

Econ 3 Final Study Guide Explained Solutions

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The final review session will be in WLH 2005 Thursday, June 11 at 5 pm.

The exam will cover Ch. 16-28 in Frank and Bernanke.

Questions will be evenly distributed across chapters.

Note this study guide covers only sample questions from Ch. 25-28.

I will attempt to cover the entire spectrum in our review.

June 9, 2009

Chapter 25

4. All else equal, an increase in the rate of inflation [?] planned spending and [?] short-run equilibrium output.

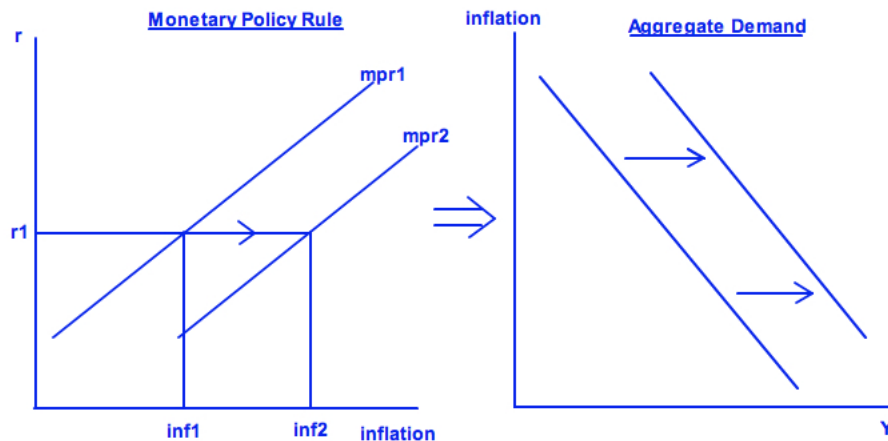
C. decreases; decreases

Ceteris paribus ("all else equal," a latin term used popularly by economists), the higher the level of disposable (post-tax) income, the higher consumption will be. When inflation increases, the *real* value of dollars in pockets just decreased, so planned spending does as well. Since two-thirds of planned aggregate expenditure (PAE) is consumption spending, where output $Y = PAE + I_u$, (I_u is unplanned investment, I_p is planned investment, recall $I = I_u + I_p$ and $PAE = C + I_p + G + NX$), a decrease in consumption expenditure caused by an increase in inflation decreases short-run output.

27. If the Federal Reserve raises its target inflation rate, the monetary policy rule [?] and the aggregate demand curve [?].

D. shifts downward to the right; shifts to the right

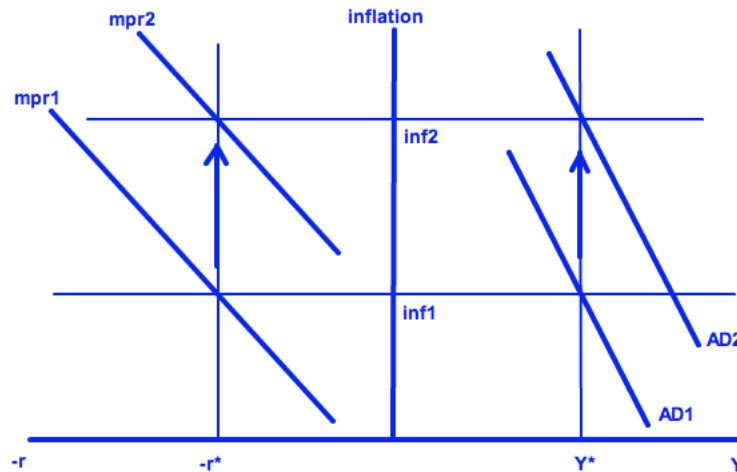
What does it mean when the Fed raises its target inflation rate? It means that for each given real interest rate they would like a higher rate of inflation. Since the monetary policy rule is an upward-sloping line in (π, r) space as below, where π is inflation, that means for every fixed real interest rate r_1 , inflation will increase from $inf1$ to $inf2$. The result is a parallel shift of the entire monetary policy rule curve from $mpr1$ to $mpr2$.



