

Announcements

- Office hours: 9-10:30am Monday 12/8 (per usual) 2-6p Monday 12/19 (Day before final)

Goals for this session

- Understand each curve of the 4-graph system we've been working on in class and also why they shift
- Get comfortable drawing shocks to this model and understand results.

The Model (shifts and assumptions)

1. Money Market Graph

- Money Supply
 - What causes it to shift? **Decisions by Fed to increase or decrease (i.e. open market operations, quantitative easing, paying interest on reserves etc..)**
- Money Demand
 - What causes it to shift?
 - * **Transactions Demand**
 - * **Liquidity Demand**
 - * **Speculative Demand**
- Investment Demand Graph
 - Why is Investment downward sloping? **Cheaper cost of borrowing means more investment**
- AD/AS Graph
 - Why is AD downward sloping
 - * **Real Wage Effect**
 - * **International Trade Effect**
 - * **Interest Rate Effect**
 - What causes AD to shift? **Any change to C, I, G, NX**
 - What causes AS to shift? **Input costs or productivity changes (wage rate, capital stock, technology)**
 - What causes LRAS to shift? **Changes to productivity i.e. Technology and Capital**
- Labor Market Graph
 - What are our assumptions behind this graph?
 - * **Diminishing Returns to Labor**

- * Perfect Competition
- * Therefore $w = mpl \cdot p$ or $mpl = w/p$
- What Causes L_d to shift? Changes in productivity, payroll tax.
- What Causes L_s to shift? Changes in population, or number of hours people work. For example if obama mandated people could only work 30 hours a week, that is a negative labor supply shock.

