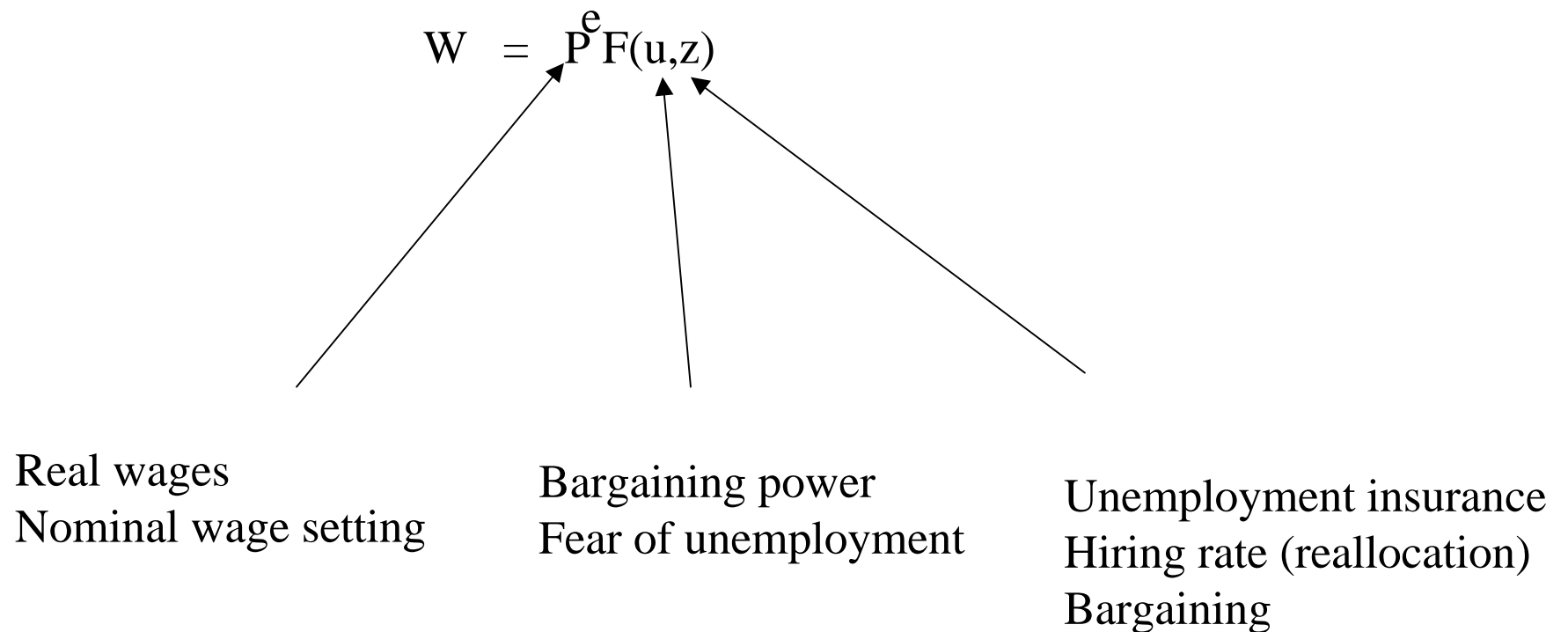


# Lecture 18: Aggregate Supply and Aggregate Demand

- Current events (FT 11/10/99)
- Review
  - Wage determination
  - The natural rate of unemployment (and output)

# Wage Determination

- Bargaining and efficiency wages



# Price Determination

- Production function (simple)

$$Y = N$$

$\Rightarrow$

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

# The “Natural” Rate of Unemployment

- “Long Run”  $P = P^e$
- The wage and price setting relationships:

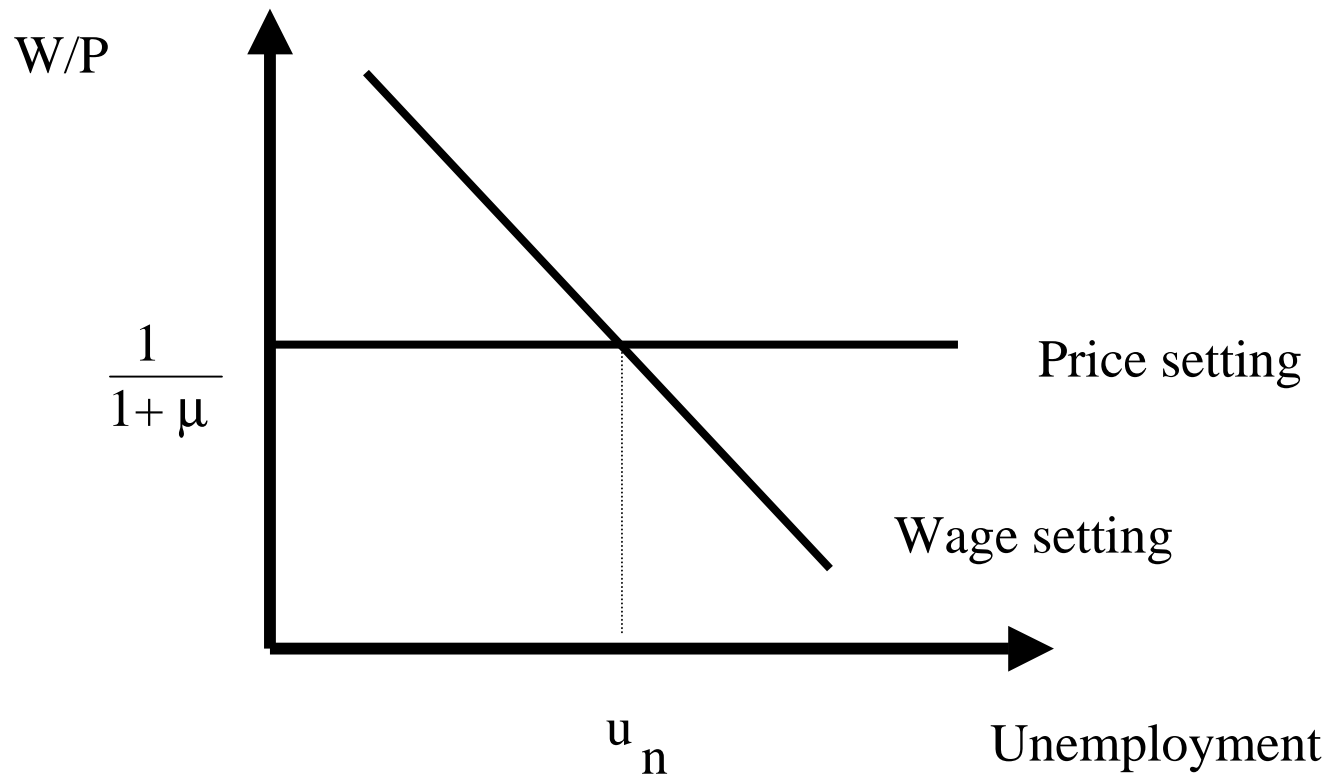
$$\frac{W}{P} = F(u,z)$$

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

$\Rightarrow$

The natural rate of unemployment

$$F(u,z) = \frac{1}{1 + \mu}$$

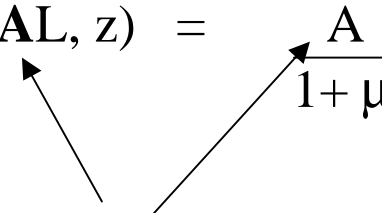


$z$ , markup

