Aggregate Demand and Supply Analysis
ECON 4673
Dr. Keen

Answers

1. *As the labor force becomes more productive over time, how is the long-run aggregate supply curve affected?*

   As labor productivity grows, the long-run aggregate supply curve shifts to the right. This shift occurs because the higher level of productivity combined with the existing labor force and capital stock enables the economy to produce more output which raises potential output.

2. *Why are central banks so concerned with inflation expectations?*

   Increased inflation expectations lead to an upward shift in the short-run aggregate supply curve, which causes actual inflation to rise in the short run. This example illustrates the negative consequences of inflation expectations become "unanchored" from a low level. In that case, the central bank has a more difficult time stabilizing inflation, particularly when a temporary inflation shock pushes up expected inflation.

3. *What factors shift the short-run aggregate supply curve? Do any of these factors shift the long-run aggregate supply curve?*

   The short-run aggregate supply curve shifts whenever expected inflation changes, price shocks hit the economy, or the output gap changes. If the output gap changes due to a change in potential output, then both the short-run and long-run aggregate supply curves shift. A change in potential output is the only factor that would shift both the short-run and long-run aggregate supply curves.

4. *If the unemployment rate is above the natural rate of unemployment, holding other factors constant, what will happen to inflation and output?*

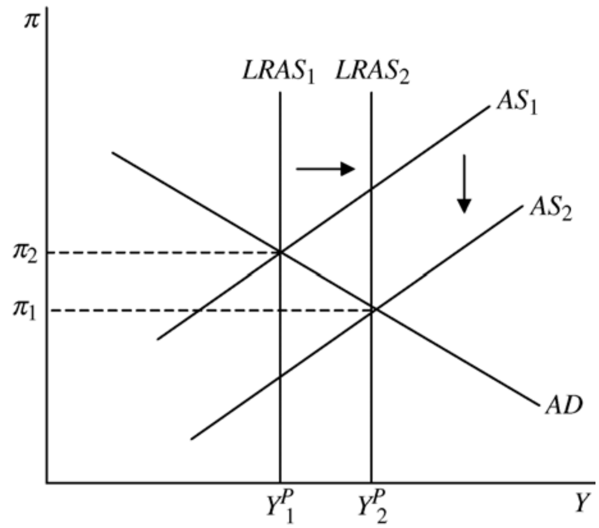
   When the unemployment rate is above the natural rate of unemployment, output is below its potential. As the economy transitions to the long run, output will slowly rise as inflation declines. Those changes will be represented by a downward shift in the short-run aggregate supply curve and will continue until output returns to its potential.

5. *What happens to inflation and output in the short run and the long run when government spending increases?*

   An increase in government spending will lead to a rightward shift of the aggregate demand curve. In the short run, inflation and output will both rise. This leads to tightness in the labor market, which raises inflation expectations and shifts up the short-run aggregate supply curve. That upward shift in the short-run aggregate supply curve continues until output returns to its potential. As for the long-run aggregate supply curve, it remains unchanged after an increase in government spending.

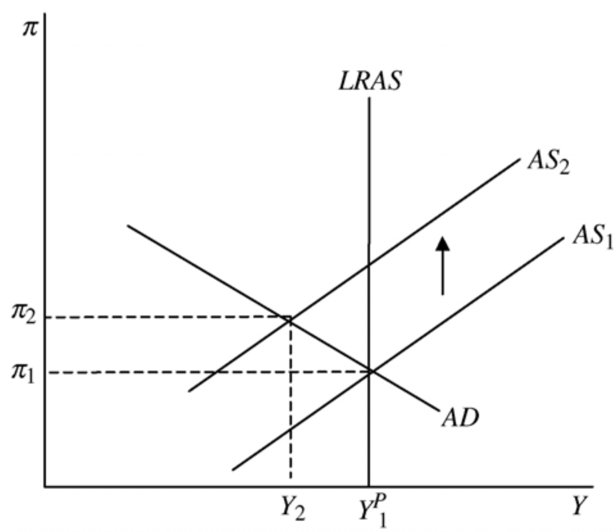
6. *Suppose the President convinces Congress to pass legislation that encourages investment in research and the development. Assuming this policy leads to an increase in productivity, use an aggregate demand and supply graph to predict its effects on output and inflation.*

   An increase in technology raises potential output which decreases the output gap. Those changes reduce inflation and push up output. Graphically, both the short-run and long-run aggregate supply curves shift to the left.



