

○ Last updated on May 5, 2015 at 20:18

Below is a list of questions that summarize the lecture and it is meant to help you retain the information you have just learned. No need to turn this in but eat it while it's still hot after the lecture (I usually update this within 24 hours of the lecture). Reheat before the exam.

CHAPTER 1

ON 1/22/15

Why Economics Discuss how Nixon's visit to China is different from the recent Chinese mission's visit to Africa.

Definition of Economics Pick whatever you have at hand right now and discuss the economic trade-off associated with it from 1) consumer's perspective and 2) producer's perspective.

Definition of Economics Explain why the air you're breathing in right now does not make an economic subject.

Micro vs Macro Explain why the price of a cheesecake at Rao's cafe is a subject of microeconomics but the price level is a subject of macroeconomics.

Ceteris Paribus Controlled experiments are hard to come by in economics, but nonetheless, economists try to replicate the lab environment. Quote the United's Philadelphia-Houston example I used in class and explain why there is a possibility that a drop in passenger volume may not be from the price increase but from something else.

ON 1/27/15

Positive and Normative Analysis Define the term positive and normative analysis.

Consumer's Trade-Off Quote the cheesecake and tea example I used in class and update the budget line when the price of cheesecake becomes \$4 apiece. Explain how and why the opportunity cost of a slice of cheesecake changes.

Consumer's Trade-Off Can you predict which combination that Liz is going to choose from her budget constraint? Why or why not?

Consumer's Trade-Off Why does the budget line represents the trade-off that consumers face?

Opportunity Cost What would be your opportunity cost of trying Gumbo™.

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Consumer's Trade-Off Try Problem 3d.

Producer's Trade-Off Unlike consumers, producers' constraint is *not* characterized by income. List the items that define producers' constraint.

ON 1/29/15

Producer's Trade-Off You need to know the technology and the level of factors of production before you can sketch a PPC. Explain why you cannot sketch a PPC without this information.

Producer's Trade-Off I used the same example in class but accidentally switched Katy Perry and me in a wrong order when I tried to sketch the PPC in figure 1. In particular I asked her to switch along the red portion and asked myself to switch along the blue portion of the line. Quote the definition of PPF and explain why figure 1 is *not* a PPC (i.e., explain why figure 1 does not meet the definition of PPF).

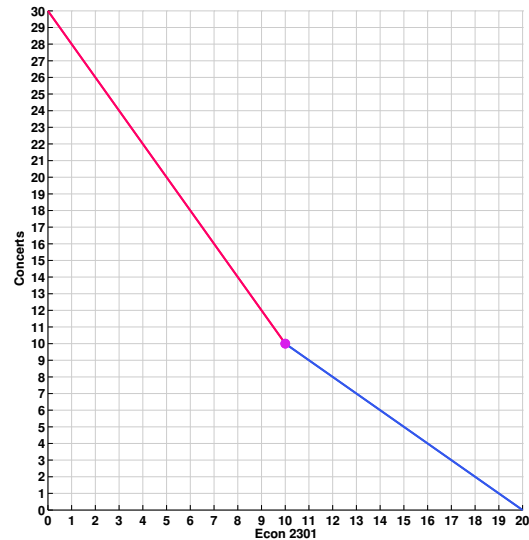


Figure 1.

Producer's Trade-Off While both Katy Perry and I can prepare one lecture in the *same* two hours, I'm a *better* instructor than her when it comes to PPF. In what sense? (Hint: It is not the absolute length of time required but the opportunity cost that matters when identifying the production constraint).

Producer's Trade-Off How is Katy Perry's opportunity cost of a concert cheaper than mine? Wouldn't it cost a lot more to sign a contract with her than with me?

Producer's Trade-Off Use the same Katy Perry example in class and update the PPC after I got a steroid shot and can prepare (probably very moody but nonetheless) one lecture in just an hour rather than in two hours. (Hint: The easiest way is to plot the maximum number of concerts first, then add the lectures one by one while throwing away the concerts by the appropriate amount, till one of them fully switches, and then keep on adding the lectures but now throwing away the concerts by a different amount till you hit the x -axis).

Producer's Trade-Off Refer to the wheat example. Explain why you would die next year when you go for the bottom right point on the PPC.

Producer's Trade-Off Refer to the wheat example. Explain why your PPC won't expand far in the future if you keep choosing the myopic combination as opposed to the far-sighted combination.

Trade-Off What does the slope of a budget line and a PPC have in common?

ON 2/3/15

Producer's Trade-Off Explain why we would be better off letting not just me but also Katy Perry teach economics when we can trade with Lady Gaga.

Producer's Trade-Off Explain why we are exporting Econ 2301 and importing concerts, not the other way around.

CHAPTER 3

Market Is the air travel market perfectly competitive? If not, which assumption(s) does the market violate?

Demand When tracing the demand curve for cheesecake, can you change the price of cheesecake and tea at the same time?

Demand Ms. Lohan is willing to pay \$15 for the 15th tequila shot and \$100 for the 16th shot. Is her behavior consistent with LOD? Explain.

Demand What is an inverse demand curve?

Demand Price change unfolds two effects. What are they and how do they work?

ON 2/5/15

Demand List five factors that shift demand curve.

Demand Sketch the demand curves of Liz, Jack, Tracy and market represented in table 1.

Demand In table 1, which one of them satisfies the LOD? Explain.

Demand Give an example of an income-inferior good.

Price (\$/ slice)	Liz	Jack	Tracy	Market
10	0	0	10	?
5	2	1	0	?
3	3	6	2	?
1	4	8	1	?

Table 1.

Demand Are the following substitutes or complements to you? Explain.

1. Cheesecakes and tea.
2. White tea and green tea.
3. Homemade bread fresh out of the oven and lousy store-bought bread from a week ago.
4. Left shoe and right shoe.
5. Advil and Tylenol .
6. Single bottles and six-packs of Stella.
7. Nickels and dimes.

Demand Outline the difference between change in demand and change in quantity demanded.

Demand Suppose that the price of a cheesecake dropped and in response, the quantity demanded increased, *ceteris paribus*. Is this change captured by a movement along the current demand curve?

Demand Suppose that the price of a cheesecake did not change but quantity demanded increased in response to an expected price hike. Is this change captured by a movement along the current demand curve?

Supply What is a marginal cost?

Supply If the ongoing price is \$2 a slice in figure 2, how many cheesecakes will be supplied?

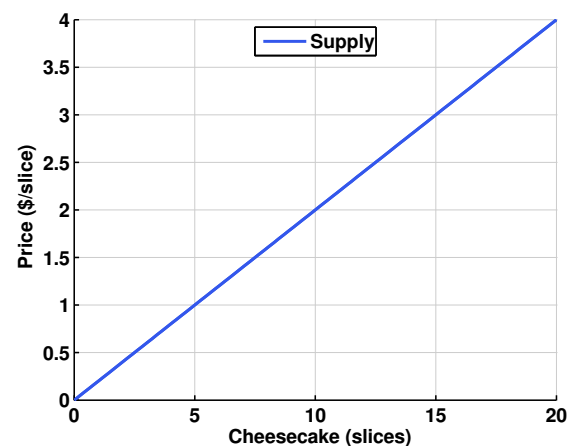


Figure 2.

