



Inflation: Now and 50 Years Ago

Regional Banker Forum
October 19, 2021

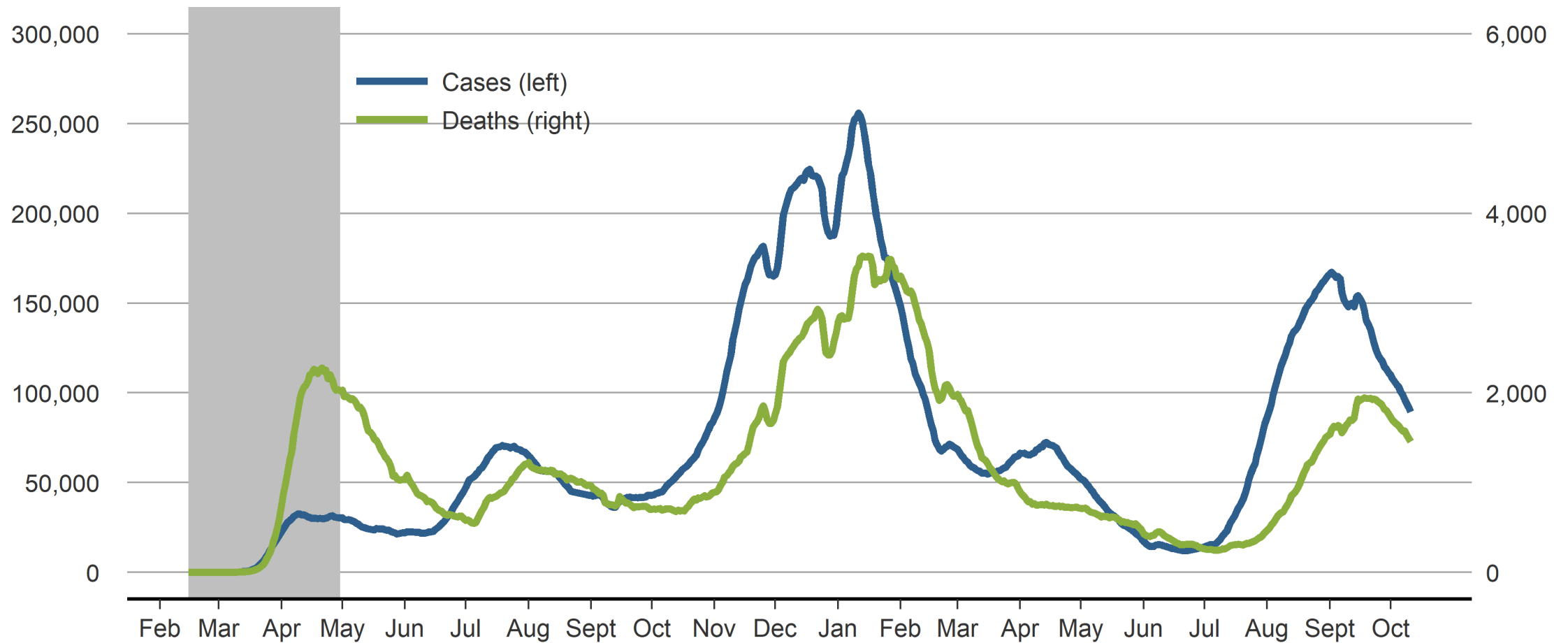
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Executive Vice President & Director of Research

• **SFFed**

Delta variant is waning

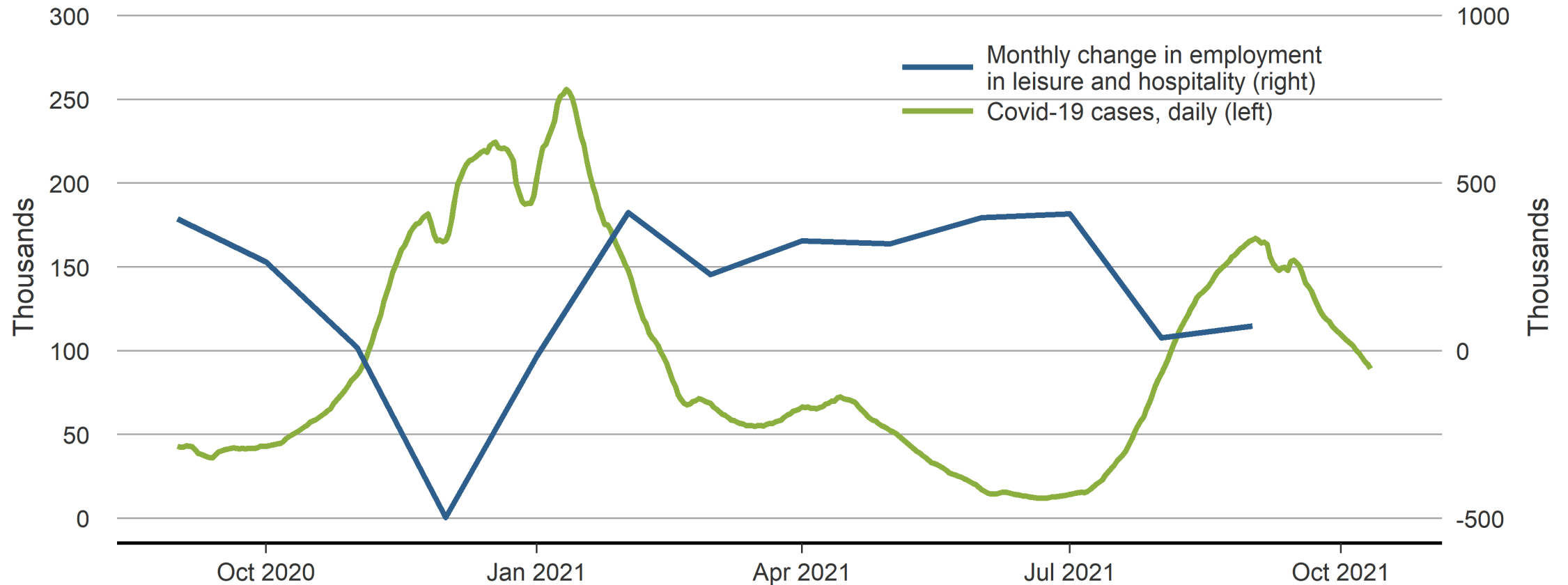
Daily cases and deaths, US COVID-19



Note: All series are 7-day moving averages
Source: Worldometer, data through Oct. 11, 2021

As COVID goes, so goes the economy

Monthly change in employment in leisure and hospitality and COVID-19 cases



Note: Covid-19 cases shown as 7-day moving averages, employment series is seasonally adjusted. All values shown in 1000s.
Source: Worldometer and Bureau of Labor Statistics

