

Review Problems: Long-run Inflation

Prof. Lutz Hendricks. March 16, 2010

Jones, Macroeconomics, problems 8.2-8.12.

1 Basics

1. What is meant by classical dichotomy?
2. What is the yield curve? Why is it usually upward sloping?
3. What does it mean to say: money is the short end of the yield curve?
4. What is the velocity of money?

1.1 Answers: Basics

1. Money variables (M, V) have no effect on real variables (Y).
2. The yield curve plots the yield of a bond (e.g. a treasury bill) against maturity. It is usually upward sloping because longer bonds are less liquid and more risky.
3. See slides.
4. The number of times a unit of money is used in transactions: $MV = PY$.

2 Real and Nominal Interest Rates

1. What is the real return on cash?
2. What is the real interest rate?
3. What is the nominal interest rate?
4. If the nominal interest rate is 10% and the inflation rate is 3%, what is the real interest rate.
5. Why are nominal interest rates irrelevant for borrowing decisions?

2.1 Answers: Real and nominal interest rates

1. The negative inflation rate.
2. The price of future consumption. It answers the question: how much consumption do I have to give up today in order to buy a unit of consumption tomorrow?
3. The price of future money. It answers the question: how much money do I have to give up today in order to buy a unit of money tomorrow.
4. 7%.
5. See slides.

3 Miscellaneous

1. List some of the costs of moderate, steady inflation.
2. Why is unanticipated inflation more costly than anticipated inflation?
3. Why could steady deflation cause trouble, even though steady inflation seems harmless?
4. Why is inflation a fiscal problem?
5. Does the central bank control the money supply?

3.1 Answers

1. See class notes.
2. Anticipated inflation gets built into contracts. Unanticipated inflation changes relative prices in arbitrary ways. For example, those who borrow at fixed interest rates gain at the expense of the lenders.
3. The real interest rate could be high. By the Fisher equation: $r = i - \pi$. Deflation means $\pi < 0$. Since i cannot be negative, $r > -\pi$. With fast enough deflation, the real interest rate must be high.
4. Countries fail to control inflation because they either have too much government debt, which needs to be inflated away, or because they have too little revenue and need seignorage.
5. The central bank controls $M0$, but not larger monetary aggregates.

4 Quantity Theory

1. According to the Quantity Theory, what are the effect of changes in velocity, money supply, and real GDP on the price level?
2. How would the expression for inflation change, if the velocity were not constant but instead were to grow at rate $g(V)$?