Supply What is the marginal cost of the 10th cheesecake in figure 2?

Supply List two reasons why LOS holds.

Supply Suppose that United deploys 15 planes on Houston-Chicago route and 5 planes on Houston-Philadelphia route. If the airfare between Houston-Chicago dropped while Houston-Philadelphia airfare remained the same, how does United reallocate their fleet?

Supply Suppose that you are at a gate waiting to board your flight from Minneapolis to Houston on Delta. They sold more tickets than the number of seats on the plane and everyone showed up (overbooking) and asking passengers waiting at the gate (including you) to give up their seats to be rebooked on a later flight in exchange for cash compensation. Who is the supplier of the seats on the plane about to depart and who is the buyer in this case?

Supply In the example above, you have decided to take a later flight in exchange for \$300 compensation from Delta. Is this \$300 your marginal willingness to pay for the seat you are giving up or your marginal cost? Explain.

Supply In figure 2, sketch a new supply curve when \$1 tax is imposed on each slice.

ON 2/12/15

Equilibrium In figure 3, if the ongoing price is \$15 a slice, what is the quantity demanded and supplied? How much excess demand or supply is observed? Is the cheesecake overpriced or underpriced? What do we expect to happen to the ongoing price?

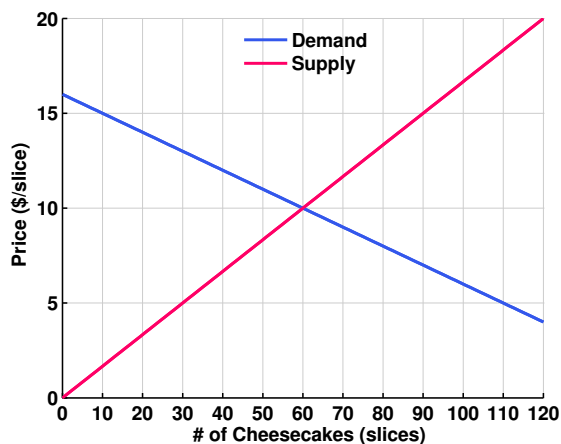


Figure 3.

Equilibrium What if the ongoing price is \$5 a slice in figure 3 instead?

Equilibrium In figure 4, if the first cheesecake is traded, will it benefit Anne and Adam? Explain.

Equilibrium In figure 4, if the eighth cheesecake is traded, will it benefit Henry and Haley? Explain.

Equilibrium In figure 4, if the ongoing price is \$14 for each, who would bake and who would buy cheesecakes?

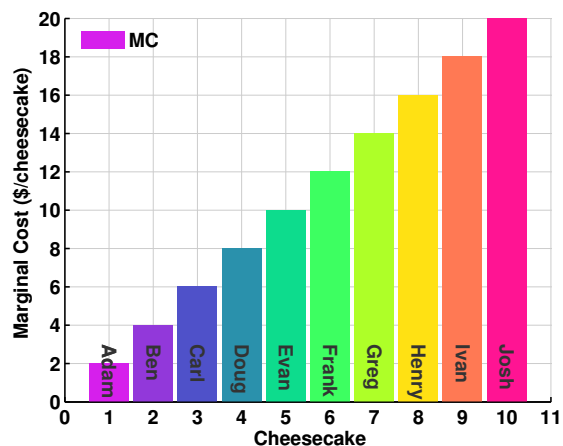
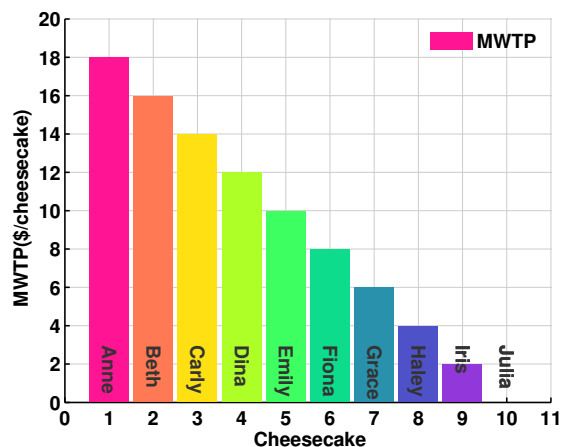


Figure 4.

Equilibrium In figure 4, if the ongoing price is \$14 for each, how much is Carl, Greg and Josh's profit margin?

Equilibrium In figure 4, who should be baking and who should be buying cheesecakes?

Equilibrium At what price is the allocation above realized?

Equilibrium As a consumer, nine cheesecakes sound much better than five cheesecakes. Explain why five cheesecakes are actually *better* than nine cheesecakes in figure 4 (or, to be more specific, explain why the sixth through ninth cheesecake should *not* be traded).

Equilibrium Consider an economy in figure 5. Find the equilibrium.

Equilibrium In figure 5, suppose that a \$3 tax is levied on bakers for each slice sold. How much does it take to bake the fifth cheesecake and break even?

Equilibrium Sketch a post-tax supply curve in figure 5.

Equilibrium In figure 5, if the price remains at the pre-tax equilibrium price even after tax is imposed, how much excess supply or demand would there be?

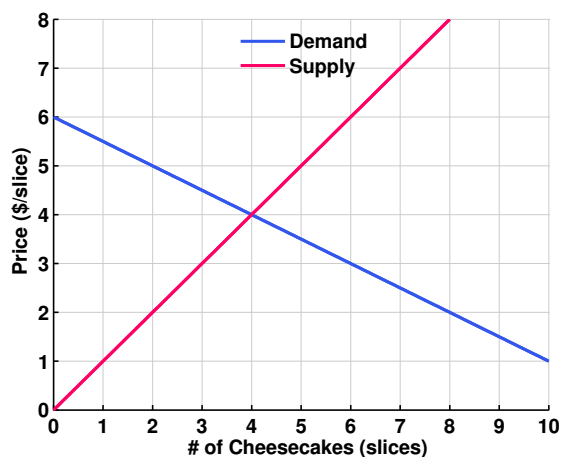


Figure 5.

Equilibrium Find a new equilibrium with tax in [figure 5](#). Explain why the tax raises the equilibrium price.

ON 2/17/15

Equilibrium Explain why we can prevent Grace from getting a cheesecake in [figure 4](#) in equilibrium.

Price Ceiling Suppose that in [figure 4](#), the government introduced a price ceiling to make cheesecakes more affordable. Would 14\$/slice be binding? How about 4\$/slice? Explain.

Price Ceiling If a \$4 price ceiling is imposed, who are going to buy and who are going to bake in [figure 4](#)? How many cheesecakes will be legally traded in the end?

Price Ceiling It turns out that Dina and Doug could not trade because of the \$4 price ceiling in [figure 4](#). Explain why they couldn't trade and why it is wasteful not to have them trade.

Price Ceiling Suppose that Grace ended up getting a cheesecake but Beth did not when the \$4 price ceiling is imposed. Explain how it happened, why it is not fair, and how it *won't* happen under market equilibrium.

Equilibrium Consider a labor market represented in [figure 6](#). Who is on the demand side?

Equilibrium What is the equilibrium in [figure 6](#)?

Price Floor What is the lowest price floor that is binding in [figure 6](#)?

