

Aggregate Demand Curve

1) IS curve: $\tilde{Y}_t = \bar{a} - \bar{b}(R_t - \bar{r})$

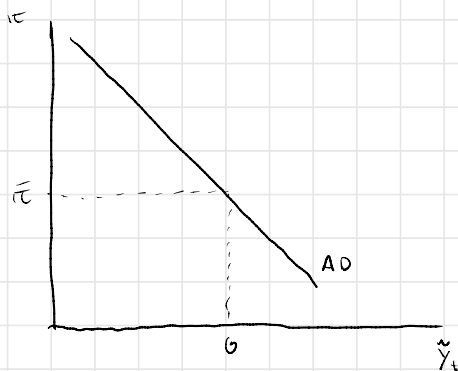
relationship between economic activity and interest rate

2) Monetary policy rule: $R_t - \bar{r} = \bar{m}(\pi_t - \bar{\pi})$

Aggregate demand: $\tilde{Y}_t = \bar{a} - \bar{b}(\bar{m}(\pi_t - \bar{\pi}))$

$\pi_t \uparrow \rightarrow \tilde{Y}_t \downarrow$

Assume $\tilde{Y}_{t+R} = 0$, $\bar{a} = 0$, so $\pi_t = \bar{\pi}$ at eq'm



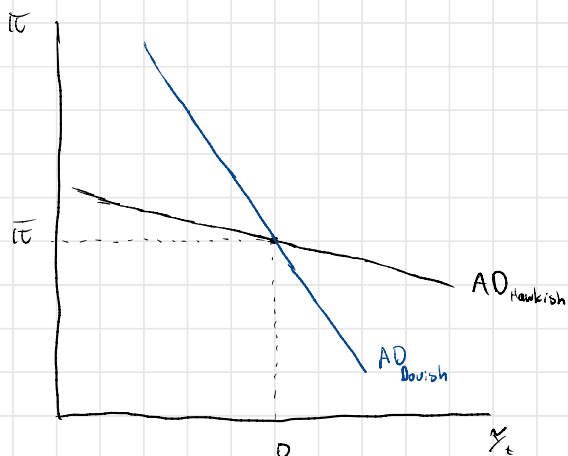
AD curve shows relationship between output and inflation, mediated through the central bank

$\pi_t \uparrow \rightarrow R_t \uparrow \rightarrow \tilde{Y}_t \downarrow$

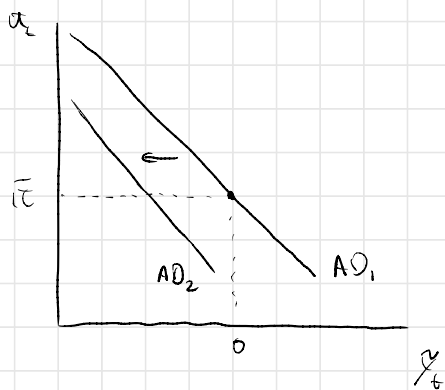
AD curve for hawkish central bank:

\bar{m} high $\rightarrow Y_t$ changes more for a given change of inflation \rightarrow flatter AD curve

\bar{m} low $\rightarrow Y_t$ change little for a given change of inflation \rightarrow steeper AD curve



A change in \bar{a} :

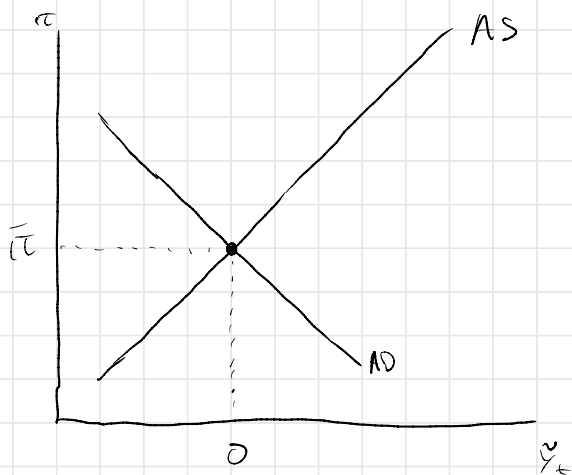


Aggregate Supply = Phillips Curve

$$\pi_t = \pi_t^e + \bar{v} \tilde{y}_t + \bar{\sigma}$$

$$AD: \tilde{Y} = \bar{\alpha} - \bar{\alpha}\bar{m}(\pi_t - \bar{\pi})$$

$$AS: \pi_t = \pi_t^e + \bar{\alpha}\tilde{Y} + \bar{\alpha}$$



Adaptive expectations:

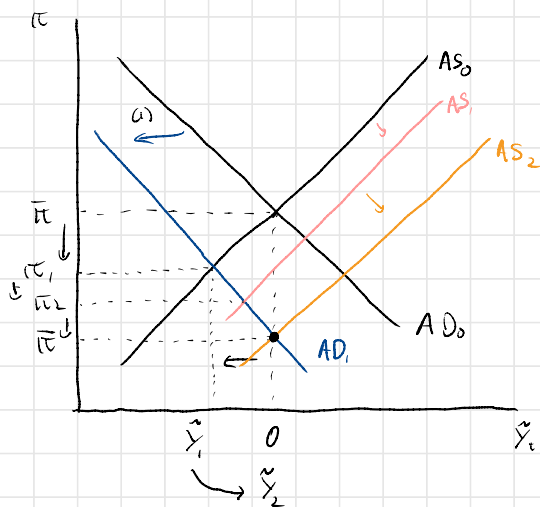
$$\pi_t^e = \pi_{t-1}$$

Aggregate Demand - Aggregate Supply

Ex. 2:

$$AD: \tilde{Y} = \bar{a} - \bar{b}m(\pi_t - \bar{\pi})$$

$$AS: \pi_t = \pi_t^e + \tilde{\nu} \tilde{Y}_t$$



Volcker Disinflation: $\bar{\pi}' < \bar{\pi}$

Short run: $AD \downarrow, \tilde{Y}_1 < 0$

Ex. 3:

