

2004 AP® MACROECONOMICS FREE-RESPONSE QUESTIONS

2. (a) Assume that national saving in the United States increases. Explain the effect of this increase on the real interest rate in the United States.
- (b) Suppose that real interest rates in the rest of the world remain unchanged.
- (i) Explain the effect of the real interest rate change in the United States that you identified in part (a) on the demand for the United States dollar in the foreign exchange market.
 - (ii) As a result of the effect you identified in (i), what will happen to the international value of the United States dollar?
- (c) Given your answer in part (b), indicate how each of the following will change.
- (i) United States imports
 - (ii) United States exports

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3. The Federal Reserve buys \$5,000 in bonds from Clark Consulting Services, which then deposits the money in a checking account at First Generation Bank.
- (a) As a result of the Federal Reserve's action, what is the change in the money supply if the required reserve ratio is 100 percent?
- (b) If the required reserve ratio is reduced to 10 percent, calculate the following.
- (i) The maximum amount this bank could lend from this deposit
- (ii) The maximum increase in the total money supply from the Federal Reserve's purchase of bonds
- (c) If banks keep some of the deposit as excess reserves, how will this influence the change in the money supply that was determined in part (b)(ii)? Explain.
- (d) If the public decides to hold some money in the form of currency rather than in demand deposits, how will this influence the change in the money supply that was determined in part (b)(ii)? Explain.

END OF EXAMINATION

**AP® MACROECONOMICS
2004 SCORING GUIDELINES**

Question 2

Correct Answer:

- (a) An increase in savings increases the supply of loanable funds (shifts the supply of loanable funds curve to the right). An increase in the supply of loanable funds will lead to a reduction in the real interest rate.
- (b) Because there is a reduction in the US real interest rate (with real rates in the rest of the world unchanged), US financial assets are less attractive, so there will be a decreased demand for US financial assets. With a decreased demand for US financial assets there will be a decreased demand for (and/or increased supply of) the dollar in the foreign exchange market. The decreased demand for the dollar in the foreign exchange market will cause the international value of the US dollar to depreciate.
- (c) A depreciation of the dollar makes US goods relatively cheaper than foreign goods, so imports will decrease and exports will increase.

Scoring Guidelines: 7 points (2+3+2)

(a) 2 points:

- 1 - the supply of saving (loanable funds) increases, shifting the supply curve for loanable funds to the right
- 1 - the interest rate falls (assertion w/o prior point is ok)

(b) 3 points:

- 1 - U. S. financial assets become less attractive investment instruments (not just a repeat of the stem)
 - must be consistent with the interest change in part (a)
- 1 - The demand for the U. S. dollar would decrease
 - must be consistent with (b)(i) or if answer to (b)(i) is not present, then it must be consistent with the interest rate change given in (a)
- 1 - The dollar would depreciate
 - must be consistent with shift of demand (and/or supply) of dollar

(c) 2 points:

- 1 - imports will decrease
- 1 - exports will increase
 - must be consistent with appreciation/depreciation of (b)(ii), or if answer to (b)(ii) is not present, then it must be correct (consistent with the stem of the question)
 - note that (c) can be scored without having to refer to (a)