

Midterm Exam 2

1. [20 minutes] Consider the Fed's new monetary strategy.

1.1 What does the Fed's new monetary strategy entail? Describe two components.

1. Aiming for maximal employment, i.e., not raising interest rates when employment is at or above full employment levels, and lowering rates when it is below. *5 points*
2. Aiming for inflation averages, so that periods of undershooting will imply overshooting subsequently. This is a sort of price level targeting where the price level target trends upward over time. *5 points*

1.2 How do the new findings regarding post-recession output gaps modify your views regarding when and how much to tighten monetary policy.

Blanchard et al. show that almost two thirds of recessions are followed by adjusted output gaps (gaps between output and the pre-recession trend) that are persistent. Fully one third of these recession events are associated with disinflations, so this suggests that disinflations could result in larger output costs than if one thinks the gap is not persistent. *7 points describing "new findings" from Blanchard et al.; 3 points for describing bigger case for stimulus*

2. [20 minutes] Consider expansionary fiscal policy in 2017-2018, in the form of the Tax Cuts and Jobs Act. The tax cut increased the federal debt by about \$1.5 trillion over ten years.

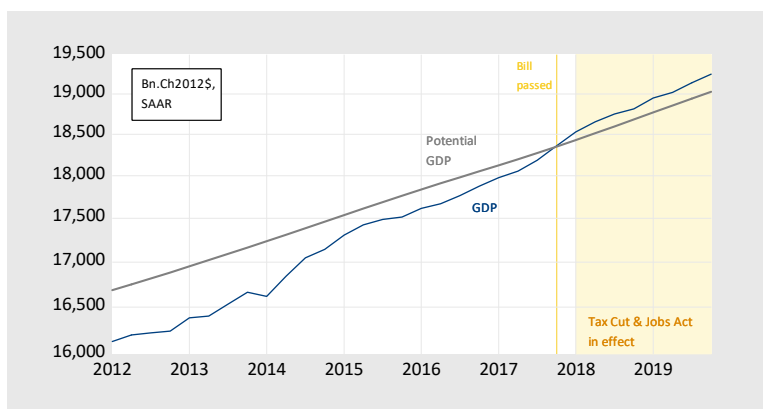


Chart 1.

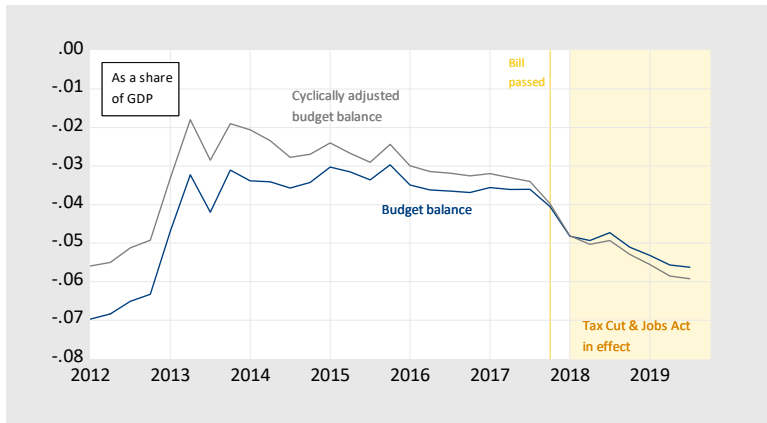


Chart 2.

2.1 Do you expect the fiscal multipliers to have been relatively large or small for the tax cut at the time of passage? Why? Use equations or graphs to explain.

The output gap was essentially zero in the last quarter of 2017. The evidence by Auerbach and Gorodnichenko is that multipliers are fairly small when output is high relative to potential GDP (Y_n) or increasing, and larger when output is low relative to potential GDP (Y_n) or decreasing. This can be explained by the aggregate supply curve being kinked so that it is steeper $Y > Y_n$, and flatter $Y < Y_n$. This is shown in Figure 1 below (y^{FE} is same as Y_n) 6 points for explanation, 4 for graph; if they use backwards-L for AS curve, then give 2 instead of 4.