Shipping costs climb with supply chain bottlenecks

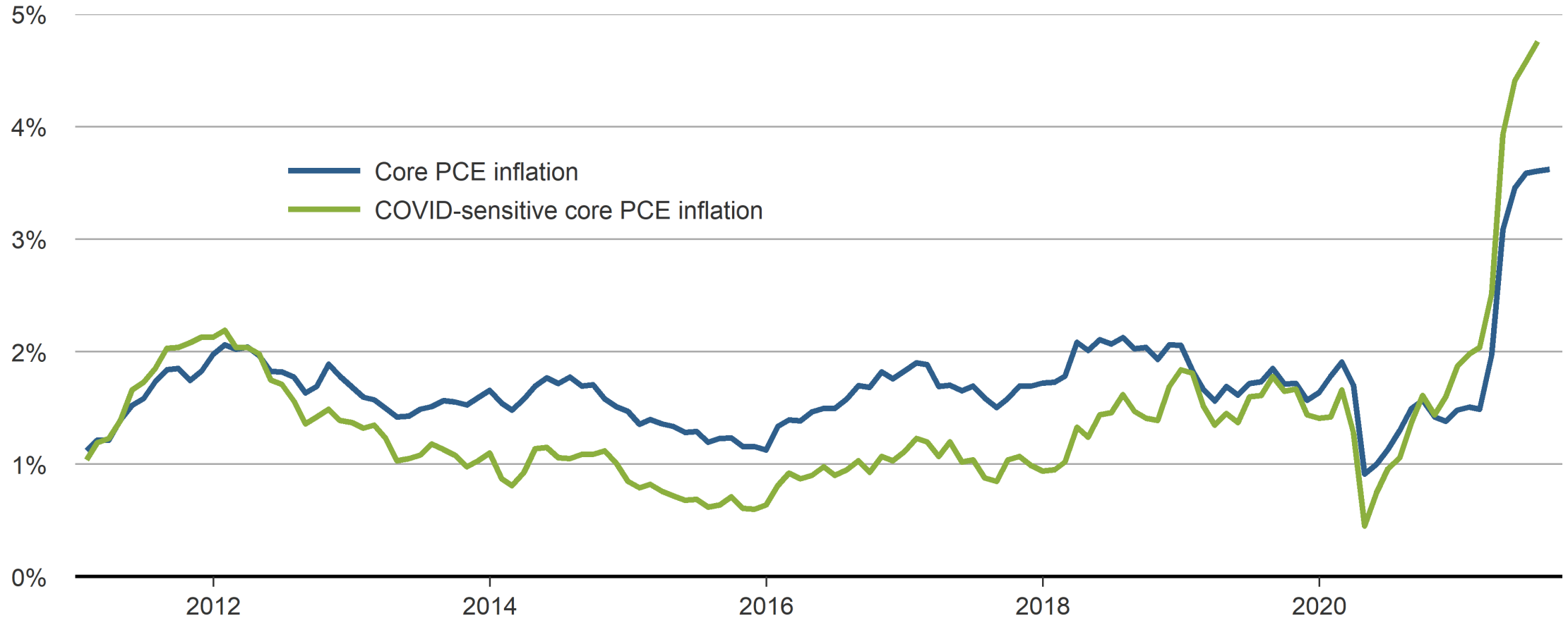
Baltic Dry Index (dry bulk carriers or merchant ships)



Source: Bloomberg

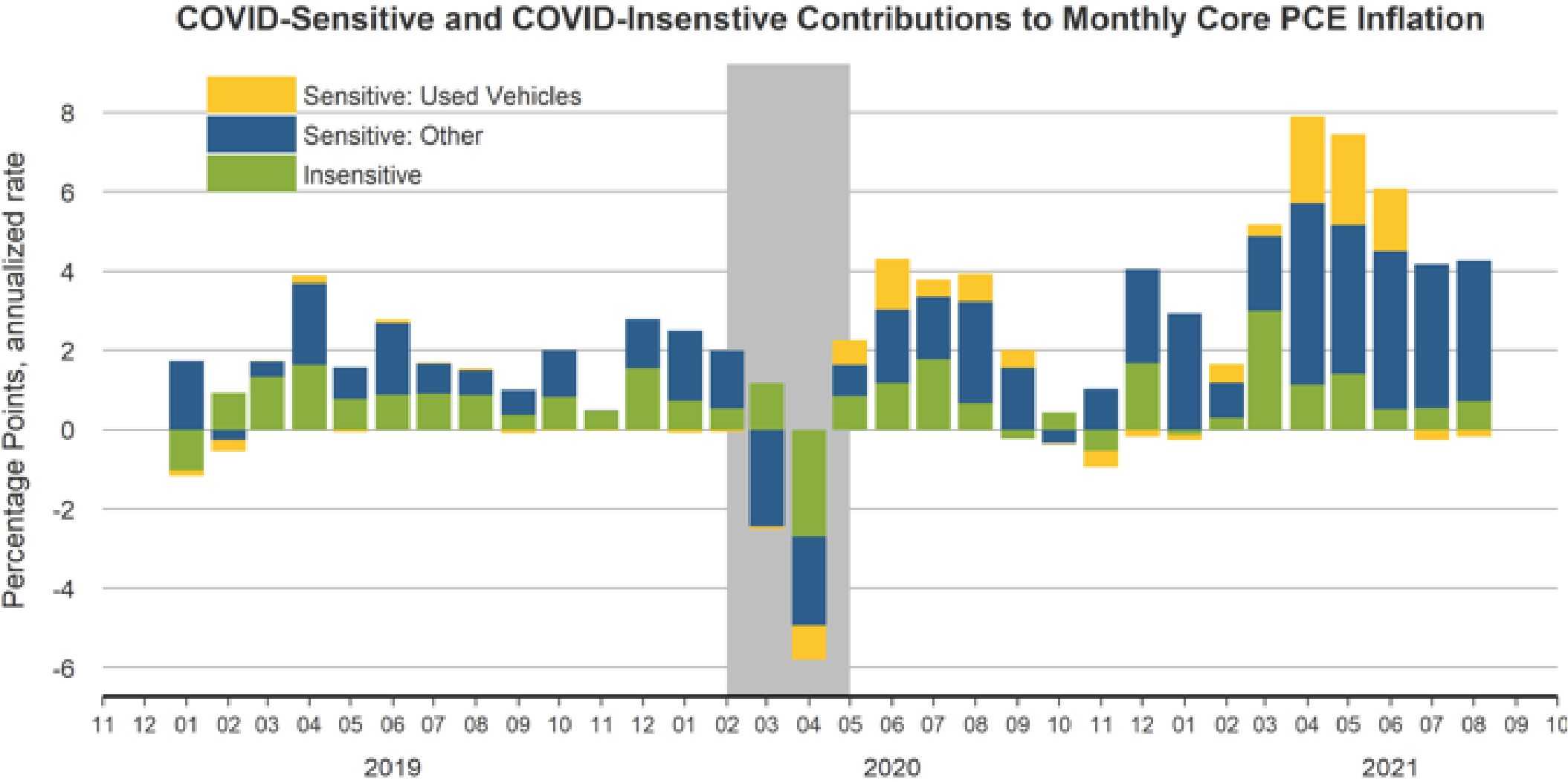
Inflation rose markedly as economy reopened

Core personal consumption expenditures (PCE)
inflation and COVID-sensitive inflation



