

EE212 (2/2018 Section 046402): Quiz 2

90

CC = 6000

DD = 4000

20

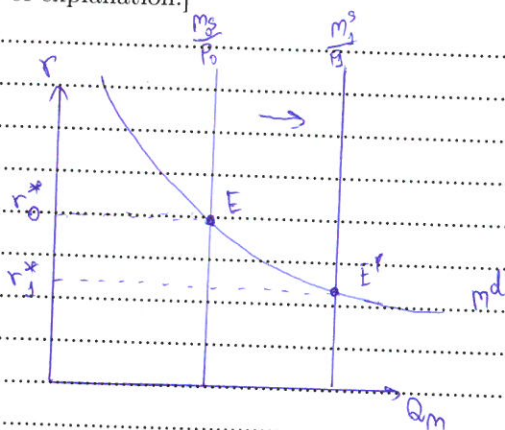
1. (20 marks) Suppose there is 6,000 million Baht in form of currency in circulation and 4,000 in form of million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

narrow definition of money supply (M1) is currency in circulation combined with demand deposits at commercial banks. or  $CC + DD$  which is  $6,000 + 4,000 = 10,000$  million baht.

please give definition of money supply

70+

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank buys government bonds from the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]



Given: • Equilibrium at  $\frac{M_0^s}{P_0}$  intersect w/  $m^d$

• Government bonds is purchased by central bank

Effects: • The shift (an increase) in  $\frac{M_0^s}{P_0}$  to the right

•  $r_0^* \rightarrow r_1^*$  (decrease in interest rate)

From the figure above, using information given, the original Equilibrium is the point where the real money supply ( $\frac{M_0^s}{P_0}$ ) intersect with the money demand ( $m^d$ ) and make  $r_0^*$  to be an equilibrium interest rate. When central bank buys gov. bonds from the public, the money injection is to the hand of the public making the increment of real money supply, which is the shift from  $(\frac{M_0^s}{P_0})$  to  $(\frac{M_1^s}{P_0})$  (new money supply). By the effect of new money supply increased, it intersect  $(\frac{M_1^s}{P_0})$  with  $(P_0)$   $m^d$  at  $r_1^*$  where is located lower than  $r_0^*$ , thus, the effect of buying gov. bonds from public is the reduction in interest rate at new  $E'$ .

V. good explanation  
price remain constant

-10 Explain adjustment toward new E.

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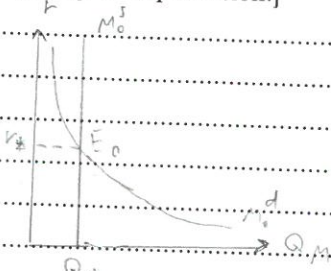
1. (20 marks) Suppose there is 6,000 million Baht in form of currency in circulation and 4,000 in form of million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

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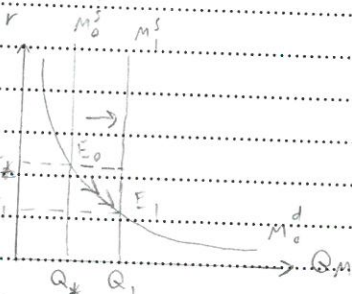
Money supply = the amount of money which is in economy system ✓  
 $M_1 = \text{currency in circulation} + \text{demand deposit}$   
 $M^s = CC + DD = 6000 + 4000 = 10000 \text{ million Baht}$  ✓

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank buys government bonds from the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

70



Firstly, the economy are in equilibrium at point  $E_0(Q^*, r^*)$  ✓



When the central bank buy government bonds from the public it mean that the money in economy system increase, then  $M^s$  shift to the right ✓ from  $M_0^s$  to  $M_1^s$ . At this stage, we will see that there is an excess supply. Thus, people will ~~buy~~ sell more bond. ?

⇒ Bond Price ? ⇒ interest rate

• NEW  $E^1$

-10 Explain new E

& adjustment toward new equilibrium

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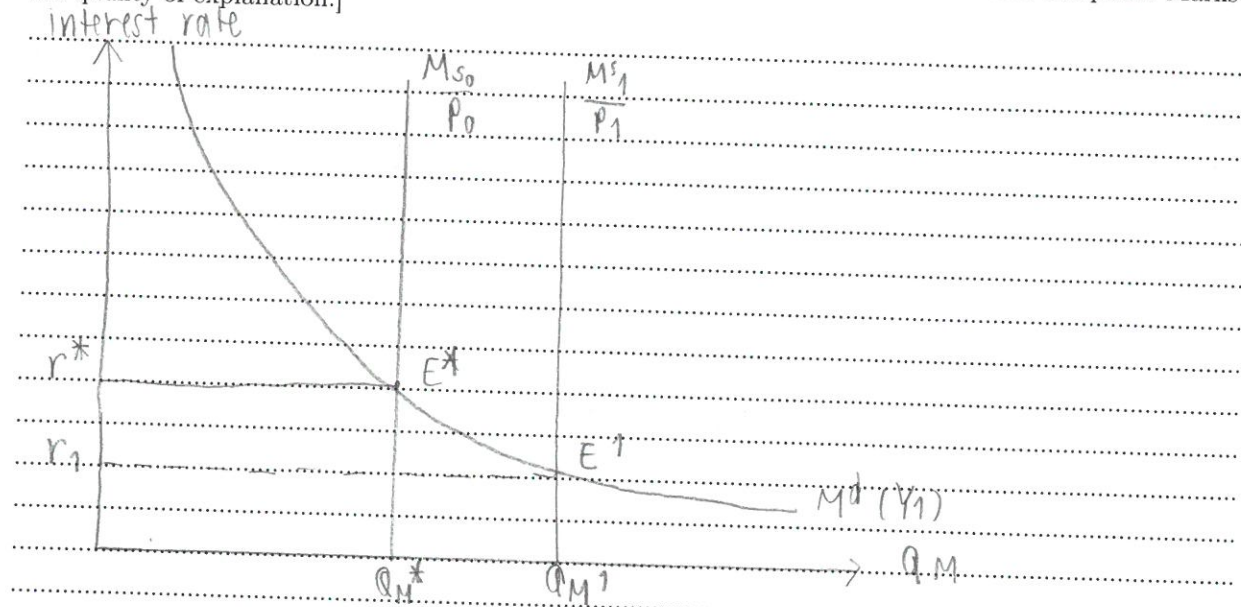
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$M^s = CC + DD$   
 $= 6,000 + 4,000$   
 $= 10,000$  million baht

Money supply  
 $=$  money in the market (have ~~DD~~)  
 $M_1$   
 $=$  money in the market (no ~~DD~~) <sup>interest</sup>

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank buys government bonds from the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

70



Central bank buys government bonds from the public, so money supply will increase, moving from  $M_{S0}$  to  $M_{S1}$ , from the increasing of money supply, the interest rate is lower moving to  $r_1$  at equilibrium to  $r_*$  and Quantity Money Demanded is increasing moves from  $Q_{M*}$  to  $Q_{M1}$

-10 explain adjustment toward new equilibrium

EE212 (2/2018 Section 046402): Quiz 2

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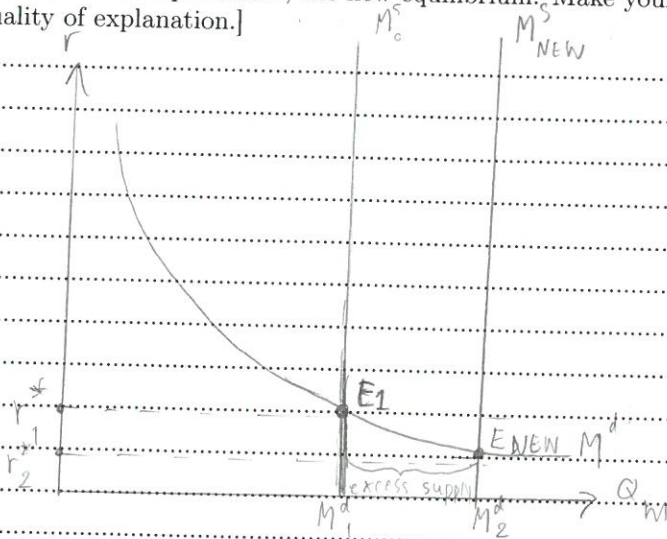
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Money supply ( $M^s$ ) is money in the hand of public, but for M1, narrow money supply is the money supply without deposit system created by bank sector

$$\therefore M^s = CC + DD = 6000 \text{ m.} + 4000 \text{ m.} = 10000 \text{ million Baht}$$

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank buys government bonds from the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

70



At first our economy is at the equilibrium then central bank buys government bonds. So, this action created excess supply. Now, after buy bond the money supply is going up, shift to the right, so the new equilibrium is lower interest rate and money demand go up (move along)

\* organization

⇒  $M^s \uparrow$

⇒ at the original  $r \rightarrow$  excess  $M^s$

...