Notice in the picture above I drew a double-lined arrow (\implies) which in mathematical terms means "implies." What do I mean by the shift in the monetary policy rule *implying* a shift in the aggregate demand curve? Since for each real interest rate the inflation rate is now *higher*, this means that for each inflation rate the real interest rate is now *lower*. Since this is the case, the value of investment has decreased, meaning that people will want to save relatively less and spend relatively more.

The result is for each inflation level π , an increase in autonomous expenditure, consumption C and planned investment I_p . Since these are now higher for each π , $Y = PAE + I_u = C + I_p + I_u + G + NX$ will increase for each inflation level π as well. This is exactly the verbal description of a rightward shift of the entire aggregate demand curve.

The second part of this answer was slightly tricky, wasn't it? Note that you can make the problem slightly easier conceptually by flipping around the monetary policy rule picture and drawing both graphs with a shared axis π . If you remember that a rise in the inflation target means an increase in the inflation rate from $inf1$ to $inf2$ for each set $-r^*$ and Y^* , the solution is more immediate. Remember you've got to shift the pictures back around after to get the right answer and that a strict upward movement in the AD curve is the same as a rightward movement.

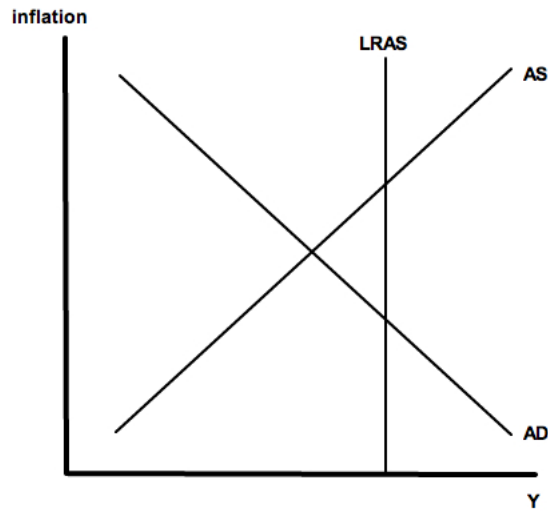


50. When actual output exceeds potential output there is [?] output gap and the rate of inflation will tend to [?].

A. an expansionary; increase

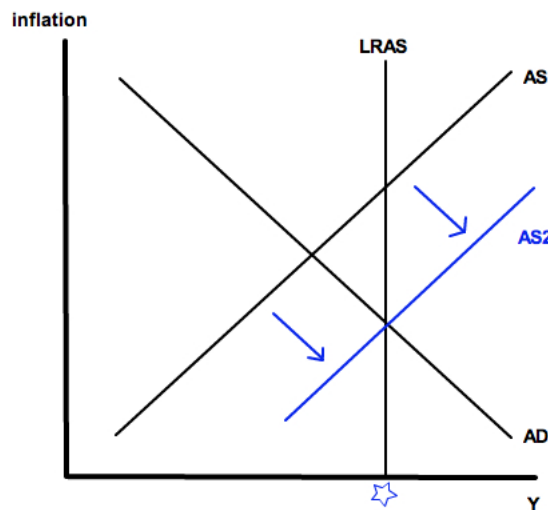
When firms are production above potential output, we call this producing "above capacity." When this happens, the economy is expanding faster than it sustainably can; thus there is an expansionary gap that can not be maintained since output is above potential. Why would firms have been producing above potential? Because aggregate demand exceeded aggregate supply. What do firms do when demand is in excess of supply? They raise prices, which causes inflation.

67. Refer to the figure below. If the Fed does not change its monetary policy rule, long-run equilibrium in this economy



C. will occur when AS shifts downward and to the right

Recall from number 27. above that the Federal Reserve controls aggregate demand, not aggregate supply. Thus, when the Fed doesn't change its monetary policy rule, aggregate supply will be the only curve shifting. We know that in the long-run, AS will intersect AD at exactly the point where LRAS intersects AD. So therefore, in the long-run, aggregate demand shifts downward and to the right.



98. A large increase in oil prices is an example of:

B. an adverse inflation shock.

This is just a definition you can find in the book.