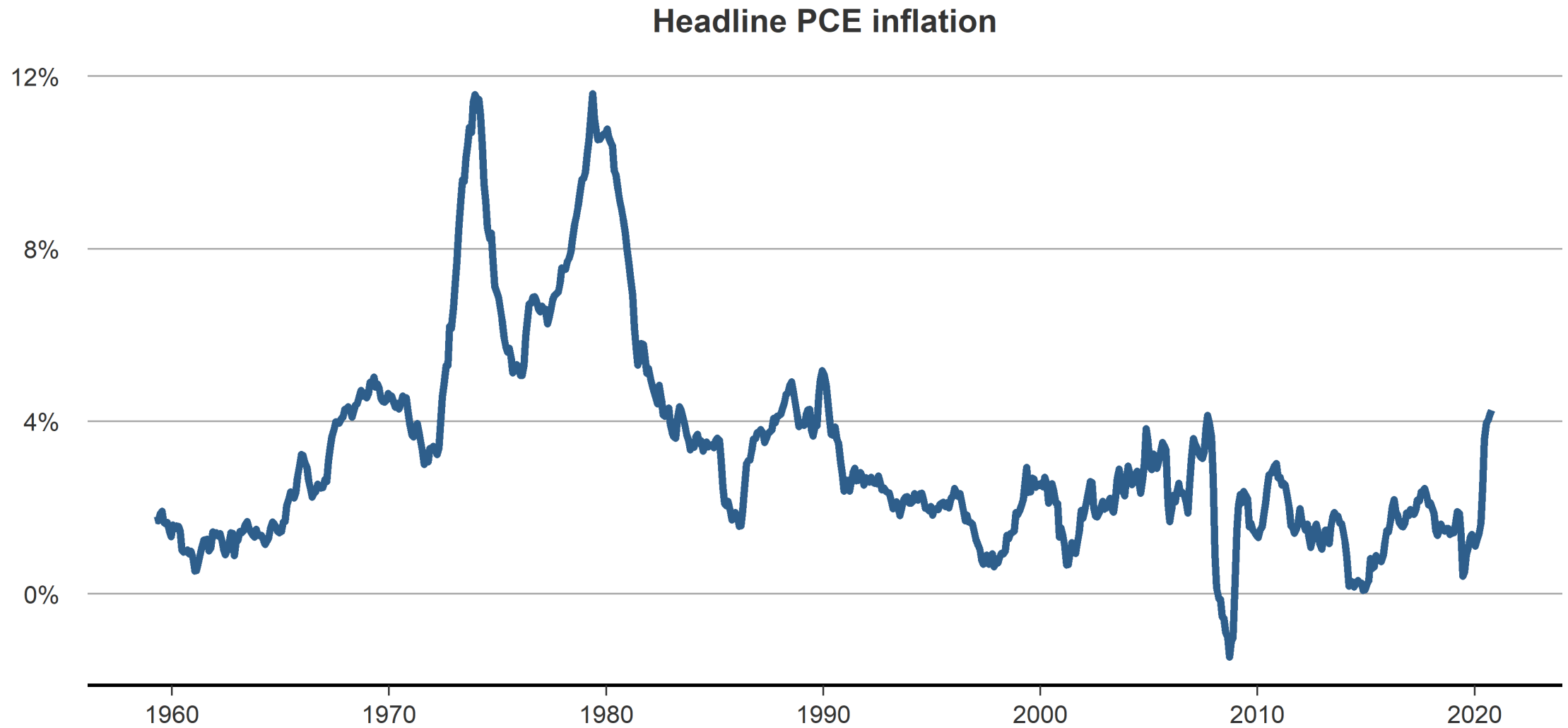
Note: 12-month percent change, seasonally adjusted
Source: FRBSF Staff

COVID-sensitive sectors are pushing inflation up



A repeat of the 1970s?

The ups and downs of US inflation



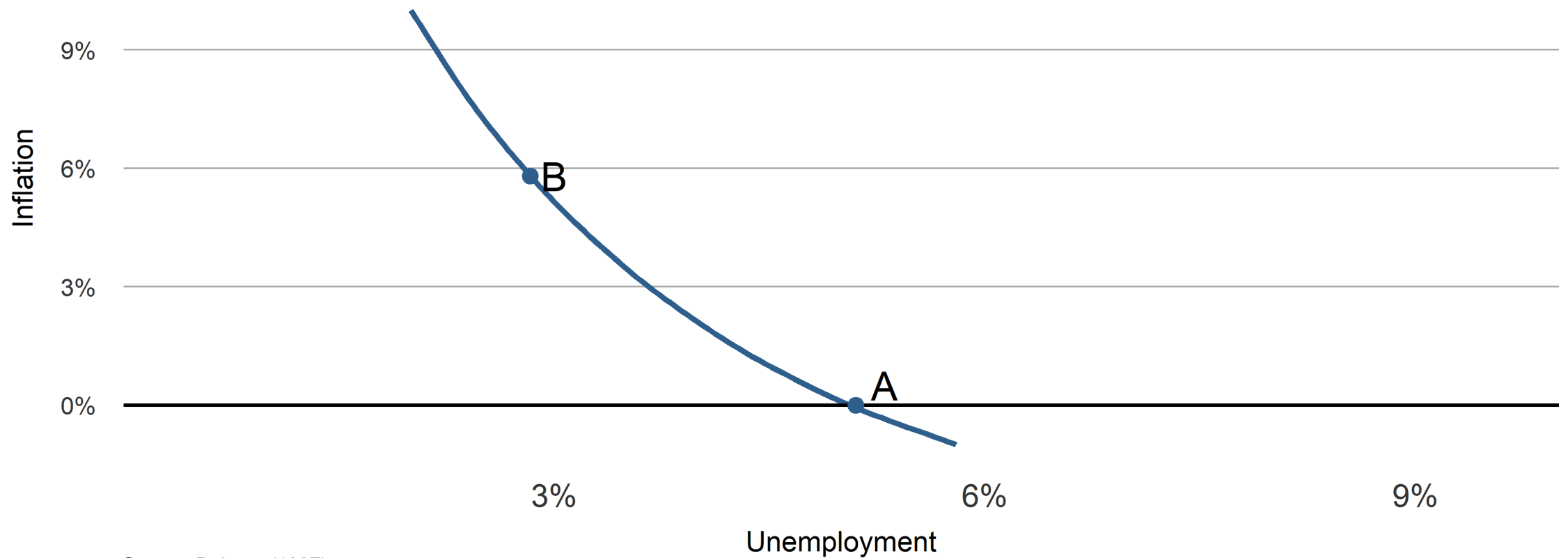
Source: Bureau of Economic Analysis.