\* -10 explain adjustment

toward new equilibrium

EE212 (2/2018 Section 046402): Quiz 2

100

1. (20 marks) Suppose there is 6,000 million Baht in form of currency in circulation and 4,000 in form of million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

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$M_1 = \text{currency in circulation} + \text{demand deposit}$

$= 6,000 + 4,000$

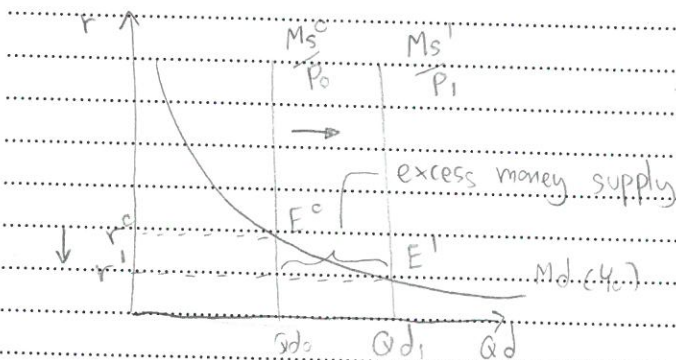
$= 10,000$

Therefore, Money supply is 10,000 Baht

explain definition of  $M_1$   
buy

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank buys government bonds from the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

80



- If the central bank buys government bonds from the public, there is a change in money supply, increase (shifting to the right) and it also lead to excess money supply

When there is excess money supply, agency buy more bond. And demand of bond will increase, leading to higher price of bond. Then when price of bond is higher, interest rate will be lower. There is adjusting until it reach new equilibrium

↓ Explain new E. (-5)

new E  $\Rightarrow$  interest rate decreases

EE212 (2/2018 Section 046402): Quiz 2

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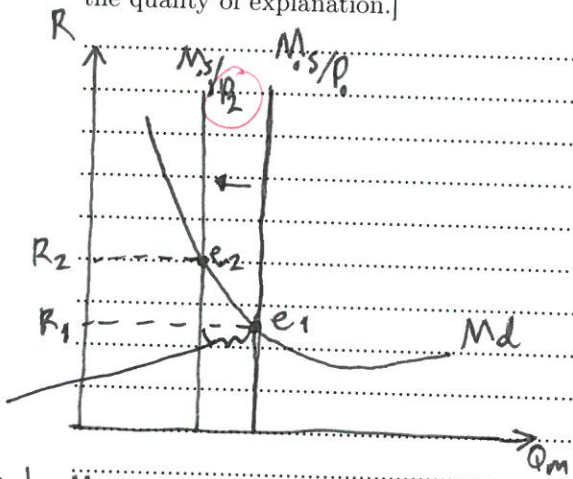
1. (20 marks) Suppose there is 6,000 million Baht in form of currency in circulation and 4,000 in form of million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

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The money supply is the amount of money that is in the hand of public at specific time. If we consider from M1 the amount of money is currency in circulation plus demand deposit. Therefore,  $M1 = 6000 + 4000 = 10000$   
 ∴ There is 10,000 million Baht in this economy.

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank sells government bonds to the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

70



If the central bank sells government bonds to the public, price of bonds will fall and interest rate will increase

Consequently, money supply will decrease because money will go to central bank which shift money supply to the right from  $M_{s/p1}$  to  $M_{s/p2}$  which will meet ~~old~~ new equilibrium of  $e_2$

price remain the same

Let  $M_{s/p}$  = money supply

$M_d$  = money demand

$e_1$  = initial equilibrium

with the higher interest rate and lower money supply.

-10 explain adjustment toward new equilibrium

EE212 (2/2018 Section 046402): Quiz 2

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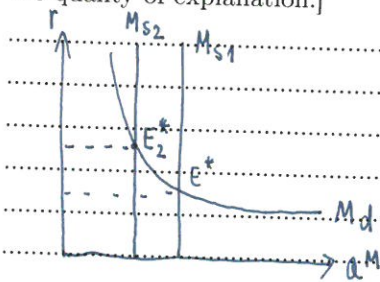
money supply = total amount of money in economy at a period of time ~~X~~ at a point of time

$M_1$  = currency in circular + demand deposits

$M_1 = 6,000 + 4,000 = 10,000$  # money supply

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank sells government bonds to the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

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First the economy is at equilibrium then central bank sells bonds to the public which made money supply curve shift to the left equilibrium interest rate increase ( $E_2^*$ ), money demand decrease since money supply shift left equilibrium move ~~and~~ along money demand curve ( $M_d$ ) from original money supply curve ( $M_{s1}$ ) toward new money supply ( $M_{s2}$ ) ✓

-10 explain adjustment toward new equilibrium

EE212 (2/2018 Section 046402): Quiz 2

55

1. (20 marks) Suppose there is 6,000 million Baht in form of currency in circulation and 4,000 million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

15

$M_1 = C^c + DD$       Suppose reserve ratio = 0.1 ?

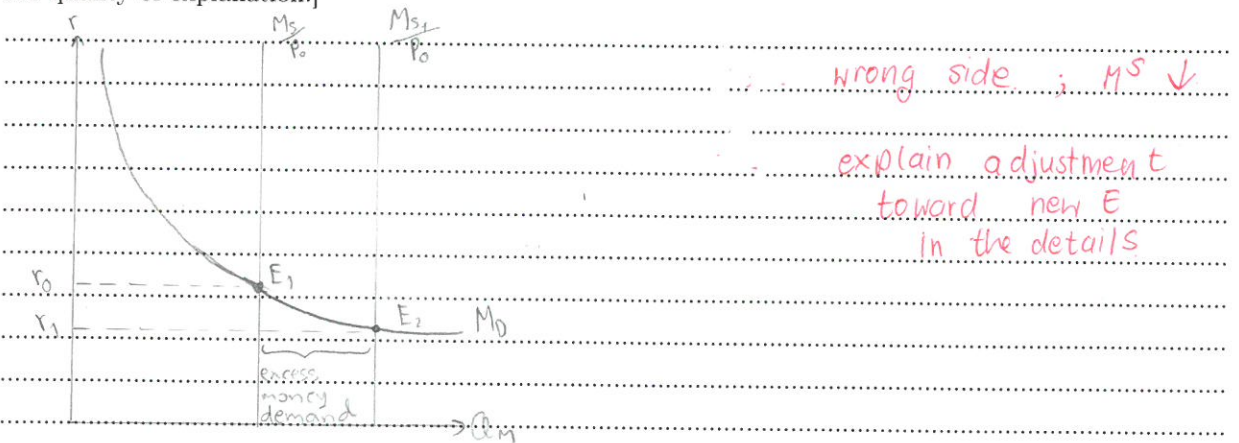
$= 6000 + (4000/0.1)$

$= 46000$       X -5

Hence,  $M_1 = M_s$ , money supply of this economy is 46000 ✓

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank sells government bonds to the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

40



Suppose central bank sells government bonds so money supply will increase and money supply line will shift right from  $M_s/P_0$  to  $M_{s1}/P_0$ . Moreover, bond price will decrease lead to decrease in interest rate which move down and adjust to new equilibrium at  $E_2$ .

