MEASURING FULL EMPLOYMENT WITH $u^* = \sqrt{uv}$

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HOW TO INTERPRET LEGAL CONCEPT OF FULL EMPLOYMENT?

- Employment Act of 1946
  - "policy and responsibility of the federal government…to promote maximum employment, production"
- Federal Reserve Reform Act of 1977
  - responsibility of the Federal Reserve "to promote effectively the goals of maximum employment, stable prices"
- Full Employment and Balanced Growth Act of 1978
  - "policy and responsibility of the federal government to use all practicable means…in a manner calculated to foster and promote…full employment and production"

PROPOSITION: FULL EMPLOYMENT = EFFICIENT UNEMPLOYMENT

- maximizes productive use of labor
  - consistent with standard economic theory (Hosios 1990)
  - consistent with spirit of law (“promote maximum production”)
- given voluntary labor-force participation
  - consitent with standard economic interpration (Rees 1957)
  - consistent with spirit of law (“promote employment opportunities for those able, willing, and seeking to work”)
- not NAIRU: employment mandate is not price mandate
- not noncyclical unemployment: average unemployment is not socially desirable

COMPUTING FULL EMPLOYMENT

- finding unemployment u to minimize nonproductive use of labor $u + v$
- subject to hyperbolic Beveridge curve $uv = A$

⇝ finding unemployment u to minimize $u + A/u$

- first-order condition gives solution:

$$\frac{d[u + A/u]}{du} = 0 \implies 1 - A/u^2 = 0 \implies u = \sqrt{A}$$

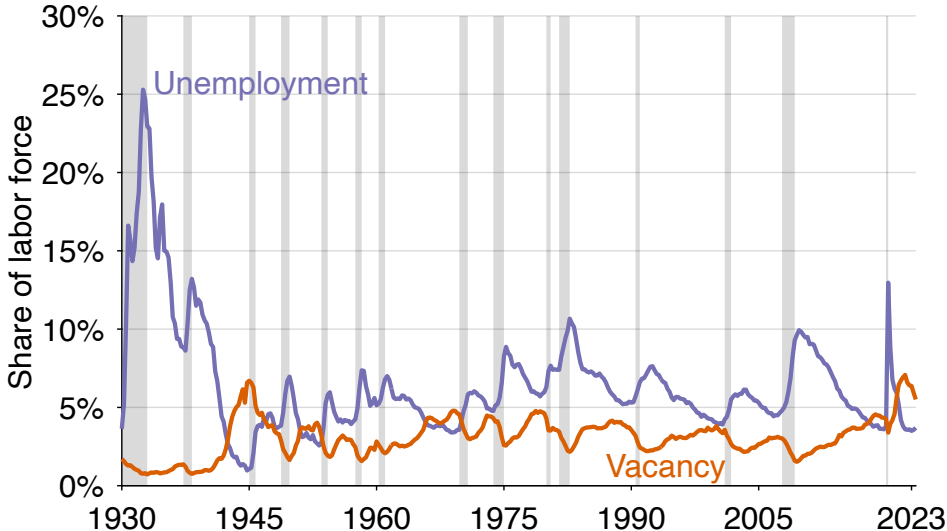
- solution is efficient unemployment rate:

$$u^* = \sqrt{uv}$$

CRITERION FOR FULL EMPLOYMENT, EFFICIENCY

- full-employment, efficient unemployment rate is $u^* = \sqrt{uv}$
- economy is at full employment, efficient when $u = u^*$
  - ⇝ efficient when $u = v$
- economy is above full employment, inefficiently tight when $u < u^*$
  - ⇝ inefficiently tight when $u < v$
- economy is below full employment, inefficiently slack when $u > u^*$
  - ⇝ inefficiently slack when $u > v$

