Economics 302
Intermediate Macroeconomic Theory and Policy
(Fall 2010)

Lecture 8

Monday, October 4, 2010

Outline

- Recap
- Graphical depiction of policy
- Extreme cases
- Policy in a Liquidity Trap

IS-LM equations, solution

$$(12) \qquad Y = \left(\frac{1}{1-b(1-t)+m}\right)[A_0 - (d+\tilde{n})R] \qquad \text{<IS curve>}$$

$$(17) \qquad R = \left(\frac{\mu_0}{h}\right) - \left(\frac{1}{h}\right)\left(\frac{M_0}{P_0}\right) + \left(\frac{k}{h}\right)Y \qquad \text{<LM curve>}$$

$$(21) \qquad Y_0 = \hat{\alpha}\left[A_0 + \frac{(d+\tilde{n})}{h}\left(\frac{M_0}{P_0}\right) - \frac{(d+\tilde{n})\mu_0}{h}\right] \qquad \text{<equilibrium income>}$$

Where

$$\hat{\alpha} \equiv \frac{1}{1-b(1-t)+m+\dfrac{(d+\tilde{n})k}{h}}$$

Using Total Differentials

$$(21) \qquad Y_0 = \hat{\alpha}\left[A_0 + \frac{(d+\tilde{n})}{h}\left(\frac{M_0}{P_0}\right) - \frac{(d+\tilde{n})\mu_0}{h}\right]$$ <equilibrium income>

$$(22) \qquad \Delta Y = \hat{\alpha}\left[\Delta A + \frac{(d+\tilde{n})}{h}\Delta\left(\frac{M}{P}\right) - \frac{(d+\tilde{n})}{h}\Delta\mu\right]$$

$$\Delta Y = \hat{\alpha}\Delta GO \Rightarrow \frac{\Delta Y}{\Delta GO} = \hat{\alpha}$$

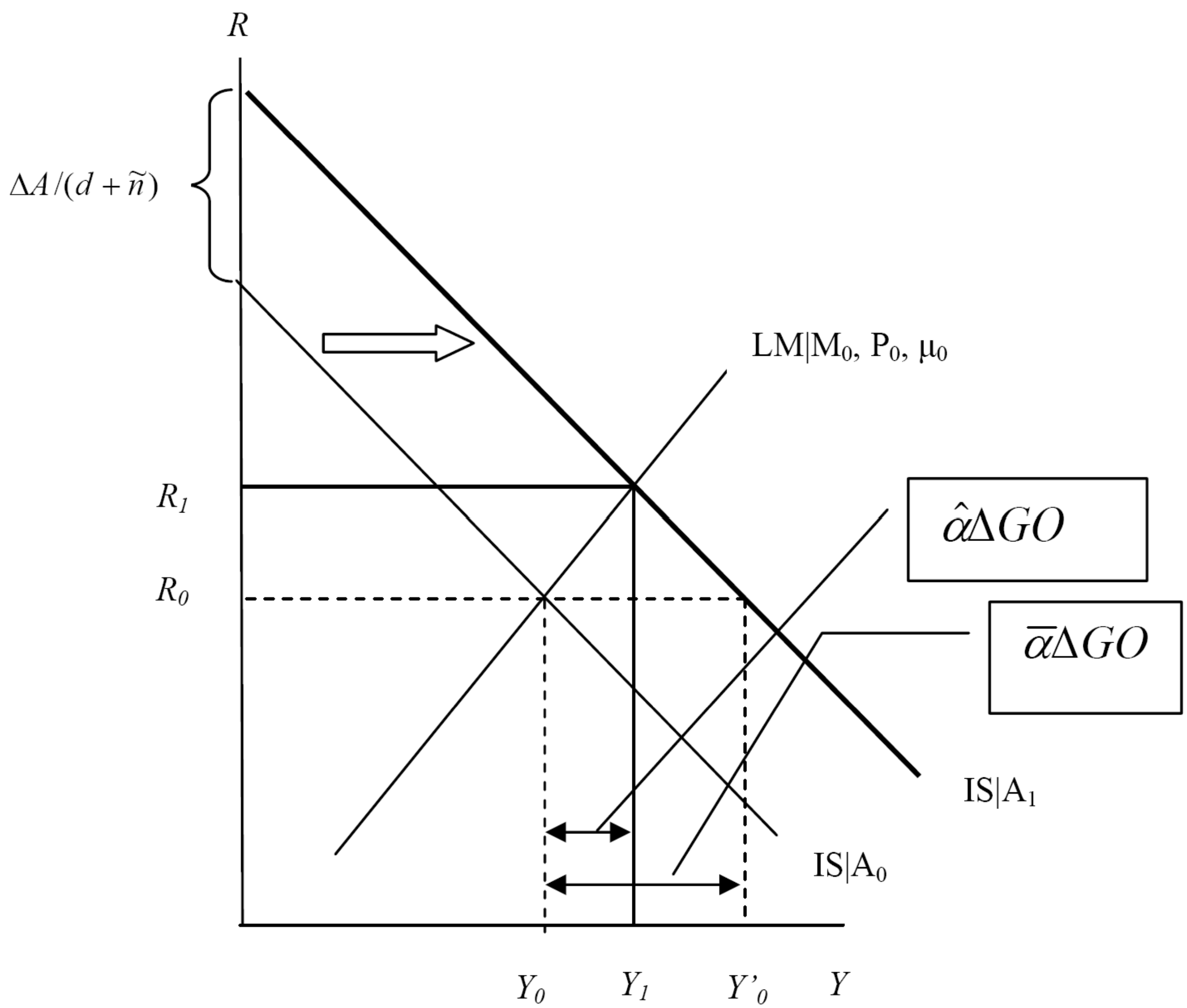
If it is lump sum taxes:

$$\Delta Y = -\hat{\alpha}b\Delta TA \Rightarrow \frac{\Delta Y}{\Delta TA} = -\hat{\alpha}b$$

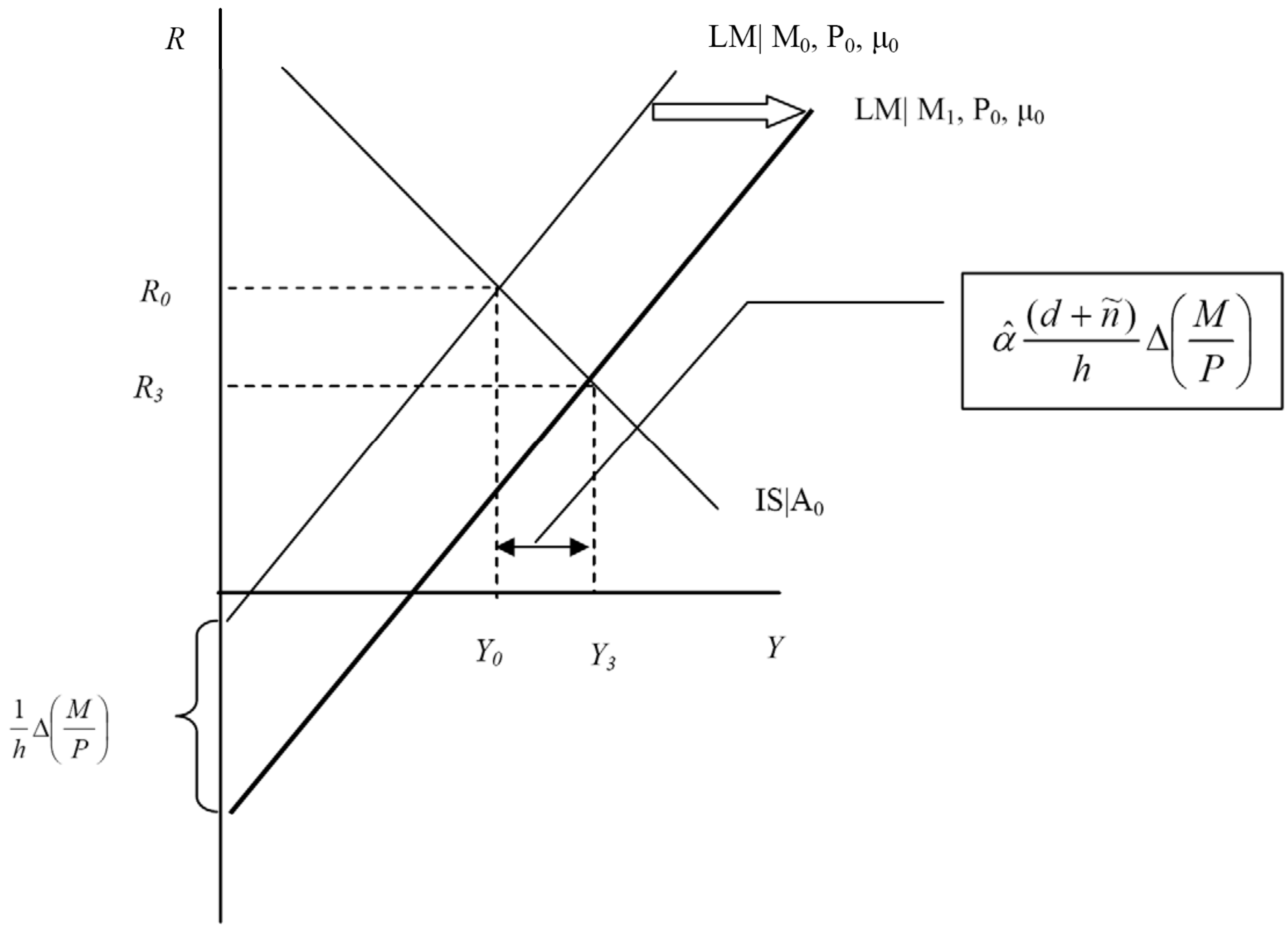
If monetary policy is being used, the $\Delta A = 0$, so:

$$\Delta Y = \hat{\alpha}\left(\frac{d+\tilde{n}}{h}\right)\Delta\left(\frac{M}{P}\right) \Rightarrow \frac{\Delta Y}{\Delta(M/P)} = \hat{\alpha}\left(\frac{d+\tilde{n}}{h}\right)$$

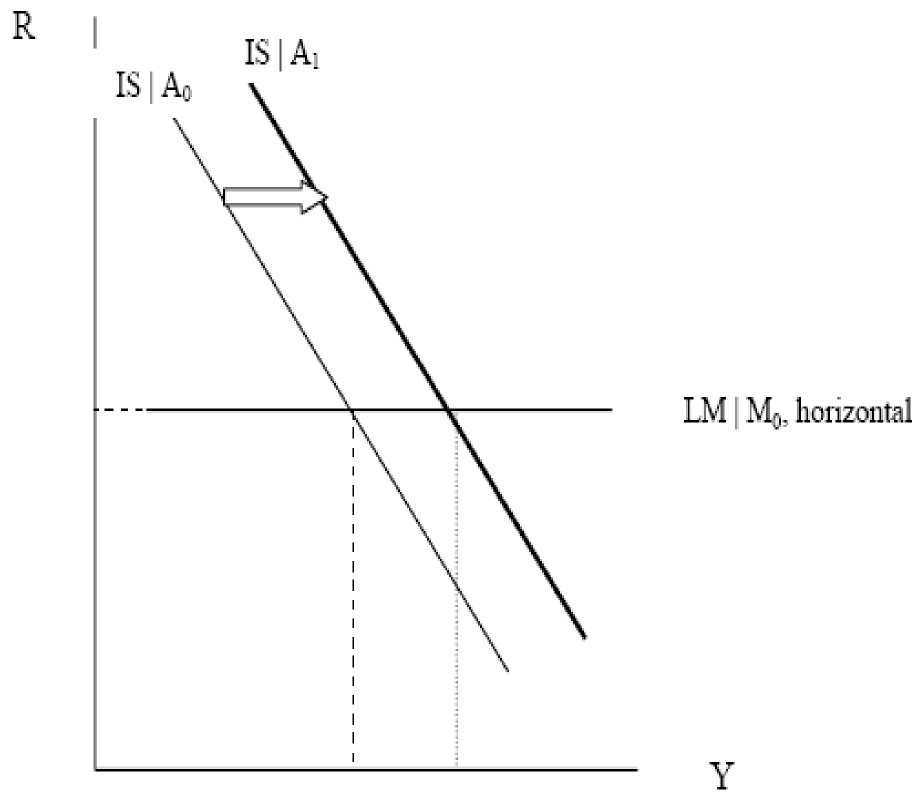
Fiscal Policy (Handout Figure 3)