EE212 (2/2018 Section 046402): Quiz 2

60

1. (20 marks) Suppose there is <sup>CC</sup> 6,000 million Baht in form of currency in circulation and <sup>DD</sup> 4,000 in form of million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

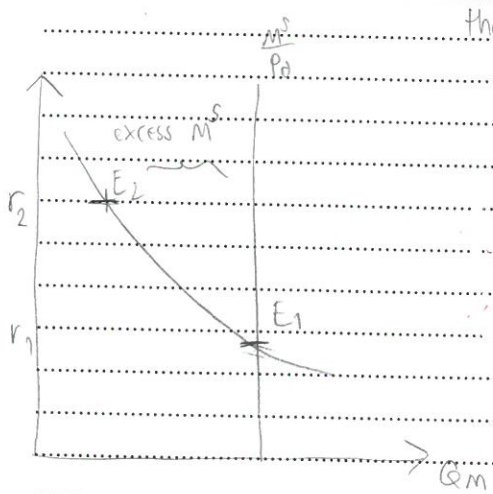
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Money supply = total money supply in circular flow at specific time  
 $M_1 = \text{Currency in circulation} + \text{demand deposits}$   
 $M_1 = CC + DD = 6000 + 4000 = 10000$  ∴ Money supply 10,000 million baht.

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank sells government bonds to the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

40

Originally the economy is at equilibrium  
 central bank sells bonds. It means  $M^s$  will decrease (↓).  
 then bonds price will decrease? why?



So, interest rate will go up, to reach new Equilibrium.

new money supply line is missing

∴ Explain adjustment process toward new E

Interest rate	excess demand	$r > r_E$	excess $M^s$
$< r_E$	sell bonds		buy bond
2	bond price ↓		demand bond ↑
	interest ↑		price ↑
			interest rate ↓

EE212 (2/2018 Section 046402): Quiz 2

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$M_1 = CC + DD$

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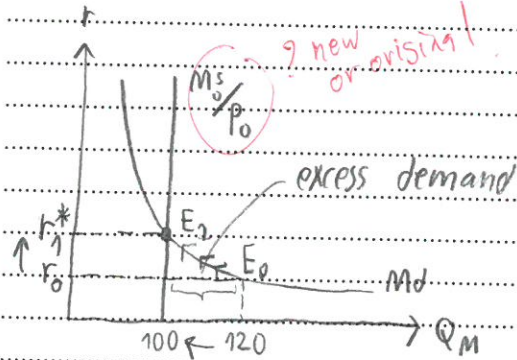
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$M_1 = CC + DD$   
 $M_1 = 6000 + 4000$   
 $M_1 = 10000$  million Baht

The money supply of the economy is 10,000 million baht.

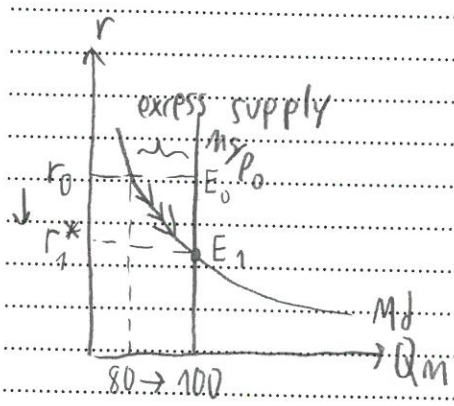
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Depends on this graph, from  $E_0$  to  $E_1$  is a excess money demand which means that interest rate is lower than the equilibrium. To solve this problem, the agents should sell more bonds to decrease bond price and after that the interest rate will be increased from  $r_0$  to  $r_1^*$ . For example, if interest rate is low, public will want to hold their money instead of keep in the bank, so the central bank should sell more bond to solve this problem to make public to save their money more.

please explain  
 $M^s$  decreases



original  
 - new  $M^s$  line is missing  
 - adjustment toward new E

EE212 (2/2018 Section 046402): Quiz 2

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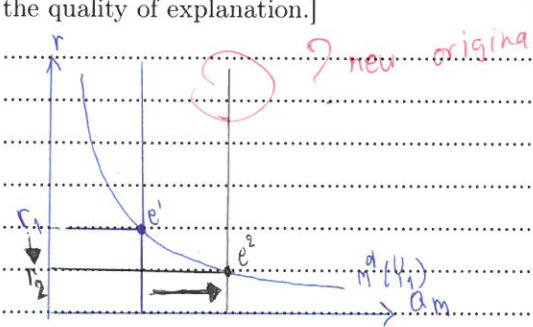
money supply is the amount of money in public's hand at specific time  
 $M1 = \text{currency in circulation} + \text{demand deposit at commercial banks}$   
 $M^s = 4000 + 6000$   
 $M^s = 10,000$

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank buys government bonds from the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

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20

40



If the central bank buys government bonds from the public, the interest rate will decrease and the quantity of money will increase.

money supply ↑

- name of money supply lines are missing

- adjustment process toward new equilibrium

EE212 (2/2018 Section 046402): Quiz 2

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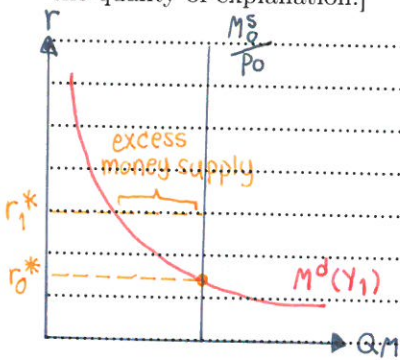
Money supply is the amount of money and bond that in the hand of public. banks  
 narrow definition of money (M1) = currency in circulation + demand deposit in commercial

$$M1 = 6,000 + 4,000 = 10,000$$

Hence, the money supply of the economy is 10,000 million baht.

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank sells government bonds to the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

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Originally, the equilibrium is  $r_0^*$ , where  $\frac{M_s^0}{P_0} = M^d(Y_1)$ .  
 If the central bank sells government bonds to the public, the bond price will decrease and the interest rate will increase  
 $r^*$  increases from  $r_0^*$  to  $r_1^*$ .  
 There will be excess money supply at the new equilibrium.

-10 new money supply line is messy  
 -10 Explain adjustment process toward new Equilibrium

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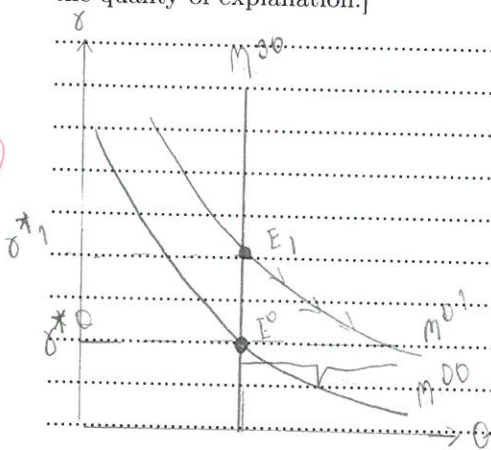
Money supply = the money in the hand of the public at the specific time

$$M^S = \frac{6000 + 4000}{0.1} = 10,000 \text{ m. Baht}$$

definition M1? -10

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank sells government bonds to the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

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the central bank sells government bonds to the public

so Money demand is shift to the right

- excess money demand

- price of bonds are increases.

therefore interest rate is decreases.

$$i^{*1} > i^{*0}$$

EE212 (2/2018 Section 046402): Quiz 2

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1. (20 marks) Suppose there is 6,000 million Baht in form of <sup>CC</sup> currency in circulation and 4,000 in form of million Baht <sup>DD</sup> demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

Money supply ( $M^S$ ) is the money in the hand of public at specific time.

