

Unit 4 Progress Check: FRQ

1. Include correctly labeled diagrams, if useful or required, in explaining your answers. A correctly labeled diagram must have all axes and curves clearly labeled and must show directional changes. If the question prompts you to “Calculate,” you must show how you arrived at your final answer.

Commercial banks in Country A hold no excess reserves. The required reserve ratio is 0.1. The central bank of Country A has become concerned about a steep decline in investment spending.

- (a) Calculate the simple money multiplier. Show your work.
- (b) Identify an open market operation that Country A’s central bank is likely to implement to address the decline in investment spending.
- (c) Draw a correctly labeled graph of the money market and show the effect of the central bank’s policy identified in part (b) on the nominal interest rate.
- (d) Explain the effect of the change in part (c) on aggregate demand in the short run.



Please respond on separate paper, following directions from your teacher.

Part (a)

Select a point value to view scoring criteria, solutions, and/or examples and to score the response. The response must show appropriate work in order to receive the point.



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The response calculates the money multiplier as 10 and shows appropriate work:

$$= \frac{1}{\text{required reserve ratio}} = \frac{1}{0.1} = 10$$

Part (b)

Select a point value to view scoring criteria, solutions, and/or examples and to score the response.



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The response states that the central bank should buy bonds.

Part (c)

Select a point value to view scoring criteria, solutions, and/or examples and to score the response. The response should be consistent with the open market operation identified in part (b).



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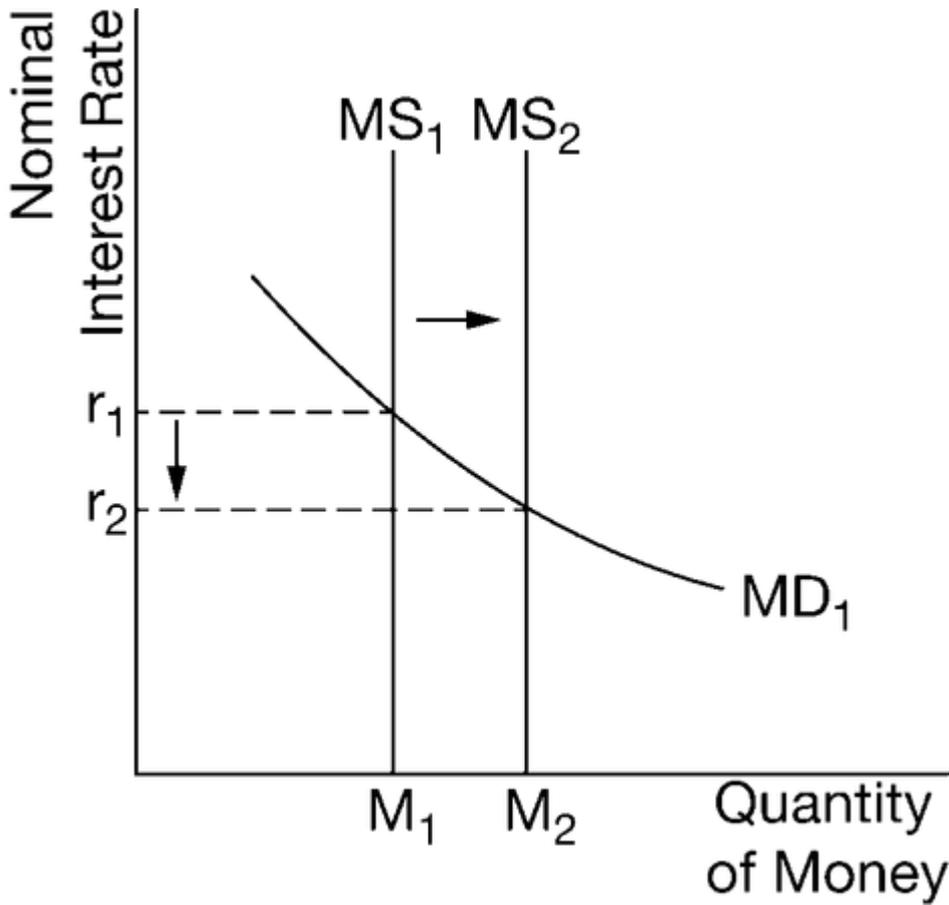
The response accurately includes both of the criteria below.

- A correctly labeled graph of the money market.
- A rightward shift of the money supply curve and a lower nominal interest rate.

Complete Solution



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Part (d)

Select a point value to view scoring criteria, solutions, and/or examples and to score the response. The response should be consistent with the change in the nominal interest rate shown in part (c).



