

Figures for “Update on the Economy and Monetary Policy”

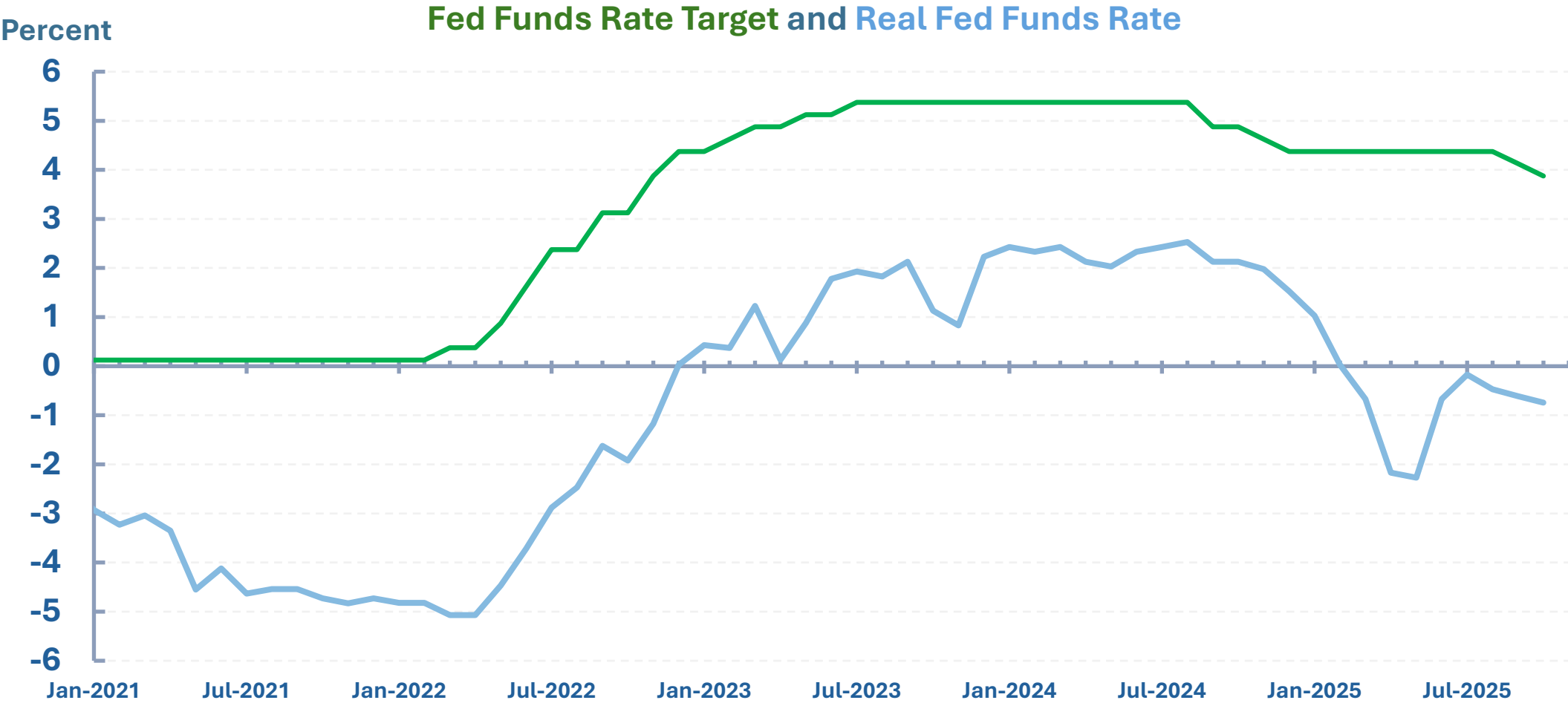
Loretta J. Mester*

**Adjunct Full Professor of Finance, The Wharton School, University of Pennsylvania,
Senior Scholar, Griswold Center for Economic Policy Studies, Princeton University,
and Former President and CEO, Federal Reserve Bank of Cleveland**