Price Floor Suppose that the minimum wage of \$15/hour is imposed in [figure 6](#). How many workers will lose their job because of the minimum wage?

Price Floor Why can't the 40th firm hire the 40th worker in [figure 6](#) when the minimum wage is in effect? Why this *won't* happen under market equilibrium?

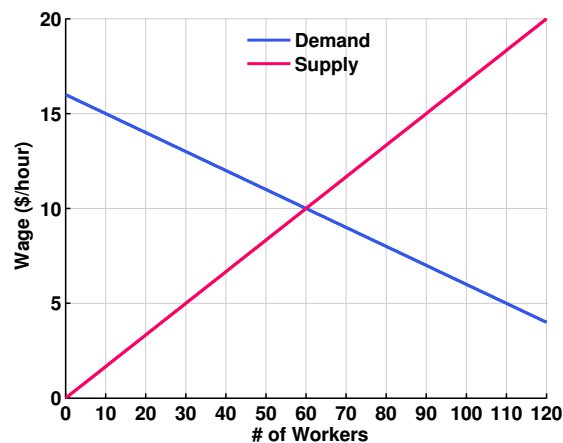


Figure 6.

CHAPTER 24

GDP Suppose that US produced 50 cheesecakes and 5 cars yesterday, whereas Germany produced 5 cheesecakes and 50 cars. Why can't we use the sum of the number of products (i.e., 55 each) as a representative of these countries economic performance level? (Hint: There are two reasons).

ON 2/19/15

GDP Why is GDP measured in US dollar but not in the volume of the output produced?

GDP Why is it misleading to use the *current* value of the output to represent the economy's performance over the years?

GDP Consider an economy described in [table 2](#). Take 2014 as your base year and complete the table. You can compute the growth rate by

$$\frac{\text{following year's value} - \text{current year's value}}{\text{current year's value}} \cdot 100.$$

For instance, the output growth between 2013 and 2014 is given by

$$\frac{10 - 5}{5} \cdot 100 = 100\%,$$

as I have already filled in [table 2](#). Inflation rate is just the growth rate of the price level by the way.

GDP In [table 2](#), between nominal and real GDP growth rates, which one coincides with the output growth and thus, is better suited to represent the economy's actual growth?

GDP Solve the second half of problem #2 on p.545.

Unemployment Why is unemployment bad for the economy as a whole?

Unemployment Consider a two-producer, two-product economy described in [table 3](#) (the same one we used in class). Sketch the PPF of this economy with lectures

Year	Output	Output Growth	Price Level	Inflation Rate	Nominal GDP	Nominal GDP Growth	Real GDP	Real GDP Growth
2013	5	NA	2	NA		NA		NA
2014	10	100%	1					
2015	15		4					

Table 2.

	Econ 2301	Concerts	Hours Worked
Katy Perry	1 lecture / 2 hours	1 concert / 1 hour	20
Me	1 lecture / 2 hours	1 concert / 2 hours	20

Table 3.

on the horizontal axis and concerts on the vertical axis. Pick the kink, i.e., 10 lectures and 20 concerts on the PPF (recall that any point on the PPF is attainable *and* efficient). Suppose that Katy has lost her job. Can you stay on the kink? If not, where on the graph would you end up with?¹ How does unemployment harm the economy’s efficiency? Explain.

Inflation Suppose that Liz has \$100. Right now, a cheesecake is \$1 a slice, which gives her a purchasing power of 100 slices. She deposited her \$100 in her checking account at 30 Rock Bank, which bears no interest. The economy experienced a galloping inflation right after she deposited her cash and next day, the price of cheesecake skyrocketed to \$100 apiece. If she withdrew her deposit at this point, how much would her purchasing power be?

Inflation Suppose that Kenneth took out an interest-free loan of \$100 from 30 Rock Bank, with which, he bought 100 cheesecakes. The same inflation happened as above right after he bought his cheesecakes. To pay off his debt next day, how many cheesecakes does he have to sell?

Deflation In the two examples above, suppose instead that a runaway deflation took place and the price of cheesecake becomes just 1 cent a slice. Between Liz and Kenneth, who would be the winner? (Hint: Note that Liz is a creditor and Kenneth is a debtor in this example).

Deflation List two reasons why deflation is bad.

Financial Institutions Which line in figure 7 is the consumption stream when there are financial institutions?

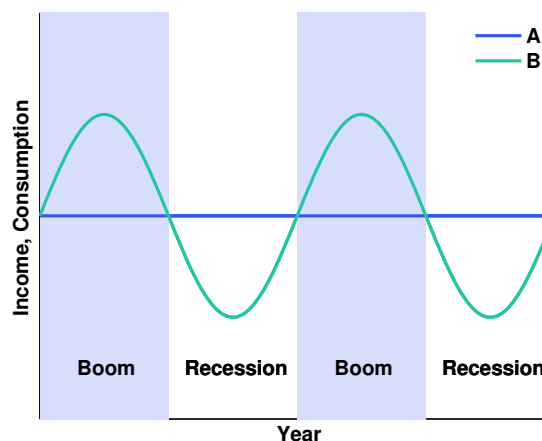


Figure 7.

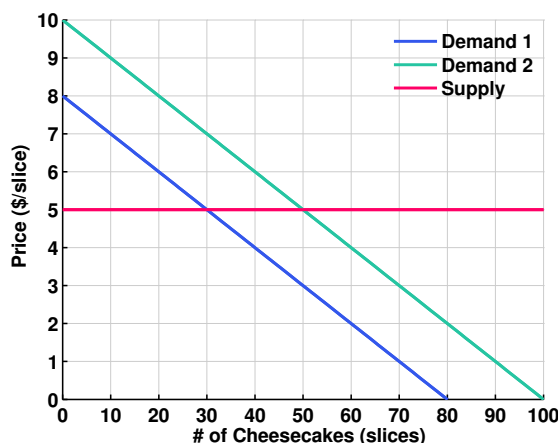


Figure 8.

ON 2/24/15

Sticky Price Suppose that the demand and supply of cheesecake are represented in figure 8. Does the change from Demand 1 to Demand 2 represent a negative demand shock?

Sticky Price In figure 8 if demand switches from Demand 1 to Demand 2, how much of excess demand or supply will there be?

Sticky Price Can the price adjust to clear the excess found in the previous question?

Sticky Price Would the change from Demand 1 to Demand 2 in figure 8 raise or reduce the unemployment? Explain.

Sticky Price Suppose that UPS and FedEx are competing in parcel delivery in the United States. Their revenue is represented in table 4 (in billion dollars) for when they either maintain their current shipping rates or reduce rates. Which cell will return the largest sum of revenue, and what is the most likely outcome when they cannot negotiate with each other?

¹For example, let’s say that I did not change my combination of lectures and concerts.

		UPS	
		Drop	Hold
FedEx	Drop	3, 4	9, 2
	Hold	1, 10	7, 8

Table 4.

CHAPTER 25

GDP State the three equivalent definitions of GDP.

GDP Explain, in words, why the production view of GDP always comes to the same number to the income view of GDP.

GDP Complete table 5.

GDP In table 5, from the income point of view, how much is GDP?

GDP In table 5, from the production point of view, how much is GDP?

GDP in table 5, from the value added point of view, how much is GDP?

