

Homework Assignment 12 solution.

1. (1 point) Explain why inflation can be damaging to an economy?

High level of inflation creates risk – it is typically more difficult to predict what the actual inflation will be in the future if one expects inflation to be high (e.g., if the expected inflation is 15% it wouldn't be unusual to observe the actual inflation of 20%, whereas it would be unusual to observe 7% inflation if the expected level is 2%). The inflation risk is systemic and therefore not diversifiable. In addition, constantly changing prices reduce the effectiveness of money as a store of value (people would prefer to hold other assets). Money can even lose its ability to perform the role of a means of payment if the inflation is very high (hyperinflation) – people may stop accepting currency because it loses value so fast. Money should be able to perform all its functions for the whole financial system to function smoothly (which in turn is necessary for non-financial economy to perform well).

2. (2 point) Explain how the emergence and growth of electronic money (like PayPal) will affect the ability of central banks to control inflation?

The ability of a central bank to control inflation ultimately depends on its ability to control the amount of money in circulation. Central banks have considerable amount of control over the amount of money in their respective economies because they have monopoly over printing currency and creating reserves (this control is not perfect, especially in more developed countries). At the same time central banks do not have any control over electronic money (electronic money is not issued by central banks) so their ability to manage inflation are diminished because of the spread of electronic money.

3. (2 points) The main goal of most central banks in the world is price stability. However, some central banks (Federal Reserve, for example) do not specify what exactly “price stability” means. Others (like European Central Bank) define explicit objective expressed in terms of rate of change in specific price index. What are the advantages of the two strategies?

A central bank that sets explicit objectives (like target level of inflation) is clearly more transparent and accountable. This strategy gives credibility to the central bank itself and its policies. Credibility reduces risk – if a central bank says that the inflation will be between 1 and 3% and the inflation always is between 1 and 3%, market participants will tend to believe statements made by the central bank. If a central bank never promises or (worse) promises but never delivers on the promises, there would be no reason to expect that inflation will fall between 1 and 3%. If inflation is less predictable – there is more risk.

The advantage of not defining explicit goals is that there may be situations where (1) it is not possible to achieve these goals (and it is much worse not to be able to achieve an explicitly stated goal than not to state any goals at all), (2) it is desirable to have higher inflation (to stimulate growth, for example). A central bank without explicit goals has more flexibility and can potentially address multiple objectives.

4. (1 point) What are the arguments in favor of central bank independence?

The main argument for central bank independence (from elected politicians) is that politicians are typically concerned with short-term outcomes (which decide elections) and not long-term outcomes (which are more important). For example, it may be possible to achieve short-term growth by pumping money into the economy (and win the elections). The long-term consequences of this (inflation) may not surface until after the politicians are safely in their seats. On top of that, politicians are typically not trained to conduct complex monetary policies.

5. (2 point) Read the summary of the most recent Beige Book (<http://www.federalreserve.gov/fomc/beigebook/2006/20060315/default.htm>). In a few sentences summarize the main points of the report.
6. (1 points) Suppose that the Fed buys \$1 bln worth of French government bonds denominated in Euros, paying in dollars. What is the impact on the monetary base? What would the Fed have to do to keep the monetary base unchanged?

The monetary base is equal to the sum of currency and reserves. The impact of this transaction is shown on a T-account below (wasn't required for this problem):

A		L
Foreign exchange		Reserves +\$1 bln
Reserves +\$1 bln		

The monetary base goes up by \$1 bln. To keep the monetary base unchanged Fed could sell some securities (T-Bonds):

A		L
Securities -\$1 bln		Reserves -\$1 bln

7. (1 point) The Central Bank of China often buys US dollars from Chinese businesses which sell their products in US. In a T-account show what is the effect of one such transaction (worth, say, \$1 mil) on the Central Bank's balance sheet?

To the Central Bank of China US dollars are foreign currency:

A		L
Foreign exchange		Reserves +\$1 mil
Reserves +\$1 mil		