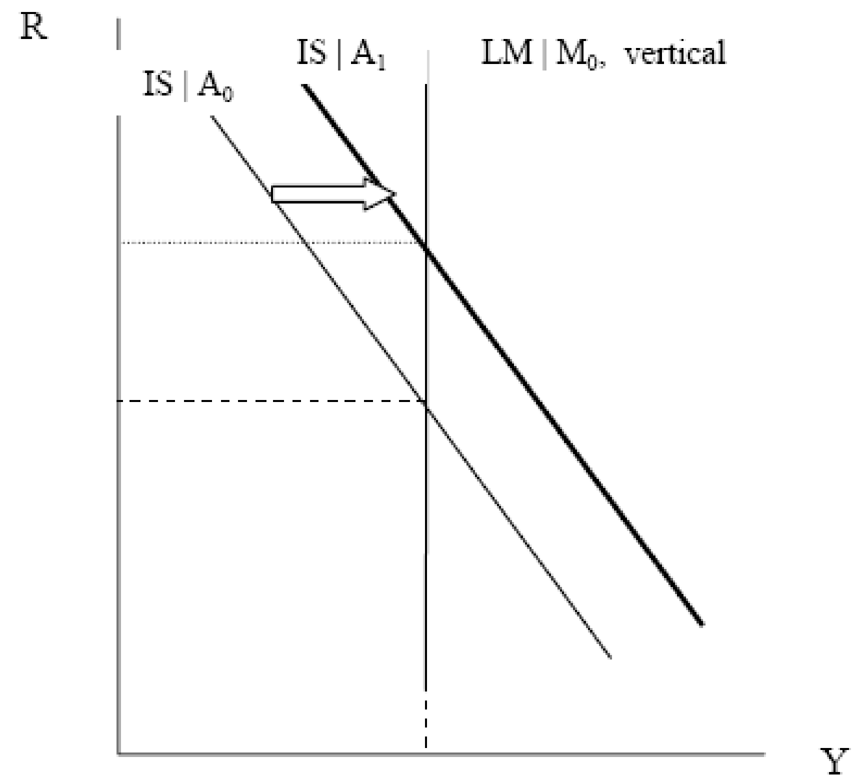


Monetary Policy (Handout Figure 4)