GDP Figure 9 represents an economy where fishery provides tuna to a bar Sub Zero, where they serve sushi. Complete the table.

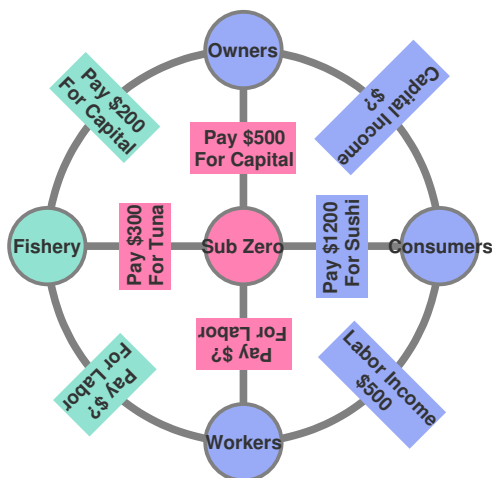


Figure 9.

ON 2/26/15

GDP Figure 10 represents an economy where Wile E. Coyote provides his labor and capital provided by Acme to catch roadrunners, which are turned into scrumptious burritos at Freebirds World Burrito.² One of the numbers in the figure is off. Which one is it and why is it off?

²I think by freebirds, they mean more like chicken than roadrunners.

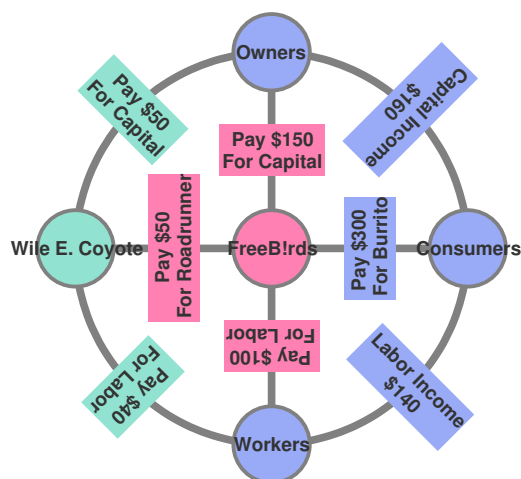


Figure 10.

GDP Complete table 6. How much is the GDP in this economy?

GDP List two things that look like part of GDP but actually not.

Four-Way Split What are four components of GDP and why do we split it in four ways?

Four-Way Split What is depreciation allowance and why is it part of investment?

GDP Deflator Define GDP deflator and explain why it is defined in the way it is.

Four ☺'s Consider following two economies:

Economy A Wile E. Coyote caught Roadrunner and sold it to Yosemite Sam's diner for \$20. Yosemite Sam made stew with it and sold it to Tasmanian Devil for \$30.

Economy B Wile E. Coyote caught Roadrunner and sold it to Yosemite Sam for \$20. Yosemite Sam made stew with it and ate it by himself.

How much is the GDP in each economy and in which economy is Yosemite Sam's contribution underrepresented in terms of GDP?

Four ☺'s Consider following two economies:

Economy A Dr. House lives in his house and Dr. Lahiri lives in her house.

Economy B Dr. House lives in Dr. Lahiri's house and pays her \$2,000 each month as a rent. Dr. Lahiri lives in Dr. House's house and pays him \$3,000 each month as a rent.

How much is the GDP in each economy and in which economy are housing services underrepresented in terms of GDP?

Firm	Intermediate Goods	Output	Revenue	Value Added	Labor Income Paid	Capital Income Paid
Ranch	N/A	Cream Cheese	\$500	\$500	\$50	\$?
Dairy Queen	Cream Cheese	Cheesecake	\$800	\$300	\$?	\$200

Table 5.

Firm	Intermediate Goods	Output	Revenue	Value Added
Cotton farm	N/A	Cotton	\$100	
Spinning Co.	Cotton	Yarn	\$200	
Textile Co.	Yarn	Fabric	\$500	
PacSun	Fabric	Clothes	\$2,000	

Table 6.

Four ☺'s What is the hypothetical rent in Economy A above called and what does it represent?

Four ☺'s Consider following two economies:

Economy A Paper mill produces \$1,000 worth of paper and clean air.

Economy B Paper mill produces \$1,000 worth of paper and dirty air.

How much is the GDP in each economy and in which economy is paper mill's production technology under-represented in terms of GDP?

ON 3/5/15

Four ☺'s Suppose you worked from 9 to 5 and baked 100 cheesecakes yesterday. Today, you were productive and baked 100 cheesecakes by noon and called it a day. Can GDP tell yesterday from today? If so, how? If not, why not?

Four ☺'s Why can't GDP address income inequality? (Hint: Cite one of the three definitions).

CHAPTER 27

Business Cycles Explain why durables are more susceptible to recessions than non-durables.

Unemployment Consider the two cities, Beaumont and its evil twin city, Fauxmont as represented in table 7. What are each economy's total population and unemployment rate?

Beaumont		Fauxmont
60,000	Not in Labor Force	65,000
40,000	Employed	40,000
10,000	Unemployed	5,000

Table 7.

Unemployment Despite its unemployment rate, Fauxmont may possibly in a severer recession than Beaumont. Under what condition would Fauxmont's economy worse than Beaumont?

ON 3/10/15

Unemployment Define the natural rate of unemployment and potential GDP.

Unemployment State Okun's law.

Unemployment Suppose that the natural rate of unemployment is 5% and actual unemployment rate is 7%. How much is cyclical unemployment rate? If economy follows Okun's law and the actual GDP is 1 trillion dollars, how much is the lost GDP?

Inflation List three drawbacks of GDP deflator.

Inflation Why was CPI higher than GDP deflator during energy crises of 1970's?

Inflation List two reasons behind inflation and explain how they develop.

Inflation Suppose that your nominal income grew by 3% but inflation was 2%. What is the change in your real income?

Inflation What is an inflation premium?

ON 3/12/15

Inflation Explain why cost-push inflation tends to be short-lived.

CHAPTER 28

C Define consumption function (schedule).

C What are MPC and MPS?

C Using the PPF over wheat this year and next year, explain why a high MPC implies a myopic choice and a low MPC implies a far-sighted choice.

- C If an economy's MPC is one, there is a good chance that everyone in this economy will die next year. Why?
- C Suppose that MPC is .7. By how much will consumption grow if income grows by \$1 or \$2?
- C Suppose that last year's GDP Y was 16 trillion dollars and consumption level C was 12 trillion dollars. Explain why $.75 (= \frac{12}{16} = \frac{C}{Y})$ is *not* an MPC.
- C In the question above, what else do you need to compute the MPC? (Hint: You'll need two more pieces of information).
- C Explain why MPC does not cut below zero or go above one.
- C Explain why MPC and MPS always add up to one.
- C Consider a consumption function represented in [table 8](#). What are MPC and MPS?

GDP Y	Consumption C
999	799.8
1000	800
1001	800.2

Table 8.

- C Consider a consumption function represented in [table 9](#). What are MPC and MPS?

GDP Y	Consumption C	C with tax break
305	205	220
330	225	240
355	245	260
380	265	280
405	285	300

Table 9.

- C Consider savings level represented in [table 10](#). What are MPC and MPS?

