AFRICAN ECONOMIC RESEARCH CONSORTIUM

Collaborative MA Programme in Economics for Anglophone Africa (Except Nigeria)

JOINT FACILITY FOR ELECTIVES (JFE)

JULY – OCTOBER 2006

MONETARY THEORY AND PRACTICE I

First Semester: Final Examination

Duration: 3 Hours **Date: Tuesday, August 15, 2006**

INSTRUCTION:

Attempt **ANY THREE (3)** Questions

Question 1

a) While almost all economists accept that the long run effects of money fall entirely or almost entirely on prices with little impact on real variables, most, also believe that monetary disturbances can have important effects on real variables such as output in the short run. Explain.
(10 marks)

b) Given the following macroeconomic model summarising a small open economy and assuming that the policy target goals are price stability output and employment:

Output:

$$Y_t = Y(N, \bar{K}); Y_N > 0; Y_{NN} < 0$$

$$Labour\ Supply: \frac{W}{P^e} = g\left(N^S\right);$$

$$P_t^e = P_{t-1} + (1-\lambda)\left[P_{t-1}^e - P_{t-1}\right], 0 < \lambda < 1$$

$$Labour\ Demand: Y_N\left(N, \bar{K}\right) = \frac{W}{P}$$

Aggregate demand:

$$Y_t = C((Y - T(Y)), A) + I_t(Y, r, A) + G_t + X_t\left(P, E, Y^f\right) - Z_t(E, Y)$$

$$C_{Y-T}, C_A, I_Y, I_A, X_E, X_{Y^f}; Z_Y, > 0; I_r; X_P, Z_E < 0;$$

$$A = \bar{K} + \frac{M}{P} + \frac{B}{r}$$

Money Market:

$$M^s = M^d = PL(Y, r); L_Y > 0, L_r < 0$$

Balance of payment:

$$BP = X_t\left(P, E, Y^f\right) - Z_t(E, Y) + F_t\left(r - r^f\right); F_r > 0$$

Y denotes output, C aggregate real consumer expenditure, I real investment expenditure, G real government consumption, X real value of exports, Z real value of imports, P price level, r real interest rate, r^f is foreign interest rate, E floating exchange rate, W nominal wage, $\bar{K}$ capital stock (assumed constant), M^s money stock, and Y^f foreign demand (or foreign income), A wealth, B real value of bonds held by the public, and F capital inflow. Subscripts indicate first derivative with respect to the variable described.

Describe how an increase in money supply would affect the policy target goals of price stability, output and employment. ***(10 marks)***

Question 2

a) In most macroeconomic analyses, money supply is regarded as exogenous and under the control of the monetary authorities. To what extent can the central bank in your country control money supply? ***(10 marks)***

b) Explain how bank deposits are an endogenous quantity determined along with other variables by the interaction of the portfolio preference of the banking and non-bank sectors. ***(10 marks)***

Question 3

a) A country with a fixed exchange rate can borrow from the central bank to finance its deficits and avoid inflation provided foreign reserves continue to be available. Explain. ***(10 marks)***

b) Consider an economy described by expectations-augmented Phillips curve of the form $\pi - \pi^e = f(x)$ and where inflation (π) is assumed to be a monetary phenomenon such that $\pi = \frac{1}{M}\frac{dM}{dt} + u$,

where u is a random shock variable, π^e is the expected inflation rate and x is a measure of the deviation of output from its full employment or natural level. Assuming that expectations are formed rationally, explain how output and employment can differ from their natural levels in this economy. ***(10 marks)***

Question 4

a) Most African countries that have had inflation problems and have adapted the IMF/World bank sponsored programmes have had to adopt the policy of central bank independence to fight the inflation. Explain why this is said to reduce inflation bias. ***(7 marks)***

b) Assuming a central bank's welfare objective function is of the form: $V = 0.5(y - y^*)^2 + 0.5\beta\pi^2, \beta > 0$ Where β measures the degree of inflation aversion of the central bank. Aggregate output is a Lucas-type aggregate supply function of the form: $y = \bar{y} + \alpha(\pi - \pi^e) + e,\ \alpha > 0$

i. Determine actual inflation and the output under discretionary monetary policy. ***(8 marks)***

ii. Suppose the central bank instead follows a simple money growth rule that ensures that the inflation rate is zero and the public believes this. Explain why this policy is not credible. ***(5 marks)***

Question 5

Explain the following concepts: ***(5 marks each)***

a) Monetarist approach to demand for money.
b) Credit Monetary Transmission Mechanism.
c) Inside money
d) Monetary Policy rules.

THE END