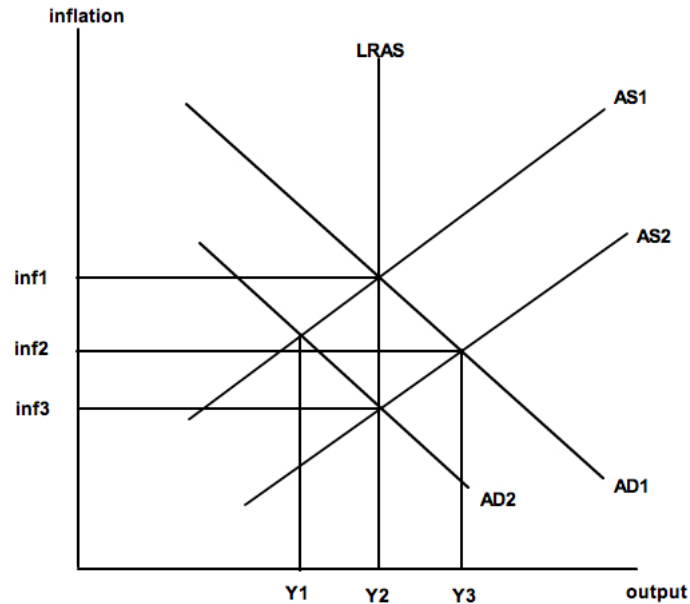
Chapter 26

3. If the Federal Reserve's target rate of inflation equals 5 percent, the target real interest rate equals 4 percent, and the actual inflation rate equals 5 percent, then the actual real interest rate equals:

A. 4 percent

The target inflation / rate combination is just a point on the monetary policy rule line, which is a guideline saying "for inflation rate a we will set interest rates b ." So given the target rate is a point at which inflation is 5% and the resultant real rate is 4%, that is what it will be in practice.

9. Refer to the figure below. Suppose this economy had been at a long-run equilibrium in which AS_1 and AD_1 were the prevailing functions. Then suppose AD_1 shifted to AD_2 . In the new long-run equilibrium output would be [?] and inflation would be [?]?



B. $Y_2, inf3$

Recall from numbers 27 and 67 above that AD is controlled by the Fed. So the Fed takes some action to decrease inflation (note from the pictures in 27 it could be a monetary policy shift to

the *left*), and AD_1 shifts to AD_2 . What happens in the long-run? Recall from 67 above that we must have $AS = AD = LRAS$ in the long-run. How does this happen? As AD shifts downward, peoples' expectations of inflation fall. Why? Note, a leftward shift in the monetary policy rule is in fact a lower inflation level for each interest rate level, so peoples' expectations are *rational*. People cause AS to shift: falling expectations of inflation directly cause AS_1 to shift downward to AS_2 . The point at which $AS = AD = LRAS$ is thus achieved at $(Y_2, inf3)$, the same output level as originally but at a strictly lower level of inflation. This is the realization of the monetary policy's goal.

17. When the Fed chooses a lower long-run inflation target, output will [?] and unemployment will [?]

B. decrease; increase

Recall from the last problem that the initial shift was a shift in aggregate demand from AD_1 to AD_2 which I explained using the pictures from 27 was likely a leftward shift of the monetary policy rule; i.e. lower inflation for each real rate. The line of thinking is (almost) applicable here; instead of shifting the entire MPR curve, say the Fed simply chooses a point on the same curve with lower inflation. The result is a lower inflation level with the AD curve shifting leftward (see the pictures for 27 if this isn't clear in your head). Thus, output *decreases*. What about unemployment? Recall Okun's Rule (or "Law"), $\frac{y^* - y}{y^*} = c(u - u^n)$ where y^* is potential output and u^n is the natural rate of unemployment. Since c , y^* , and u^n are all fixed, a decrease in y *must* be coupled with an increase in u .

62. Anchored inflationary expectations are people's expectations of future inflation that:

C. do not change if inflation rises temporarily

The answer is self-explanatory. Remember an important caveat of this fact: if the Fed is *credible*, i.e. it tells people not to worry about inflation change very much even if there are blips and people believe them, then potentially the AS curve will not shift as much as I described in 9 above. Remember the old adage, credibility must be earned; central banks that do well get better reputations. The Fed is arguably the world's most credible.

71. The core rate of inflation is the rate of increase of prices EXCEPT:

A. energy and food

Definition. Core measures are less volatile than ones including energy and food. The core CPI is a popular inflation measure. The Fed's favorite measure of inflation is popularly believed to be the core PCE "personal consumption expenditures." It's just a little different from CPI.