Factors to keep in mind

- **We learned from the Great Inflation**
- **Labor market institutions have changed**
- **Measurement issues are better understood**

Importance of expectations and natural rates

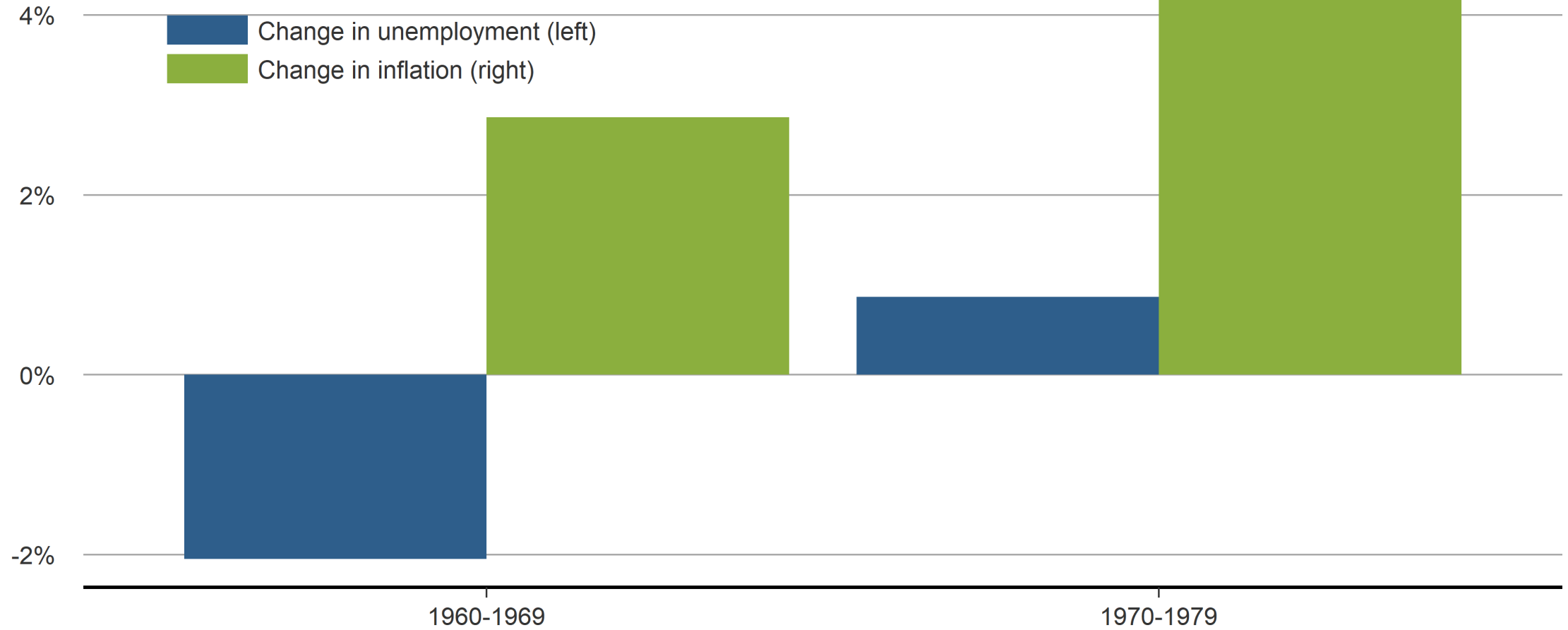
Estimated Phillips Curve from Samuelson and Solow (1960)



Source: DeLong (1997)

The Phillips curve broke down in the 1970s

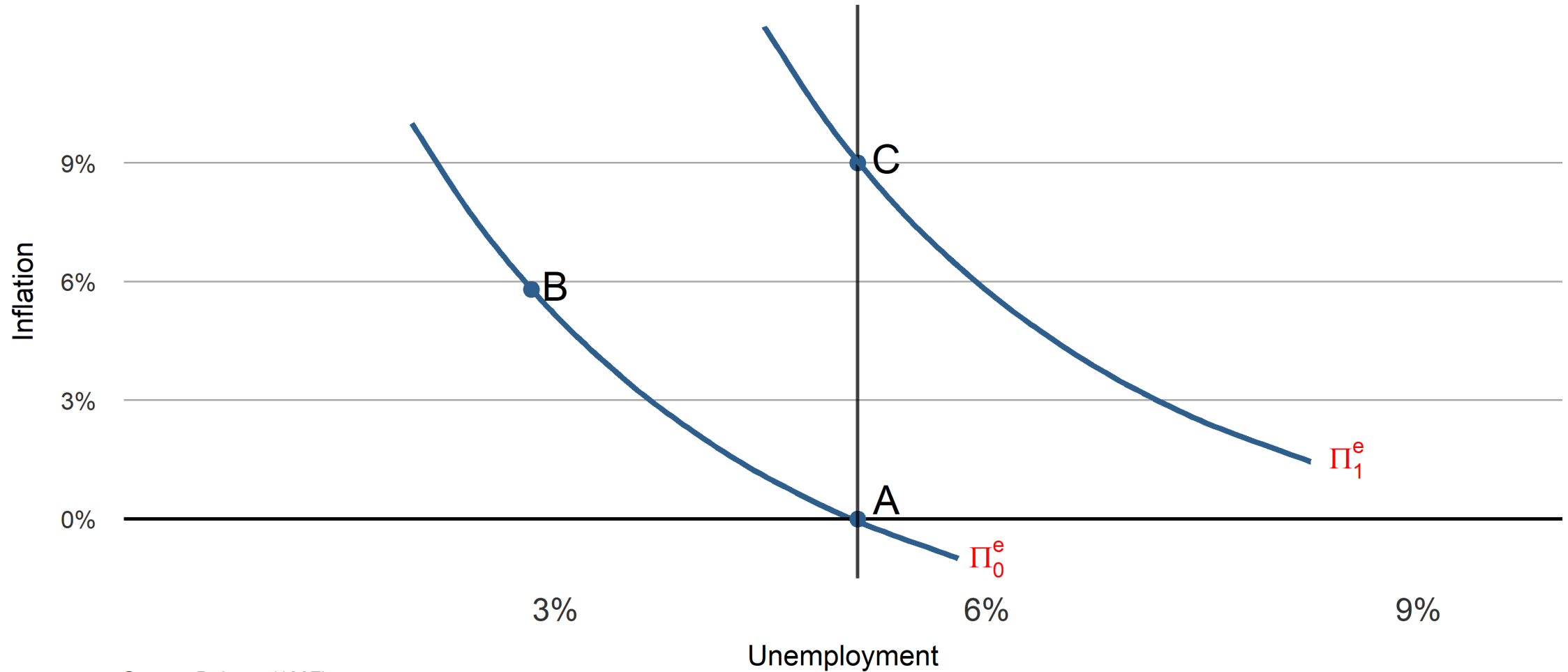
Change in unemployment and inflation in the '60s and '70s



Source: Bureau of Labor Statistics and Bureau of Economic Analysis.