Philadelphia Council for Business Economics

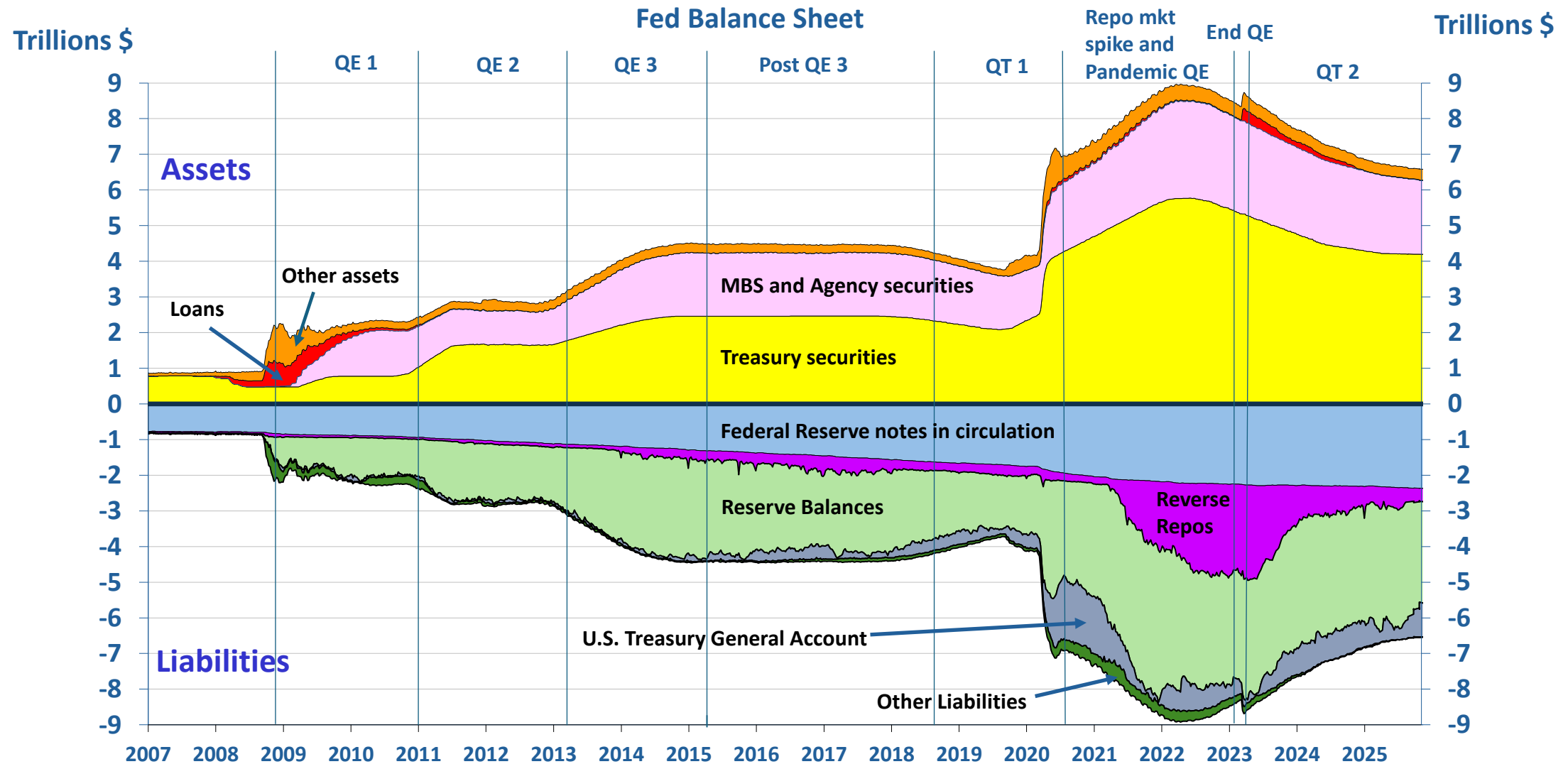
**Philadelphia, PA
November 20, 2025**

Figure 1. The FOMC cut its federal funds rate target to 3-3/4 to 4 percent in October



Real Fed Funds rate is effective ff rate minus U Michigan one-year ahead CPI inflation expectations
Source: Federal Open Market Committee and University of Michigan via Haver Analytics
Monthly data, end of period, midpoint of target range starting in Dec 2008: Last obs. Oct 2025