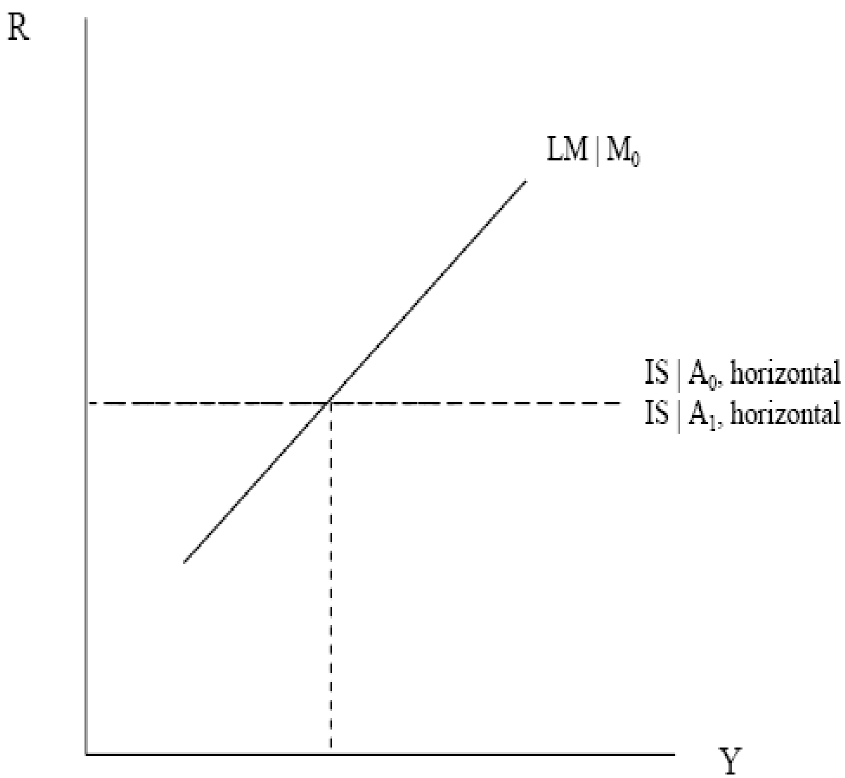


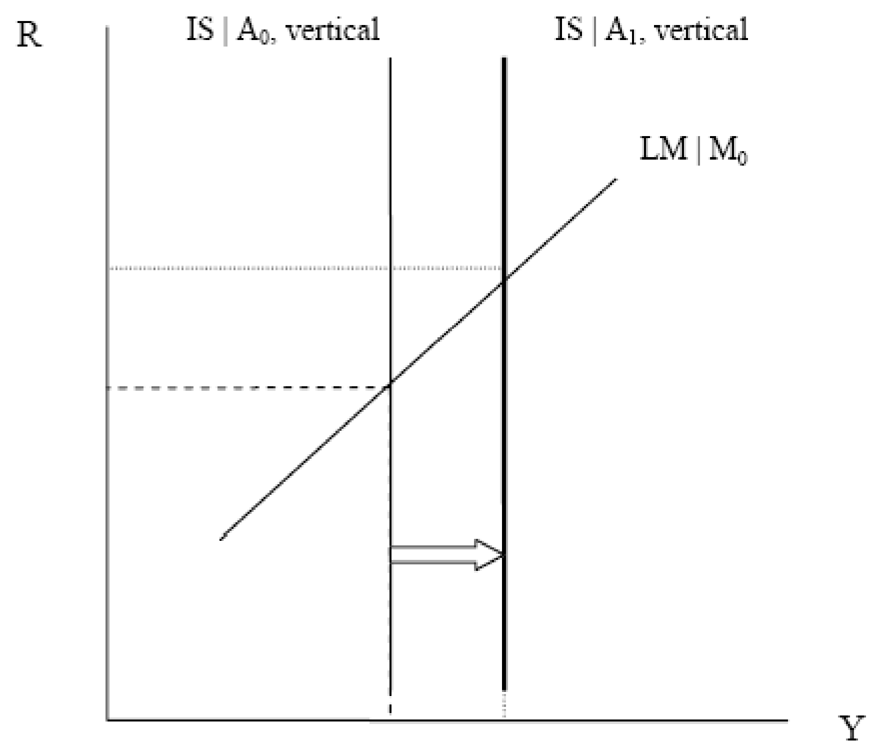
Extreme Cases: Fiscal (I)