GDP Y	Savings
305	85
330	90
355	95
380	100
405	105

Table 10.

- C With GDP Y on the horizontal axis and consumption level C on the vertical axis, sketch the consumption functions described in [table 9](#) for before and after a tax break. What is the value of the slope of your lines?
- C Find the MPC and MPS in [figure 11](#) and compute the consumption level when $Y = 9$ and 10.

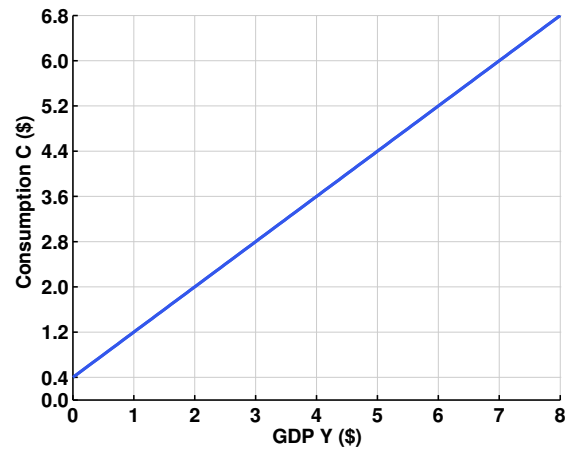


Figure 11.

- C Find the MPC and MPS in [figure 12](#) and compute the consumption and savings levels when $Y = 2001$.

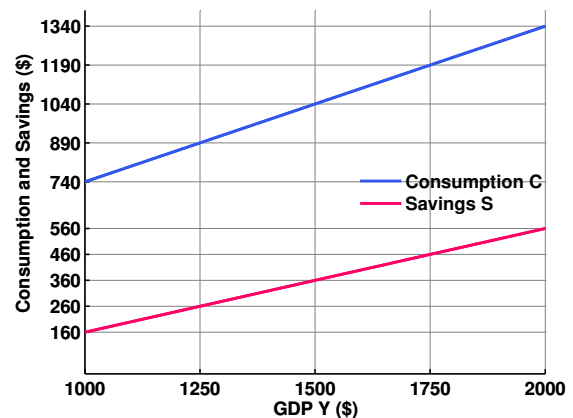


Figure 12.

- I Explain why investment is inversely related to interest rate.
- I Complete [table 11](#).
- I With the number of projects undertaken on the horizontal axis and interest rate on the vertical axis, sketch the investment function from [table 11](#).
- I Explain, in words, why Project B will not be undertaken when the ongoing interest rate is 30%.

ON 3/24/15

- I Consider financing schemes represented in [table 12](#) to undertake an investment plan that has a ROR of 5%. The interest rate is 10%. Complete the table and explain why there is a gap between accounting and economic costs of investment.

Project ROR (%)	A	B	C	D	E	F	# of Projects Undertaken
Interest Rate (%)							
40	no-go	no-go	no-go	no-go	no-go	no-go	0
30	go	no-go					1
20							
10							
5							
0							

Table 11.

	Self financing	External financing
Out-of-pocket expense	20K	0
Borrowed funds	0	20K
Accounting cost	20K	22K
Revenue	21K	21K
Accounting profit	1K	-1K
Economic cost	?	22K
Economic profit	?	-1K

Table 12.

I Suppose that your firm has enough cash at hand to self-finance your investment in table 12. Explain why accountants and economists will have split opinions on whether you should undertake the investment.

I Consider an another investment plan, which costs \$300K with a 15% ROR. Assuming that the ongoing interest rate is 20% on loans, complete the table in table 13.

	Self financing	External financing
Out-of-pocket expense		
Borrowed funds		
Accounting cost		
Revenue		
Accounting profit		
Economic cost		
Economic profit		

Table 13.

I What is the interest rate below which it makes economic sense to self-finance the investment in table 13?

I What is the interest rate below which it makes accounting sense to self-finance the investment in table 13?

I Suppose that your airline’s fleet size was 300 aircraft at the beginning of 2013. You bought 50 aircraft and retired 30 aircraft by the end of 2013. In 2014, you bought 20 aircraft and retired 30 aircraft. What are flow and stock variables in this case, and what is your current fleet size at the beginning of 2015?

Multiplier Effect Suppose that the economy’s MPC is .6. If the government expenditure increases by \$500M, how much would the first recipients spend on consumption?

Multiplier Effect In the previous example, how much would the second and third recipients would add to GDP?

Multiplier Effect By how much does GDP increase in the end in the previous example?

Multiplier Effect What if the MPC is .4 in the example above?

Multiplier Effect Complete table 14. Explain how multiplier

MPC	Multiplier
0	
.25	
.5	
.75	
.9	
.99	
.999	

Table 14.

is related to MPC and explain why in words.

ON 3/26/15

CHAPTER 30

AD Explain why LOD does not apply to AD.

AD What is real balances effect?

AD Why does money demand increase when the price level goes up?

AD Why is the opportunity cost of holding a \$20 bill *not* \$20?

AD What is the price of holding your asset in the form of money rather than bonds?

AD Why is money demand decreasing in interest rate?

AD Consider money market represented in figure 13(a). Suppose that the current money demand is *Money Demand B*. What is the equilibrium?

AD If the price level goes up, will money demand change? If so, which line in figure 13(a) will be the new money demand?

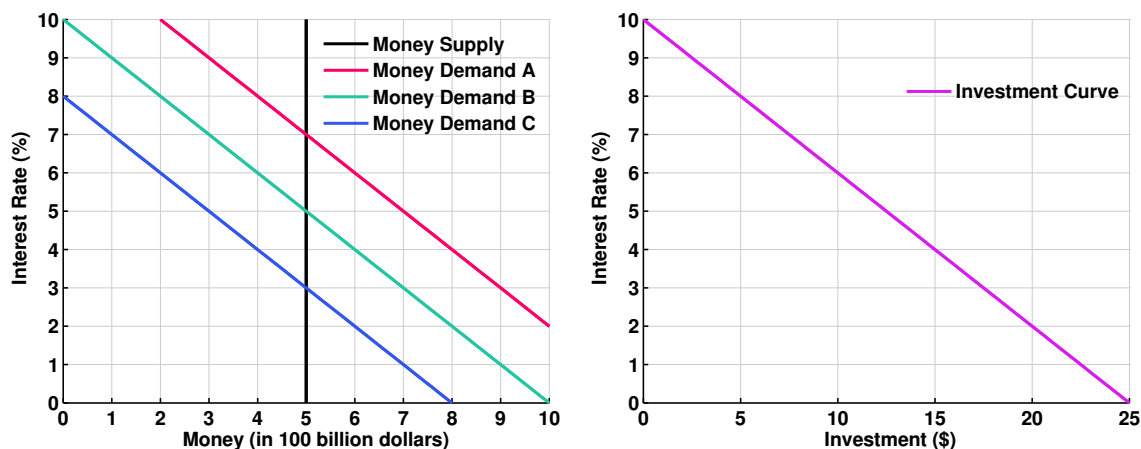


Figure 13.

AD If the interest rate did not change after the price level increase in figure 13(a), how much of excess demand for money would there be? Would the excess demand put upward or downward pressure on the interest rate?

