Problem Set #5  
ECON 3510, Prof. DeBacker  
Due Friday, December 4, 5 p.m.

_**NOTE:** You are encouraged to work on this problem set in a group of up to four members. When finished, each group should turn in one copy of the problem set directly to me by the beginning of class on the due date. A completed problem set should list the names of the group members who worked on the assignment. As noted in the syllabus, no late assignments will be graded._

---

1. **Chapter 18, Problems and Applications (5 points): #2**

   - #2 – This is a time inconsistent policy since politicians will have an incentive to put rent controls on the buildings once they are built. The results is that if the rent controls pass, builders will expect the future rent controls and so be less likely to build because the apartments won’t be as profitable once built.

2. **Chapter 18, “Made up problem”- Stabilization policy and its limitations (5 points):**

   (a) The _inside lag_ is the time between the economic event and the policy response. The _outside lag_ is the time between the policy action and its effects on the economy.

   (b) For monetary policy, the outside lag is longer, because the monetary transmission mechanism works through interest rates and thus most affects investment, which is often planned far ahead of time. The inside lag is the longer of the two for fiscal policy, since fiscal policy must go through the legislative process.

   (c) Automatic stabilizers can shorten the inside lag, since they kick in as soon as the economic event happens. Better ability to forecast economic conditions could also help with the inside lag. Looking for “shovel-ready” projects can shorten the outside lag of fiscal policy.

3. **Chapter 19, “Made up problem”- the Stimulus Package (5 points):**

   (a) The “Stimulus Package” has about $509 billion in increased government spending and $286 billion in tax cuts. According the the models from Chapter 3, an increase in \( G \) results in a fall in national savings, \( S \). The fall in national savings pushes interest rates higher and thus lowers the demand for investment. Investment falls enough to offset the increase in \( G \) and thus there is not next effect on \( Y \). A cut in taxes does the same.

   (b) In the longer run, a fall in savings means less investment and a lower steady state capital stock. A lower steady state capital stock means less output.

   (c) If the steady state capital stock was below the golden rule capital stock before the stimulus package, it will be even farther below the golden rule capital stock after the stimulus package. This means that not only output, but also consumption will be lower in very long run.
(d) The stimulus package can be represented by a rightward shift in the IS curve. This means that the short run equilibrium after the stimulus package will have an higher interest rate, \( r \), and higher level of income, \( Y \).

(e) One could have an argument to vote either side of this issue. There are costs (in the long run) and benefits (in the short run). The decision depends how you weight these. As the economist Thomas Sowell said, “There are no solutions...there are only trade-offs.”

4. Chapter 20, Problems and Applications (10 points): #1, #4

• #1

(a) Moral hazard - Rick is putting forth low effort since if publisher can’t monitor him. To solve this, the publisher might visit Rick to discuss progress or set intermediate deadlines.

(b) Adverse selection - David hasn’t gotten the advance and is looking for an advance because he knows writing the book first and hoping to earn money on sales is unlikely. To prevent this, the publisher might ask for a writing sample, a draft of a chapter, or not offer an advance.

(c) Adverse selection. Brenda knows something that it’s unlikely her insurer knows that makes her a bigger risk. The insurer may ask for a detailed family history or do genetic testing to prevent this.

(d) Moral hazard - Maria has insurance and is pursuing risky activities because the insurance reduces the cost she imposes on her family in the case of death. To prevent this, the insurer could state in the policy that they will not payout for death due to engagement in extremely risky activities such as these.

• #4 Both Greece and the US had financial crises stemming from falls in asset prices. In the US, those assets were related to home prices, in Greece, it was government debt. Both financial crises depressed output and lead to insolvent financial institutions, though the situation in Greece was more severe.

The major differences were that in the US it was (primarily/more directly) the decisions of private firms and households that lead to the crisis, whereas in Greece, the government’s tax and spending decisions directly affected their government debt levels which lead to the crisis. Also, the increase in gov’t debt in Greece precipitated the crisis, whereas the increase in gov’t debt in the US was the result of trying to combat the crisis.

Greece had much different policy options since it is a member of the European Monetary Union (EMU). The US was able to use monetary policy extensively, as well as use the Fed as a lender of last resort and purchaser of troubled assets. Greece did not have such an option since it does not control the ECB. Greece could only hope other countries would loan them money and/or forgive their debt.