Changes in theory: Expectations and natural rates

Estimated Phillips Curve from Samuelson and Solow (1960)

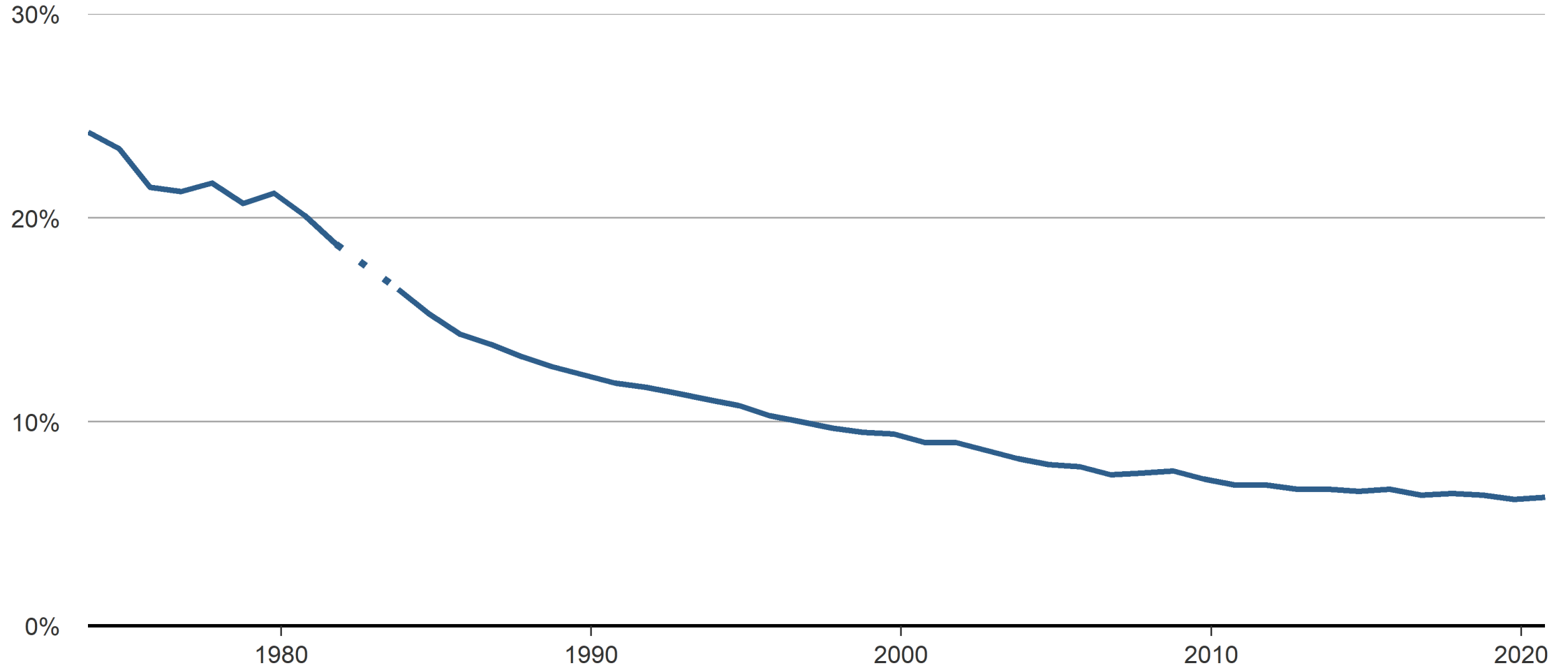


Source: DeLong (1997)

Expectations and wage-price spirals

Labor markets have changed

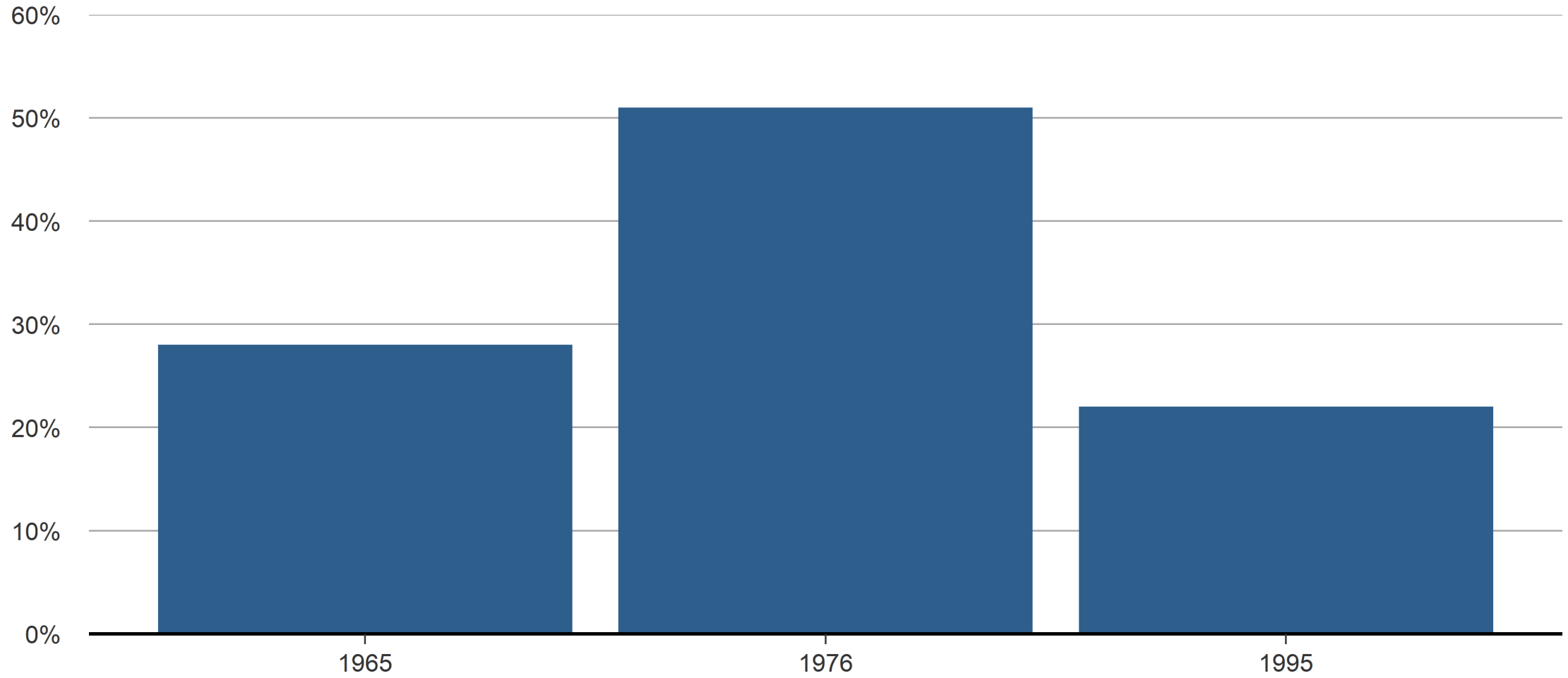
Union membership rate, private sector employment