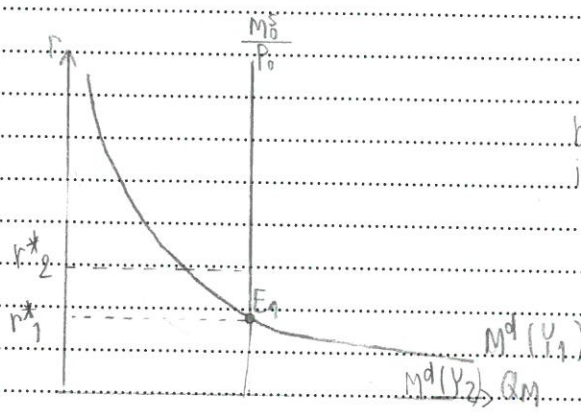
$M_1 = \text{Currency in circulation} + \text{Demand Deposit}$

$M^S = CC + DD = 6000 + 4000 = 10,000$

Therefore, money supply ( $M^S$ ) in this economy is 10,000 million Baht.

20

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank buys government bonds from the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]



Originally, the equilibrium is  $r_1^*$  where

$M^S/P_0 = M^d(Y_1)$

If the central bank buys government bonds from the public, the interest rate is increase.

In this case, showing that Money demand is decrease.

$r_2^* > r_1^* \rightarrow \text{excess } M^S$

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$$M^S = CC + DD$$

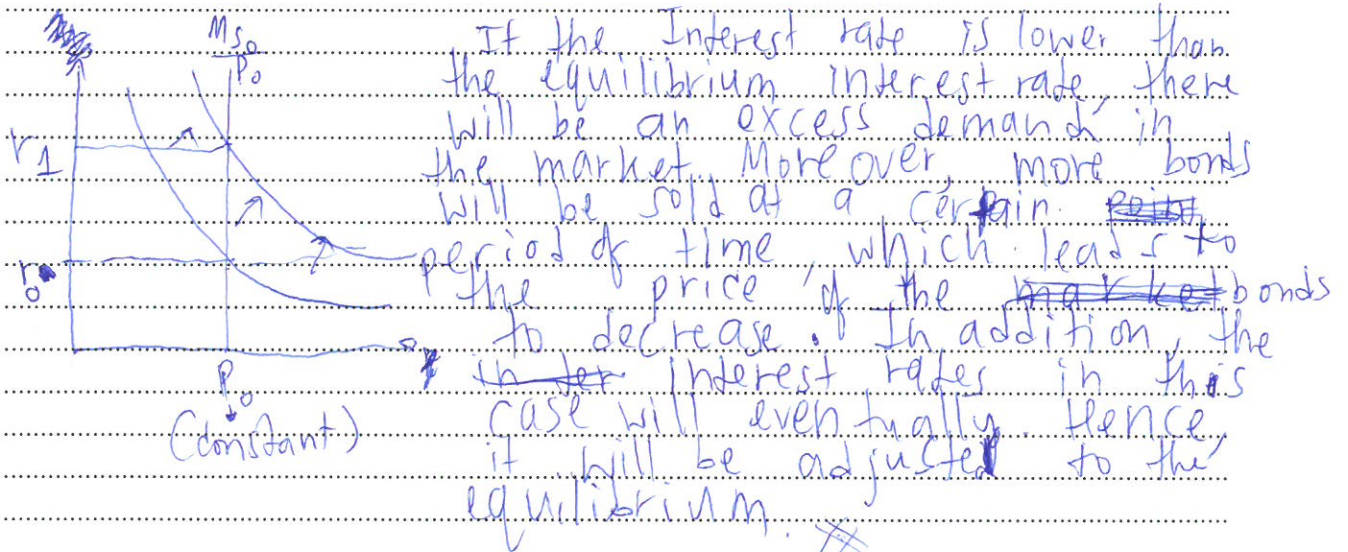
$$= 6,000 + 4,000$$

$$= 10,000$$

Money supply is the total amount of money that includes the currency in circulation along with the demand deposits.

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank sells government bonds to the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

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$$M^S = CC + DD$$

$$= 6,000 + 4,000$$

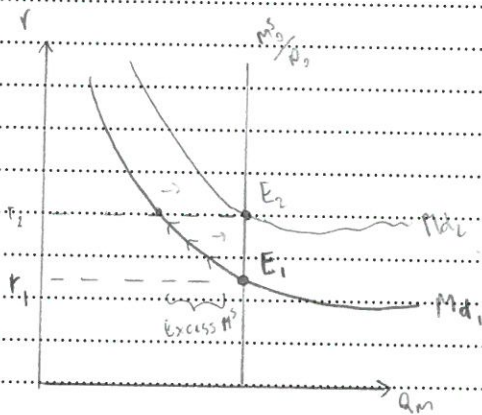
$$= 10,000 \text{ million baht}$$

Money supply is the money that you keep to yourself plus the money deposit to the bank (primary deposits) and the bank keep the money as part as legal reserve and another part as lend to another bank

Agents buy

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank sells government bonds to the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

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If the central bank sells government bonds to the public means that the agents will buy bonds so the bond demand will increase so the interest rate will increase due to bond demand.

To reach E2 or new equilibrium which have more interest rate, you have to shift the graph to the right, increase  $M^S$  to reach new equilibrium

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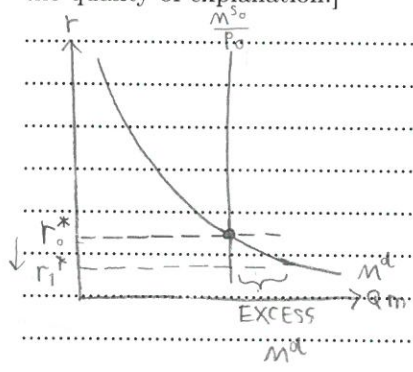
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$M^S = CC + DD$   
 $M^S = 6000 + 4000$   
 $M^S = 10,000$  million Baht

money supply is amount of money in the hand of central bank  
 The narrow of money (M1) = commercial bank

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank buys government bonds from the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

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In this case the interest rate is lower than equilibrium rate so it make to create excess of money demand ( $M^d$ ) and we have to sell more bonds then bond price is decreases therefore interest rate is increases adjust the equilibrium interest rate ?

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1. (20 marks) Suppose there is 6,000 million Baht in form of currency in circulation and 4,000 in form of million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

20

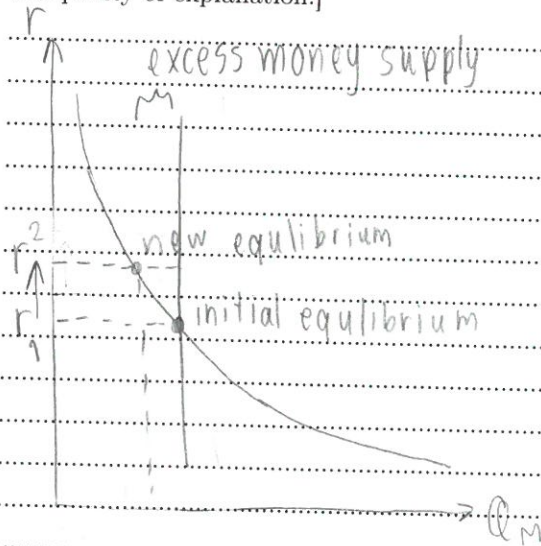
$$M^S = \text{currency in the circulation} + \text{demand deposit}$$

$$= 6000 + 4000 = 10,000$$

$$M^1 = r + \text{checkable deposit}$$

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank buys government bonds from the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

80



- bank buys bonds from public  
 adjust to the new equilibrium  
 - increase interest rate  
 so people will deposit more  
 reduce money in the  
 circulation