AD What is the new equilibrium after the change in money demand in figure 13(a)?

ON 3/31/15

AD How does an increase in equilibrium interest rate lead to a lower GDP?

AD How does the investment in figure 13(b) respond to the change in figure 13(a)?

AD Outline foreign purchases effect.

AD How do net exports shift AD curve? (Hint: There are two ways).

AS Why does AS change its shape depending on the time frame in consideration, while AD does not.

AS Why does input price usually take more time to change than output price?

AS Suppose $Y < Q_F$. Explain why output can grow without much inflation.

AS Suppose $Y > Q_F$. Explain why output growth comes with larger inflation than the previous question.

AS Is cyclical unemployment rate positive or negative when $Y > Q_F$?

AS Explain why long-run AS stands upright.

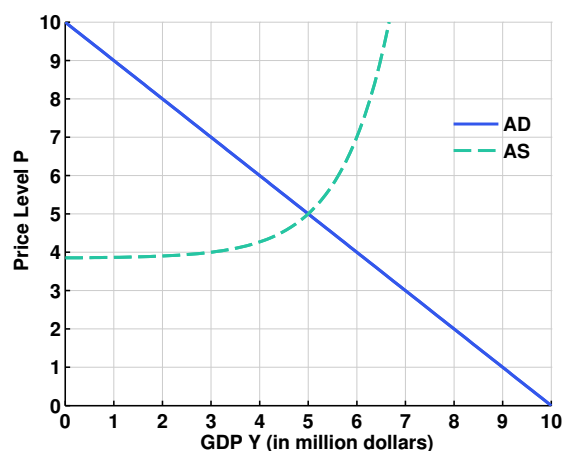


Figure 14.

ON 4/2/15

Equilibrium In figure 14, what are the equilibrium GDP and price level?

Equilibrium In figure 14, suppose that US dollar gets weaker. How would the equilibrium change?

Equilibrium In figure 14, suppose that AD curve shifts to the right and to the left by the same 3 million dollars. How much are the resulting inflation and deflation?

Equilibrium Explain the four reasons behind the downward stiffness of the price level.

ON 4/9/15

31 FISCAL POLICY, DEFICIT AND DEBT

31.1 Active Policy Define active fiscal policy.

- 31.2 Active Policy** Define expansionary and contractionary fiscal policies.
- 31.3 Active Policy** Suppose that the government expenditure went up by 5 billion dollars, while tax revenue dropped by 3 billion dollars. Is this policy expansionary? What are government deficit and government surplus through these changes in government expenditure and tax revenue?
- 31.4 Active Policy** Suppose that the government expenditure went up by 5 billion dollars, while tax revenue went up by 3 billion dollars. Is this policy expansionary? What are government deficit and government surplus through these changes in government expenditure and tax revenue?
- 31.5 Active Policy** Suppose that GDP to be recorded at the natural rate of unemployment is \$800 but the actual (recorded) GDP is \$740. How much is the GDP gap?
- 31.6 Active Policy** Suppose that there are \$60 of a GDP gap to be filled. If $MPC = \frac{3}{4}$, how much increase in G is needed to fill the gap?
- 31.7 Active Policy** In the previous example, how much reduction in T is needed to fill the gap?
- 31.8 Active Policy** In the previous example, which one(s) of the following combinations will fill the gap?
1. $\Delta G = 3, \Delta T = 8$
 2. $\Delta G = 3, \Delta T = 16$
 3. $\Delta G = 6, \Delta T = 6$
 4. $\Delta G = 6, \Delta T = 12$
- 31.9 Active Policy** Suppose that there are \$60 of a GDP gap to be filled. If $MPC = \frac{1}{2}$, how much increase in G is needed to fill the gap?
- 31.10 Active Policy** In the previous example, how much reduction in T is needed to fill the gap?
- 31.11 Active Policy** In the previous example, which one(s) of the following combinations will fill the gap?
1. $\Delta G = 20, \Delta T = 20$
 2. $\Delta G = 20, \Delta T = 40$
 3. $\Delta G = 10, \Delta T = 40$
 4. $\Delta G = 10, \Delta T = 50$
- 31.12 Active Policy** Suppose that there are \$60 of a GDP gap to be filled. If $MPC = \frac{1}{3}$, how much increase in G is needed to fill the gap?
- 31.13 Active Policy** In the previous example, how much reduction in T is needed to fill the gap?
- 31.14 Active Policy** In the previous example, which one(s) of the following combinations will fill the gap?
1. $\Delta G = 20, \Delta T = 40$
 2. $\Delta G = 20, \Delta T = 60$
 3. $\Delta G = 30, \Delta T = 30$
 4. $\Delta G = 30, \Delta T = 40$
 5. $\Delta G = 40, \Delta T = 0$
 6. $\Delta G = 40, \Delta T = 20$

ON 4/14/15

- 31.15 Active Policy** What fiscal policy does a proponent of a small government take during recession?
- 31.16 Passive Policy** Define built-in stabilizer.
- 31.17 Passive Policy** Explain why it is hard to tell active and passive policy apart.
- 31.18 Passive Policy** Define full-employment deficit.
- 31.19 Passive Policy** Consider fiscal position represented in figure 15. Suppose that potential GDP is \$100. Com-

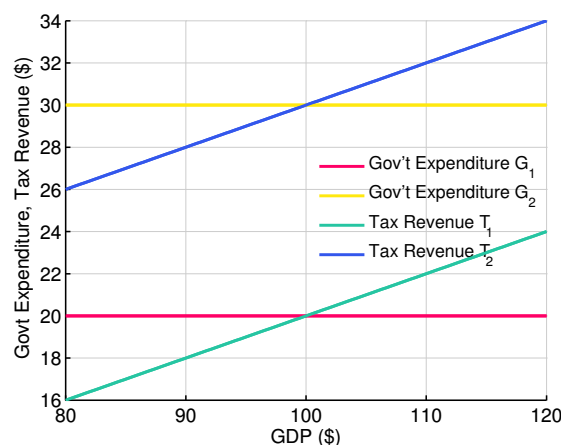


Figure 15.

- plete table 15.
- 31.20 Five Ⓞ's of Fiscal Policy** List five drawbacks of fiscal policy.
- 31.21 Five Ⓞ's of Fiscal Policy** What are three lags of fiscal policy?
- 31.22 Five Ⓞ's of Fiscal Policy** Why does balanced budget requirement for local government negate the fiscal expansion effort at the federal level?

ON 4/16/15

- 31.23 Five Ⓞ's of Fiscal Policy** Outline crowding-in effect.
- 31.24 Five Ⓞ's of Fiscal Policy** Outline crowding-out effect (this one is much more involved than the previous question just fyi).
- 31.25 Five Ⓞ's of Fiscal Policy** Consider investment function represented in figure 16. Suppose that current investment function is represented by line A. If investment function shifts to line B, is it because of a decrease in GDP? Explain.
- 31.26 Five Ⓞ's of Fiscal Policy** In figure 16, suppose that economy started with line A with the interest rate of 2%. If the expansionary fiscal policy raised the interest rate to 4%, how much does it crowd out the investment?