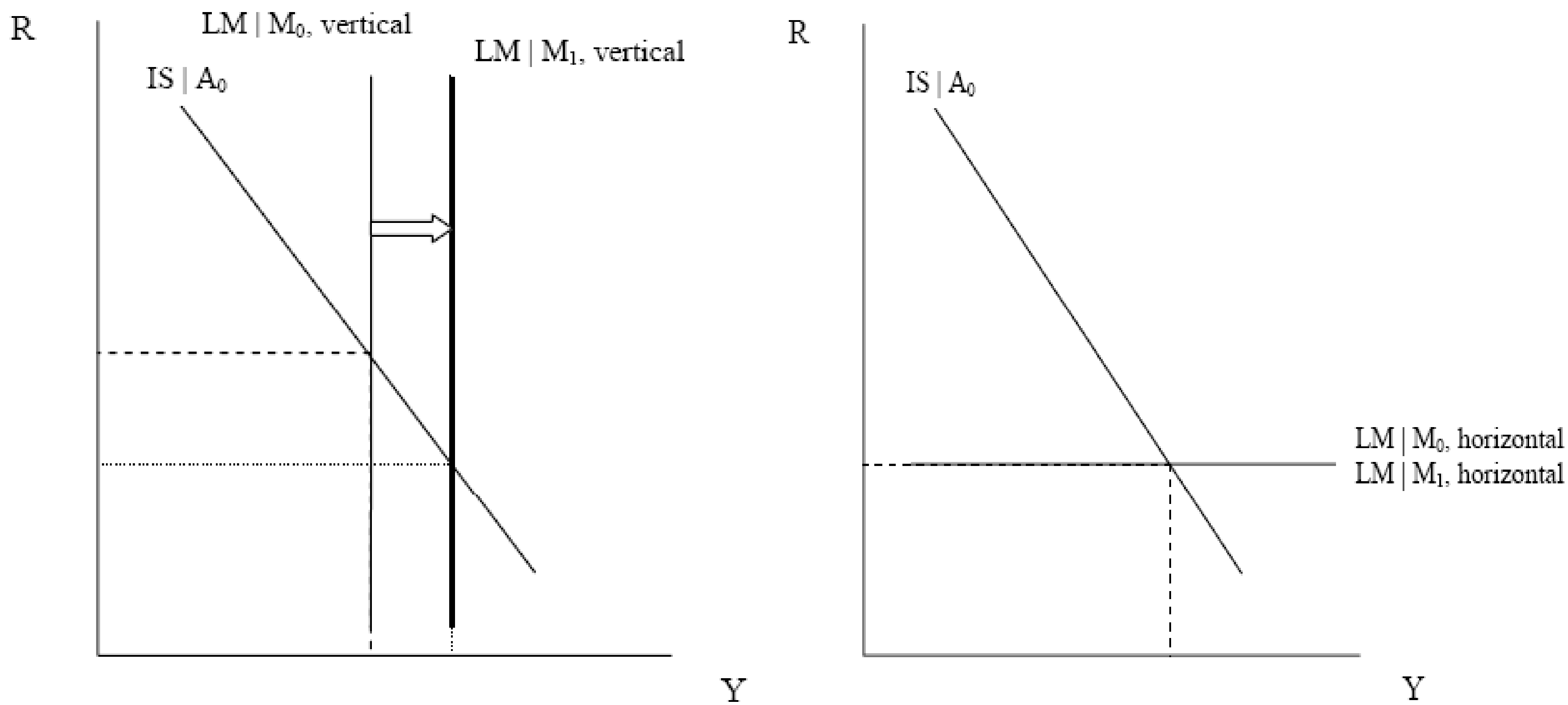


Extreme Cases: Fiscal (II)