Source: CPS via Unionstats.com

Fewer automatic COLA wage adjustments

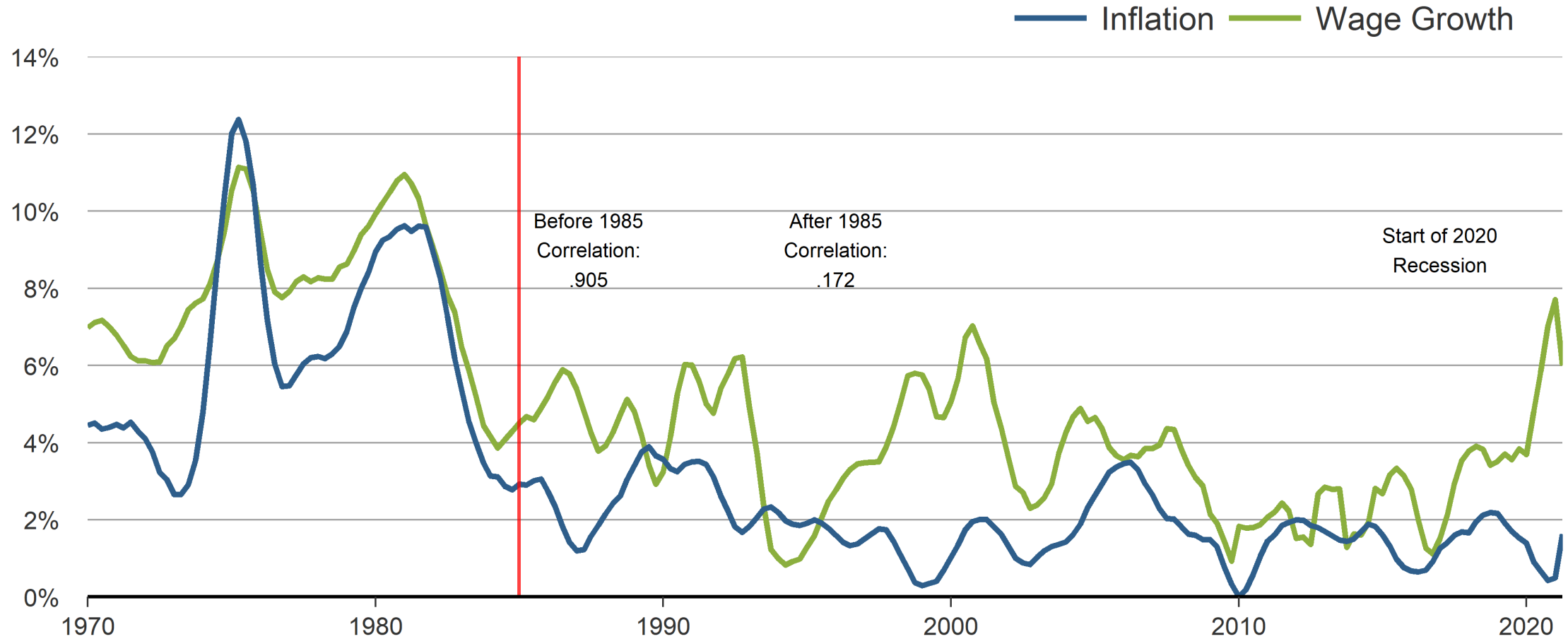
Cost-of-living-adjustment coverage (% of union contracts)



Source: Ragan and Bratsberg (2000)

Economy less prone to wage-price spirals

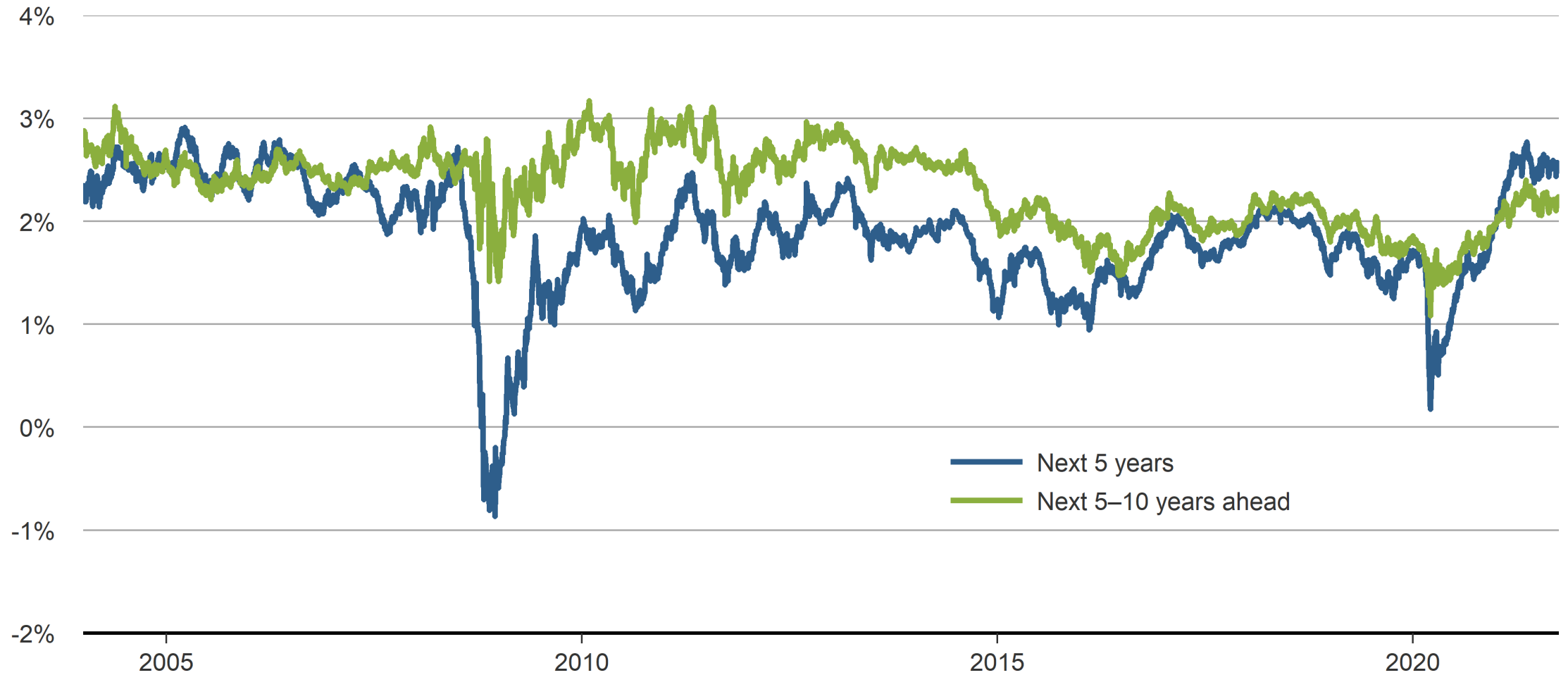
Inflation and Wage Growth Since 1970



Note: Series shown are 3 quarter moving averages. 'Before 1985 correlation' is based on the years 1970-1984.
Source: FRBSF calculations using data from Bureau of Labor Statistics and Bureau of Economic Analysis.

