in goods market
Monetary assets

• Because goods and assets markets are interrelated, both M & policies affect both level of output and interest rates

... Amount that bond bearer receives every year till eternity

Page No.
Date

A] Monetary Policy

→ Open Market Operations

Buy bonds by printing cash (Real balances ↑)

Sell bonds (Real balances ↓)

→ When $M \uparrow$, $i \downarrow$:-
(Higher supply of loanable funds)

→ Price of bonds $\propto \frac{1}{\text{Yield}}$

If the bond pays 5 \$ per year (coupon value),
and Interest rate in market (Yield) = 5 %,
then effective price of bond = 100 (with 5 \$ as 5% interest)

If interest rate = 10%, price of bond = 50

- When Fed buys bonds, bond prices tend to increase.
For same coupon value, effective interest rate must decrease.

A Transmission Mechanism

Process by which changes in monetary policy affect AD

1 When real balances ↑,
Portfolio disequilibrium :- At prevailing i and Y, people are holding more money than they want. They reduce their money holdings by buying other assets

~~anything~~ bonds, FDs.

In the process, asset prices increase and $i \downarrow$

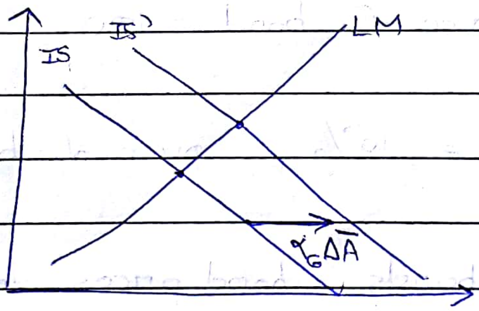
2 Fall in interest rates affects AD $(i \downarrow)$

- $\Rightarrow I \uparrow \Rightarrow AD \uparrow$
- $\Rightarrow$ Savings $\downarrow \Rightarrow C \uparrow \Rightarrow AD \uparrow$

Changes in money stock affect Y in economy

B] Fiscal Policy

When $\bar{G} \rightarrow \bar{G} + \Delta\bar{G}$, IS curve shifts to right by $\Delta Y = \alpha_G \Delta\bar{G}$



- When $G \uparrow$, $i \uparrow \Rightarrow I \downarrow$

  $\therefore (\Delta\bar{A})_{net} = \Delta\bar{G} + \Delta\bar{I}$

  'Crowding out'

Hence, ΔY is not as much as it would have been.

- To counter this, government pumps more money supply to shift LM curve (monetary policy), to prevent i from increasing

With unemployment and thus, a possibility for output to expand, interest rates need not increase at all. When government spending increases, there need not be any crowding out. This is because monetary policy can accommodate the fiscal expansion by increase in money supply.

'Monetizing budget deficit policy'

- Fed prints money to buy the bonds with which the government pays for its deficit.