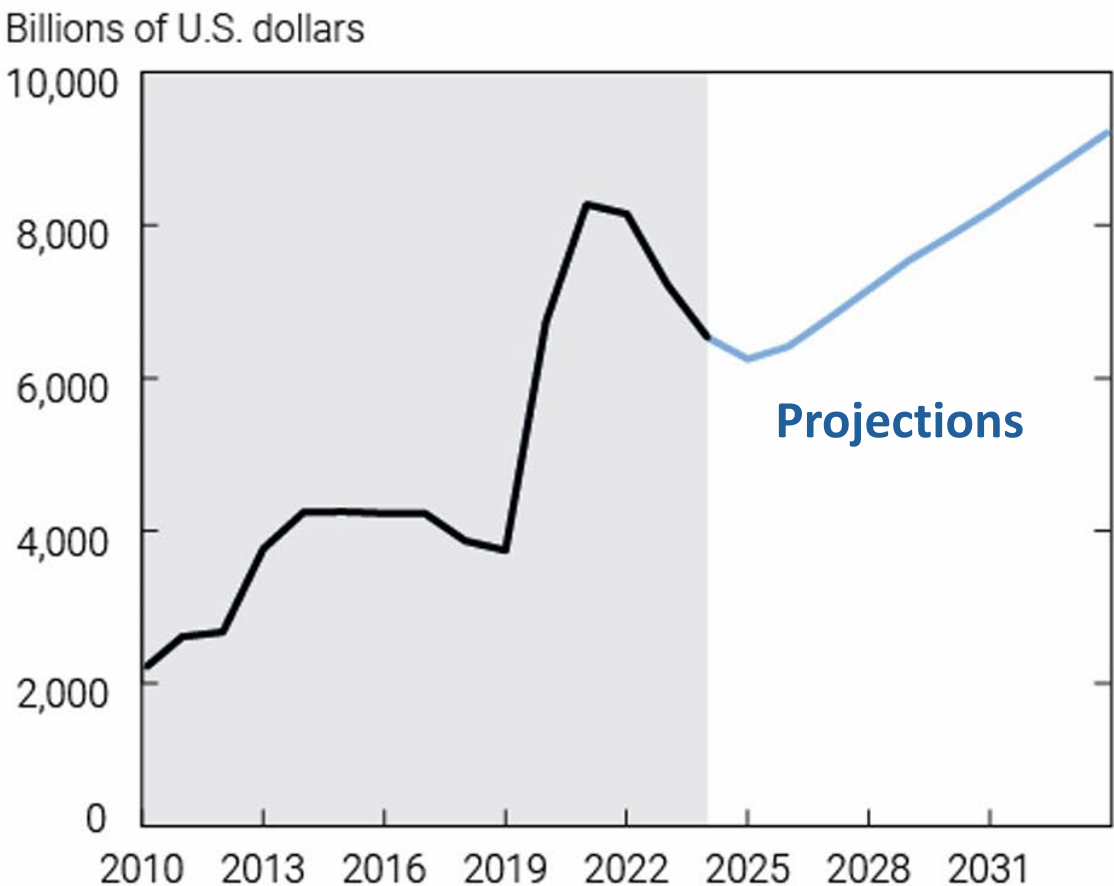
Figure 2. The Fed will stop balance sheet reduction as of December 1



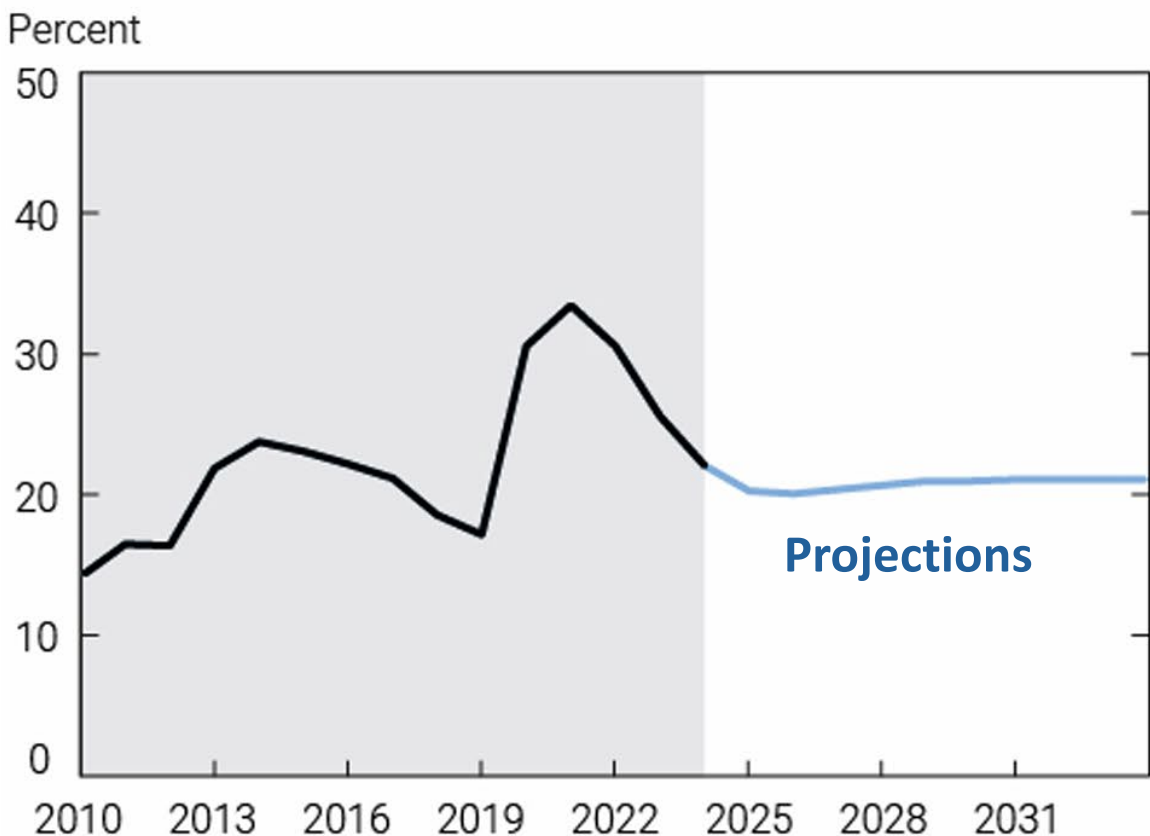
Source: Federal Reserve Board via Haver Analytics
Weekly data: Last point plotted is Nov 5, 2025

