

Q7. Ch10 HW1

Initially Money Supply = 1,148 billions.
Required-reserve-ratio was 0.1

$$\text{Money Supply} = \text{Money Base} \times \left(\frac{1}{r}\right)$$

$$1,148 = \text{Money Base} \times \left(\frac{1}{0.1}\right)$$

$$\therefore \text{Money Base} = 114.8 \text{ billions}$$

with required reserve ratio changed to 0.11

$$\text{Money Supply} = 114.8 \times \left(\frac{1}{0.11}\right)$$

$$= 1044 \text{ billions}$$

\therefore Changing the reserve ratio will reduce money supply
by $1,148 - 1044 = 104$ billions

Chapter 10 HW

Q6] Before change in reserve-ratio

$$r = 0.12$$

$$MS = 52 \text{ mill. hrs.}$$

$MS = \text{Money Base} \times \frac{1}{r}$	Money-base (or Primary deposit)
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equals $\rightarrow 52 = \text{Money-base} \left(\frac{1}{0.12} \right)$

$$\text{Money-base} = 6.24$$

After change in reserve-ratio

$$r = 0.10$$

$$\text{Money-base} = 6.24$$

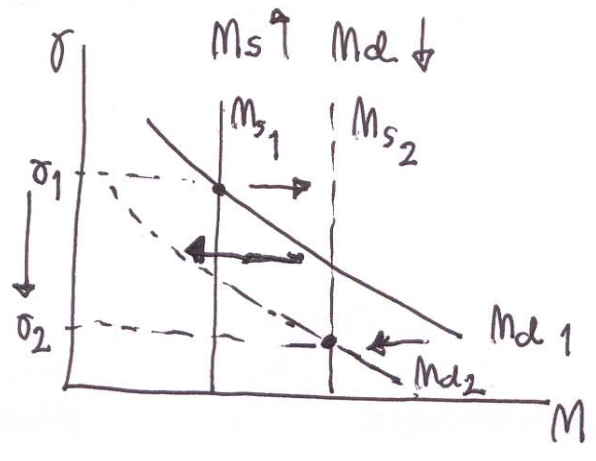
$$\therefore MS = 6.24 \times \frac{1}{0.1} = 62.4 \text{ mill. hrs}$$

Money-Supply will increase by 10.4 mM. hrs

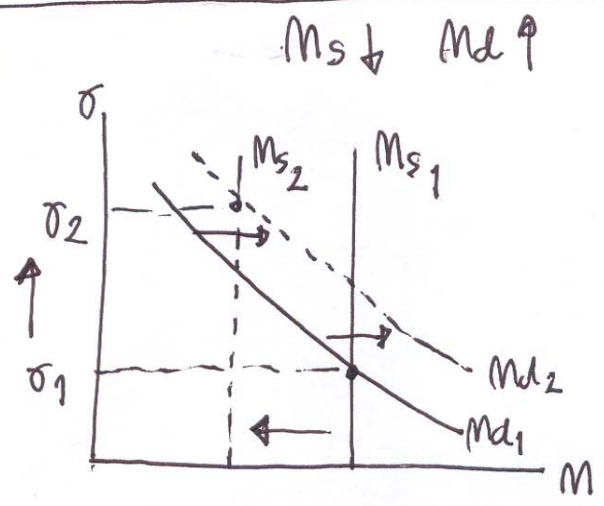
To counteract the change from the change in reserve ratio Central Bank can use open-market-operations by selling bonds. It can also increase the discount rate.

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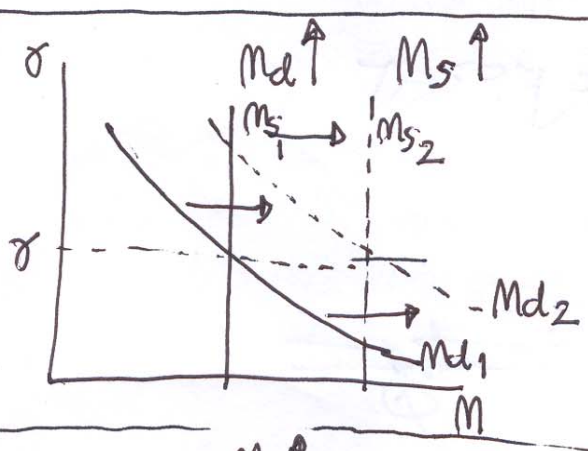
a)



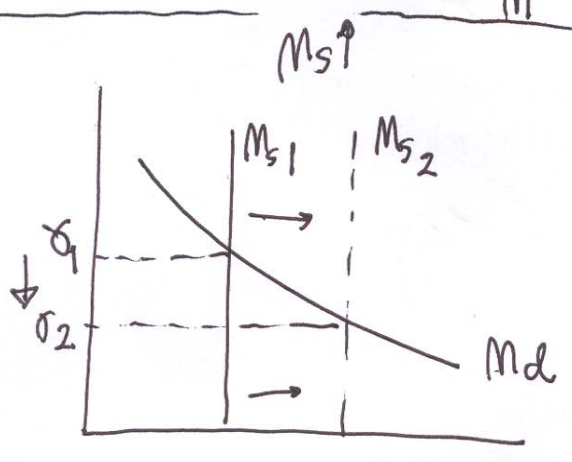
(b, e)



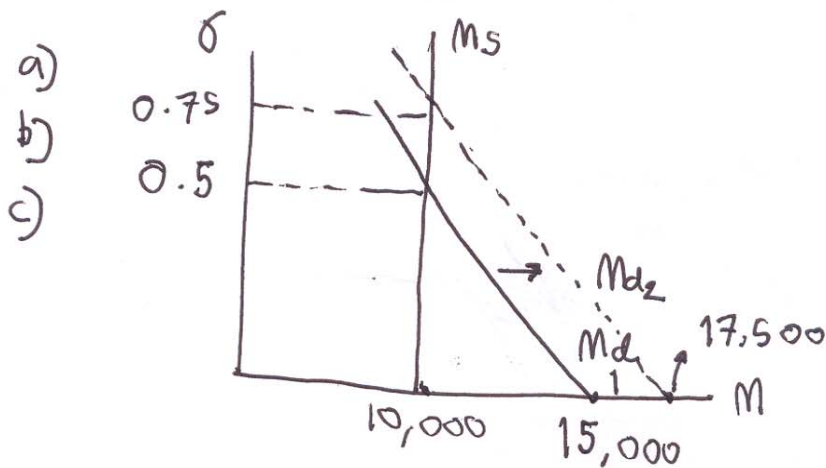
c)



d)



Q9)



b) \rightarrow At σ_{ym} $M_s = M_d$

$$10,000 = 10,000 - 10,000\sigma + 5,000$$

$$\sigma = 0.5.$$

c) $P.Y = 7,500 \rightarrow M_d$ shift.

New σ_{ym} interest rate occurs at.

$$10,000 = 10,000 - 10,000\sigma + 7,500$$

$$\sigma = 0.75$$

d) CB needs to control M_s to be at $\sigma = 0.5$

$$\begin{aligned} \text{where } M_d &= 10,000 - 10,000(0.5) + 7,500 \\ &= 12,500 \end{aligned}$$

$\therefore M_s$ needs to be set at 12,500

e) Several possible reasons. Price level may have fallen.

Or other changes contributed to ~~change~~ the fall in ψ

Q12) → Excess supply of money

→ Households will try to spend money on bonds. This will bid the bonds' price up, and the interest rate will fall.

→ Excess demand for money

→ Households will try to sell bonds. This will bid the bonds' price down, and the interest rate will rise.
