1. In March 2009 the nominal exchange rate between the U.S. dollar and the Brazilian real was around 2.3 real per dollar. By March 2009 it was quite clear that the Brazilian economy was not as affected by the world financial crisis as the U.S. economy. In March 2010, the exchange rate was 1.8 real per dollar.

   a. Graph the foreign exchange market in March 2009 from the U.S. perspective.

   b. Using the graph, explain how expectations about the relative future performance of the U.S. and Brazil affected the demand for U.S. dollar-denominated assets.

   Expectations of a slow recovery and low interest rates in the United States decreased the relative expected return of the domestic asset. Therefore, the alternative asset (i.e., Brazilian Real-denominated assets) increased its relative expected return. This resulted in a shift to the left in the demand for the domestic asset and in a depreciation of the U.S. dollar, as noted in the graph below.
2. On November 2007 Brazil announced the discovery of huge oil reserves that could potentially transform the country into a big exporter of oil.

a. What would be the effect of the increase in revenues from oil exports on Brazil’s exchange rate?

An increase in Brazilian net exports will result in an inflow of foreign currency. If the central bank of Brazil does not want to accumulate foreign assets, it will sell them and get Brazilian reals in exchange. This reduces Brazil’s money supply and increases domestic interest rates. Alternatively, the inflow of foreign currency can create inflation and increase the real exchange rate. These are just two reasons as to why Brazil’s exchange rate will increase.

b. How would this affect other Brazilian exports? Is this a desirable outcome for the country as a whole?

Even if the oil exporting industry thrives in Brazil, it can potentially have negative consequences for other exporting industries if the Brazilian currency becomes more expensive (i.e., if the exchange rate increases). The more expensive currency makes exports more expensive, and other industries are severely affected. This effect is often referred to as the “Dutch disease,” based on the experience of the Netherlands’ discovery of natural gas reserves in the 1960s. As this is clearly not a good prospect for the Brazilian economy, monetary authorities probably will try to minimize the effect of the foreign currency inflow on Brazil’s exchange rate.

3. Assume that Social Security taxes remain constant, but that the number of employed people in the United States declines over time.

a. Explain the effect of such a scenario on the size of contributions for social insurance and the government deficit in the United States.

A decrease in the number of employed people results (holding Social Security tax rates constant) in a decrease in contributions for social insurance. This decreases tax revenue and therefore increases the size of the government deficit. This effect often takes place during contractions, when unemployment increases.

b. Assume now that employment remains constant, but there is an increase in unemployment insurance benefits. How would your answer to (a) change?

Even if employment remains constant, an increase in unemployment insurance benefits (e.g., more people applied for unemployment insurance, or the time period for unemployment insurance is extended) increases government transfer payments and therefore adds to the government deficit.
4. On March 26, 2010, the *Wall Street Journal* reported the following: "A sudden drop-off in investor demand for U.S. Treasury notes is raising questions about whether interest rates will finally begin a march higher [...]. [...] there are signs the spotlight is turning to the ability of the U.S. to finance its own budget deficit."

a. Explain the effect of higher Treasury note interest rates on the government deficit.

*An increase in Treasury note interest rates represents an increase in net interest payments for the U.S. government and therefore increases the deficit.*

b. What would be the long run effect of distrust in the U.S. government's ability to finance its own deficit?

*Although it is not plausible to happen in the near future, there could be some trouble ahead for the U.S. government to sell its debt. This decrease in the demand for U.S. Treasuries should be considered, as the *WSJ* article suggests, as a wake-up call. Investors are taking into consideration the size and persistence of the U.S. deficit, and are not as willing as they were a few years ago to buy U.S. debt. Trust in the U.S. government's ability to repay its debt is still high, but maintaining such big deficits and for such a long time might create some problems in the future, especially if investors decide to buy fewer U.S. Treasuries. If that ever happens, the United States will have to choose between two options: immediate contractionary fiscal policy to reduce the deficit, or increase the monetary base to pay for its deficit—not a nice trade off.*

5. Assume that the expenditure and tax multipliers can be estimated to be 0.75 and 0.5 respectively.

a. Would you recommend expansionary fiscal policy based on tax cuts or increased government expenditures?

