Outline

1. Controversy over ECB management of 2001 recession.

2. Supply Side of Economy.
   - (a) Motivation,
   - → (b) (b1) Wage setting: bargaining. → Labor market numbers
   - → (c) Prices
   - (d) Natural Rate of Unemployment.
     - → Changes in bargaining power of workers (globalization, legal changes, changes in unemployment insurance)
     - → Competition of firms
   - (e) ~~AS~~ aggregate supply curve ("AS curve").

3. Aggregate Demand ("AD curve").

Experiment?

Figure 1a: Interbank Loan Rates

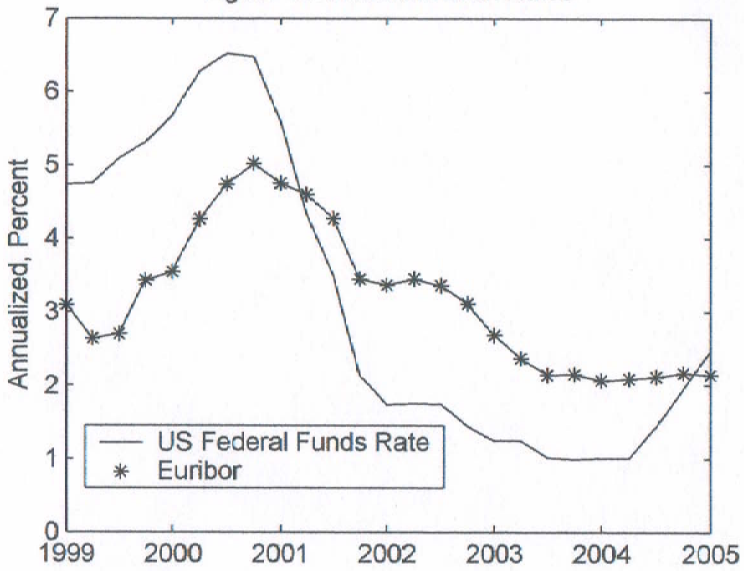


Figure 1b: US versus Euro Area GDP

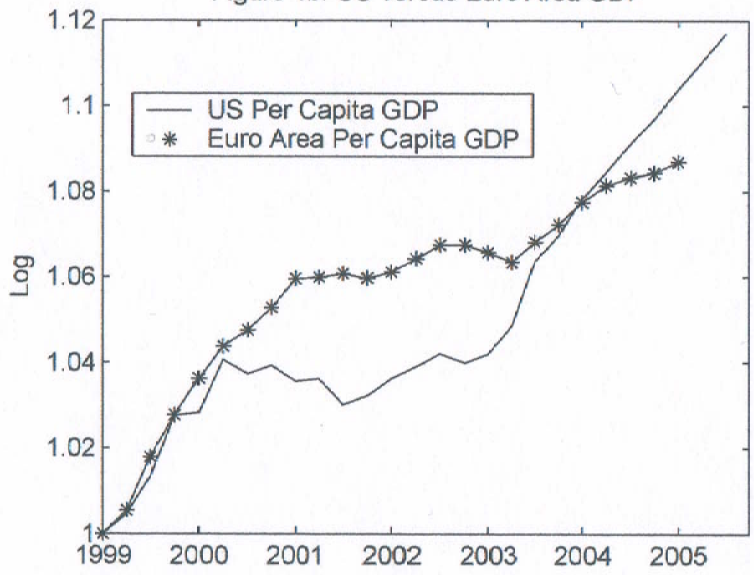
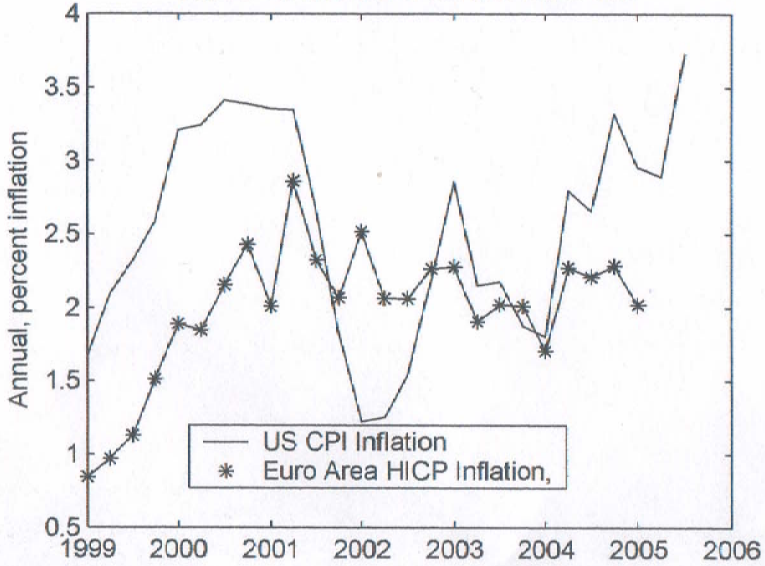


