ECON W3213 Spring 2014 Jón Steinsson

Midterm Review Session

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This is a set of questions to get you **started** on revision. They are very very basic. Don't expect the midterm to be this easy (just check out the sample finals!) Don't be too happy if you can answer these. After all, these are the **bare basics**. If you can't answer them, however, you're in deep shit. In that case, as Gandalf says, you shall not pass.

You will also notice that I skipped giving a lot of the formulas. They are a pain in the ass to type, and they're given in your formula sheet. However, I do ask you do derive most of them. Great exercise for revision!

1 Measuring Inflation

Inflation π_t is given by

$$\pi_t + 1 = \frac{P_{t,a}Q_a + P_{t,c}Q_c}{P_{t-1,a}Q_a + P_{t-1,c}Q_c}$$

1. What is a basket of goods?
2. Using the equation above and the little table that we drew for inflation (just read my recitation notes), explain the differences between
    a) Laspeyres Index
    b) Paasche Index
    c) Fisher Index

2 Medieval Monetary Economics

1. In the money market,

a) What is money demand? How does that relate to the value of transactions?

b) What is money supply?

c) How do we combine the two above to form the money velocity equation?

2. What production function do we use? Why only L_t?
3. What is the price adjustment equation? What is the intuition behind this equation?
4. What are the long run dynamics of this model?
5. What are the short run dynamics of this model?
6. What lags what and what adjusts immediately and what eventually settles to what? (If your answer to this is whaaaaaat, goooooood luck :P)

3 Gold Standard

1. Revisiting the definition of money supply, define these and show how they relate to one another

    a) Amount of gold M_g

    b) Amount of deposits in banks M_b

    c) Total money supply M

    d) Show how we get $M = M_g \frac{M_b}{M_g} \frac{M}{M_b}$

    e) What is the Gold Coverage Ratio? The Bank Money Multiplier? (Careful, the GCR is kind of an inverse)

2. If A imports from B, which direction is gold flowing?
3. What's the impact on prices of such gold flows?

    a) What can the government do to the GCR?

    b) Should the government do this? Will it be violating the "Rules of the Game" of countries in the gold standard?

4. On hyperinflations

    a) Can governments print money to fund deficit spending?

    b) Can it eliminate such increases in money supply using borrowing?

    c) For additional practice on this, just refer to your problem set. That's one hardcore pain in the a**.

4 Great Depression

1. What are the 4 causes of the Great Depression?
2. With regard to the Sterling Crisis (which is the 2nd cause. Ha! Freebie!)
   a) How do you solve dynamic games?
   b) Who chooses first in dynamic games?
   c) What does that little dotted bubble / rectangle around Investor B of the Bank Run game mean?
   d) What can governments do to its cost of defending its currency to ensure that investors not run all the time?
3. With regard to the Bank Bailouts
   a) This is moral hazard. What do the banks expect the government to do?
   b) Is the promise of "no-bail-out" credible?

5 Business Cycles

1. How do we define output gao $\tilde{Y}_t$
2. For the medieval AD and SRAS
   a) How do we derive AD?
   b) How do we derive SRAS?
   c) What happens when AD increases? Does the SRAS increase as well?
   d) Trace out what happens for 3 periods for a temporary increase in money supply (hence positive $\Delta \log M_t$ for one period
   e) Trace out what happens during a permanent increase in money supply
3. What happens during positive trend growth?
4. What is the function of Okun's Law
5. What is the Non Accelerating Inflationary Rate of Unepmloyment
6. How do we derive the Phillip's Curve? With regard to the Phillip's Curve
   a) Does the relationship hold in the long run? If not, what happens to the Phillip's Curve if output gap is not at 0 or if unemployment is not at NAIRU?
   b) How do we add adaptive expectation into the model to formalize this intuition?

c) Trace out what happens if $\tilde{Y}_t$ is made to be permanently positive by having a positive $\Delta \log M_t$. Then use Okun's Law to translate the effects on output gap to unemployment.

6 Monetary Policy

1. For the IS Curve,
   a) Derive the investment curve
   b) Derive the savings curve
   c) Combine them to form the IS curve
2. For money demand and supply
   a) Derive money demand, now adding the assumption that money velocity is not constant and is instead related to nominal interest rate
   b) What is the money supply?
   c) What conclusion do we get from this? Can the central bank now control nominal interest rates?
3. How do we use the Fisher Equation to link nominal interest rates and real interest rates? So can the central bank control real interest rates now?
4. If so, what is the MP curve?
5. Shocks to the IS-MP
   a) What happens if there is a temporary boom?
   b) What if the central bank wants to remove any inflationary effects from such a boom?
   c) Do the other examples in the recitation notes
   d) Derive the AD-AS model.
   e) Compare the AD-AS model to the IS-MP / Phillips Curve model and show that they both describe the same thing.

7 Fiscal Policy

1. What is the fiscal multiplier? Define it.
2. What is the fiscal multiplier for each of these scenarios? Trace the entire dynamics between IS-MP and the Phillips Curve.

a) Base case without monetary response and without liquidity trap

b) Base case with monetary response

c) Hand to mouth consumer

d) Zero lower bound or Liquidity Trap

e) Useful Spending

f) Wasteful Spending

3. Provide empirical evidence for the last two

8 Bonus Question

What is Jón 's favorite drink?