*According to the estimates of the expenditure and tax multipliers, one should recommend conducting expansionary fiscal policy by increasing government expenditures, as this will have a bigger effect on aggregate demand. In this case, government expenditures should be wisely directed to productive uses, with the potential to improve infrastructure and increase productivity in the long run.*

b. Suppose now that there is substantial evidence that supports the hypothesis of a crowding out effect in this economy. How would your answer to (b) change?
If there is a crowding-out effect, the original increase in government expenditure (or investment) will be realized at the expense of some private investment. *A priori*, there is no reason to believe that the government allocates resources (i.e., allocates funds to the most productive investment) more efficiently than the private sector. It is not clear that expansionary fiscal policy based on increased government spending will be a good idea in the presence of crowding out. A counterargument to the latter proposition is that the government could potentially use increased spending to fund specific sectors with large spillovers that will result in more technology or higher productivity in the long run (sectors in which the private sector usually under invests): education, renewable energy sources, and research and development.

6. A government committed to long-run fiscal discipline (i.e., low or zero budget deficits) usually conducts contractionary fiscal policy at some point to reduce the government deficit. If that action is interpreted as a commitment to long run fiscal discipline….

a. Describe the effects on autonomous consumption and investment expenditure.

The prospect of a government committed to long-run fiscal discipline increases both types of autonomous expenditure. Usually a commitment to long-run fiscal discipline is one of many characteristics of a government committed to long-run economic growth. It is quite possible that such an administration will promote free trade, secure property rights, and encourage research and development. This spurs consumption and investment spending and adds to aggregate demand. Although it is possible that a tax increase or a government spending decrease has a negative effect on aggregate demand in the short run, it will most surely positively affect the economy in the long run, if properly understood by the society.

b. Describe the effects on the cost of borrowing by issuing bonds.

Another effect of a proper understanding of the long-run goals of fiscal discipline might result in a decrease in government bond interest rates. As investors realize that the current contractionary fiscal policy is a first step towards long-run fiscal discipline, this will increase that government's ability to pay back its debt. Long-term bonds, therefore, should experience a decrease in their yields, as they become safer assets.

7. According to the FDIC thirty banks failed or were assisted during 2008: six were based in California, two in Florida, and five in Nevada. The *New York Times* reported in 2007 that Nevada (-36.1%), Florida (-30.8%), and California (-21.3%) were amongst the top five states where home sales dropped (in parenthesis) the most between the fourth quarter of 2005 until the fourth quarter of 2006. Explain how real estate market conditions in these areas can explain almost 50% of bank failures in 2008.
As the boom in the real estate market reached its peak (by Fall 2006), home sales started to decline in many regions. Some of these regions observed a steeper decline in home sales and home prices, thereby increasing the probability that homeowners would default on their mortgage payments. Although many of these mortgages were bundled and securitized (not shown on the banks’ balance sheets), banks located in these regions suffered when borrowers could not afford their payments or simply decided to walk away, since the value of their house was now less than the amount owed on its mortgage. Not surprisingly, almost 50% of bank failures during 2008 were concentrated in the regions where the real estate market experienced a more severe contraction.

8. According to the March 16, 2010, FOMC statement, “The Committee will maintain the target range for the federal funds rate at 0 to ¼ percent and continues to anticipate that economic conditions [...] are likely to warrant exceptionally low levels of the federal funds rate for an extended period.” As the U.S. economy was already showing some signs of recovery by the first quarter of 2010, some people warned that the Federal Reserve actions might increase expected inflation. Explain why low levels of interest rates might fuel inflation expectations and what the Federal Reserve should do to avoid the latter.

According to aggregate demand and supply analysis, low levels of interest rates might stimulate aggregate demand and create inflation. If the Federal Reserve keeps its policy instrument (i.e., the federal funds rate) at low levels while the output gap is positive, it will be effectively shifting the demand curve to the right and triggering subsequent shifts to the left of the short-run aggregate supply curve. Based on that reasoning, some policy makers (even inside the Federal Reserve) questioned the Federal Reserve’s actions. Most members of the FOMC, however, saw inflation expectations at very low levels and therefore decided not to raise the federal funds target. The fact that the unemployment rate remained at high levels (9.7% by March 2010) also indicated that the recovery has not yet reached the labor market and therefore inflationary pressures would probably remain subdued for quite some time. In addition, the Federal Reserve should be quite attentive to any sign of future inflation and act quickly in order to avoid an increase in inflation expectations. The federal funds target will most surely be increased at the first sign of inflationary pressures (maybe when the unemployment rate starts to decrease). The Federal Reserve has been actively promoting its so-called “exit strategy” to send the message that it has many tools at its disposal to remove the excess liquidity pumped into the financial system. The whole purpose of the “exit strategy” is to reassure market participants that the Federal Reserve is committed to fight inflation.