1. Our model with an interest rate differential assumes that all investment depends on a single interest rate, \( r^b \). In truth, there are many interest rates, and they are relevant to many different kinds of investment.

To partially capture this idea, suppose investment is the sum of two types of investment, a safer type \( I_1 \) and a riskier type \( I_2 \). \( I_1 \) depends on \( r^{b_1} \) and \( I_2 \) depends on \( r^{b_2} \): \( I_1 = I_1(r^{b_1}) \), \( I_2 = I_2(r^{b_2}) \), where both functions are decreasing. Suppose also that \( r^{b_1} - r^s = d_1(Y) \) and \( r^{b_2} - r^s = d_2(Y) \), again with both functions decreasing. To reflect the idea that Type 2 investment is riskier than Type 1 investment, assume that for a given \( Y \), \( r^{b_2} - r^s \) is greater than \( r^{b_1} - r^s \), and that when \( Y \) falls, \( r^{b_2} - r^s \) rises by more than \( r^{b_1} - r^s \) does.

   a. In this model, suppose there is a fall in consumer confidence, so that \( C \) for a given \( Y - T \) is lower than before.

      i. What is the effect of this change on \( r^s \), \( Y \), \( r^{b_1} - r^s \), and \( r^{b_2} - r^s \)?

      ii. Is the change in \( r^{b_1} - r^s \) larger, smaller, or the same as the change in \( r^{b_2} - r^s \), or is it not possible to tell?

   b. One message we have stressed is that a modeling assumption is not inherently “good” or “bad”; the value of an assumption depends on the question we are trying to answer. Thus, give one example of a question that moving from a model with just one interest rate differential \( (r^b - r^s) \) to one with two differentials \( (r^{b_1} - r^s \) and \( r^{b_2} - r^s) \) would be helpful in answering. Give one example of a question where moving from a model with one differential to a model with two would complicate the analysis without generating any significant additional insights.

2. Recent research stresses the role of high levels of debt for consumers and firms in causing or exacerbating short-run fluctuations.

   a. What is some of the evidence that high levels of debt affect consumer or firm behavior?

   b. If consumers and firms are trying to reduce their debt (deleverage), how, if at all, is this likely to show up in the IS-MP diagram? Why?

   c. What policy actions would be most effective in combating a recession caused by deleveraging? Why?

3. Label each of the following statements as True, False, or Uncertain, and explain your answer briefly.

   a. “The bursting of an asset price bubble can lead to a financial crisis.”

   b. “High income inequality can result in a long-lasting shortfall of aggregate demand and very prolonged high unemployment.”
4. Both Iceland and Ireland suffered major banking crises starting around September 2008. One potentially important difference between the two countries is that Ireland is a member of the Eurozone while Iceland has its own currency.
   a. By how much did the Icelandic Króna depreciate against the euro from August 2008 to its low point? How much lower is the Króna against the euro today than it was in August 2008?
   b. By how much did the unemployment rate rise, in percentage points, in Iceland from its pre-crisis level to its peak? By how much did it rise in Ireland?
   c. If the exchange rate was important to the different performances of the two countries, we would expect that to be reflected in the behavior of net exports. Is the behavior of net exports in the two countries consistent with the hypothesis that exchange rate depreciation helped to cushion the effects of the banking crisis in Iceland?

Pick the best answer to each of questions 5–8. No explanations of your answers are needed.

5. In the paper by Richardson and Troost on banking panics in Mississippi, the authors find that the monetary policy beliefs and behavior of the Federal Reserve Banks of Atlanta and St. Louis were:
   a. Fundamentally different before, during, and after the panics of 1930.
   b. Different in the 1920s, but very similar starting in 1929.
   c. Similar throughout the 1920s and 1930s.
   d. Very different before and during the panic of 1930, but similar during later panics in the Depression.

6. Uncertainty is likely to have an especially large negative short-run effect on spending by households and firms if:
   a. They do not expect the uncertainty to be resolved soon.
   b. There are large costs to reversing their spending decisions.
   c. The real interest rate is high.
   d. Inflation is high.
   e. All of the above.
   f. None of the above.

7. When economists speak of hysteresis, they refer to the fact that:
   a. Once a recession starts, it is likely to last for a while.
   b. High unemployment tends to be followed by low unemployment.
   c. Prolonged high unemployment can cause the natural rate of unemployment to rise.
   d. Prolonged high unemployment will eventually reduce inflation.

8. The three “coping mechanisms” that Reich argues middle class families used to deal with stagnating incomes included all of the following except:
   a. Women move into paid work.
   b. Everyone works longer hours.
   c. Families stop investing in their children’s education.
   d. We draw down savings and borrow to the hilt.