Figure 3. The Fed is expected to resume growing the balance sheet next year

Projected SOMA Domestic Securities Holdings



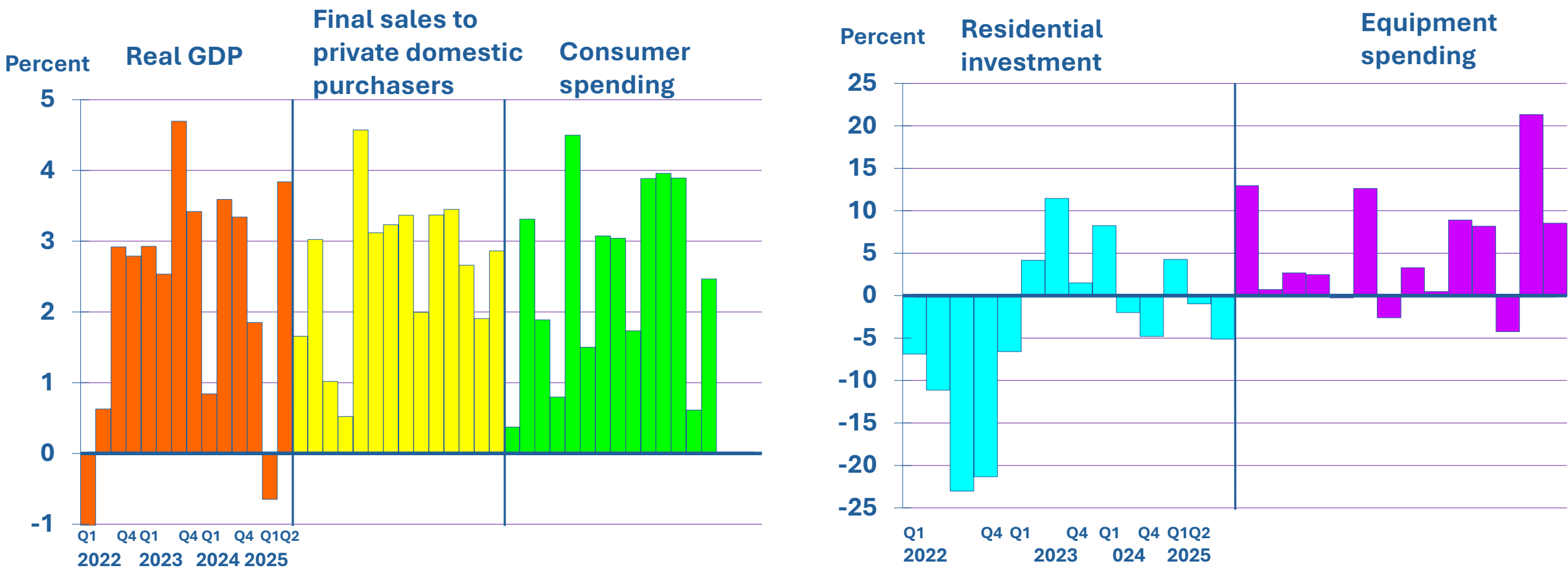
Projected SOMA Domestic Securities Holdings as a Share of NGDP



