NANYANG TECHNOLOGICAL UNIVERSITY
SCHOOL OF SOCIAL SCIENCES
SEMESTER 1 AY22-23

HE1002 MACROECONOMICS I

PROBLEM SET 8

Question 1
During the heavy Christmas shopping season, sales of retail stores, online sales firms, and other merchants rise significantly.

(a) What would you expect to happen to the money demand curve during the Christmas season? Show graphically.

(b) If the Fed took no action, what would happen to nominal interest rates around Christmas?

(c) In fact, nominal interest rates do not change significantly in the fourth quarter of the year, due to deliberate Fed policy. Explain and show graphically how the Fed can ensure that nominal interest rates remain stable around Christmas.

Question 2
How would you expect each of the following to affect the economywide demand for U.S. money? Explain.

(a) Competition among brokers forces down the commission charge for selling holdings of bonds or stocks.

(b) Grocery stores begin to accept credit cards in payment.

(c) Financial investors become concerned about increasing riskiness of stocks.

Question 3
Using a supply and demand graph of the market for money, show the effects on the nominal interest rate if the Fed takes the following monetary policy actions:

(a) The Fed lowers the discount rate and increases discount lending.

(b) The Fed increases the reserve requirements for commercial banks.

(c) The Fed conducts open-market sales of government bonds to the public.

(d) The Fed decreases the reserve requirements for commercial banks.

Question 4
In August 2015, the Chinese central bank decided to reduce China's required reserve-deposit ratio from 18.5 percent to 18 percent. Assuming no change in the amount of cash held by the Chinese public, that commercial banks lend all their excess reserves, and that bank reserves was a constant 4,329 billion yuan both before and after the change, compute the maximum change in Chinese banks deposits as a consequence of the change in the reserve-deposit ratio.

Question 5
The Fed faces a recessionary gap. How would you expect it to respond? Explain step by step how its policy change is likely to affect the economy.

Question 6
An economy is described by the following information:

$C = 2{,}600 + 0.8(Y - T) - 10{,}000r$
$I^P = 2{,}000 - 10{,}000r$
$G = 1{,}800$
$NX = 0$
$T = 3{,}000$

The real interest rate, expressed as a decimal, is 0.10 (that is, 10 percent)

(a) Find a numerical equation relating planned aggregate expenditure to output.

(b) Using algebra, solve for short-run equilibrium output.

(c) Show your result graphically using the Keynesian-cross diagram.

Question 7
An economy is described by the following information:

$C = 14{,}400 + 0.5(Y - T) - 40{,}000r$
$I^P = 8{,}000 - 20{,}000r$
$G = 7{,}800$
$NX = 1{,}800$
$T = 8{,}000$
$Y^* = 40{,}000$

(a) Find a numerical equation relating planned aggregate expenditure to output and to the real interest rate.

(b) At what value should the Fed set the real interest rate to eliminate any output gap?