Current Y	G	T	$G - T$	Full-employment deficit	Cyclical deficit	Desired policy	Active policy
90	G_1	T_1					
100	G_1	T_1					
110	G_1	T_1					
90	G_1	T_2					
100	G_1	T_2					
110	G_1	T_2					
90	G_2	T_1					
100	G_2	T_1					
110	G_2	T_1					

Table 15.

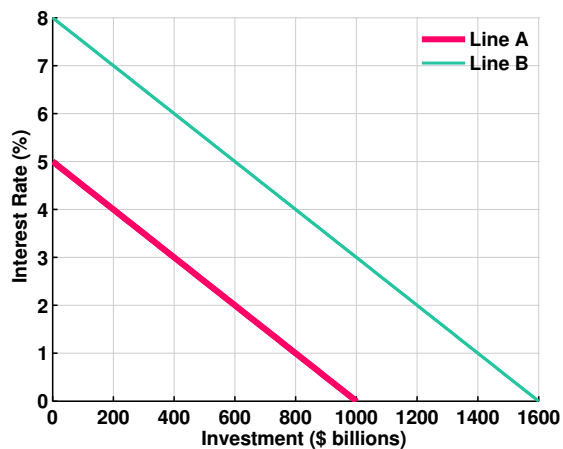


Figure 16.

- 31.27 **Five ☉'s of Fiscal Policy** In the previous question, suppose that the same expansionary policy also raised GDP, which push the line A to line B. How much does it crowd in the investment, and what is the net increase in investment?
- 31.28 **Five ☉'s of Fiscal Policy** In the previous two questions, what if the original interest rate was 1% rather than 2%?
- 31.29 **Government Debt** If the US government were to go bankrupt, it would do so for different reasons than consumer bankruptcy. List two aspects of government and consumer debt and compare them with each other.
- 31.30 **Government Debt** Suppose that US produces 16 trillion dollars of output each year and Treasury bond's interest rate is 5% over a 30-year period.
1. If there is no G , what is the GDP in 2015 and 2045?
 2. If $G = 2$ trillion in 2015, all of which is tax-financed, what is the GDP in 2015 and 2045? In 2015, how much of GDP will be $C + I$?
 3. If $G = 2$ trillion in 2015, all of which is debt-financed through a Treasury bonds, what is the GDP in 2015 and 2045? In 2045, how much of GDP will be $C + I$?

- 31.31 **Government Debt** In the previous question, does GDP and by extension, the purchasing power of future Americans in 2045 change because of the financing option (#2 or #3) current Americans in 2015 took? Explain why the government debt will not be a burden on the future generation.
- 31.32 **Government Debt** In the previous question, what is the opportunity cost of G in option #2 and #3?

ON 4/21/15

32 MONEY, BANKING AND FINANCIAL INSTITUTIONS

- 32.1 **Overview** What are two channels through which goods market is connected to financial markets.
- 32.2 **Money** List three functions of money.
- 32.3 **Money** Explain why freshly baked potatoes cannot be used to defer purchasing power to a later date.
- 32.4 **Money** Can we use freshly baked potatoes as a unit of measurement?
- 32.5 **Money** Why do money and T-bills coexist when T-bills can double the roles money plays?
- 32.6 **Money** Define token money.
- 32.7 **Money** Explain why currency cannot serve its intended purpose if its face value is *lower* than its intrinsic value.
- 32.8 **Money** Explain why currency serves its intended purpose even when its face value is higher than its intrinsic value. (Hint: There are three reasons).
- 32.9 **Money** Define seignorage.
- 32.10 **Money** Is seignorage temporary or permanent? Explain.
- 32.11 **Money** Suppose that the price level today is 2 and after inflation, it becomes 200 a year from today. What is the value V of money in each case? How is inflation related to the value of money?

ON 4/23/15

- 32.12 **Money** What is the difference between M1 and M2?
- 32.13 **Fed** Why do Federal Reserve Banks' district boundaries not coincide with state borders?
- 32.14 **Financial Crisis** Define subprimes.
- 32.15 **Financial Crisis** Why did investors put in their fund into subprimes up to 2006 despite their risk?
- 32.16 **Financial Crisis** Define MBS.
- 32.17 **Financial Crisis** Define CDO.
- 32.18 **Financial Crisis** Suppose that there are two MBS's, with a 4% chance of default each. Consider a CDO that covers the loss from MBS unless both MBS's default. What is the chance of losing investment if MBS's are
 - perfectly correlated, or
 - perfectly uncorrelated?
- 32.19 **Financial Crisis** How did CDO play down the risk associated with MBS's?

Assets		Liabilities and Net Worth	
#1 Pre-Loan Balance			
Actual Reserves	200	Checkable Deposits (Jack)	200
(Required Reserves)	(?)		
(Excess Reserves)	(?)		
#2 Granting a Loan to Liz			
Actual Reserves	200	Checkable Deposits (Jack)	200
(Required Reserves)	(?)		
(Excess Reserves)	(?)		
Loan	?	Checkable Deposits (Liz)	160
#3 Liz Cashes in			
Actual Reserves	?	Checkable Deposits (Jack)	200
(Required Reserves)	(?)		
(Excess Reserves)	(?)		
Loan	?	Checkable Deposits (Liz)	0
#4 Liz Pays off and Loan Written off			
Actual Reserves	216	Checkable Deposits (Jack)	200
(Required Reserves)	(?)		
(Excess Reserves)	(?)		
Loan	0	Checkable Deposits (Liz)	0
		Internal Reserves	16

Table 16. Granting a Loan (Simplified)

33 MONEY CREATION

- 33.1 **Fractional Reserve System** Why did merchants barely cash in the IOU (receipt) issued by goldsmiths?
- 33.2 **Fractional Reserve System** Does fractional reserve system work without a chain of trust? Explain.
- 33.3 **Fractional Reserve System** What exactly is it that Federal Reserve owes the banknote holders?
- 33.4 **Balance Sheet** Define assets and liabilities.
- 33.5 **Balance Sheet** Is a bank loan part of a bank's assets or liabilities? Explain.

ON 4/28/15

- 33.6 **Bank** Suppose that checkable deposit balance is \$100,000 and required reserves are \$10,000. What is the reserve ratio in this case?
- 33.7 **Bank** If excess reserves are \$20,000, required reserves are \$10,000 and reserve ratio is 20%, how much checkable deposit balance does a bank have?
- 33.8 **Bank** In the previous example, what is the maximum amount of loan the bank can make?
- 33.9 **Bank** Suppose that Liz bought a cheesecake for \$20 from Kenneth and wrote him a check from her account in Lemon Bank. Kenneth deposited the check at Kroger Bank. Outline balance sheets of Lemon Bank, Kroger Bank and Federal Reserve Bank before and after check is cleared.

- 33.10 **Bank** Assume that there is a bank called 30 Rock Bank and it is the only bank in operation in the economy, where the central bank sets the reserve ratio at 20%. 30 Rock Bank is going to make a one-year loan to Liz on a 10% interest, who uses it to finance her TV show. Bank's financial positions are described in table 16. In #1, how much are required and excess reserves?
- 33.11 **Bank** What is the maximum amount that 30 Rock Bank can loan out in table 16?
- 33.12 **Bank** When 30 Rock Bank increases Liz's checking account balance, what does the bank receive from Liz in return in table 16?
- 33.13 **Bank** Complete step #3 in table 16.
- 33.14 **Bank** In table 16 step #1 and #3 are the same on the ground of solvency but they are quite different from other perspective. On what ground? Explain.