Source: Federal Reserve Bank of New York, Open Market Operations Annual Report, 2024
(<https://www.newyorkfed.org/medialibrary/media/markets/omo/omo2024-pdf.pdf>)

Figure 4. Output growth this year has held up better than many economists expected

Percentage change, SAAR
2022 Q1 to 2025 Q2

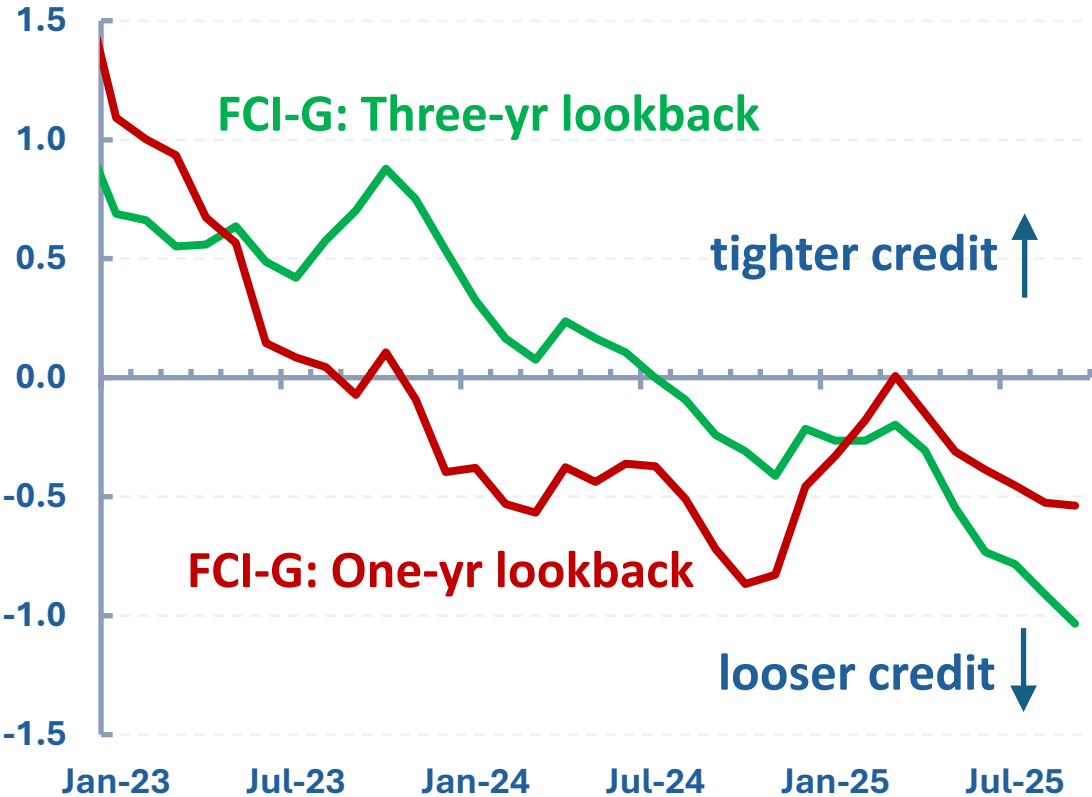


Source: Bureau of Economic Analysis via Haver Analytics
Quarterly data: Last obs. 2025 Q2

