Answer to the Quiz
Monetary Finance

September 24, 2017

Part A

1.
Because the costs of making the loan to your neighbor are high (legal fees, fees for a credit check, and so on), you will probably not be able earn 5% on the loan after your expenses even though it has a 10% interest rate. You are better off depositing your savings with a financial intermediary and earning 5% interest. In addition, you are likely to bear less risk by depositing your savings at the bank rather than lending them to your neighbor.

2.
This strategy has the following advantages:
(1) it enables monetary policy to focus on domestic considerations; (2) it does not rely on a stable money-inflation relationship; and (3) it has had a demonstrated success, producing low inflation with the longest business cycle expansion since World War II.
However, it has the following disadvantages:
(1) it has a lack of transparency; (2) it is strongly dependent on the preferences, skills, and trustworthiness of individuals in the central bank and the government; and (3) it has some inconsistencies with democratic principles because the central bank is not highly accountable.

3.
The ranking from most liquid to least liquid is: (a), (c), (e), (f), (b), and (d).

4.
(a) M1 and M2, (b) M2, (c) M2, (d) M1 and M2.

5.
If the interest rate were 12 percent, the present discounted value of the payments on the government loan are necessarily less than the $1,000 loan amount because they do not start for two years. Thus the yield to maturity must be lower than 12 percent in order for the present discounted value of these payments to add up to $1,000.

6.
People are more likely to buy houses because the real interest rate when purchasing a house has fallen from 3 percent (= 5 percent - 2 percent) to 1 percent (= 10 percent - 9 percent). The real cost of financing the house is thus lower, even though mortgage rates have risen. (If the tax deductibility of interest payments is allowed for, then it becomes even more likely that people will buy houses.)

7.
Interest rates fall. The increased volatility of gold prices makes bonds relatively less risky relative to gold and causes the demand for bonds to increase. The demand curve, Bd, shifts to the right and the equilibrium interest rate falls.

8.
The snowstorm would cause float to increase, which would increase the monetary base. To counteract this effect, the manager will undertake a defensive open market sale.

9.
The slope of the yield curve would fall because the drop in expected future short rates means that the average of expected future short rates falls so that the long rate falls.

10.
Although Joe's expectations are typically quite accurate, they could still be improved by his taking account of a snowfall in his forecasts. Since his expectations could be improved, they are not optimal and hence are not rational expectations.

11.
The value of any investment is found by computing the value today of all cash flows the investment will generate over its life.

12.
Yes, this is an example of an adverse selection problem. Because a person is rich, the people who are most likely to want to marry him or her are gold diggers. Rich people thus may want to be extra careful to screen out those who are just interested in their money from those who want to marry for love.

13.
The free-rider problem means that private producers of information will not obtain the full benefit of their information-producing activities, and so less information will be produced. This means that there will be less information collected to screen out good from bad risks, making adverse selection problems worse, and that there will be less monitoring of borrowers, increasing the moral hazard problem.

14.
Government fiscal imbalances may create fears of default on government debt. As a result, demand from individual investors for the government bonds may

fall, causing the government to force financial institutions to purchase them. If the debt then declines in price, as will occur if a government default is likely, financial institutions' balance sheets will weaken and their lending will contract for the reasons described earlier. Fears of default on the government debt can also spark a foreign exchange crisis in which the value of the domestic currency falls sharply because investors pull their money out of the country. The decline in the domestic currency's value will then lead to the destruction of the balance sheets of firms with large amounts of debt denominated in foreign currency. These balance sheet problems lead to an increase in adverse selection and moral hazard problems, a decline in lending, and a contraction of economic activity.

15.
The decline in housing prices led to many subprime borrowers finding that their mortgages were "underwater". When this happened, struggling homeowners had tremendous incentives to walk away from their homes and just send the keys back to the lender. Defaults on mortgages shot up sharply, causing losses to financial institutions which then deleveraged, causing a collapse in lending.

16.
Because when a deposit outflow occurs, a bank is able to borrow reserves in these overnight loan markets quickly; thus, it does not need to acquire reserves at a high cost by calling in or selling off loans. The presence of overnight loan markets thus reduces the costs associated with deposit outflows, so banks will hold fewer excess reserves.

17.
The benefits of a too-big-to-fail policy are that it makes bank panics less likely. The costs are that it increases the incentives or moral hazard by big banks who know that depositors do not have incentives to monitor the bank's risk-taking activities. In addition, it is an unfair policy because it discriminates against small banks.