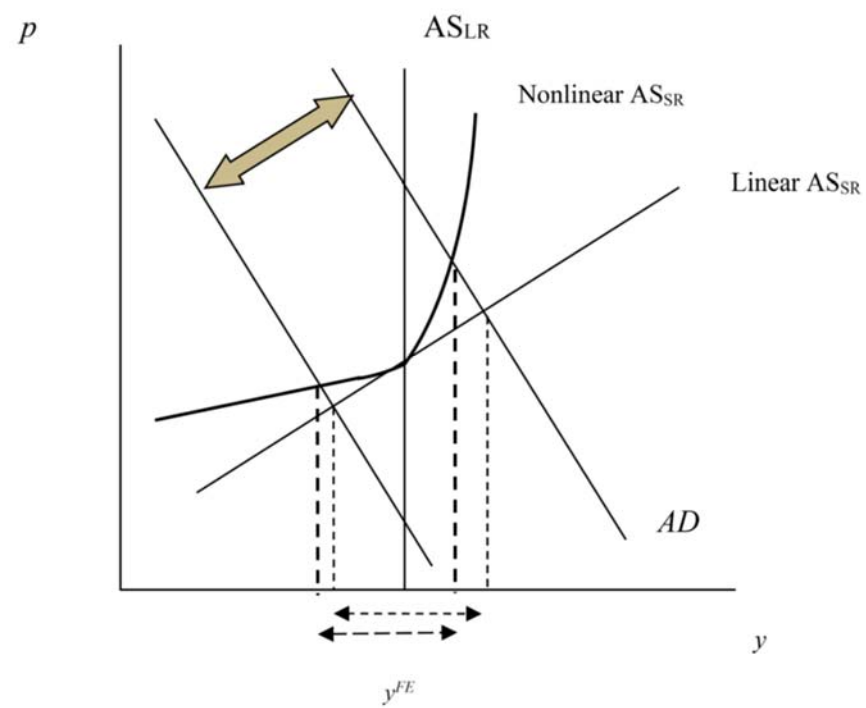


Figure 1.

[students could give this answer instead – give 5 extra credit points if they provide both explanations] An alternative explanation is Fed monetary policy tends to tighten when output rises above Y_n , and tends to loosen when output falls below Y_n . Suppose the IS curve is shifting due to changes in taxes; the LM curve shifts mean that the change in income is smaller above Y_n , than below Y_n . *This is shown in Figure 2. 6 points if explain in words, 4 points for graph.*

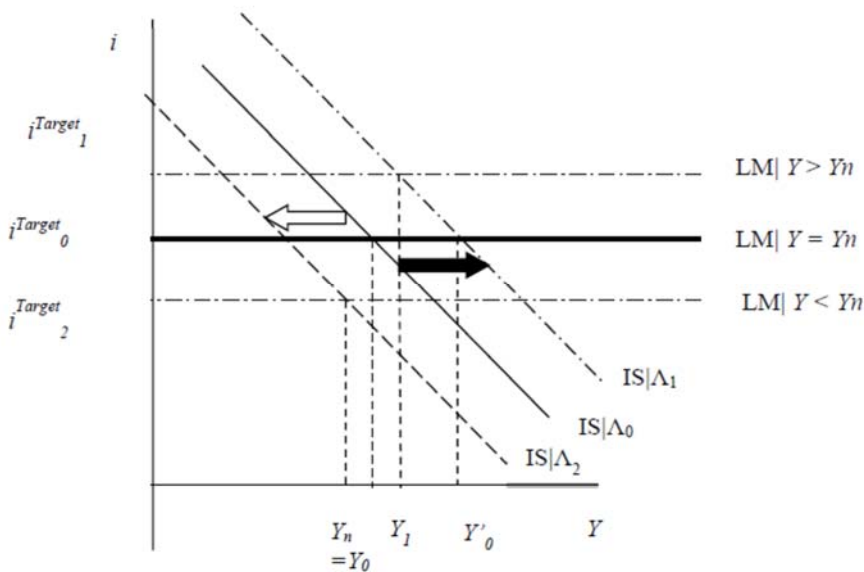


Figure 2.

2.2 If the intent of fiscal policy is to stabilize the economy around Y_n , and to stabilize the country's finances, did the tax cut passed at the end of 2017 make sense?