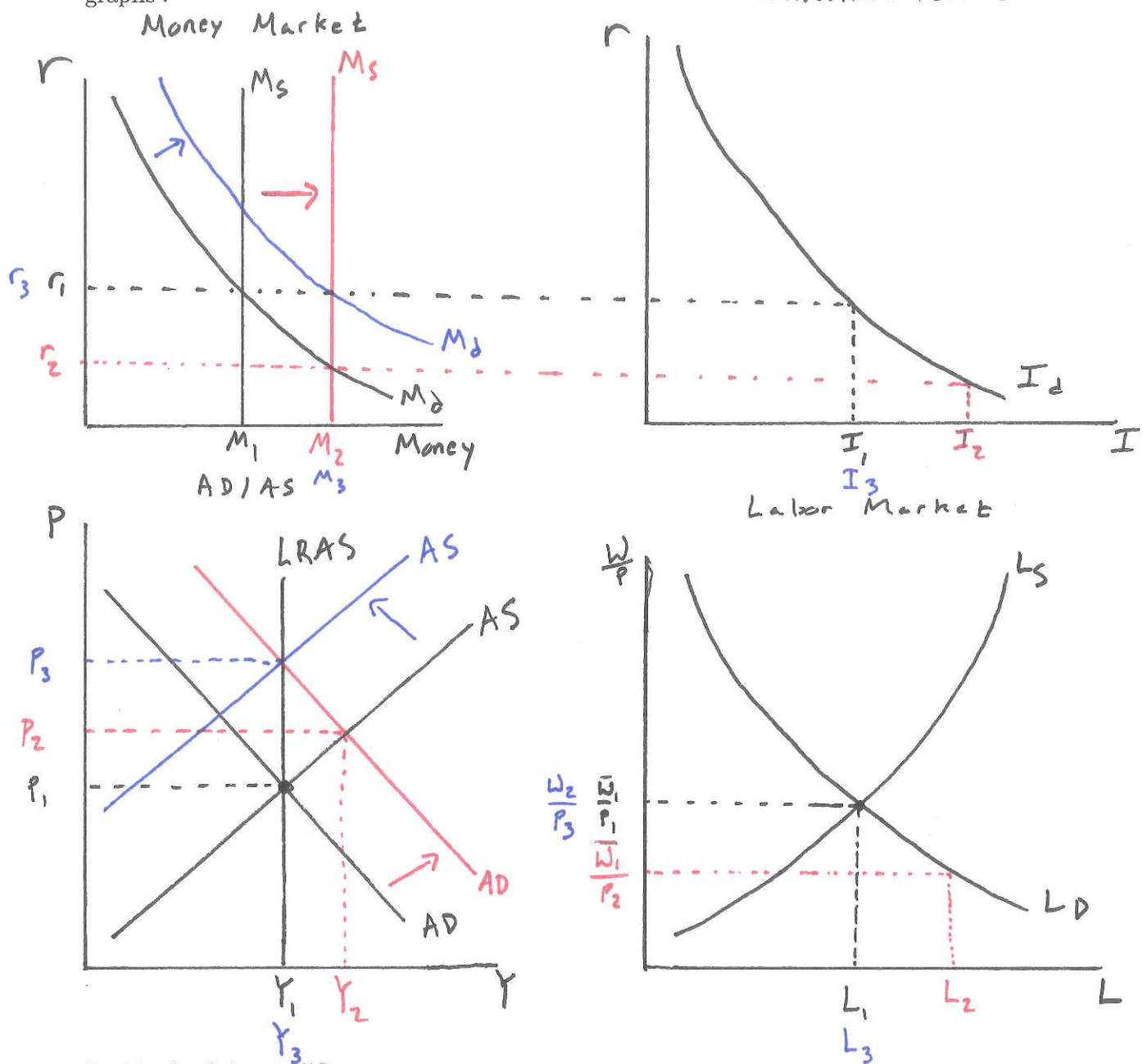
Problems

1. The Federal Reserve uses open market operations to buy bonds. Illustrate in the ‘four graphs’.
see attached

Is this shock ‘neutral’? Yes, in the long run we just have higher prices. All of Y , G , NX , I , C , are the same in real terms.

Problems

1. The Federal Reserve uses open market operations to buy bonds. Illustrate in the 'four graphs'.



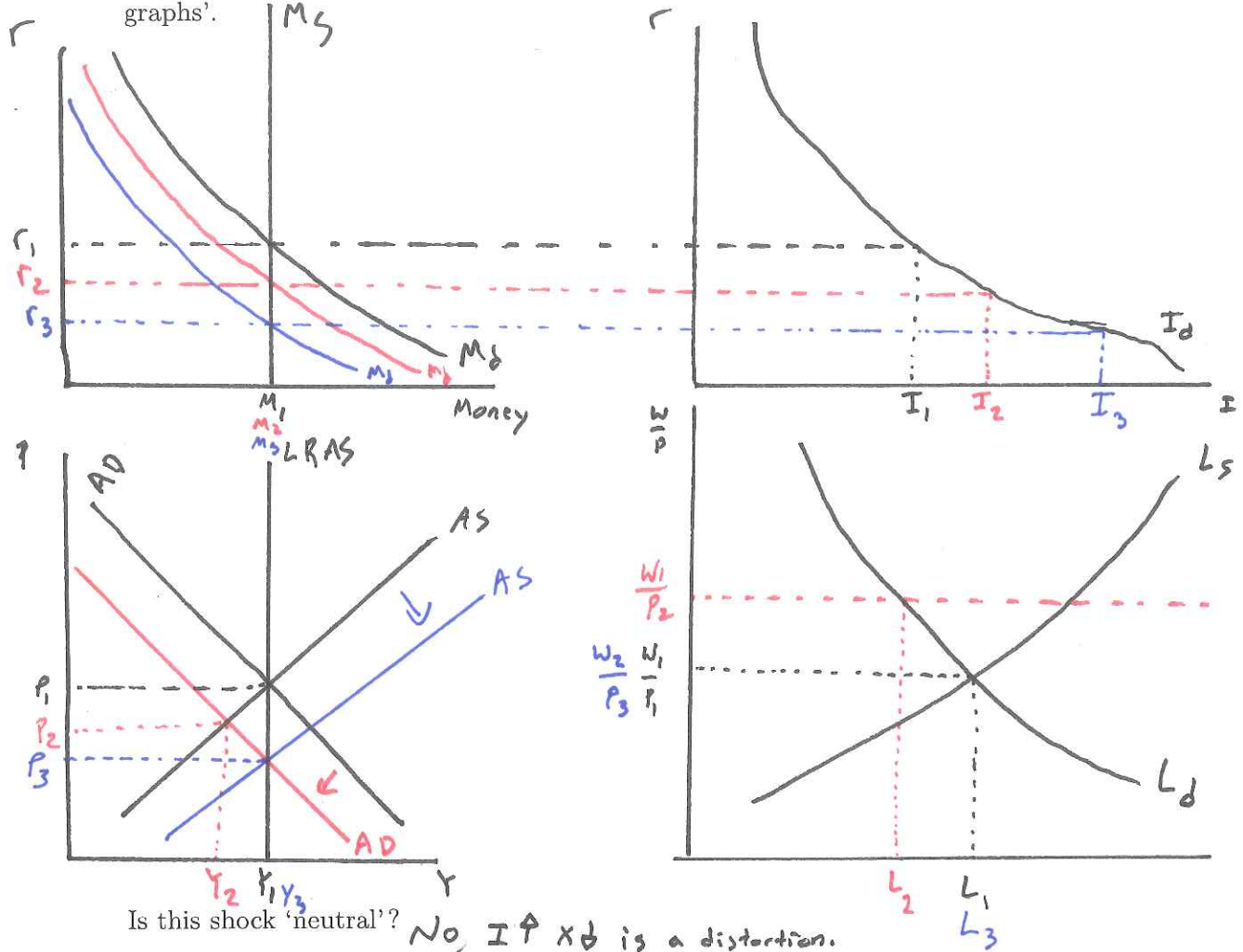
Is this shock 'neutral'?