Figure 5. Financial conditions have eased in recent months

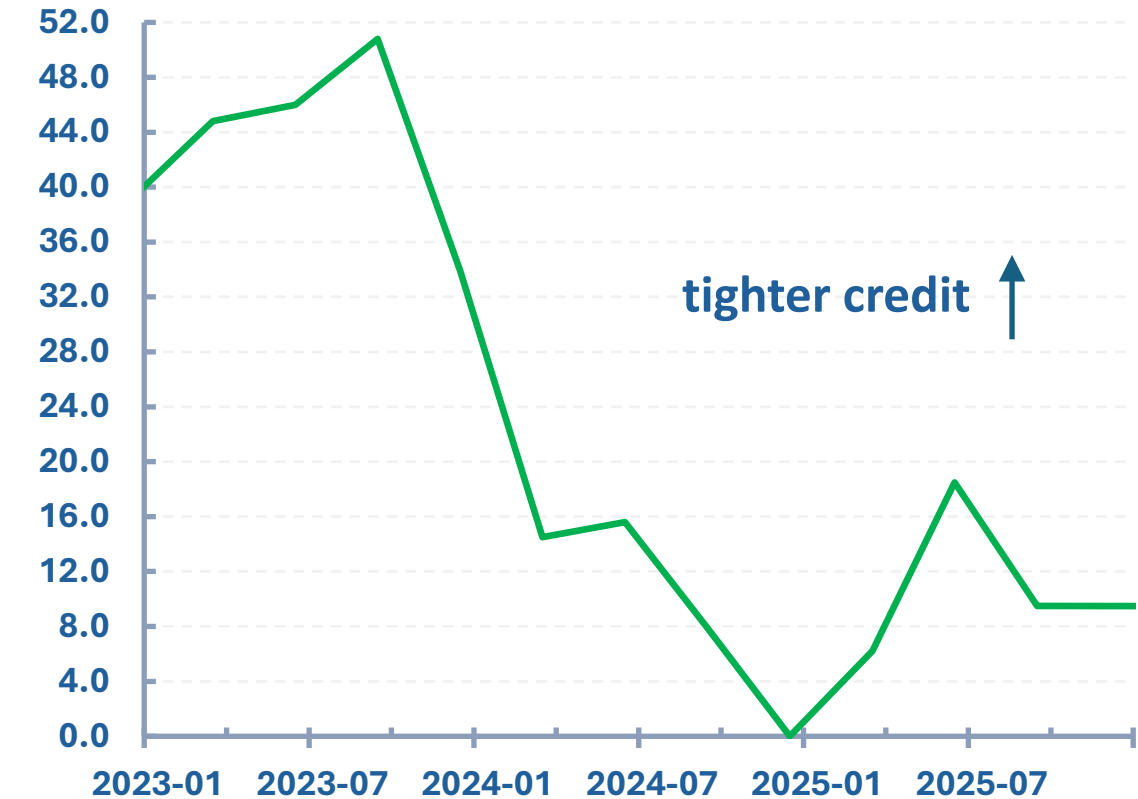
Board of Governors Financial Conditions Indexes

Percentage points



Senior Loan Officer Opinion Survey on Bank Lending:
Net % of domestic banks tightening credit stds. to medium and large firms

Percent



Source: Board of Governors of the Federal Reserve System via Haver Analytics

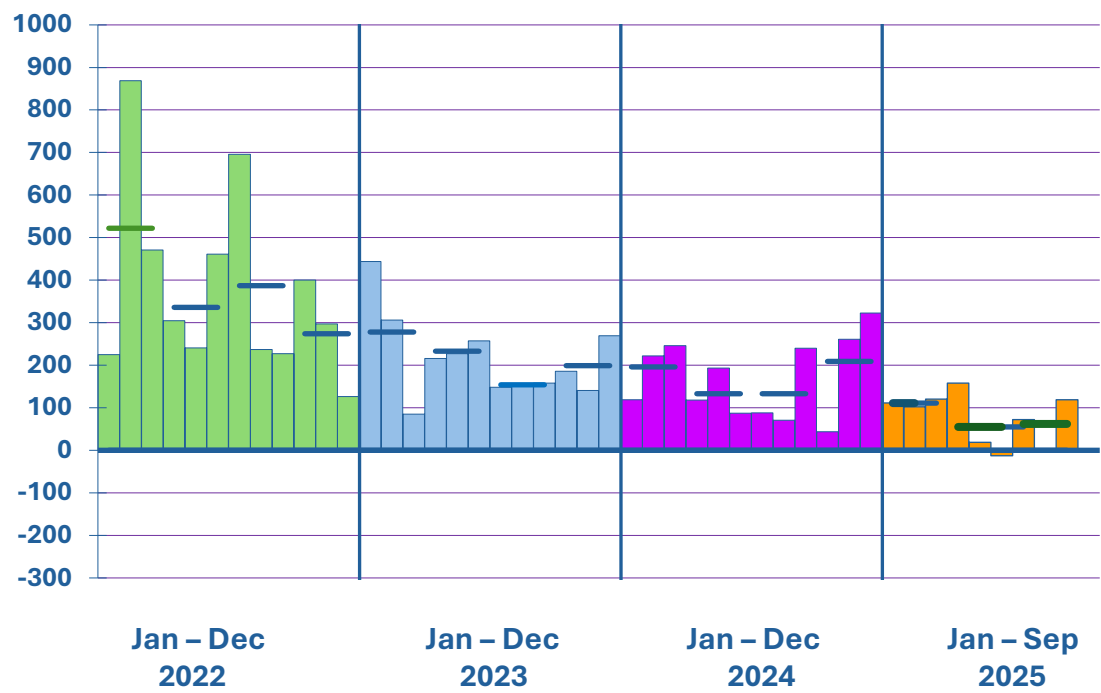
Monthly data for financial conditions indexes: Last obs. Sep 2025

6 Quarterly data for credit conditions: Last obs. 2025Q4

Figure 6. Labor market conditions have softened. Demand and supply remain in an uneasy balance.

