Problem Set 4
Fixed Exchange Rates

1. What is the official exchange rate regime in your country?

2. Using data from the IFS (or any other reliable source) for the most recent year answer the following questions:

   a) What is the ratio of foreign exchange reserves to the monetary base? Could your country withstand a massive attack on its currency?

   Answer: If foreign assets of the central bank (line 11 in the IFS) are greater that the monetary base (line 14 in the IFS) then net liabilities of the cental bank are backed by foreign exchange and a country could, in principle, withstand a massive speculative attack.

   b) How much (as a percentage of GDP) did the general government borrow from the central bank? How much from the banking system?

   Answer: Government borrowing from the central bank is the change in central bank's claims on central government(line 12a in the IFS). Similarly for government's borrowing from the banking sector.

   c) How much seignorage (as a percentage of GDP) did the central bank receive?

   Answer: Seignorage is the change in monetary base (line 14).

   d) Calculate the growth rate of $M2$. What was the contribution of domestic and foreign assets? How do you interpret your findings?

   Answer: Money supply can increase if either net domestic assets (NDA) or net foreign assets (NFA) increase. If M2 growth is associated with an increase in NFA, central bank created money by intervening in the forex market, if it is associated with an increase in NDA, central bank created money by extending domestic credit.

3. A recent study found that the volatility of foreign exchange reserves is quite high in countries that claim to have floating regimes. Why is this result interesting?

   Answer: If a country claims to have a floating exchange rate regime, its reserves should be constant.

4. What is the correlation between the monetary base and foreign exchange reserves under a currency board arrangement? **Answer:**Under currency board arrangement monetary base and foreign exchange reserves should move one for one - the correlation should be 1.