Chapter 27

4. The following table provides nominal exchange rates for the U.S. dollar.

Country	foreign currency/dollar	dollar/foreign currency
Switzerland (franc)	1.730	.578
Brazil (real)	1.821	.549

Based on these data, the nominal exchange rate equals [?] reals per Swiss franc, or equivalently, [?] Swiss francs per real.

A. 1.053; 0.95

Note, $\frac{\text{real}}{\text{franc}} = \frac{\text{real}}{\text{dollar}} \cdot \frac{\text{dollar}}{\text{franc}} = 1.821 * .578 = 1.053$. You're done because $\frac{\text{franc}}{\text{real}} = \frac{1}{\frac{\text{real}}{\text{franc}}} = 0.95$.

7. If the nominal exchange rate is 1.488 Canadian dollars per U.S. dollar, and 6.222 Mexican pesos per Canadian dollar, then there are [?] pesos per US dollar.

A. 9.258

Exactly analogous to the last problem, $\frac{\text{peso}}{\text{US Dollar}} = \frac{\text{peso}}{\text{Can Dollar}} \cdot \frac{\text{Can Dollar}}{\text{US Dollar}} = 6.222 * 1.4888 = 9.258$ $\frac{\text{pesos}}{\text{US Dollar}}$

8. An increase in the value of a currency relative to other currencies is called a(n):

A. appreciation

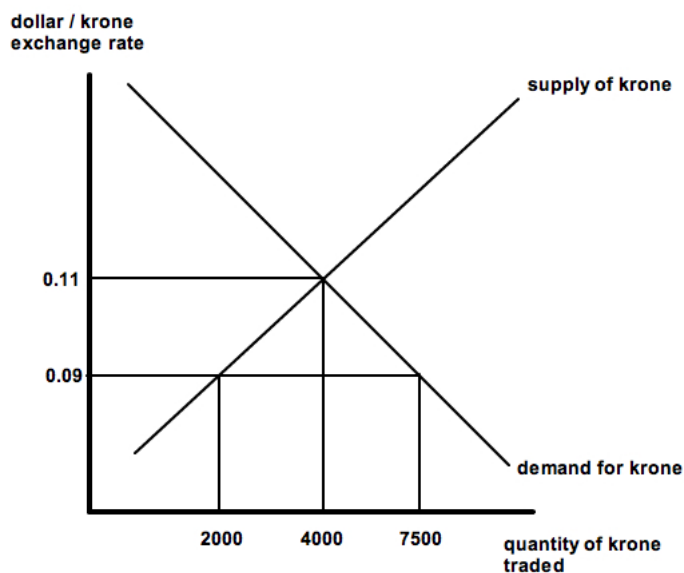
Definition. The opposite is a depreciation. If you have an exchange rate, say US dollars per krona (Swedish), and the exchange rate increases, what is this called? It's a *depreciation* of the dollar, since now there are more dollars per krona. That is, it takes more dollars to buy a krona, so the dollar is relatively weaker versus the krona, which is the definition of a depreciation. Note, this is semantically equivalent to an *appreciation* of the krona. Make sure you take your time answering these questions as it can get confusing. For example, how about if the exchange rate is kronas per US Dollar and the exchange rate increases? Now the dollar has appreciated and the krona has depreciated.

31. U.S. households wishing to purchase shares of stock in a European company are [?] the foreign exchange market

A. suppliers of U.S. dollars in

Definition.

89. Refer to the figure below. Based on the figure, if the krone (Dutch) exchange rate is fixed at \$0.09 dollars per krone, the krone is [?]



D. undervalued

Note that at \$0.09 dollars per krone, demand is in excess of supply. In order for supply to equal demand, the exchange rate would have to increase, that is, less krone per dollar (the denominator decreasing makes the ratio increase). Since at the present state there are more krone per dollar, the krone seems relatively weaker than it would be in equilibrium, e.g., it's undervalued.

Chapter 28

2. A trade surplus occurs when:

A. exports exceed imports

Definition.

12. When a Peruvian buys a U.S. government bond, from the perspective of the United States, this is a(n):

D. capital inflow.

Definition.

145. A country's trade balance and its net capital inflows:

A. sum to zero.

Definition.