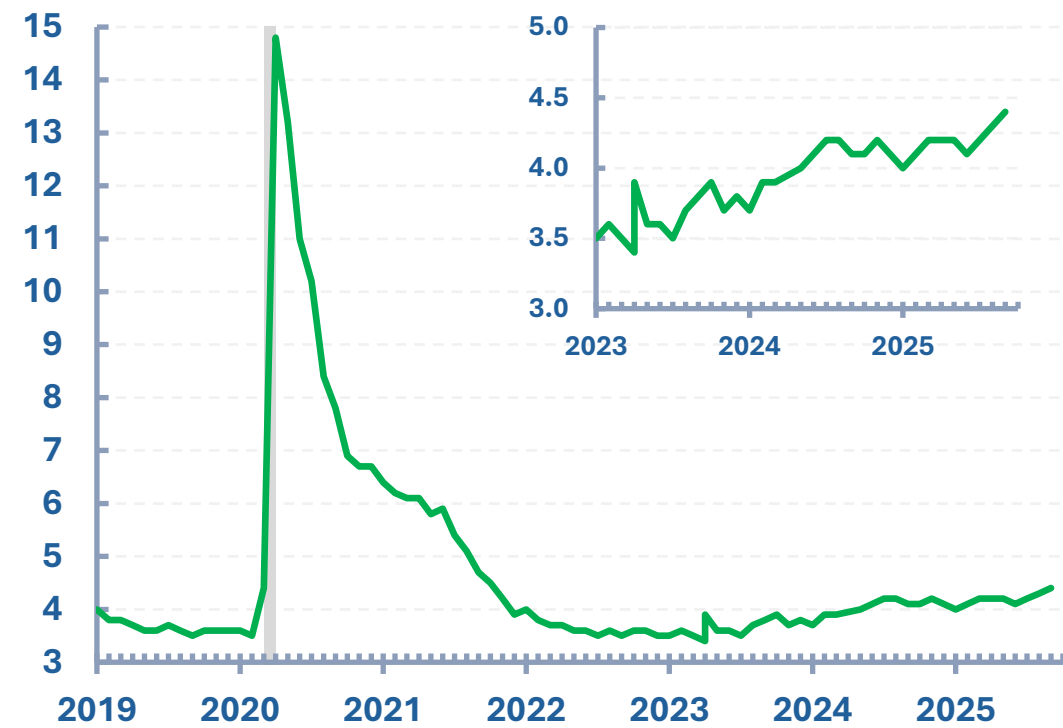
Monthly change in payroll employment
and 3-month average change

