

# Optimal Response to Unemployment Fluctuations

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## Optimal nominal interest rate $i^*$

$$i^* = i - \frac{[u - u^*]}{du/di}$$

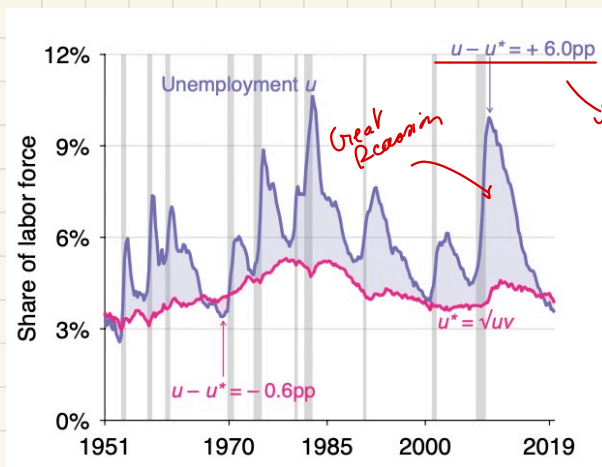
Midrange estimate of monetary multiplier  $du/di = 0.5$

$$i^* = i - 2 \times (u - u^*)$$

↳ for any unemployment gap (pp), the optimal response of monetary policy is **2x gap**

↳ ex: if unemployment gap is -1pp, FFR should ~~drop~~ <sup>increase</sup> by 2pp

US



FFR should drop by  $6 \times 2 = 12$  pp. But FFR = 5% in 2008  $\Rightarrow$  FFR should be  $\leq 0 \Rightarrow$  ZLB is binding