Figure 1c: Inflation in US and Euro Area



Good π policy operates:

→ if P high then Raise i by reducing M.

→ if Y Low then reduce i by RAising M.

Bargaining between worker & firm

Principle,

"Person who has most to lose if bargaining breaks down gets worst deal"

$$W = F(u, z)$$

z: other factors (unemployment insurance, legal changes.)

u: unemployment rate.

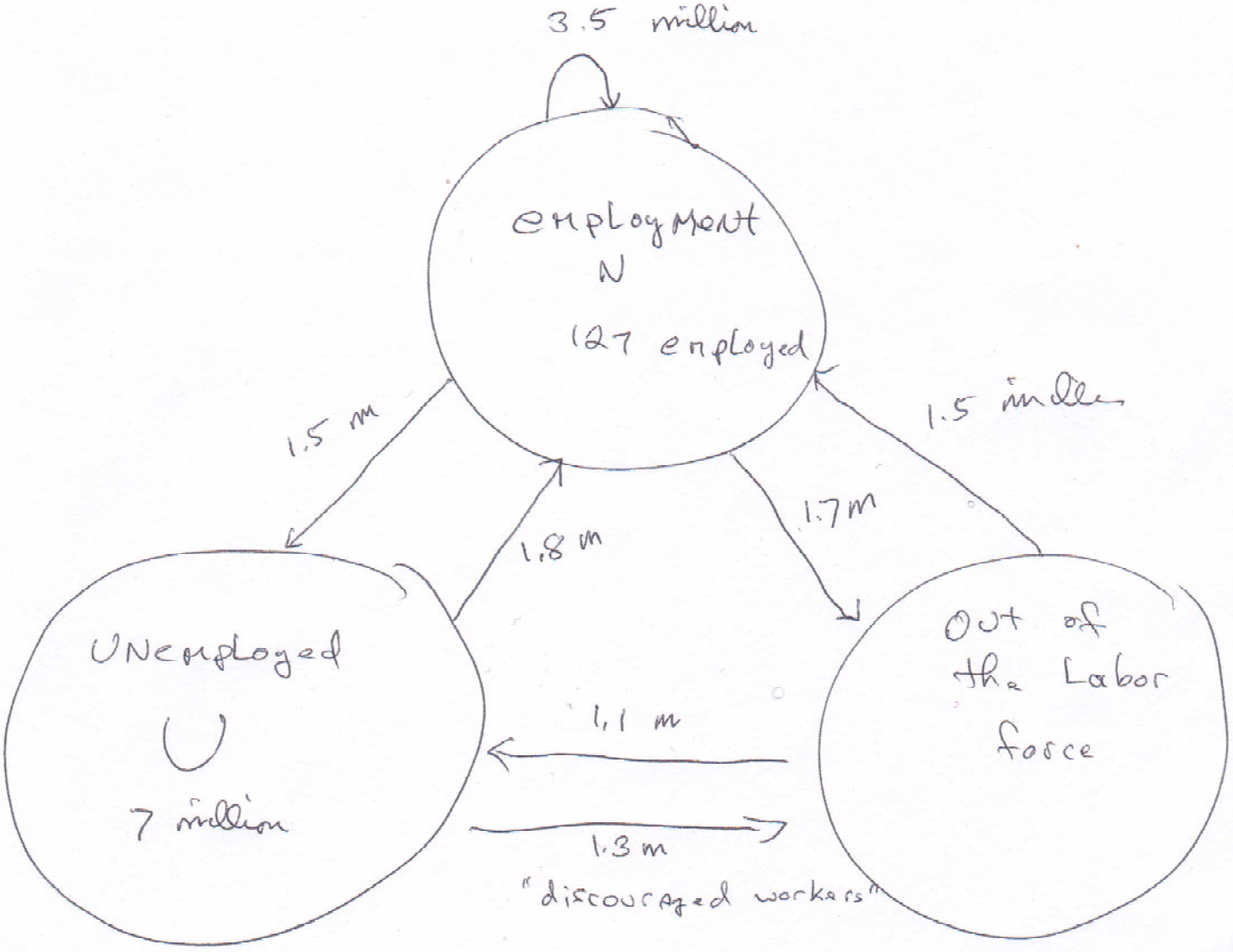
$$u = \frac{\#\text{ of people looking for work}}{\#\text{ of people looking for work} + \#\text{ employed}}$$