LABOR MARKET IS GENERALLY TOO SLACK



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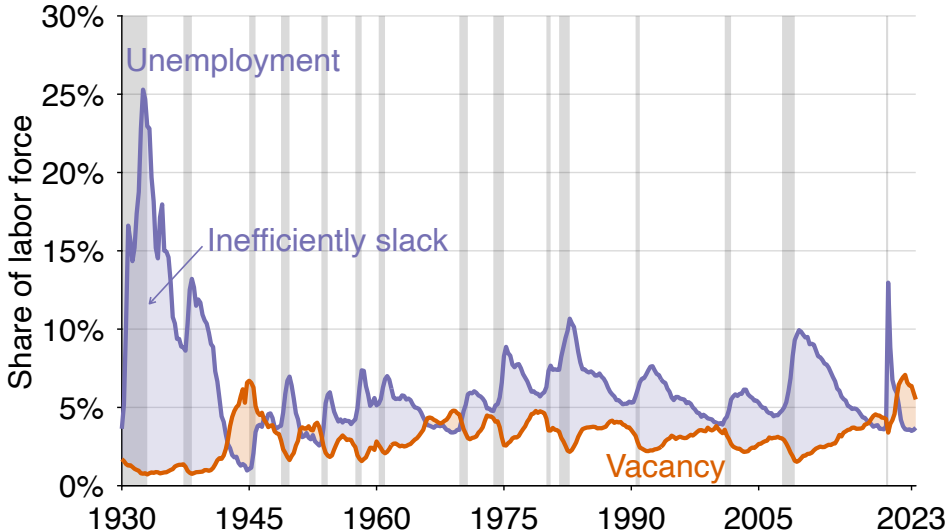
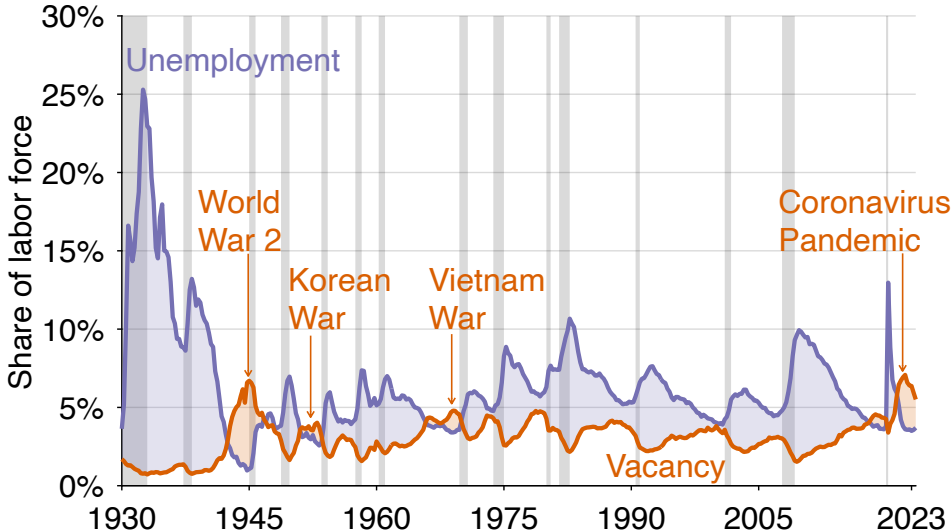
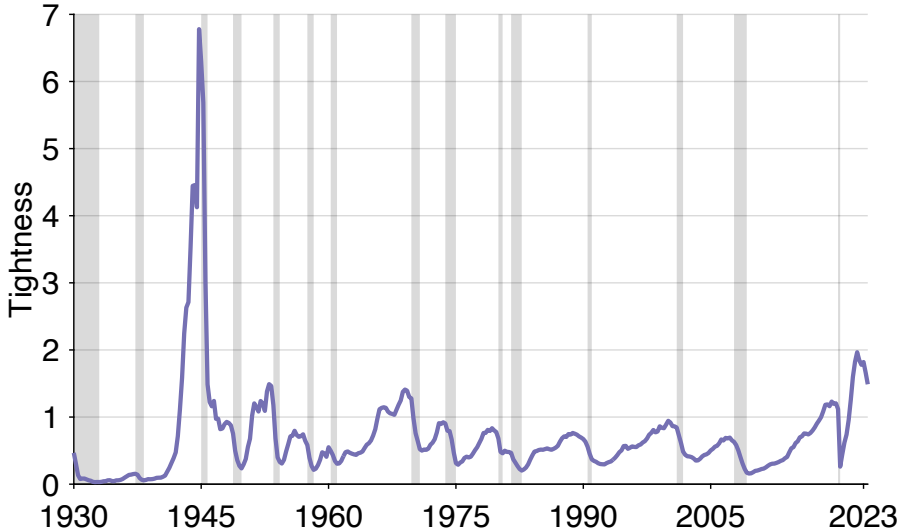


LABOR MARKET IS TOO TIGHT DURING WARS



TIGHTNESS v/u SUMMARIZES STATE OF LABOR MARKET



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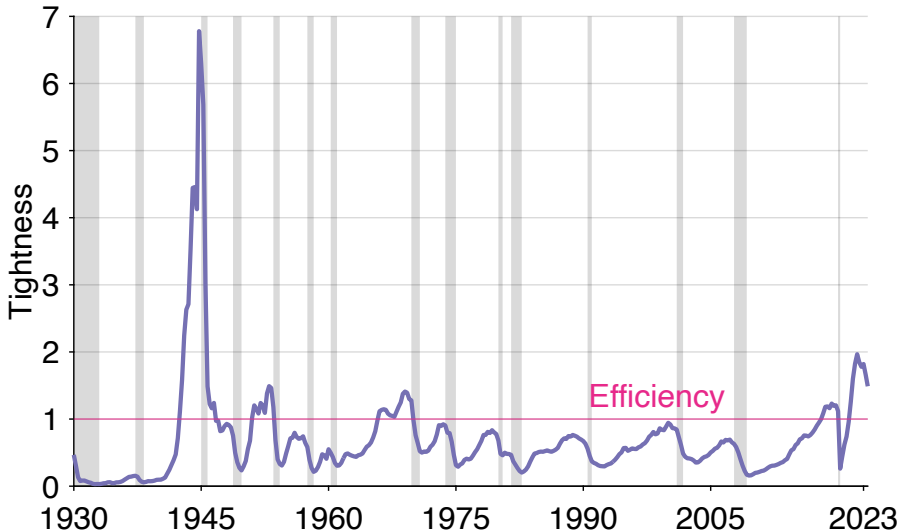

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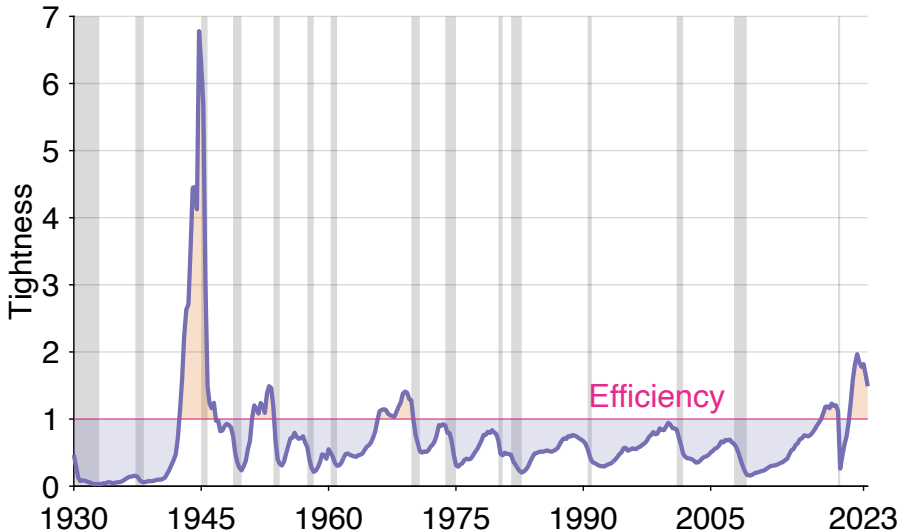