ON 4/30/15

- 33.15 **Bank** Complete step #4 in table 16.
- 33.16 **Bank** Would increased reserve ratio encourage or discourage a bank's ability to make loans? Explain.
- 33.17 **Money Multiplier** Follow through the in-class example by completing step #10 through #12 (and more if you like).
- 33.18 **Money Multiplier** Redo the in-class example with reserve ratio swapped with 20%.
- 33.19 **Money Multiplier** Redo the in-class example with initial Fed's T-bill purchase of \$200 rather than \$100.

33.20 **Money Multiplier** Compute money multiplier when reserve ratio is 10%, 20% and 30%.

33.21 **Money Multiplier** Explain in words why reserve ratio and money multiplier are inversely related.

34 INTEREST RATES AND MONETARY POLICY

34.1 **Money Market** List two reasons behind money demand and explain how they affect money demand.

34.2 **Money Market** Which of the two reasons explains why money demand curve is downward-sloping in figure 17?

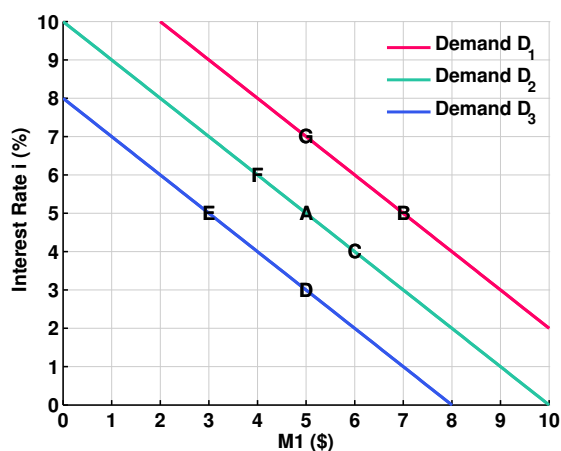


Figure 17.

34.3 **Money Market** What is the opportunity cost of holding M1?

34.4 **Money Market** Which one of the two reasons would explain the movement from A to B, and A to C in figure 17?

34.5 **Money Market** Suppose that money demand is D_2 in figure 17 and current interest rate is 5%. If GDP alone changes but interest rate does not, which point among A through G in figure 17 would you end up with?

34.6 **Money Market** In the previous question, if the interest rate alone rises ceteris paribus, which point would you end up with?

ON 5/5/15

34.7 **Money Market** Consider money and T-bill market in figure 18. If money supply is currently at Money Supply 2, what is the equilibrium interest rate?

34.8 **Money Market** In the previous question, what is the portfolio?

34.9 **Monetary Policy** Suppose that the Fed shifted money supply to Money Supply 1 in figure 18. Is this an expansionary or contractionary monetary policy?

34.10 **Monetary Policy** Write the Fed's balance sheet in the previous question.

34.11 **Monetary Policy** Suppose that money supply decreased from Money Supply 2 to 1 in figure 18. If the interest rate did not change, how much of excess supply or demand for money would there be? Would it put an upward or downward pressure on the interest rate?

34.12 **Monetary Policy** Is the change from Money Supply 2 to 1 in figure 18 increase or decrease GDP?

34.13 **Monetary Policy** Would the change from Money Supply 2 to 1 in figure 18 increase or decrease the supply of T-bill in the market?

34.14 **Bond Price** Suppose that there is a T-bill that pays \$1,200 a year from today. Call this bond T-bill A. Compute the annual interest rates on T-bill A when the current bond price P is \$800, 960, 1000 and 1200.

34.15 **Bond Price** Plot the corresponding interest rates to the current bond prices in the previous question in ??.

34.16 **Bond Price** Suppose that demand for T-bill A is represented in figure 19(b). Sketch the demand for T-bill A using bond prices rather than the interest rate in figure 19(c). (Compare figure 19(c) to your T-bill demand in your lecture note and observe that they are both downward-sloping).

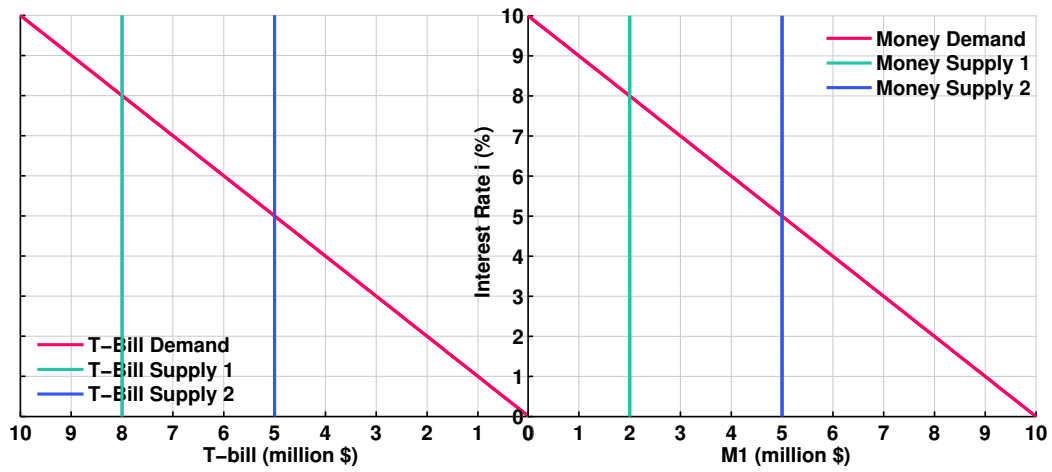
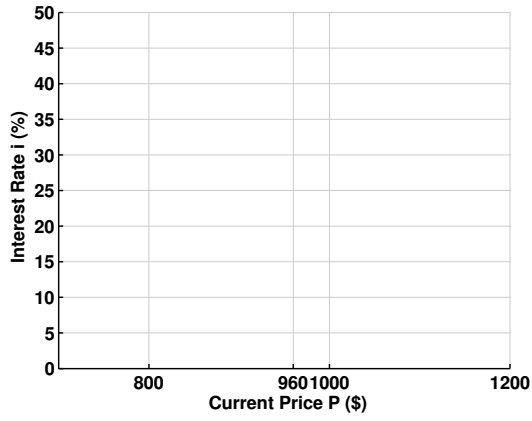


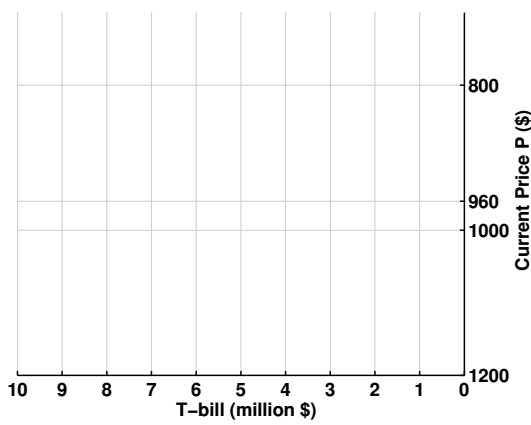
Figure 18.



(a)



(b)



(c)

Figure 19.