(# of people looking for work + # employed: Labor force.)

$$U + N = \text{Labor force.}$$

100,000 jobs per month.

$\frac{1}{2}$ size population of Minneapolis.



1994-1999

leaving job every month $3.5 + 1.5 + 1.7 \simeq 6.7$ m

$3.5 + 1.8 + 1.5 = 6.8$ m

100,000!

Price Setting.

$$P = (1+\mu) W$$

↑ main source of cost

$P > W$ because there are other costs, Fuel, intermediate inputs, because of profits.

Suppose there is Less competition

$\mu \uparrow$.

Globalization: $\mu \downarrow$.

Wage setting

$$W = F(u, z)$$

↑ globalization.

Natural rate of unemployment.

u_n.

Intuitive: where actual unemployment rate settles in the medium run.

Mechanical: in medium run

$$p^e = p. \quad (1)$$

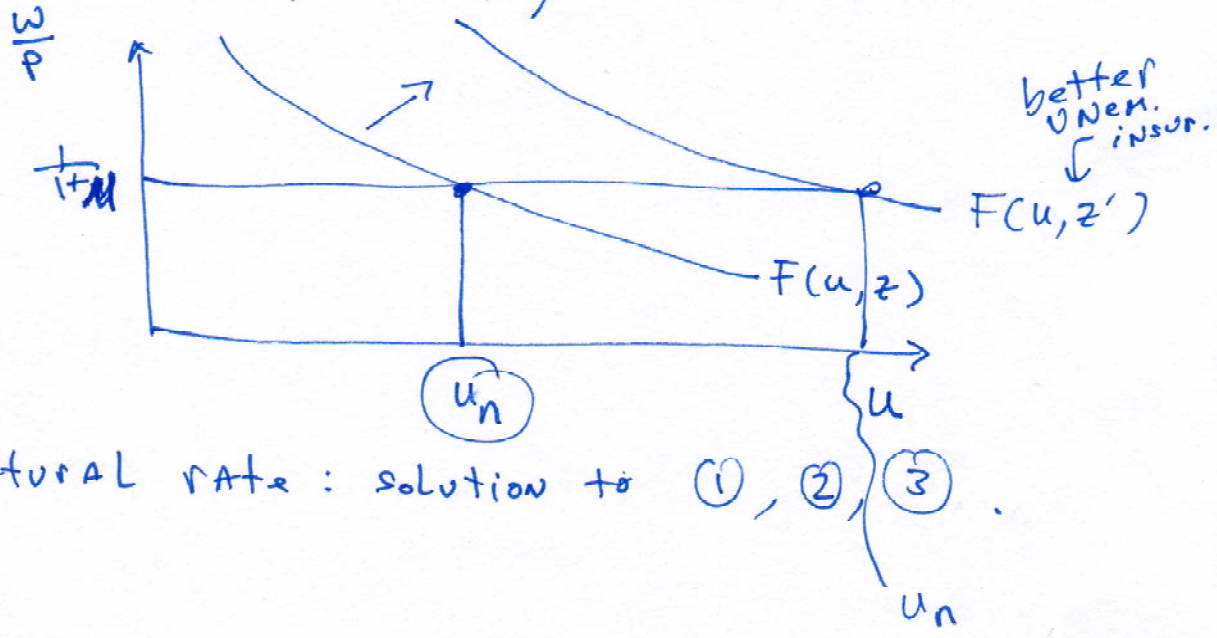
Short run: $p^e \neq p$

$$W = P^e F(u, z)$$

Price: (2) $P = (1+\mu) W$

(3) $\frac{W}{P} = \left(\frac{P^e}{P}\right) F(u, z)$ $= 1$ in medium run.

$$\frac{W}{P} = \frac{1}{1+\mu}$$



Natural rate: solution to (1), (2), (3).

Summarize theory of wage & price setting.

Wage setting $W = P^e F(u, z)$

P^e ~ expected price level over duration of bargain. (1 year).

higher $P^e \Rightarrow W \uparrow$

worker: wants higher wage because worker cares about what wage will ~~buy~~ buy & it will buy less when P^e is higher.

firm: increased wage demand occurs because P^e higher firm happy to pay higher wage because expect to pass it on.

5. Aggregate Supply.

$$u = \frac{U}{L} = \frac{L-N}{L} = 1 - \frac{N}{L}$$

$$L \sim U + N$$

$$\boxed{N = Y}$$

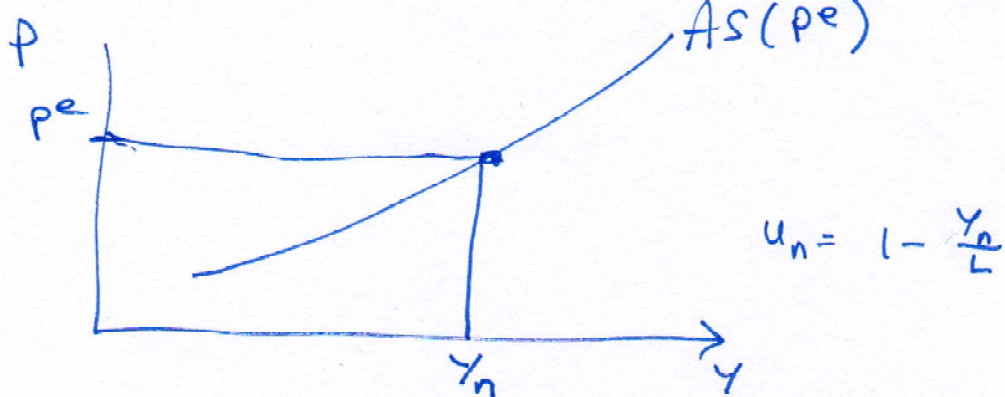
$$u = 1 - \frac{N}{L} = 1 - \frac{Y}{L}$$

$Y \uparrow \Rightarrow u \downarrow$.

Price setting / Wage setting

$P = (1+\mu)W$ $\quad L \sim$ Labor force
Assume this does not change.

$= (1+\mu) P^e F(1 - \frac{Y}{L}, z)$



$u_n = 1 - \frac{Y_n}{L}$