Investors are pricing in moderate inflation

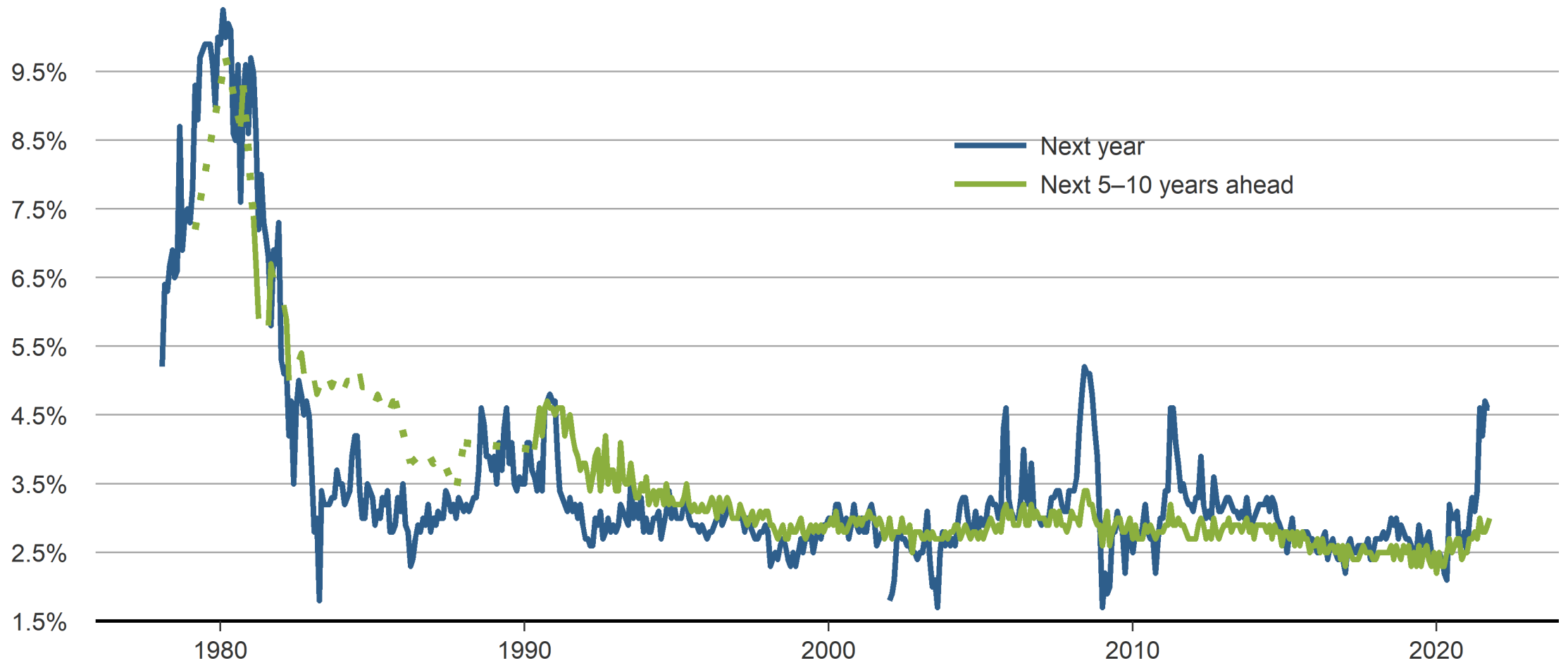
TIPS-implied inflation compensation



Source: Bloomberg

Household inflation expectations are more sensitive

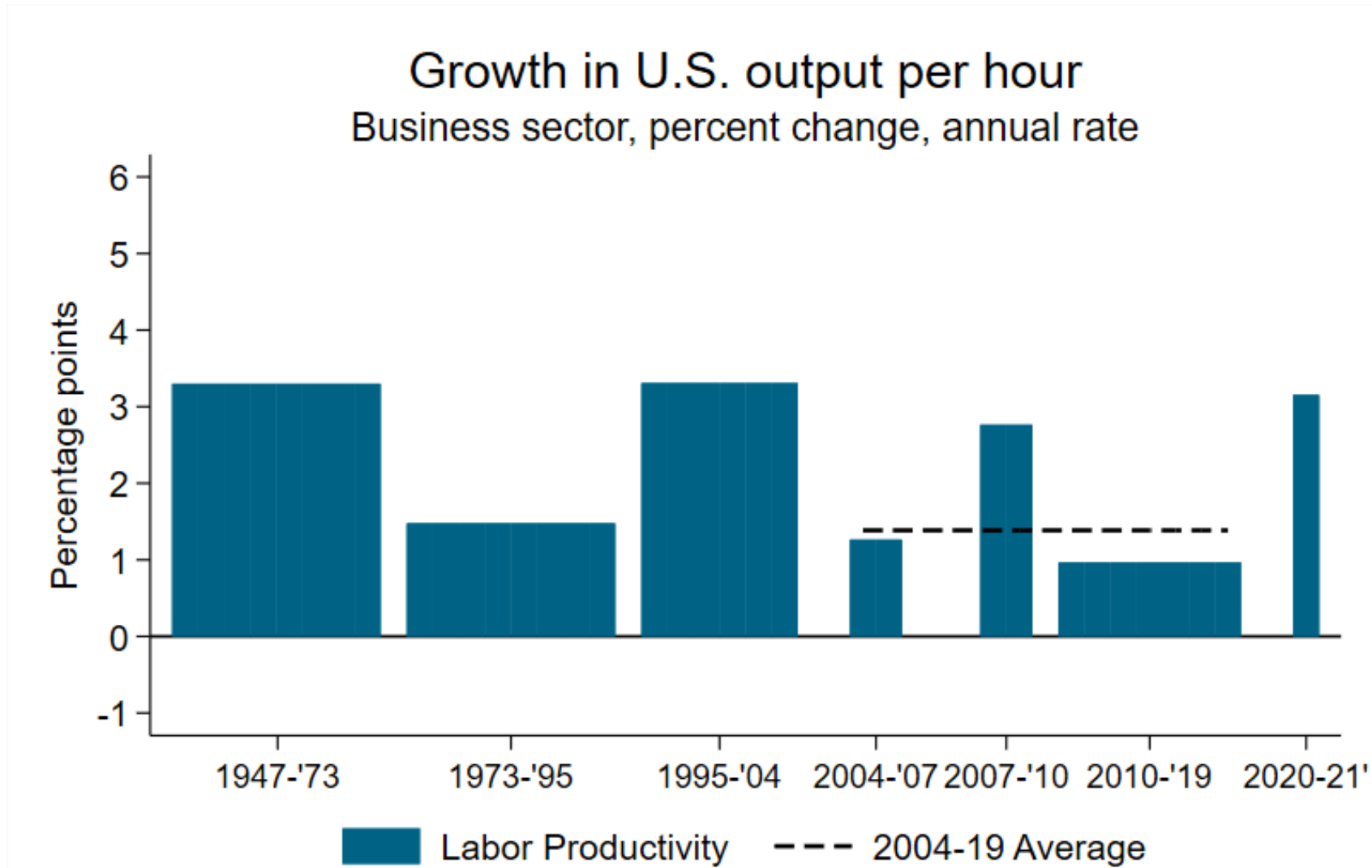
Household inflation expectations



Source: University of Michigan Survey of Consumers

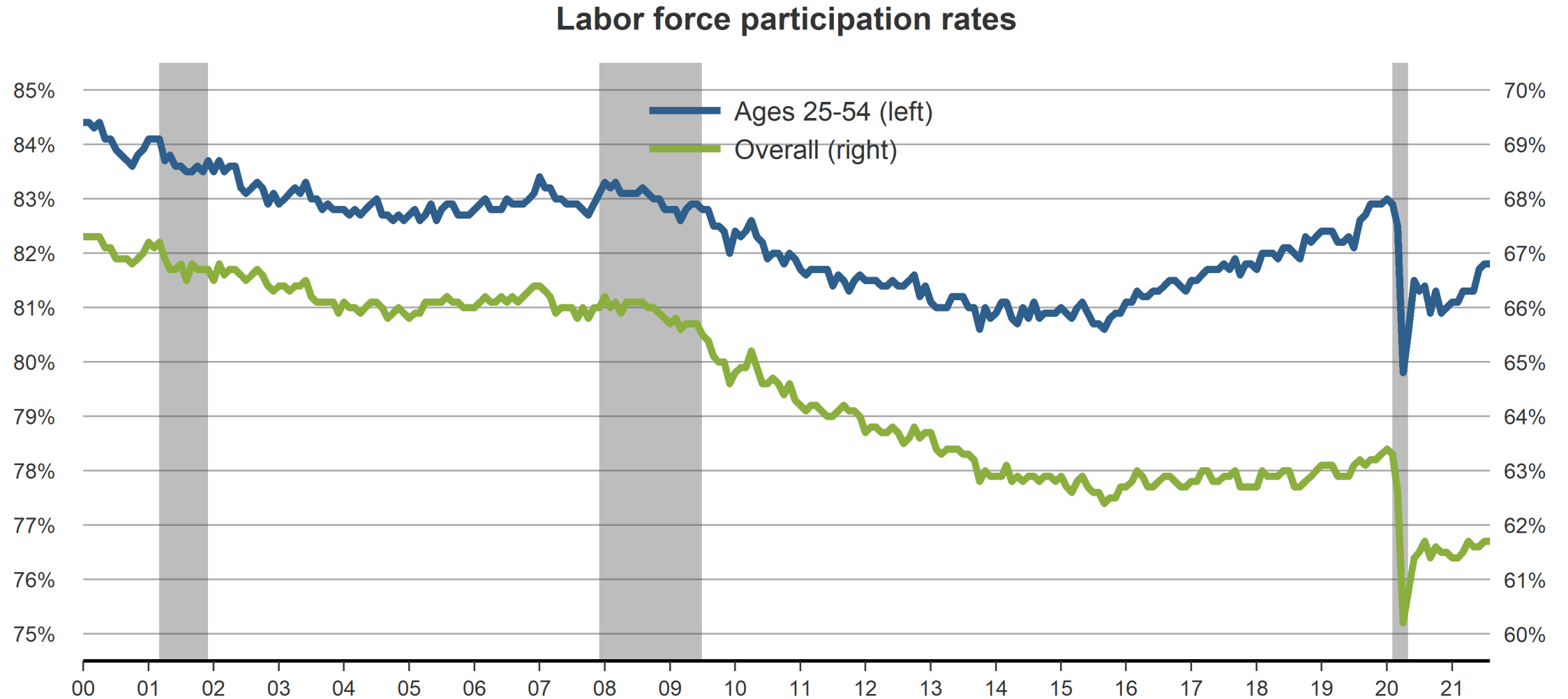
Natural rates and measurement

Failed to spot the productivity slowdown



Source: BLS and BEA. Quarterly; Growth rates are all Q4/Q4 except for first bar (which is from 1947Q1 to 1973Q4) and final bar (which shows growth for six quarters from 2020Q1 to 2021Q2). Dotted horizontal line shows average labor productivity growth from 2004Q4 to 2019Q4.