EE212 (2/2018 Section 046402): Quiz 2

40

1. (20 marks) Suppose there is 6,000 million Baht in form of currency in circulation and 4,000 in form of million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

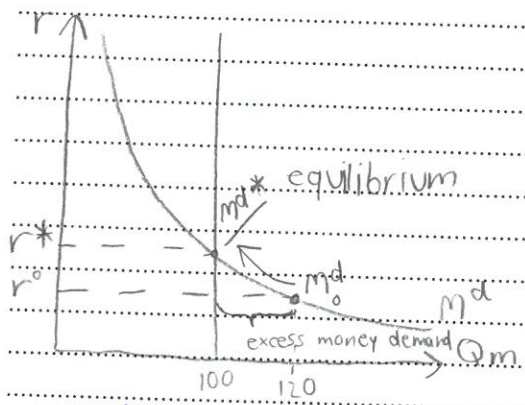
20

$M^s = CC + DD$   
 $= 6,000 + 4,000 = 10,000$  million baht  
~~M1~~ Money supply is the amount of total money in the hand of pub  
 $M_1 =$

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank sells government bonds to the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]



20



$M^d =$  initial equilibrium  
 $M_0^d =$  new equilibrium.

If the central bank sells government bond to the public, this mean the excess money demand occurred. Agents will sell more bond and decrease the bond price, giving rise to the increasing of interest rate. From the graph, at  $M_0^d$ ,  $r^0$  is lower than  $r^*$ , so bank have to increase interest rate and sell bond in order to adjust  $r^0$  to  $r^* = M^{d*}$  (the equilibrium)

EE212 (2/2018 Section 046402): Quiz 2

40

1. (20 marks) Suppose there is 6,000 million Baht in form of currency in circulation and 4,000 in form of million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

20

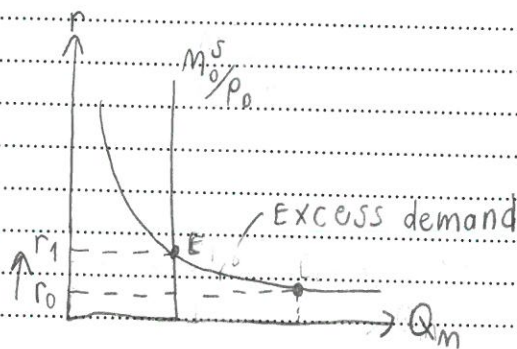
$$M^s = CC + DD$$

$$= 6000 + 4000$$

$$= 10000 \text{ million Baht}$$

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank buys government bonds from the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

20



$M^s?$

In this situation, the central bank buys government bonds from the public which means that the interest rate is lower than equilibrium because the public sells bonds to central bank which mean they have to decrease the

price of bonds. From the graph, the interest rate is lower than equilibrium so we have to move along the graph to hit with the equilibrium. After that, the interest rate will increase.

EE212 (2/2018 Section 046402): Quiz 2

40

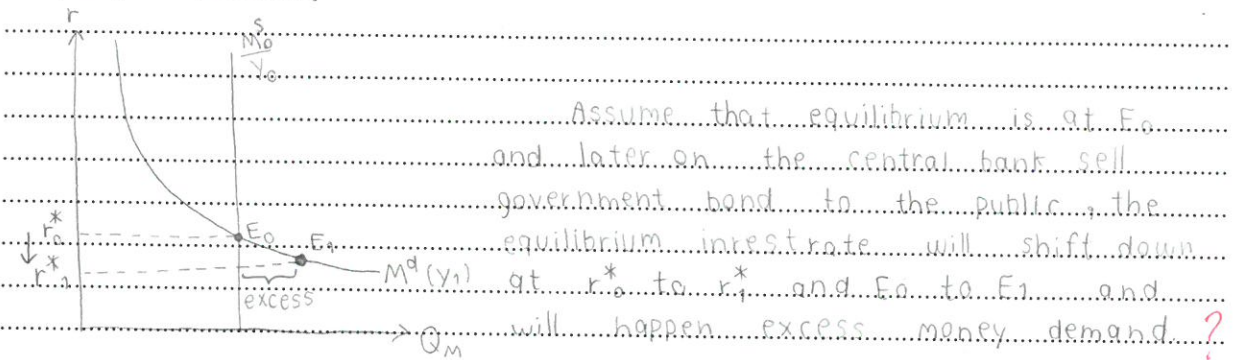
1. (20 marks) Suppose there is 6,000 million Baht in form of currency in circulation and 4,000 in form of million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

20

$M^S = CC + DD$   
 $= 6,000 + 4,000$   
 $= 10,000$  million Baht  
 money supply is amount of money in hand of public

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank sells government bonds to the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

20



$E_0$  = the initial equilibrium

$E_1$  = the new equilibrium

new  $M^S$ ?

EE212 (2/2018 Section 046402): Quiz 2

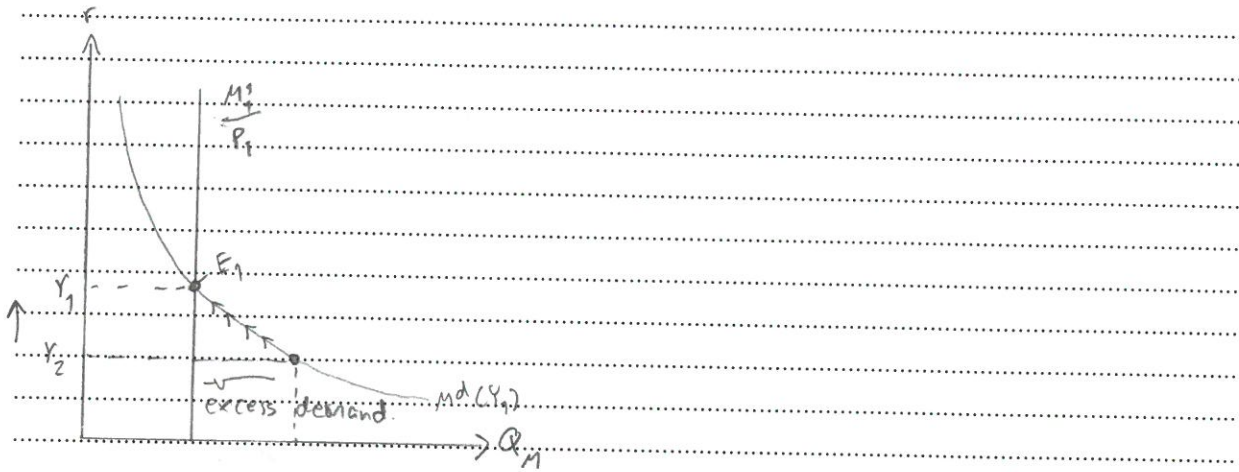
40

1. (20 marks) Suppose there is 6,000 million Baht in form of currency in circulation and 4,000 in form of million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

20 money supply is the money in economy  
 M1 is currency in circulation and demand deposit  
 $M^s = CC + DD$   
 $= 6,000 + 4,000 = 10,000$  million Baht

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank buys government bonds from the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

20



If central bank buys bonds from the public, money in hand of people, which  $\rightarrow M^d$  will increase from the equilibrium. Therefore, the interest rate should be increased for decreasing  $M^d$  to the equilibrium, which is  $E_1$ .