- Yes $Y_3 = Y_1$, $I_1 = I_3$, $r_1 = r_3$, $L_1 = L_3$. Everything is the same in the long run in real terms.

This is why economists like monetary policy

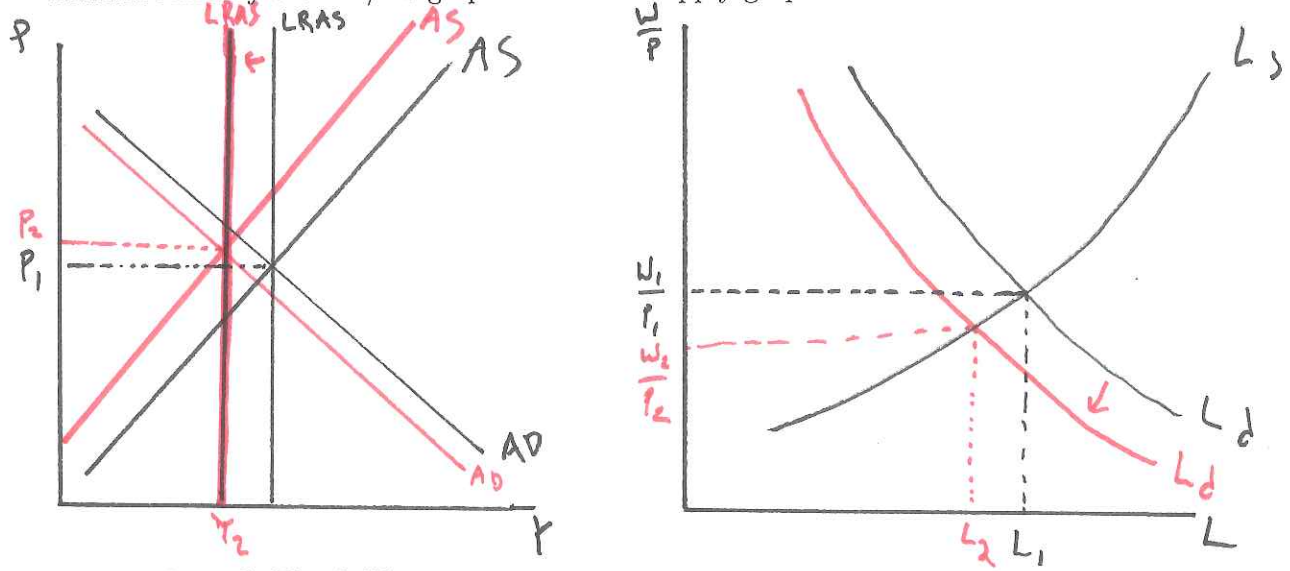
** In 2 here we showed Md shifting twice whereas in 1 we showed it shifting only once. Gwen has showed both versions in class. Md shifts twice since prices have two separate changes, so it is probably best to do the three shift version

2. Foreigners stop buying US goods because of a change in preferences. Illustrate in the 'four graphs'.



Is this shock 'neutral'? No, $I \uparrow X_d$ is a distortion.

3. OPEC cartel decides to reduce output and raise price of oil. (Negative productivity shock). Illustrate in only the AD/AS graph and Labor supply graph



Good Luck with Finals!!!

***Note: In the discussion section we did not do an AD shift for 3 here.

The main point is the LRAS, AS and L_d shift, so don't worry about the (small) AD shift.