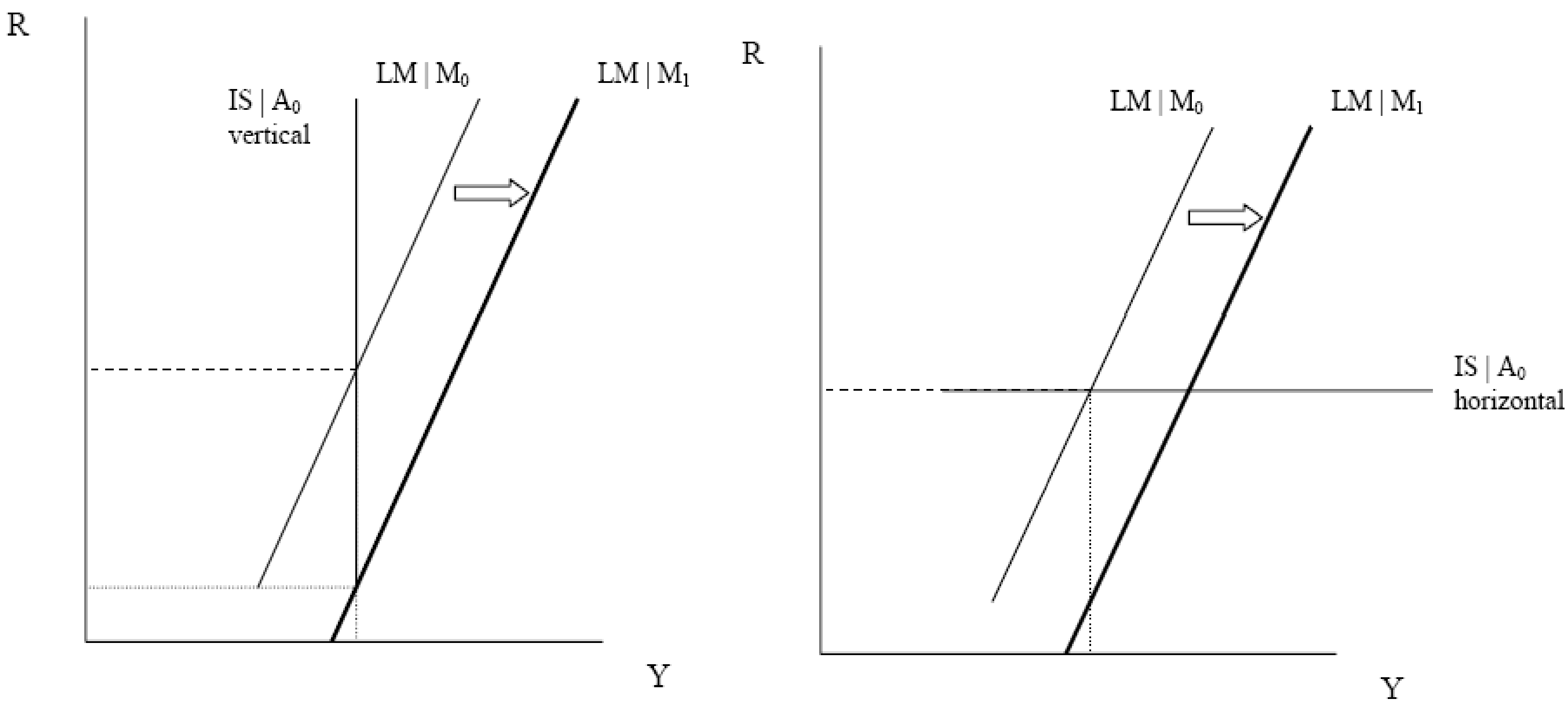




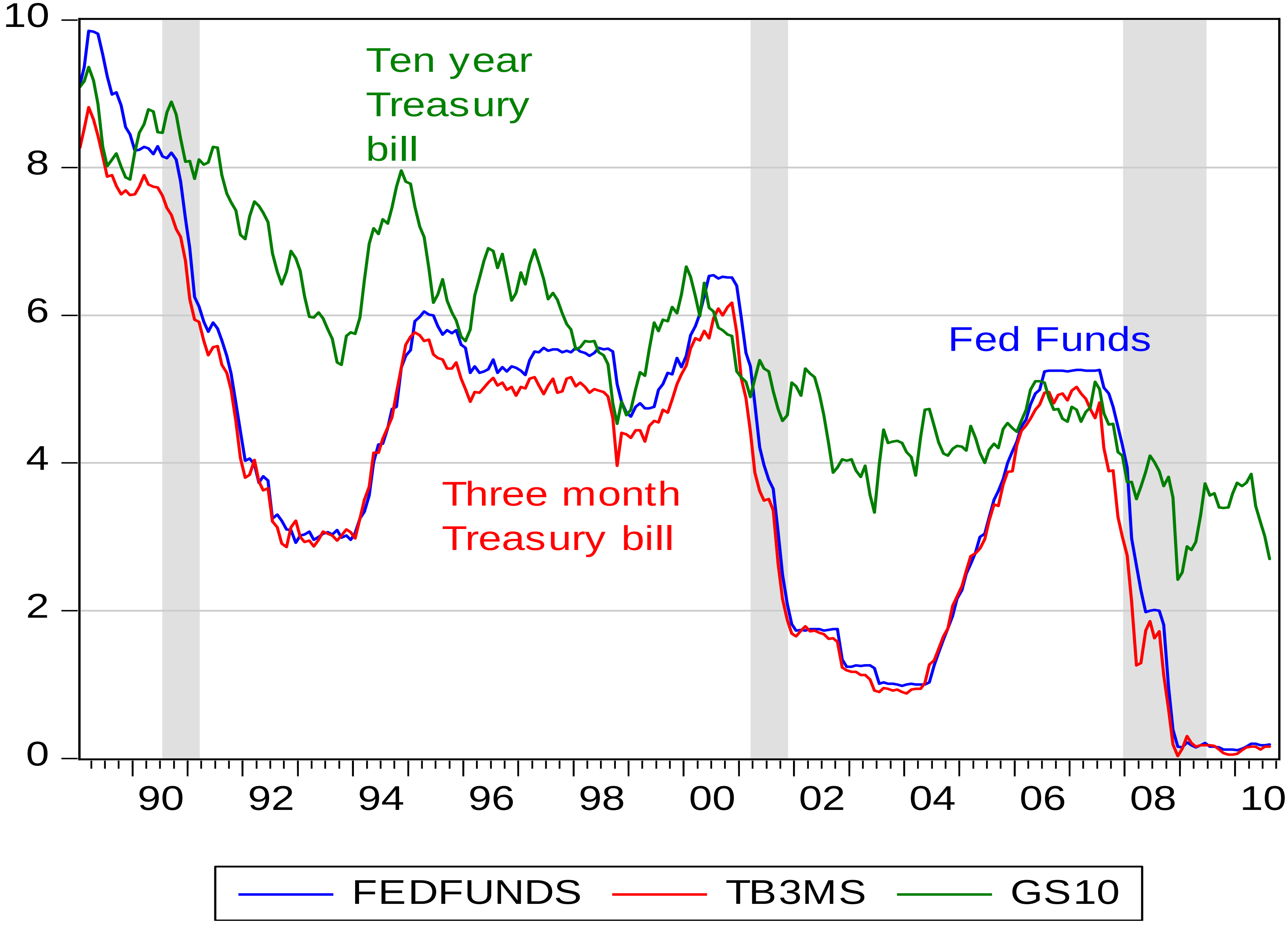
Extreme Cases: Monetary (I)