EE212 (2/2018 Section 046402): Quiz 2

25

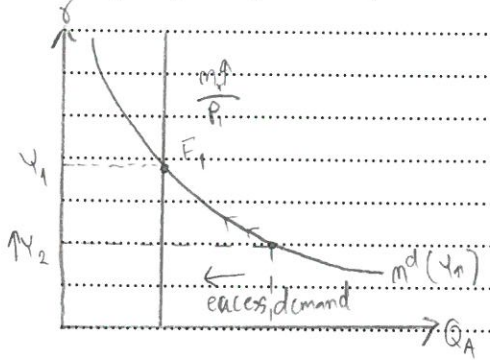
1. (20 marks) Suppose there is 6,000 million Baht in form of currency in circulation and 4,000 in form of million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

20  
25

Money supply is the money in the economy.  
 $M_1$  is currency in circulation and demand deposit.  
 $M^m = CC + DD$   
 $= 6000 + 4000 = 10,000$  million baht

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank buys government bonds from the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

5



It will make excess money demand people want to hold money.

EE212 (2/2018 Section 046402): Quiz 2

40

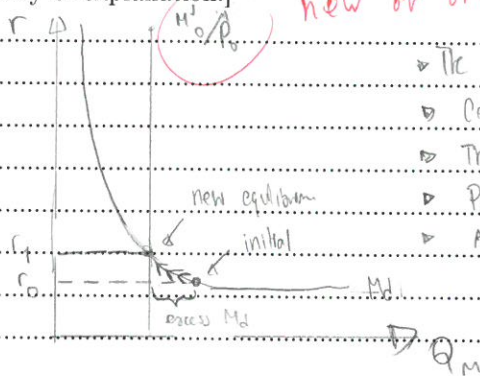
1. (20 marks) Suppose there is 6,000 million Baht in form of currency in circulation and 4,000 in form of million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

20

$M_1 = \text{Current circulation money (CC)} + \text{demand deposit money (DD)}$   
 $\text{Money supply} = CC + DD$   
 $= 6000 + 4000 = 10,000 \text{ million Baht.}$

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank sells government bonds to the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

20



- ▷ The initial interest rate is lower than the interest rate equilibrium.
- ▷ Central bank sell bonds to the public  $M^s?$
- ▷ There is excess money demand
- ▷ Price of bond decreases, in order to make interest rate increase.
- ▷ Adjust the equilibrium

$r_0 = \text{The initial interest rate}$   
 $r_1 = \text{New interest rate (interest rate that increases in order to get to equilibrium } (M^d/P_0))$

EE212 (2/2018 Section 046402): Quiz 2

15

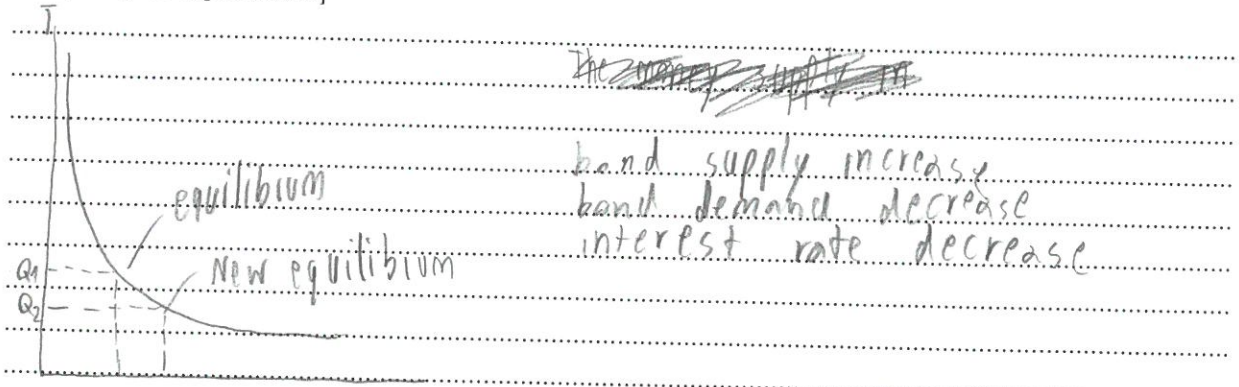
1. (20 marks) Suppose there is 6,000 million Baht in form of currency in circulation and 4,000 in form of million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

10

~~Money supply is the money in circulation~~  
~~Narrow supply money & that deposits in the bank~~  
 $M_1 = CC + DD$   
 $M_1 = \text{currency circulation} + \text{demand deposit}$   
 definition of  $M^S$   
 & calculation

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank buys government bonds from the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

5



EE212 (2/2018 Section 046402): Quiz 2

25

1. (20 marks) Suppose there is 6,000 million Baht in form of currency in circulation and 4,000 in form of million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

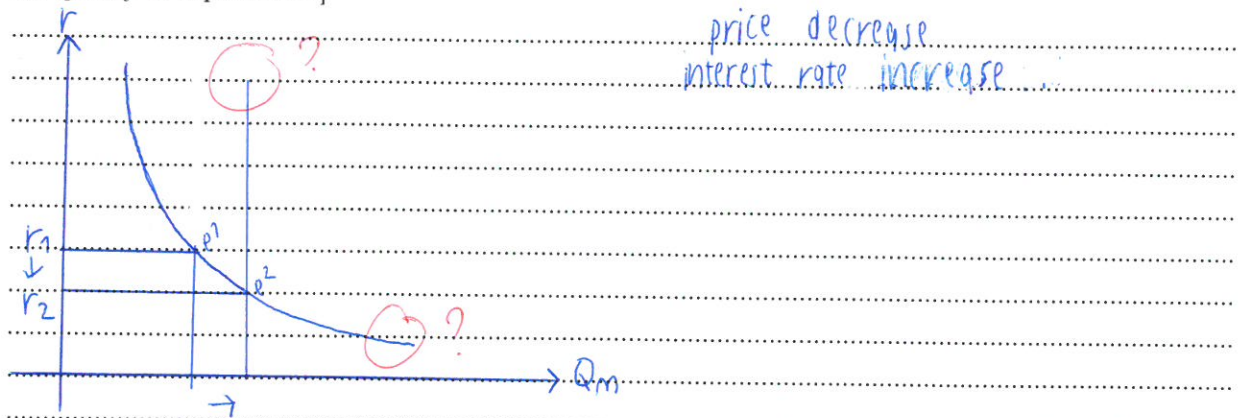
20

$$\begin{aligned}
 M^1 &= CC + DD \\
 &= 6000 + 4000 \\
 &= 10000
 \end{aligned}$$

money supply?

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank sells government bonds to the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

