# Econ 736 Analytical Assignment #3

1. (10 points) Suppose we were living in an economy where the LM curve was flat. Within such an economy, discuss the effectiveness of monetary policy. Be careful to write down the assumptions that you make, as well as the structure of the framework with which you are using to answer this question, i.e. the key equations, etc. Your answer should outline under what scenarios monetary policy would work, and under what scenarios, monetary policy would be ineffective in effecting output.

2. (10 points) Suppose that the government wishes to cut taxes that is expected to be inflationary. How can the central bank keep inflation from materializing in the economy? Use the closed economy *IS -LM* model (in one diagram) to illustrate graphically the impact of both the fiscal policy action of cutting taxes, and the monetary policy response which prevents inflation from rising. Be sure to label:
i. the axes;
ii. the curves;
iii. the initial equilibrium values;
iv. the direction the curves shift; and
v. the terminal equilibrium values.

3. (10 points) Consider your basic IS-LM model at a long-run equilibrium. Suppose that the Federal Reserve **sells** bonds to the public. Using diagrams for the IS-LM and the AD-AS models, describe the effect of this bond sale on the market for money and the goods market in both the short run and the long run. In words, what happens to interest rates, output, and prices in both the short and long run?

4. (10 points) Consider the inflation and unemployment data in the table below for the United States between 1990 and 2007. Assuming Okun's Law holds true (i.e. 1% of unemployment is approximately equal to 2% of lost output), using the data below, calculate the sacrifice ratio for the US economy based on the data between 1990 - 2007. Based on your answer, can you say anything about whether people in the economy form expectations based on rational expectations or adaptive expectations?

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| Year | Unemployment U | Natural Rate Unemployment Un | Inflation |
|---|---|---|---|
| **1990** | 5.6 | 5.87 | 5.42 |
| **1991** | 6.9 | 5.78 | 4.22 |
| **1992** | 7.5 | 5.66 | 3.04 |
| **1993** | 6.9 | 5.53 | 2.97 |
| **1994** | 6.1 | 5.4 | 2.60 |
| **1995** | 5.6 | 5.29 | 2.81 |
| **1996** | 5.4 | 5.2 | 2.94 |
| **1997** | 4.9 | 5.13 | 2.34 |
| **1998** | 4.5 | 5.07 | 1.55 |
| **1999** | 4.2 | 5.03 | 2.19 |
| **2000** | 4 | 5.01 | 3.37 |
| **2001** | 4.7 | 5 | 2.82 |
| **2002** | 5.8 | 5 | 1.60 |
| **2003** | 6 | 5 | 2.30 |
| **2004** | 5.5 | 5 | 2.67 |
| **2005** | 5.1 | 5 | 3.37 |
| **2006** | 4.6 | 4.96 | 3.22 |
| **2007** | 4.6 | 4.94 | 2.87 |