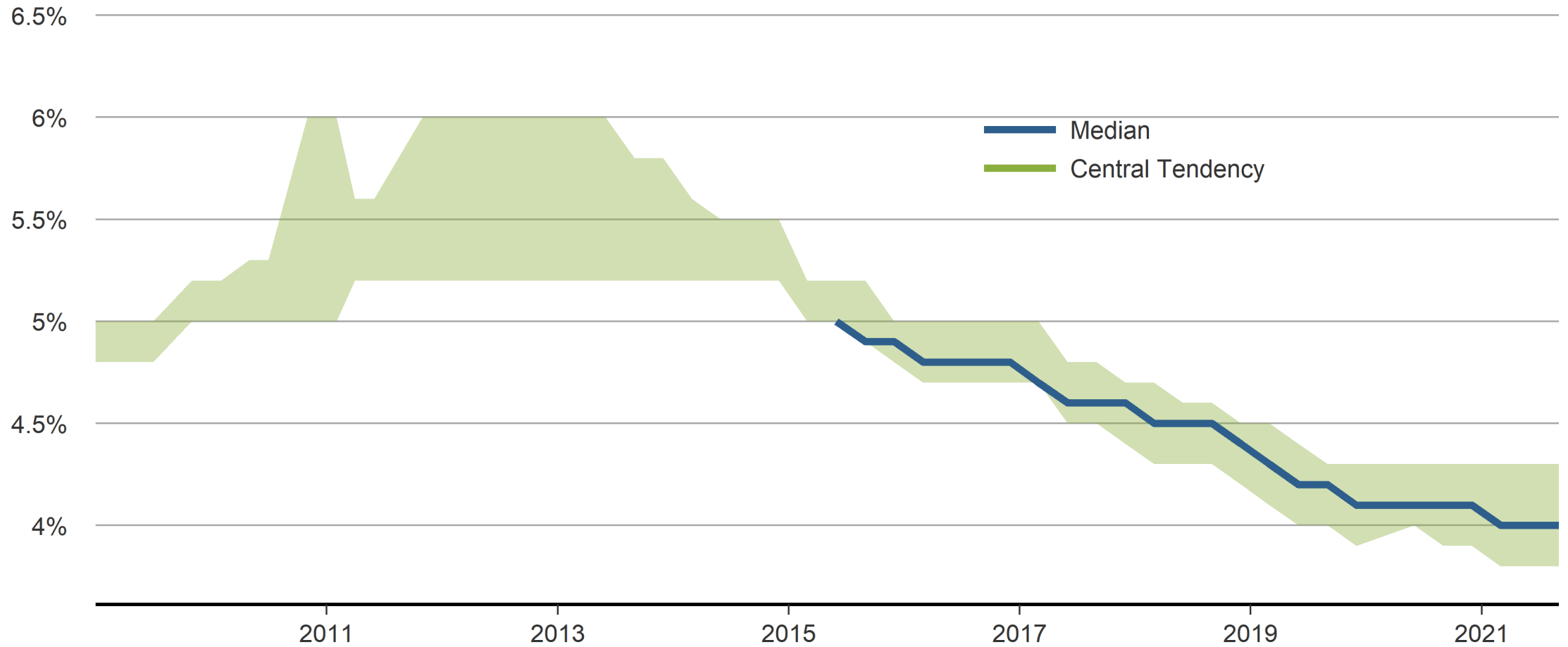
Is labor participation drop temporary or permanent?



Note: All series are seasonally adjusted
Source: Bureau of Labor Statistics, data through August 2021

Pragmatism in the face of uncertainty

SEP: Longer-run Unemployment Rate (u^*)



Source: Federal Reserve Board

Conclusion

- **Expect current high inflation to be temporary**
- **Repeat of the Great Inflation of the 1970s is unlikely**
- **We learned from the Great Inflation**
- **Labor market institutions have changed**
- **Measurement issues are better understood, but still a challenge**