Extreme Cases: Monetary (II)

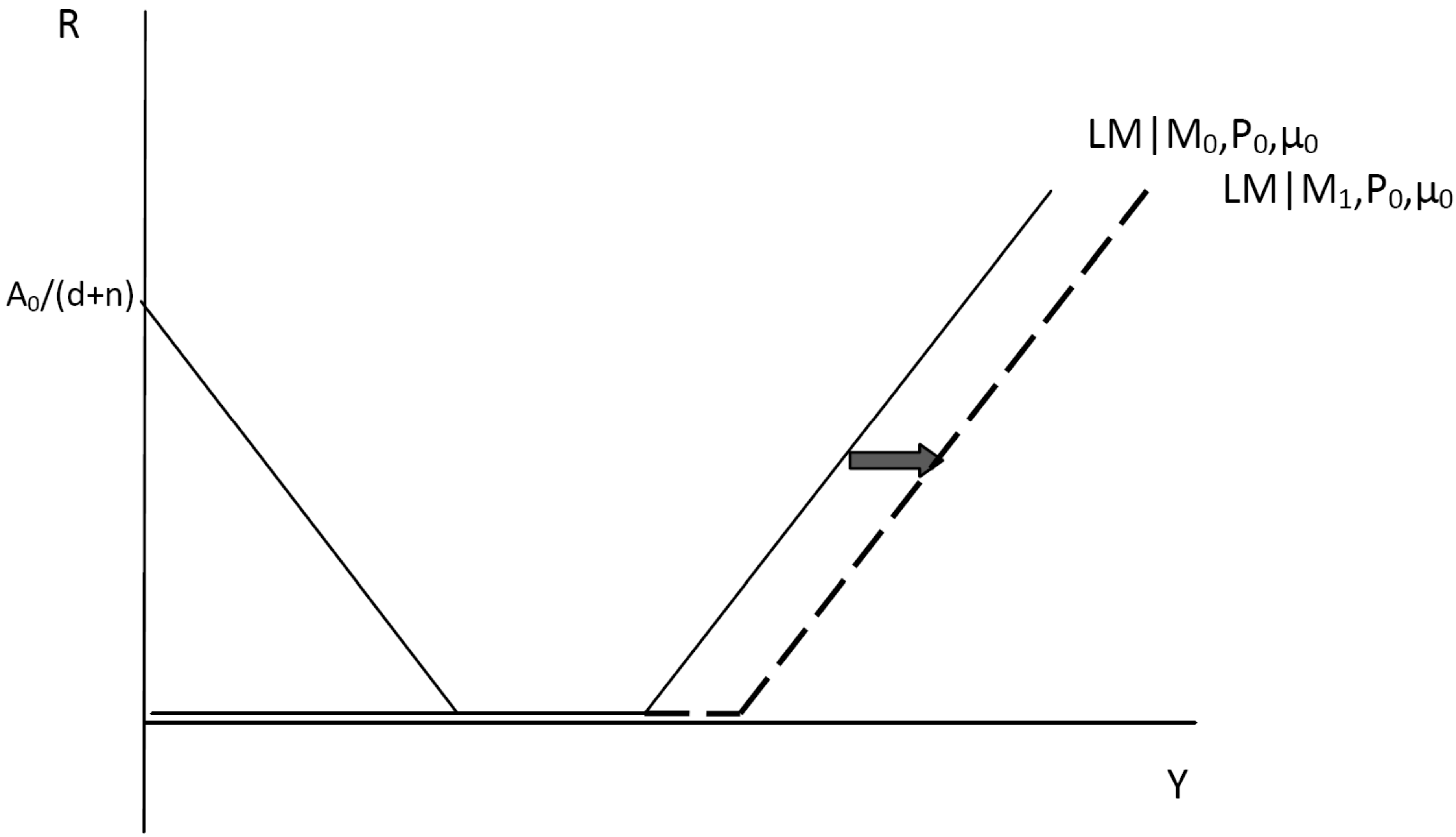


Zero Interest Rate Bound



Source: St. Louis Fed FREDII, accessed 10/3/10

Monetary Policy in a Liquidity Trap



Fiscal Policy in a Liquidity Trap