Financial Economics

2160068S 조대림

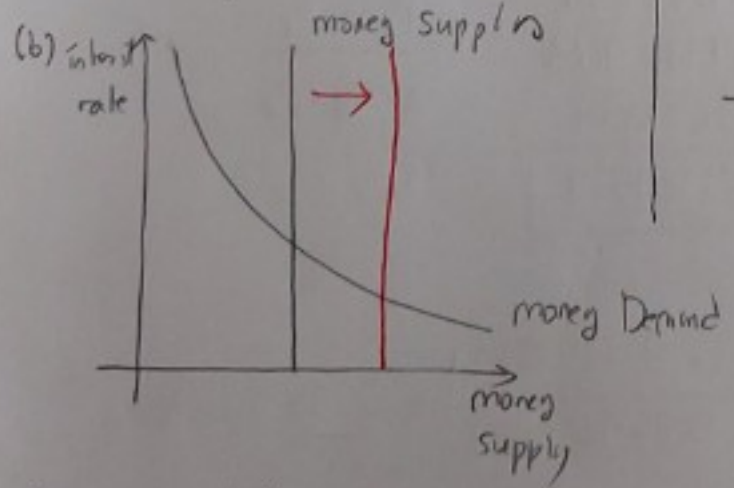
1. F
2. T
3. T
4. F
5. F
6. C
7. B
8. B
9. D
10. A

B∩D ⇒ behavioral Finance

(a)

11. They want to supply money by lowering interest rate and so on. So, economy would be restored.

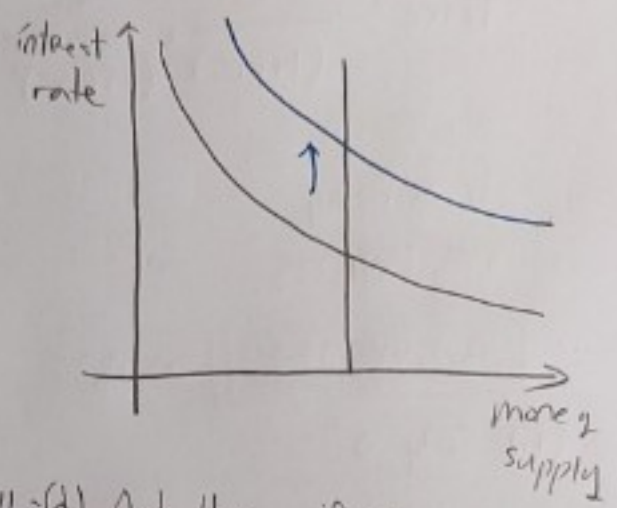
(b)



if government (central bank) supply money graph moves like that.

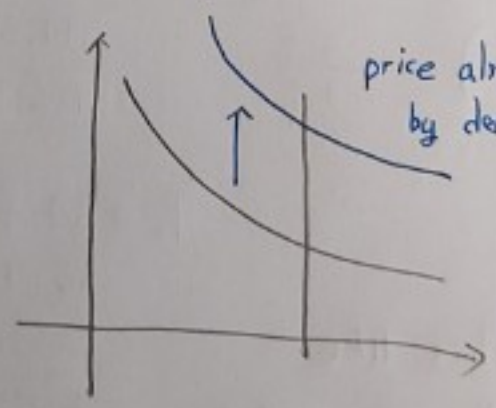
Then, liquidity would be increase and then interest rate would ~~be~~ decrease.

11-(c). And then, people feels like they income would increase so ~~they~~ their money demand would increase. So, interest rate would increase. graph move is like this



11-(d) And then, if economy yields high output and demand (money) increases, then price would be increases.

Then also interest rate also increase, but it seems yield some bubble effect.



12. 10yrs = M

6/a 2000 5.39% ← yield.

AAA

AA 5.66%.

10yrs Treasury 4.49%

AAA spread (credit spread)

is 5.39 - 4.49 = 0.9%

AA spread (credit spread)

is 5.66 - 4.49 = 1.17%

13. $E(R_m) = 15\%$ $\beta = 1.3$

$R_f = 5.5\%$.

(a) $E(R_p) = R_f + \beta[E(R_m) - R_f]$

$= 5.5 + (1.3) \times [15 - 5.5]$

$= 5.5 + (1.3) \times (9.5)$

$= 5.5 + 12.35$

$= 17.85\%$

(b) We also consider the factors like future labor income and future price model.

So, we can arrange like this $k = 1, 2$. (factors)

$$E(r_p) = \underbrace{\beta_{pm}}_{\text{market sector}} E(r_m) + \sum_{k=1}^{2} \beta_{pFk} E(r_{Fk})$$

(F means factor)

$E(r_p)$: risk premium

So, this part means future labor income and future price model part.

14. coupon rate 4%

(a) principal 1,000

$r = 5\%$

$M = 3$

$1000 \times \frac{4}{100} = 40$

$$\text{Price} = \frac{40}{(1+0.05)} + \frac{40}{(1+0.05)^2} + \frac{1000+40}{(1+0.05)^3}$$

38.095238 1

36.25117914

898.3911025.

$\Downarrow$

912.7675197 $\Rightarrow P_0$

(b) 50bp $\Rightarrow$ 0.005

$$P_- \Rightarrow \frac{40}{(1+0.045)} + \frac{40}{(1+0.045)^2} + \frac{40+1000}{(1+0.045)^3}$$

$$P_+ \Rightarrow \frac{40}{(1+0.055)} + \frac{40}{(1+0.055)^2} + \frac{40+1000}{(1+0.055)^3}$$

$P_- \Rightarrow$ 38.27751196

36.62919805

911.3424682171

$\Rightarrow$ 986.2551782271

$\Delta y = 0.005$.

$P_+ \Rightarrow$ 37.91469194

35.9380 9663.

885.6782108

$\Rightarrow$ 959.5309937 1

duration

$$\Rightarrow \frac{P_- - P_+}{2 \times \Delta y \times P_0}$$

$$\frac{26.724177857 1}{9.727675197} = 2.747231822 2$$

$\Rightarrow$ 2.748

12.35
5.5
17.85

4-(c)

$P = 1,000$

$M = 2$

$1000 \times \frac{4}{100} = CF = 40$

y is yield maturity

$$P = \frac{40}{(1+y)} + \frac{1040}{(1+y)^2}$$

$\frac{0}{0}\, y+1 = X$

$$(1+y)^2 P = 40(1+y) + 1040$$

$$1000X^2 = 40X + 1040$$

$$1000X^2 - 40X - 1040 = 0$$

1000 $\quad -1040$

$1 \quad\quad 1$

$$(1000X - 1040)(X+1) = 0$$

$$\therefore X = \frac{1040}{1000} = 1.040$$

$$\therefore y = 1{,}040 - 1$$

$$= 0{,}04$$

$\therefore$ yield to maturity is 0,04