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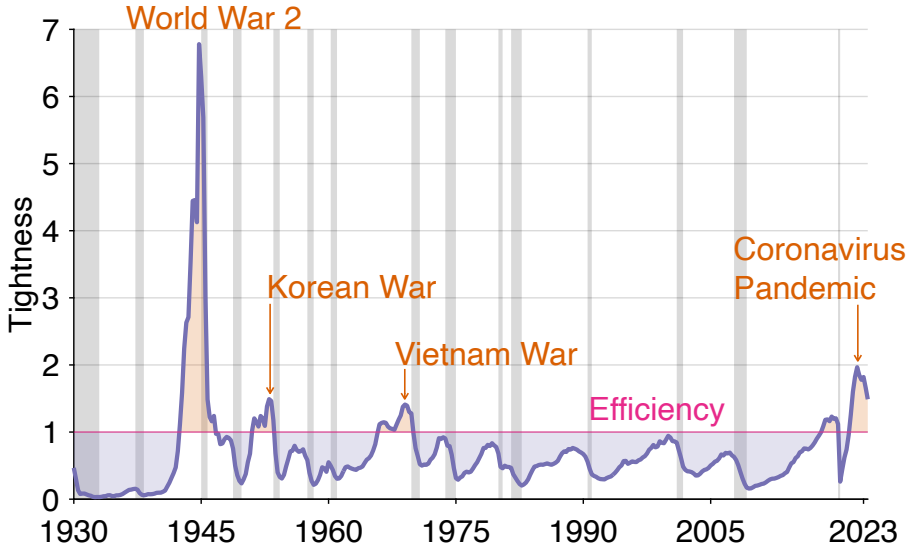
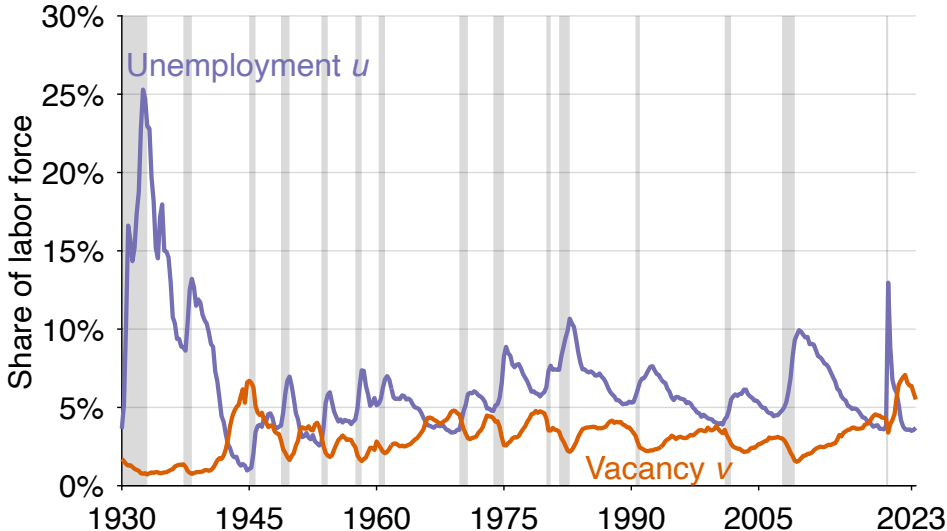