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The response states that aggregate demand will increase and explains that the decrease in nominal interest rates increases interest-sensitive spending, which increases aggregate demand.

2. Include correctly labeled diagrams, if useful or required, in explaining your answers. A correctly labeled diagram must have all axes and curves clearly labeled and must show directional changes. If the question prompts you to “Calculate,” you must show how you arrived at your final answer.



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A national newspaper’s headline reads “Business Confidence Reaches Highest Level in 5 Years.”

- (a) Draw a correctly labeled graph of the loanable funds market, and show the effect of high business confidence on the equilibrium real interest rate.
- (b) Assume the government increases its spending on capital projects and infrastructure. Would financing the increased government spending by borrowing result in a higher, a lower, or the same equilibrium real interest rate? Explain.
- (c) How will the increase in government spending financed by borrowing affect national savings?
- (d) If the expected inflation rate decreases to zero, will the nominal interest rate be greater than, less than, or equal to the real interest rate? Explain.



Please respond on separate paper, following directions from your teacher.

Part (a)

Select a point value to view scoring criteria, solutions, and/or examples and to score the response.

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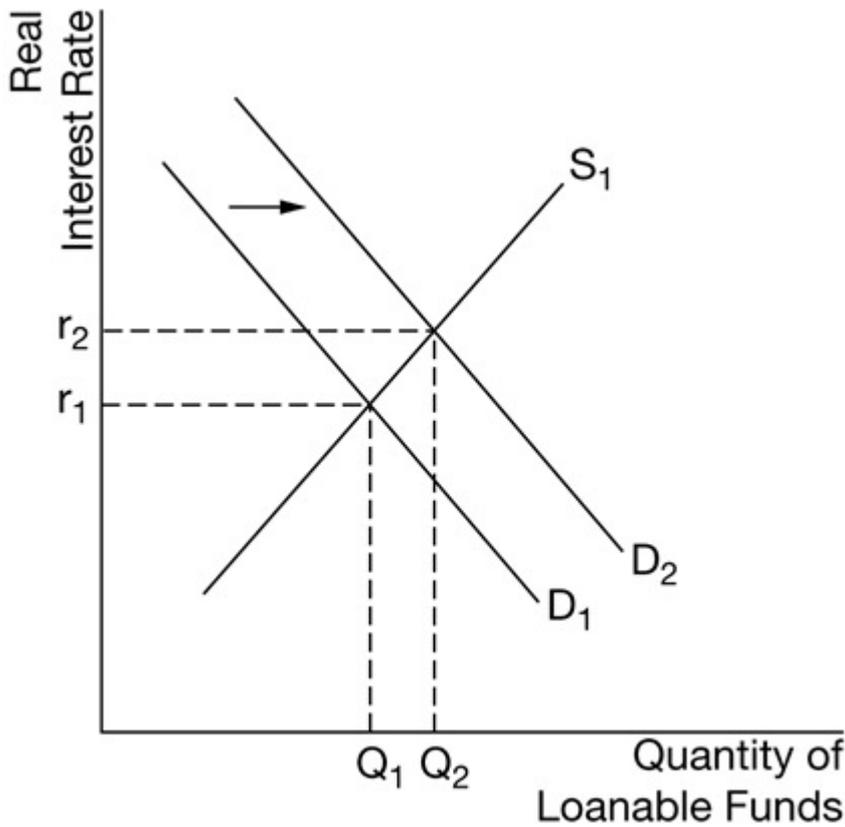
The response accurately includes both of the criteria below.

- A correctly labeled graph of the loanable funds market.
- A rightward shift of the demand curve for loanable funds and a higher real interest rate.

Complete Solution



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Part (b)

Select a point value to view scoring criteria, solutions, and/or examples and to score the response.

The response must both state that the equilibrium real interest rate will be higher and explain why in order to receive the point.



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The response states that the equilibrium real interest rate will be higher and explains that this is because increased government spending financed by borrowing will increase the demand for loanable funds.

Part (c)

Select a point value to view scoring criteria, solutions, and/or examples and to score the response.



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The response states that national savings will decrease

Part (d)

Select a point value to view scoring criteria, solutions, and/or examples and to score the response.

The response must state that both the nominal interest rate will be equal to the real interest rate and explain why.



0	1
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The response states that the nominal interest rate will be equal to the real interest rate and explains that the real interest rate is the nominal interest rate adjusted for inflation; therefore, when the expected inflation rate is zero, the nominal interest rate is equal to the real interest rate.