5



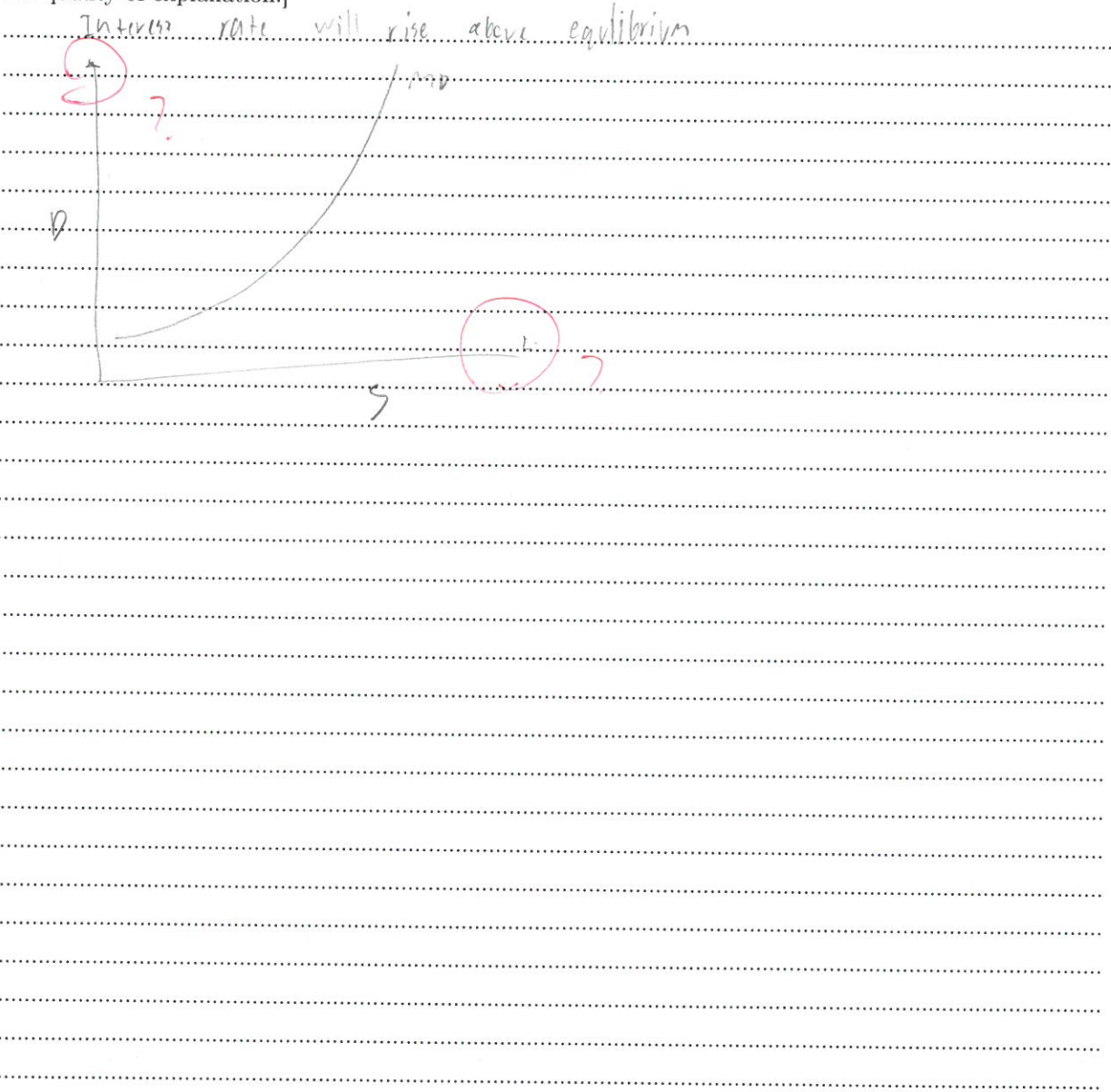
EE212 (2/2018 Section 046402): Quiz 2



1. (20 marks) Suppose there is 6,000 million Baht in form of currency in circulation and 4,000 in form of million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

.....  
 .....  
 .....

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank buys government bonds from the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]



EE212 (2/2018 Section 046402): Quiz 2

25 6104640211

1. (20 marks) Suppose there is 6,000 million Baht in form of currency in circulation and 4,000 in form of million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

20

.....  $6000 + 4000 = 10000$  .....

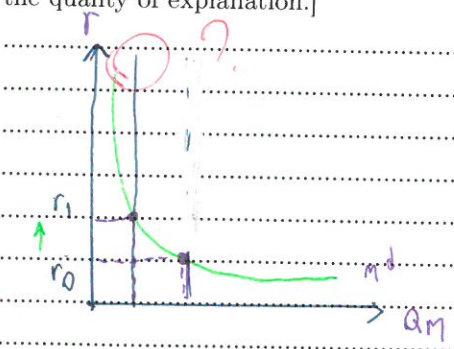
.....  $M_1 = CC + DD$  .....

.....  $M_1 = \text{currency circulation} + \text{demand deposit}$  .....

.....

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank sells government bonds to the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

5



- \* sell bonds \*
- bond supply increase
- bond demand decrease
- interest rates increase
- interest rates is lower than the equilibrium interest rate
- price decrease

EE212 (2/2018 Section 046402): Quiz 2

25

$$\frac{FD}{FD} = PD$$

1. (20 marks) Suppose there is 6,000 million Baht in form of currency in circulation and 4,000 in form of million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

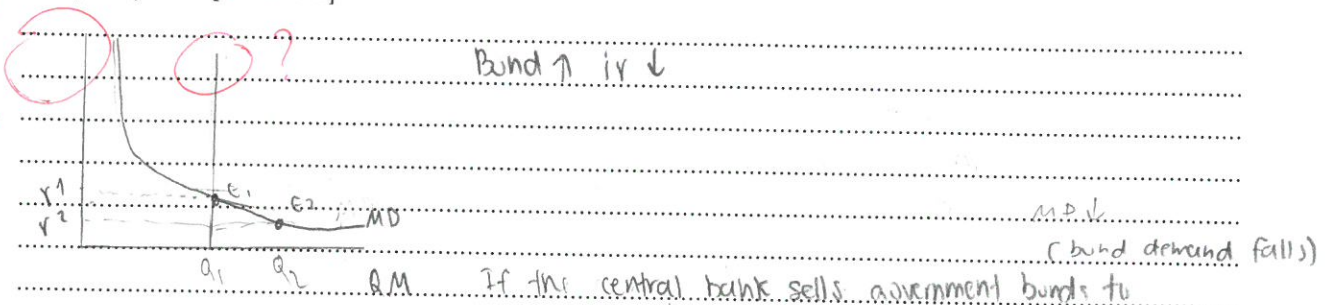
20

$M_1 = CC + DD$  (w/o interest)  
 $= 6000 + 4000$   
 $= 10,000$

money supply is the total amount of money in hands of public at a specific time

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank sells government bonds to the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

5  
 partial credit →



If the central bank sells government bonds to the public, interest rate decreases, making money demand increase. Hence the equilibrium moves from  $E_1$  to  $E_2$ .

