



## Student Performance Q&A: 2014 AP<sup>®</sup> Macroeconomics Free-Response Questions

The following comments on the 2014 free-response questions for AP<sup>®</sup> Macroeconomics were written by the Chief Reader, Arthur Raymond of Muhlenberg College in Allentown, Pa. They give an overview of each free-response question and of how students performed on the question, including typical student errors. General comments regarding the skills and content that students frequently have the most problems with are included. Some suggestions for improving student performance in these areas are also provided. Teachers are encouraged to attend a College Board workshop to learn strategies for improving student performance in specific areas.

### Question 1

#### *What was the intent of this question?*

Question 1 focused on the effects of an increase in government spending on an economy producing at a less than full employment level of real output. Part (a) required students to construct an aggregate supply and aggregate demand diagram and show a current equilibrium below the full employment level of real gross domestic product. Part (b) tested students' understanding of the effect of an increase in government spending, financed by borrowing, on cyclical unemployment and the natural rate of unemployment. Part (c) asked students to use the marginal propensity to consume to calculate the possible change in real gross domestic product as a result of the increase in government spending from part (b). Part (d) required students to draw a graph of the loanable funds market and show the effect of increased government spending on the real interest rate, and part (e) tested the students' understanding of the effect of the change in the real interest rate on economic growth. Part (f) asked students to describe the output effect of an increase in government spending financed by an equal increase in taxes.

#### *How well did students perform on this question?*

The mean score was 5.47, which is 49.7 percent of the maximum of 11 points. Students performed particularly well in drawing the aggregate supply and aggregate demand diagram and indicating current production below full-employment production.

#### *What were common student errors or omissions?*

A common error was the inability to identify that a change in government spending financed by a change in taxes can increase aggregate demand. The most common error in the question was the inability of students to explain why an increase in the real interest rate due to an increase in government spending could reduce economic growth.

*Based on your experience of student responses at the AP<sup>®</sup> Reading, what message would you like to send to teachers that might help them to improve the performance of their students on the exam?*

Teachers should develop the calculation of simple spending multipliers and make sure students understand the difference in multipliers for a change in government spending versus a change in taxes.

Distinguishing between the effect of a change in the real interest rate on aggregate demand in the short-run and on long-run economic growth is essential. Changes in investment in plant and equipment will affect the economy in the short-run by changing aggregate demand and in the long-run by changing the stock of capital.

## **Question 2**

*What was the intent of this question?*

The question asked students to identify and explain the effects of monetary policy. Part (a) asked students to identify an open market operation necessary to target a lower federal funds rate and indicate how that open market operation will affect the price of government bonds. Part (b) required students to draw a money supply and money demand graph to show the effect of the open market operation identified in part (a) on the nominal interest rate. Part (c) asked students to identify the effect of the open market operation on required reserves. Part (d) asked for a definition of the discount rate.

*How well did students perform on this question?*

The average score was 3.12, which is 52 percent of the 6 possible points.

*What were common student errors or omissions?*

Common student errors included an inability to identify an open-market operation that would reduce the federal funds rate, a misunderstanding of the effect of an open-market purchase on required reserves, and an inability to define the discount rate.

*Based on your experience of student responses at the AP<sup>®</sup> Reading, what message would you like to send to teachers that might help them to improve the performance of their students on the exam?*

The effect of open-market operations is a crucial aspect of monetary policy. Its effects on the balance sheet of commercial banks and on interest rates should be clearly established.

## **Question 3**

*What was the intent of this question?*

The question asked students to identify, explain, and show some of the international effects of a decrease in the inflation rate in the United States relative to the inflation rate in South Korea. Part (a) asked students to identify the effect of the lower relative inflation rate in the United States on exports from the United States. Part (b) required students to identify the effect of the change in United States exports identified in part (a) on the current account balance and on real gross domestic product. In part (c) students were asked to draw a graph of the foreign exchange market for the United States dollar and show the effect of the lower relative inflation rate in the United States on the United States exchange rate.

*How well did students perform on this question?*

The average score of 2.63 is just above 52 percent of the maximum of 5 points.

***What were common student errors or omissions?***

A common error was the inability to correctly show the effect of the lower relative United States inflation on the demand and supply of the United States dollar on the foreign exchange market and on the exchange rate.

***Based on your experience of student responses at the AP<sup>®</sup> Reading, what message would you like to send to teachers that might help them to improve the performance of their students on the exam?***

The effect of changes in macroeconomic variables, such as inflation, interest rates, and income (real gross domestic product), on a nation's exchange rate should be developed. Showing the effect of these variables on the exchange rate using a properly labeled diagram of the foreign exchange market is often difficult for students, requiring considerable attention and practice.