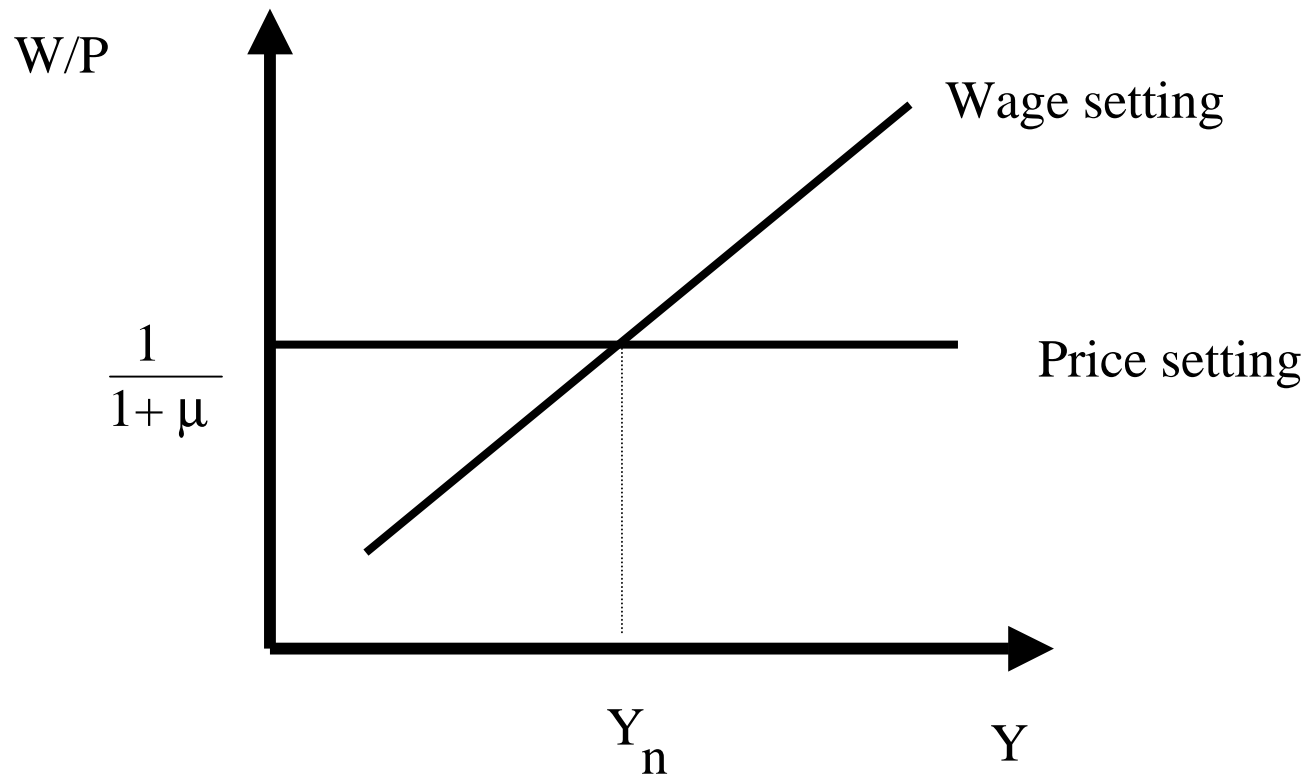
# From $u_n$ to $Y_n$

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

$$F(1 - Y_n/L, z) = \frac{1}{1 + \mu}$$

$$F(1 - Y_n/AL, z) = \frac{A}{1 + \mu}$$


Productivity:  $Y = AN$



$z$ , markup

[note:  $A=1$  again]