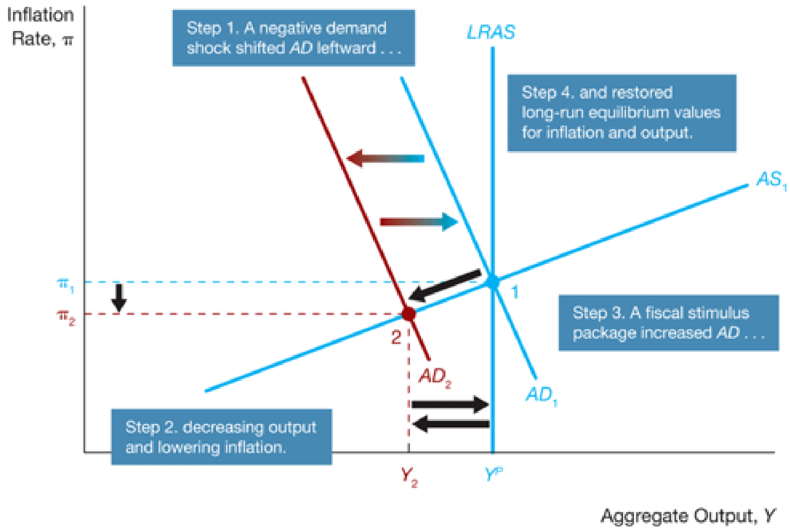
18.
Uncertain. The invention of the computer did help lower transaction costs and the costs of collecting information, both of which have made other financial institutions more competitive with banks and have allowed corporations to bypass banks and borrow directly from securities markets. Therefore, computers were an important factor in the decline of the banking system. However, another source of the decline in the banking industry was the loss of cost advantages for the banks in acquiring funds, and this loss was due to factors unrelated to the invention of the computer, such as the rise in inflation and its interaction with regulations which produced disintermediation.

19.
The Federal Reserve Banks influence the conduct of monetary policy through their administration of the discount facilities at each bank and by having five of their presidents sit on the FOMC, the main policymaking arm of the Fed.

20.
None. The reduction of \$10 million in discount loans and increase of \$10 million of bonds held by the Fed leaves the level of reserves unchanged so that checkable deposits remain unchanged.

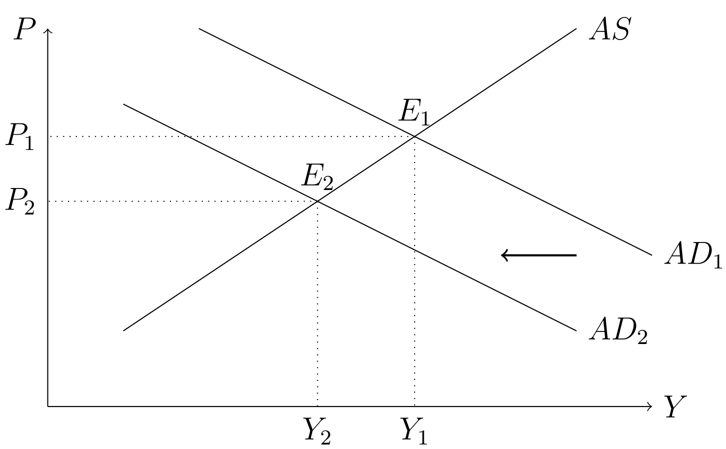
Part B

1.



In the financial crisis happened in 2007, people decreased their consumption expenditure and investment spending, which shifted the AD curve leftward from AD_1 to AD_2. Consequently, the output as well as the inflation decreased. In the meanwhile, The government increased the government spending to stimulate the economy, which shifted the AD curve rightward back to AD_1.

2.
a.



The original equilibrium is at E_1. According to aggregate demand and supply analysis, the decrease in government expenditures results in a shift to the left in the aggregate demand curve, as aggregate expenditure decreases at every inflation rate. As a result, the new intersection point with the short-run aggregate supply curve determines a lower inflation rate and output level than before. At this point, output is below potential output and inflation is below its target.

b.

If the Federal Reserve decides to use its monetary policy tools to stabilize inflation, it will effectively decrease the real interest rate at every inflation rate, thereby shifting the MP curve downward. This action will shift the AD curve to the right and restore the economy to its long-run equilibrium, where the inflation rate is at its target and output is at potential output again. The only long-run effect of this policy is to affect the real interest rate, which is now set at a lower level than the previous long-run equilibrium.