7. *During 2014, some Federal Reserve officials discussed the possibility of increasing interest rates as a way of responding to a potential increase in expected inflation. If the public starts to expect higher inflation in the future, what would be its effect on the short-run aggregate supply curve? Use an aggregate demand and supply graph to illustrate your answer.*

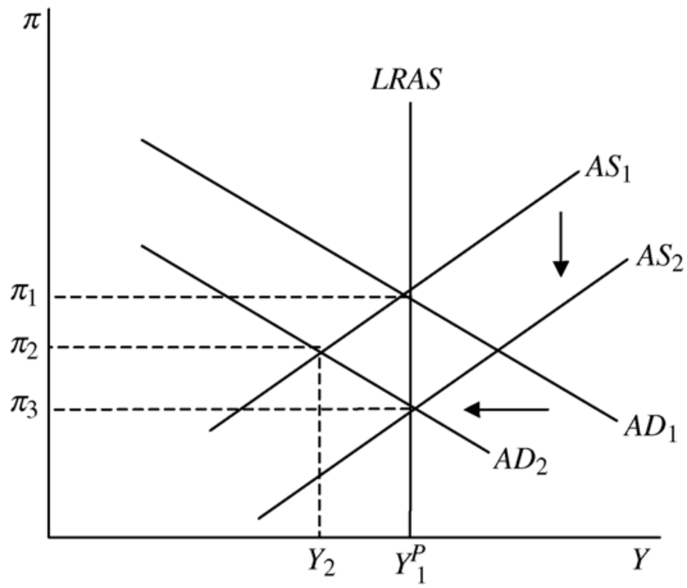
   If the public believes the Federal Reserve is not that worried about inflation, then expected inflation will increase which cause inflation to rise and output to fall. Graphically, the increase in expected inflation shifts the short-run aggregate supply curve upward.



8. *Classify each of the following as an aggregate demand shock or an aggregate supply shock. Use a graph to show the effects on inflation and output in the short run and in the long run.*

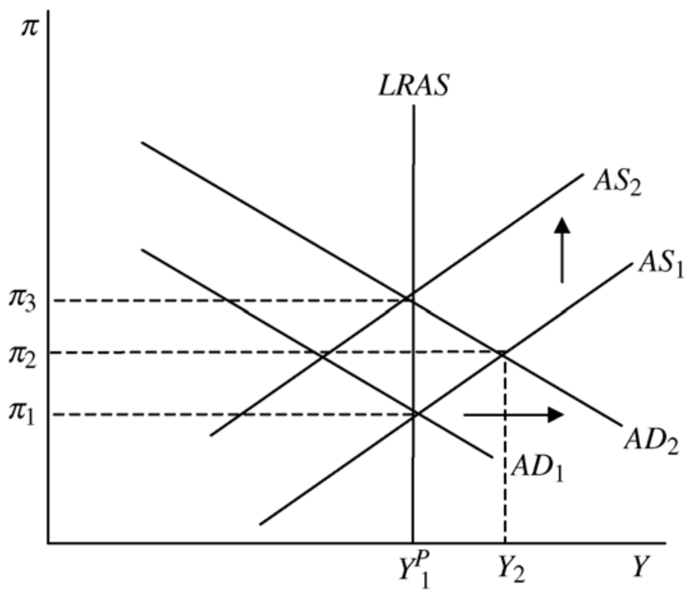
   a. *Financial frictions increase.*

      Negative demand shock. A rise in financial frictions shifts the aggregate demand curve left causing output and inflation to fall in the short run. In the long run, the aggregate supply curve shifts down causing output to return to its potential while inflation falls.



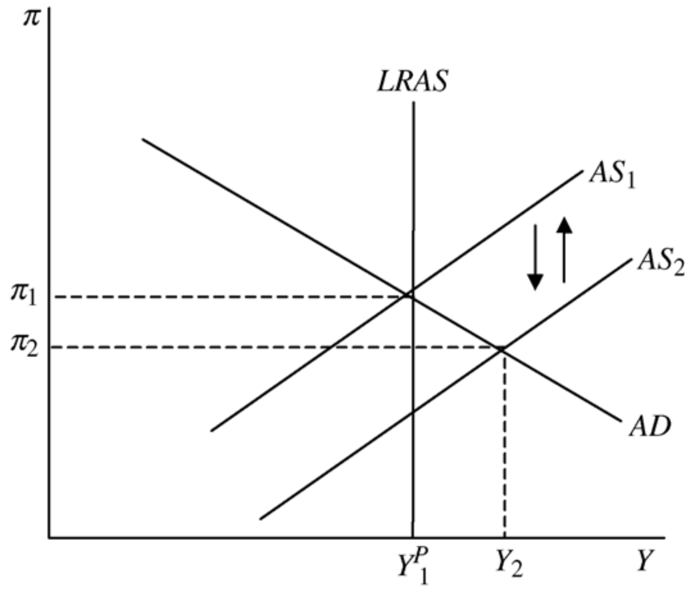
   b. *Households and firms become more optimistic about the economy.*

      Positive demand shock. This change leads to a rise in autonomous consumption and investment which causes the aggregate demand to shift to the right in the short run. As a result, both output and inflation increase. In the long run, the aggregate supply curve shifts up causing output to return to its potential while inflation rises further.



c. *Favorable weather produces a record crop of wheat and corn in the Midwest.*

Positive aggregate supply shock. The record rise in wheat and corn production shifts the aggregate supply curve downward in the short run causing output to increase and inflation to decrease. In the long run, the aggregate supply curve shifts back up leading output to return to its potential while inflation reverts to its original level.



d. *Auto workers go on strike for four months.*

Negative aggregate supply shock. The four-month long auto workers' strike shifts the aggregate supply curve upward in the short run causing output to decrease and inflation to increase. In the long run, the aggregate supply curve shifts back down leading output to return to its potential while inflation reverts to its original level.