CONSTRUCTION OF u^*



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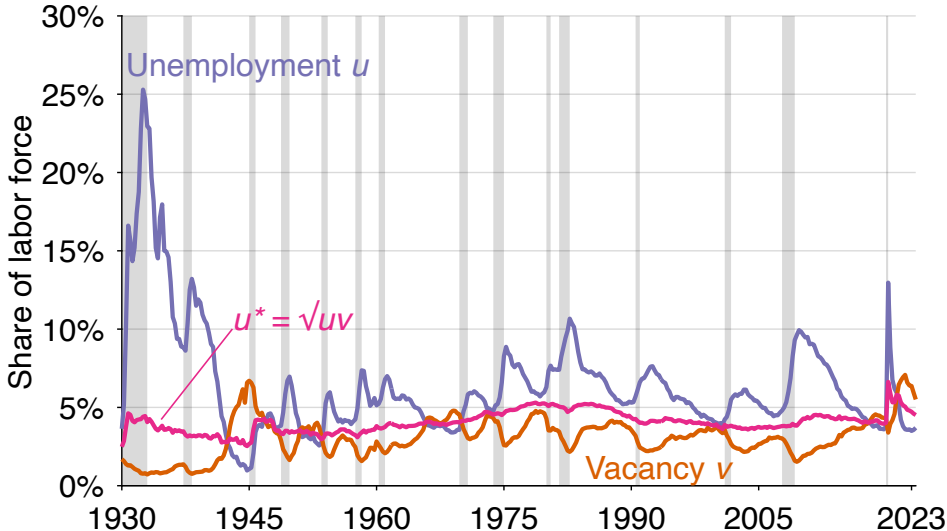
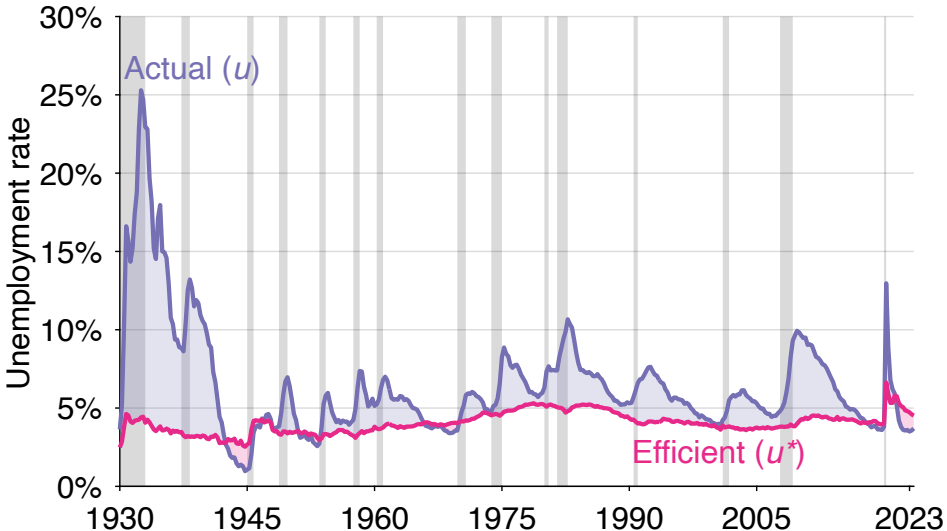
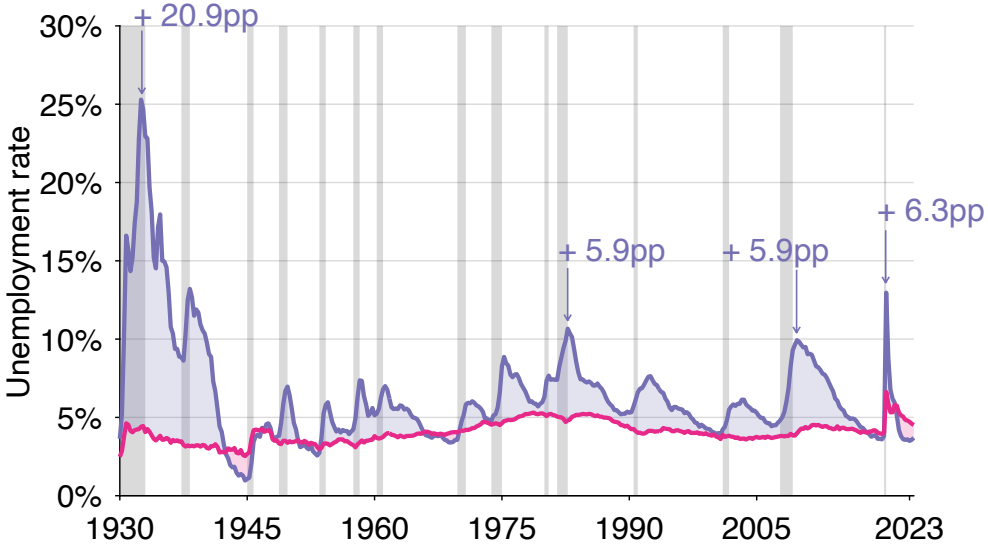