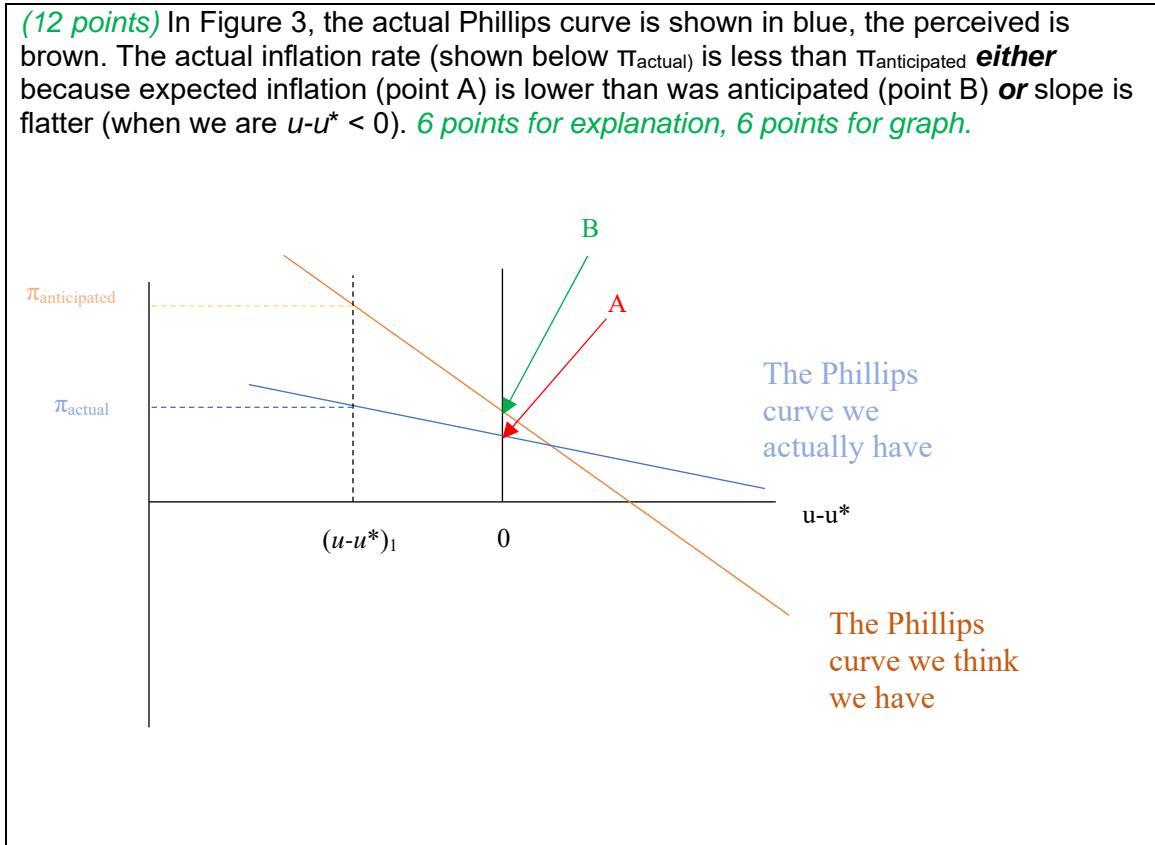
Output was at full employment levels at 2017Q4, so a tax cut at that time did not make sense, as it pushed output *away* from potential GDP. Moreover, at full employment, you want the cyclically adjusted budget balance at about zero. It was already at -3% of GDP then, and the tax cut just made the cyclically adjusted budget balance even worse. *6 points for pointing out we were at full employment already, 4 points for noting cyclically adjusted budget balance was already in deficit*

3. [20 minutes] Consider the expectations-augmented Phillips curve

$$\pi_t = \theta(u_t - u_t^*) + \lambda\pi_t^e + (1 - \lambda)\pi_{t-1}^* + \varepsilon_t$$

Where u is the unemployment rate, u^* is the natural rate of unemployment, π is the quarter-on-quarter inflation rate, and π^* is the four-quarter average of inflation rates.

3.1 In recent years inflation has appeared to be lower than anticipated by policymakers. Provide at least two theoretical explanations for why it might be the case. It would probably be helpful to use a graph.



3.2 Expected inflation can be modeled in a variety of ways. What do you think is the most appropriate approach for 2019, perhaps using an equation? Explain why, referring to Chart 3.

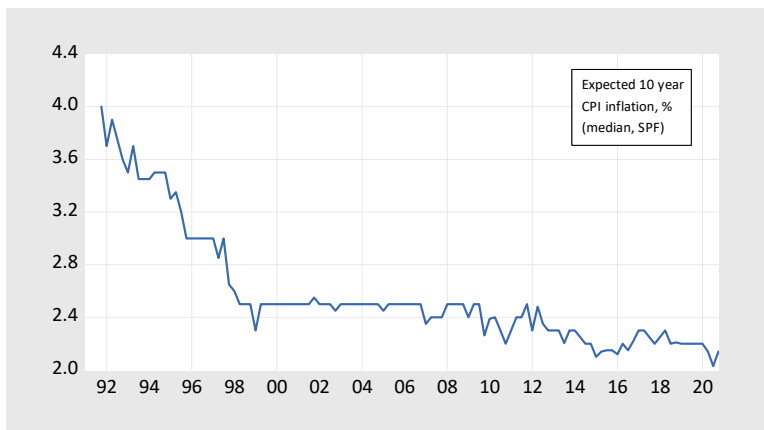


Chart 3.

If one looks at expected inflation as provided by surveys and sees it has been around 2-2.5% for over a decade, and one remembers that the Fed has been saying that it wants inflation around 2%, then it probably makes sense to think of expected inflation as being a constant, around 2.25%, $\pi^e = \bar{\pi} = 2.5\%$ *8 points, 4 for noting constancy, and 4 for noting Fed statements.*