B ↑ ↓ r

f

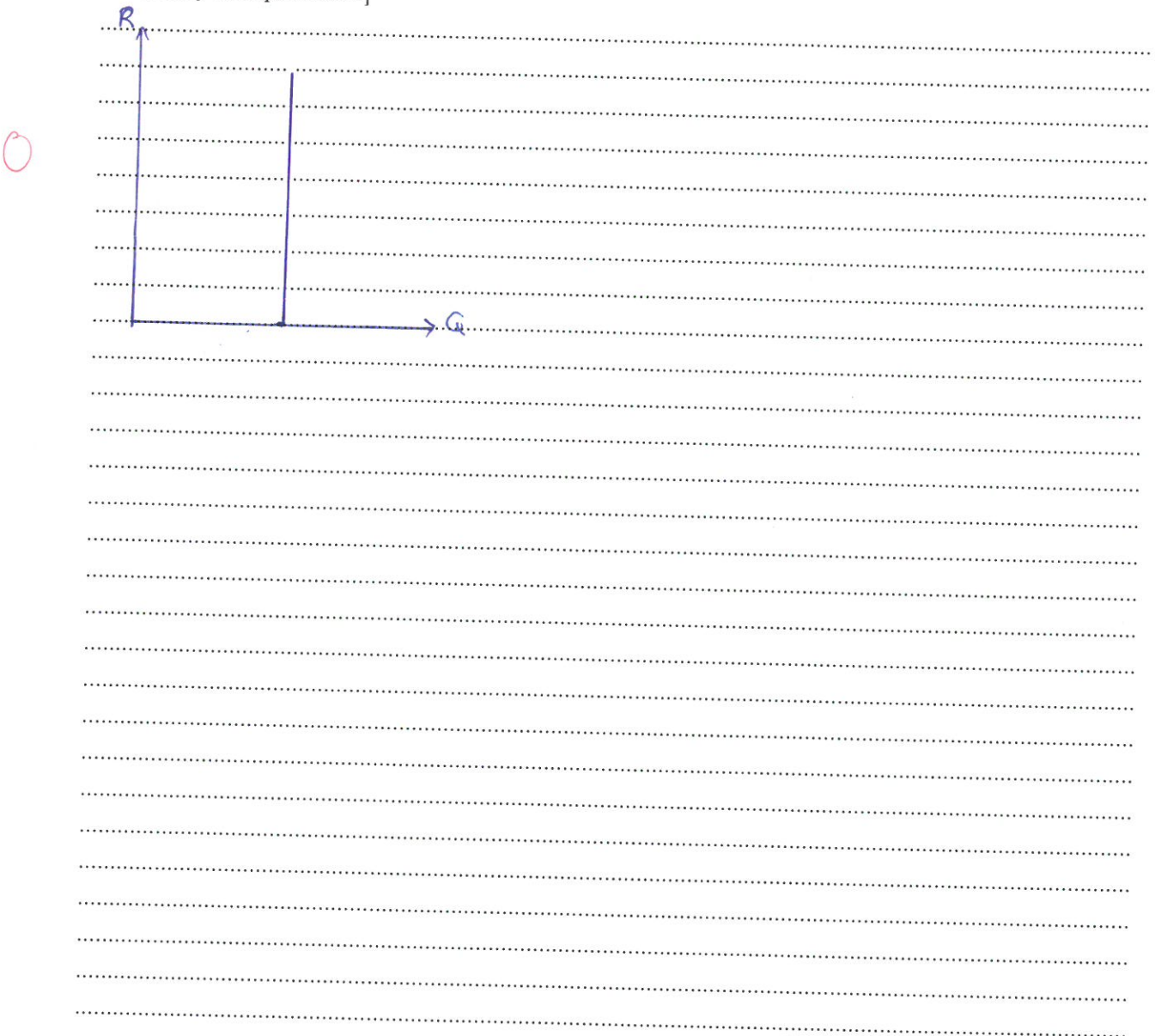
EE212 (2/2018 Section 046402): Quiz 2

20

1. (20 marks) Suppose there is 6,000 million Baht in form of currency in circulation and 4,000 in form of million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

20  $M^S = CC + DD \rightarrow$  to calculate money supply we add the currency in circulation with demand deposit.  
 $= 6000 + 4000$   
 $= 10,000$   
 • M1 is not the money supply in the hand of public

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank sells government bonds to the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]



EE212 (2/2018 Section 046402): Quiz 2

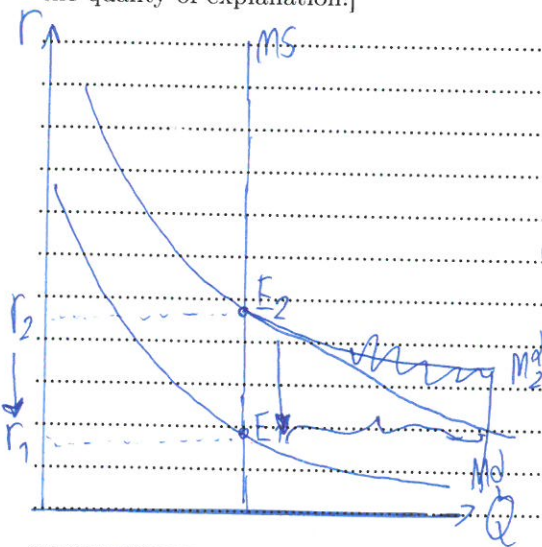
35

1. (20 marks) Suppose there is 6,000 million Baht in form of currency in circulation and 4,000 in form of million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

15 Money supply is how need to sell money to people such as government sell bond to people.  $M_1 = CC + DD = 6000 + \frac{4000}{0.1} = 46,000$

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank buys government bonds from the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

20



When central bank buys more government bond to people,  $E_2$  (original equilibrium) shift down to  $E_1$ . At this point original interest rate  $r_2$ , interest rate decrease to  $r_1$ . That mean, when people sell more bond to central bank, interest rate will decrease to adjust for new E at  $E_1$ . Excess demand will occur at this point  $E_1$ .

- 50 Wrong / shift in MS not  $M^d$

- 10 adjustment toward new Equilibrium.

EE212 (2/2018 Section 046402): Quiz 2

1. (20 marks) Suppose there is 6,000 million Baht in form of currency in circulation and 4,000 in form of million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

20

$$M^S = CC + DD$$

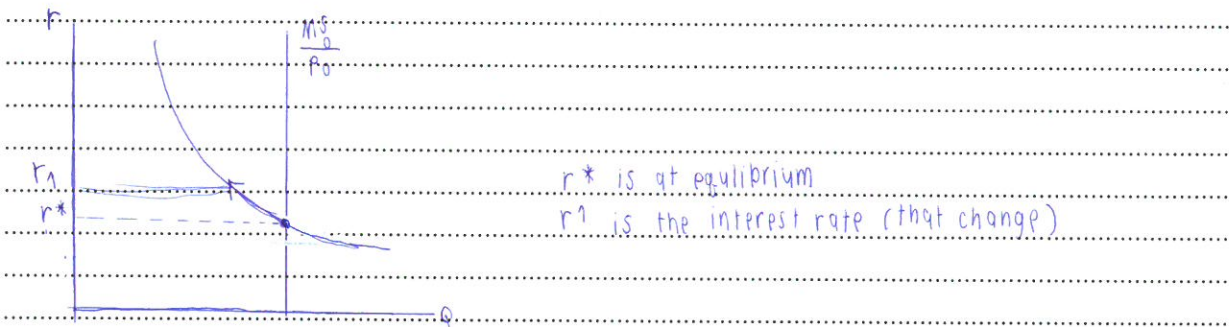
$$= 6000 + 4000$$

$$= 10,000$$

- to calculate money supply we add the currency in circulation with demand deposit  
 -  $M_1$  is the money supply in the hand of public.

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank buys government bonds from the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

20



$r^*$  is at equilibrium  
 $r_1$  is the interest rate (that change)

If the central bank buys government bonds from public it means that there is money demand and ~~the~~ the price of bonds will be decrease which makes the interest rate in the money market rise.

\* how does  $M^S$  change.

\* how does this affect  $r^*$

\* adjustment toward new  $E$

EE212 (2/2018 Section 046402): Quiz 2

30

1. (20 marks) Suppose there is 6,000 million Baht in form of currency in circulation and 4,000 in form of million Baht demand deposit. What is the money supply of the economy? [Hint: please give the definition of money supply, the definition of narrow definition of money (M1) and show how to calculate the money supply]

10

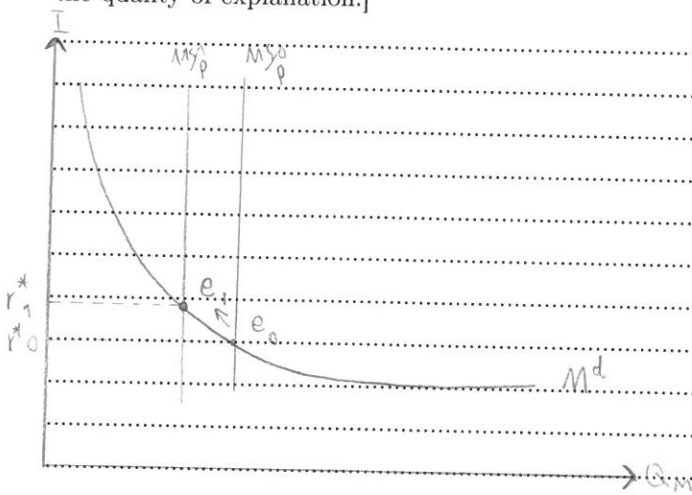
$$MS = 6000 + 4000$$

$$= 10000 \text{ Million Baht}$$

-10 definition

2. (80 marks) Suppose originally the economy is at equilibrium. If the central bank sells government bonds to the public. How does equilibrium interest rate in the money market change? Provide money market graph to support your explanation. Explain the adjustment toward the new equilibrium. [Hint: Please make the graph clear; i.e. indicate the initial equilibrium, the new equilibrium. Make your explanation clear and complete. Marks depend on the quality of explanation.]

20



how does  $M^s$  change  
new equilibrium  
adjustment toward new equilibrium

The equilibrium interest rate will adjust back to the equilibrium