

# Effects of Monetary Policy and Soft Landing

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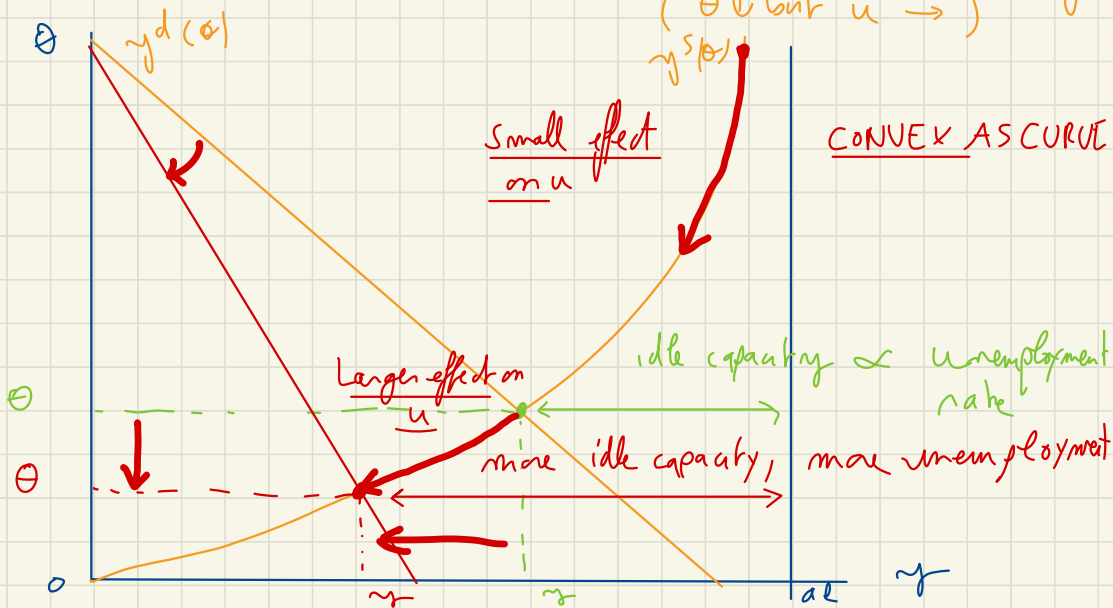
Pascal Michailat  
<https://pascalmichailat.org/c2/>

# Monetary policy operates through the AD curve

$$y^d(\theta) = \left[ \frac{\overbrace{\sigma - i + \pi}^{\Gamma = i - \pi}}{\sigma'(0)} \right]^{\frac{1}{\epsilon}} \frac{1}{[1 + \tau(\theta)]^{\epsilon - 1}}$$

Monetary policy tightens  $i \uparrow$  so AD curve is depressed.

- Tightness  $\theta \downarrow$
- Output  $y \downarrow$
- Employment  $l \downarrow$
- unemployment rate  $u \uparrow$  : not possible to have a strict soft landing



A "loose" soft landing is possible b/c AS curve is convex, so increase in  $u$  is small when  $\theta$  is high.

$$u = \frac{\lambda}{\lambda + f(\theta)} \quad \text{where } f(\theta) = \rho \cdot \theta^{1-\eta}$$

job separation rate = 3%      matching elasticity = 0.5

Compute elasticity of  $u$  w.r.t  $\theta$ :      job-finding rate = 50%

$$\frac{d \ln u}{d \ln \theta} = - \frac{f(\theta)}{\lambda + f(\theta)} \cdot \frac{d \ln f}{d \ln \theta} = -(1-u)(1-\eta)$$

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$$u \approx 4\%$$

$$\eta \approx 0.5 \quad (\text{Petrongola \& Pissarides 2001})$$

$$\frac{d \ln u}{d \ln \theta} \approx -0.96 \times 0.5 \approx 0.5$$

So if Fed wants to bring  $\theta$  from 2 to 1:

-  $\theta$  falls by 50%

-  $u$  increases by  $50\% \times 0.5 = 25\%$

-  $\Rightarrow u$  increases from 4% to  $1.25 \times 4\% = 5\%$

today

pre-pandemic + efficient