u^* REMAINS IN 2.5%–6.6%, AVERAGES 4.1%



UNEMPLOYMENT GAP $u - u^*$ IS COUNTERCYCLICAL



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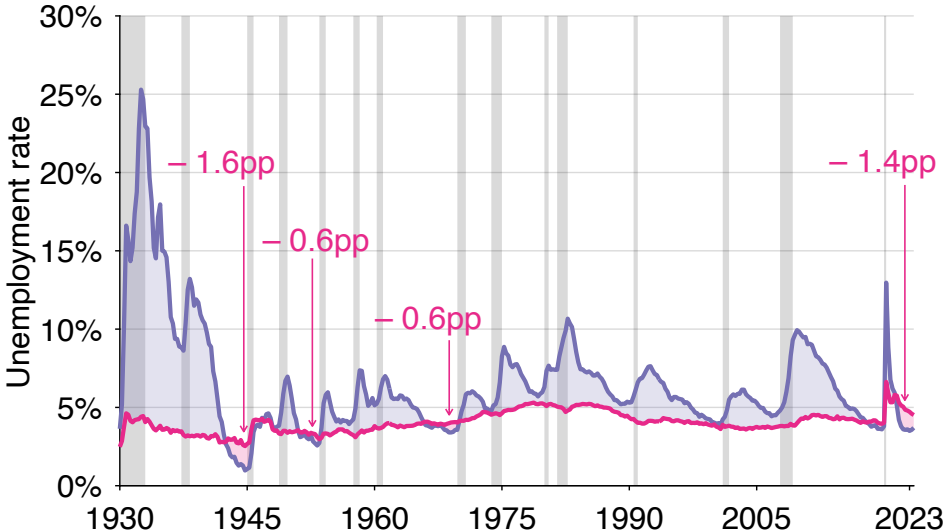
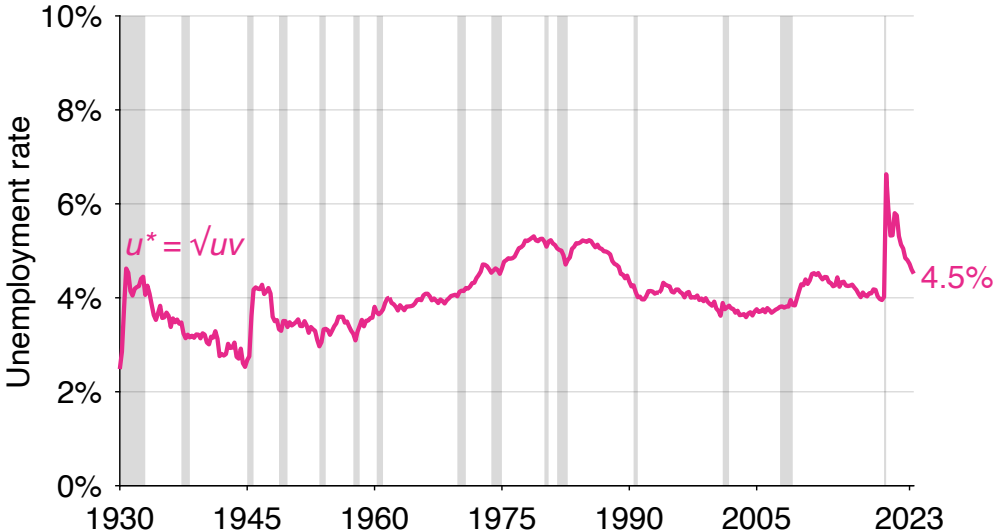
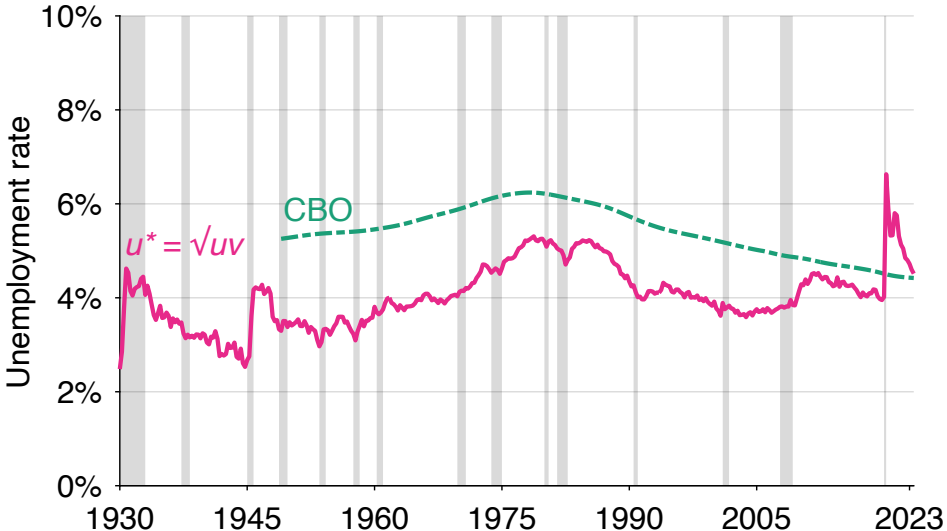


CURRENT TARGET FOR MONETARY POLICY: $u^* = 4.5\%$



COMPARISON WITH OTHER UNEMPLOYMENT RATES



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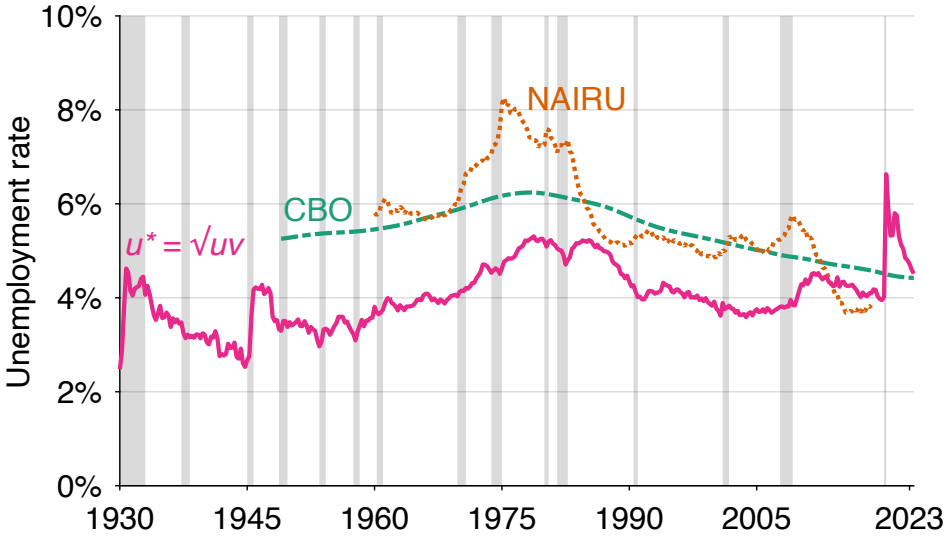
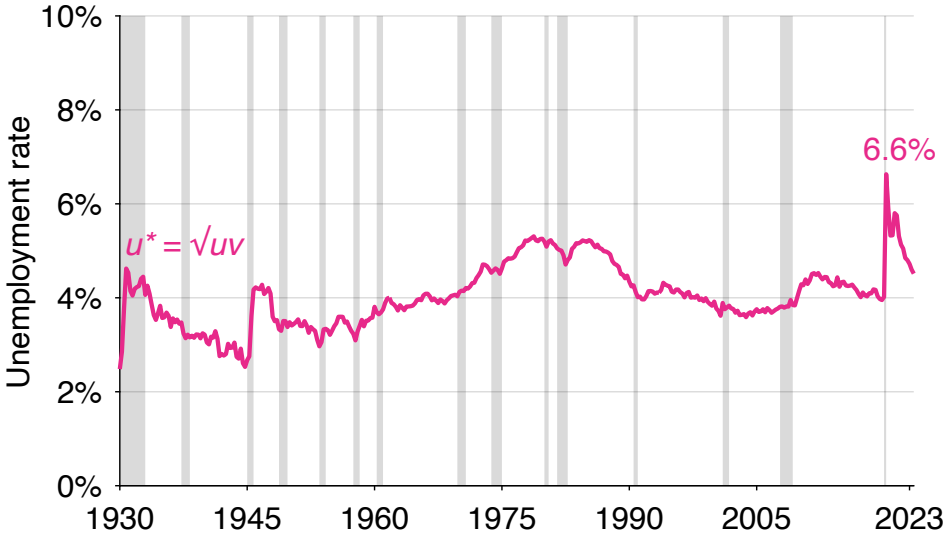


u^* INCREASED SO MUCH IN 2020 BECAUSE OF SHIFT OF BEVERIDGE CURVE



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