# Aggregate Supply

$$W = P^e F(1-Y/L, z)$$

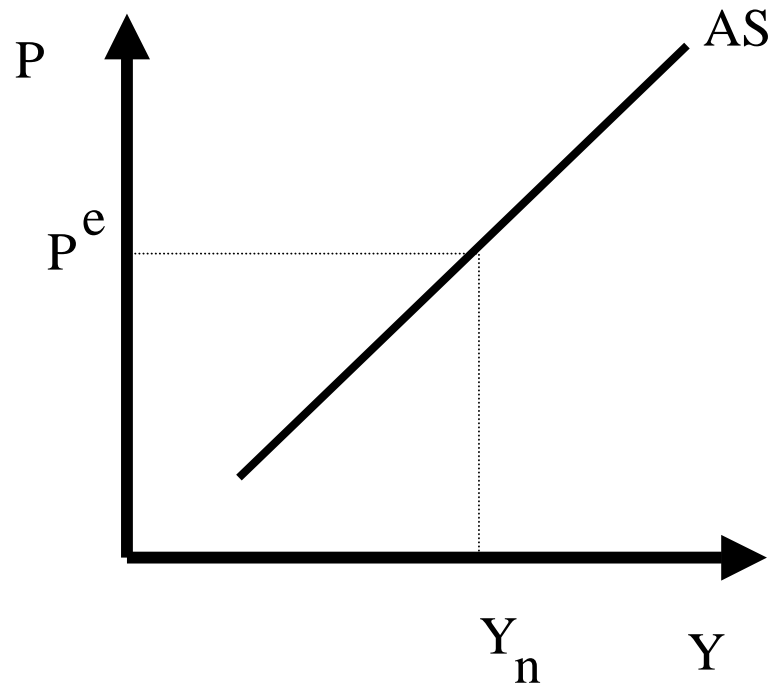
$$P = (1 + \mu) W$$

=>

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



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



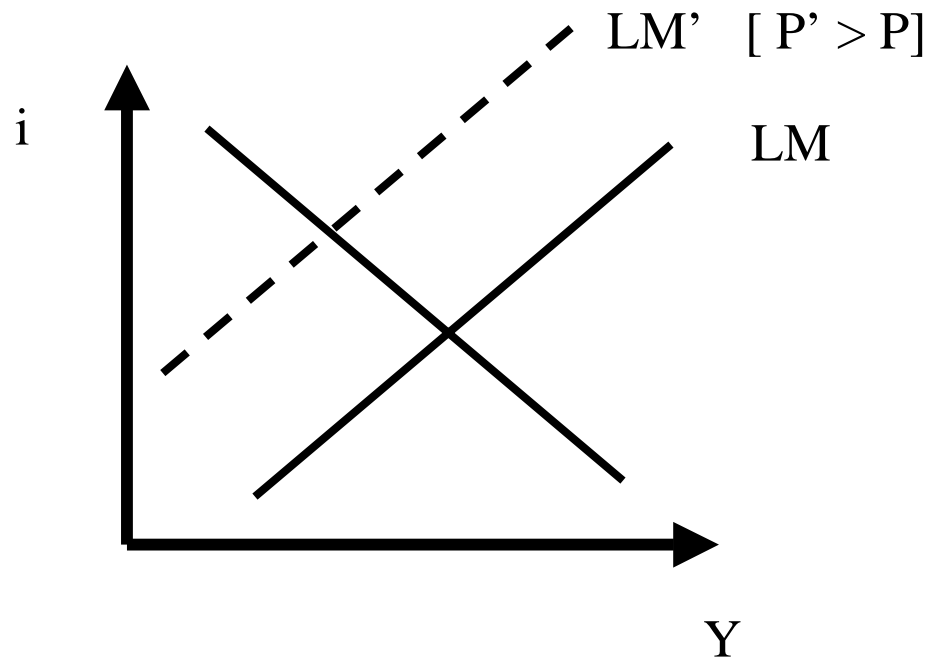
$$P^e(t) = P(t-1) \quad [\text{for now}] \Rightarrow$$

$$\text{AS:} \quad P(t) = P(t-1) (1 + \mu) F(1 - Y(t)/L, z)$$

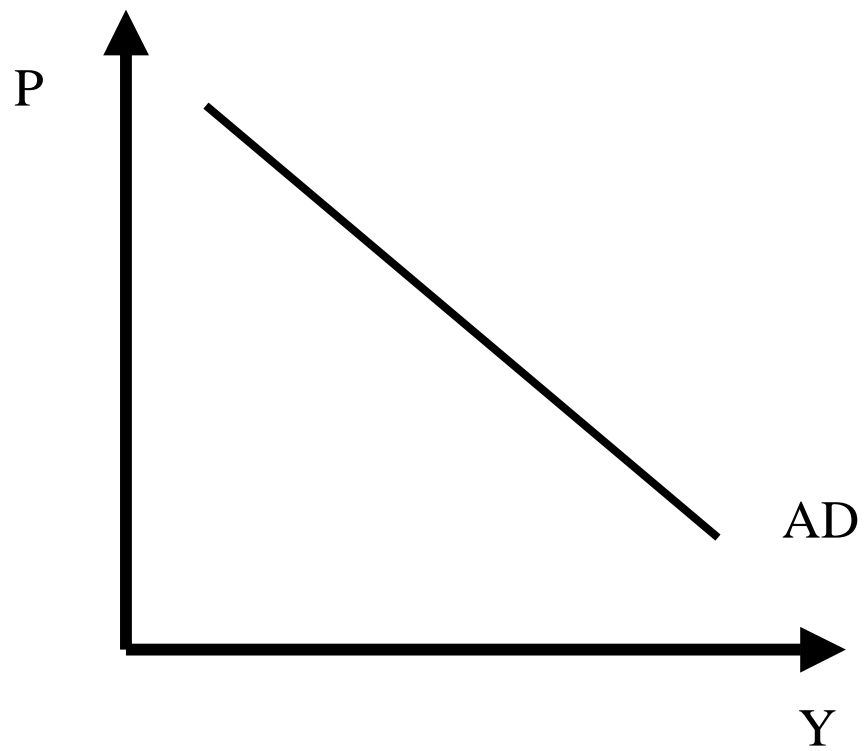
# Aggregate Demand

$$\text{IS: } Y = C(Y-T) + I(Y,I) + G$$

$$\text{LM: } \frac{M}{P} = Y L(i)$$



AD:  $Y = Y(M/P, G, T)$   
+ + -



# Aggregate Demand - Aggregate Supply