Thousands of jobs



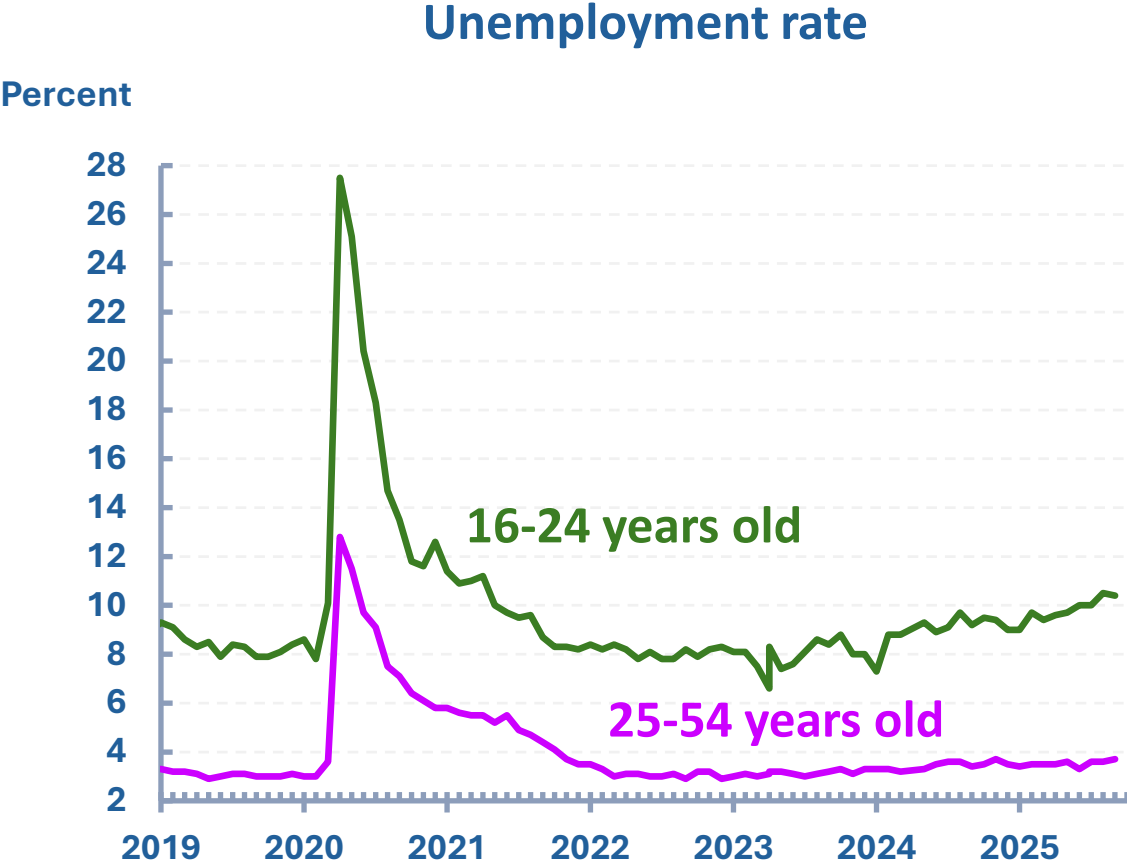
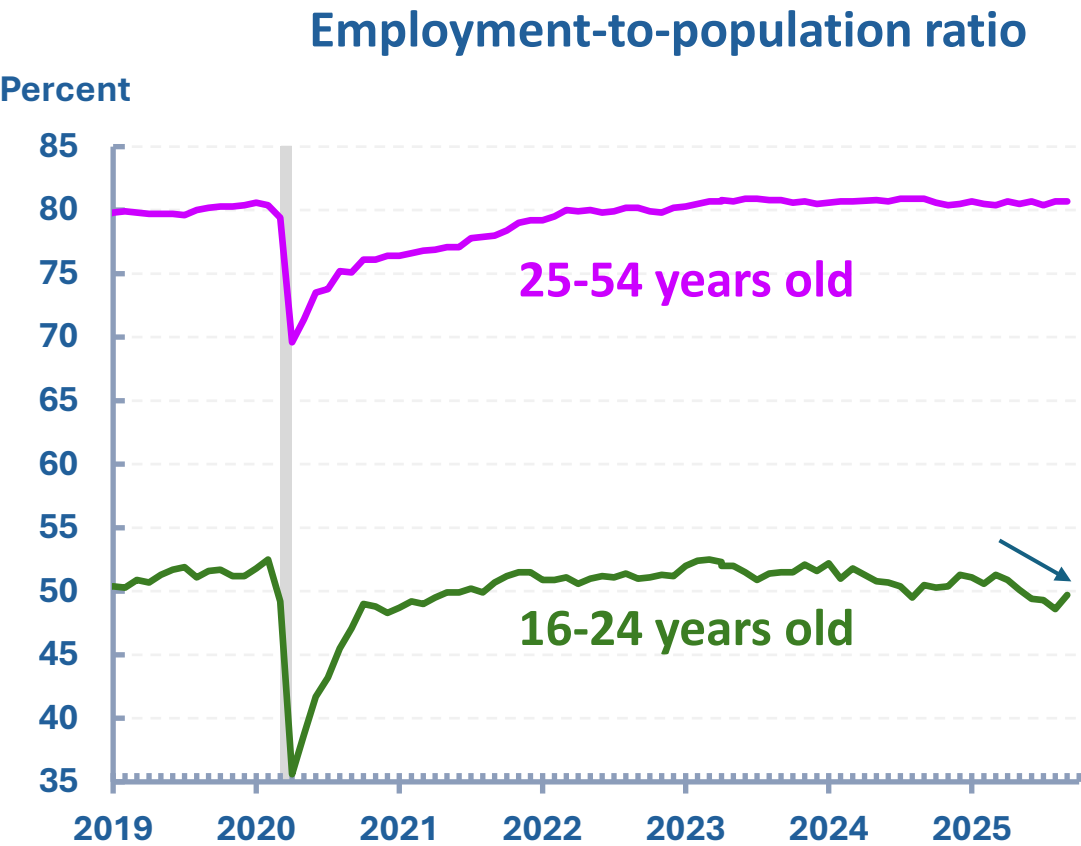
Unemployment rate

Percent



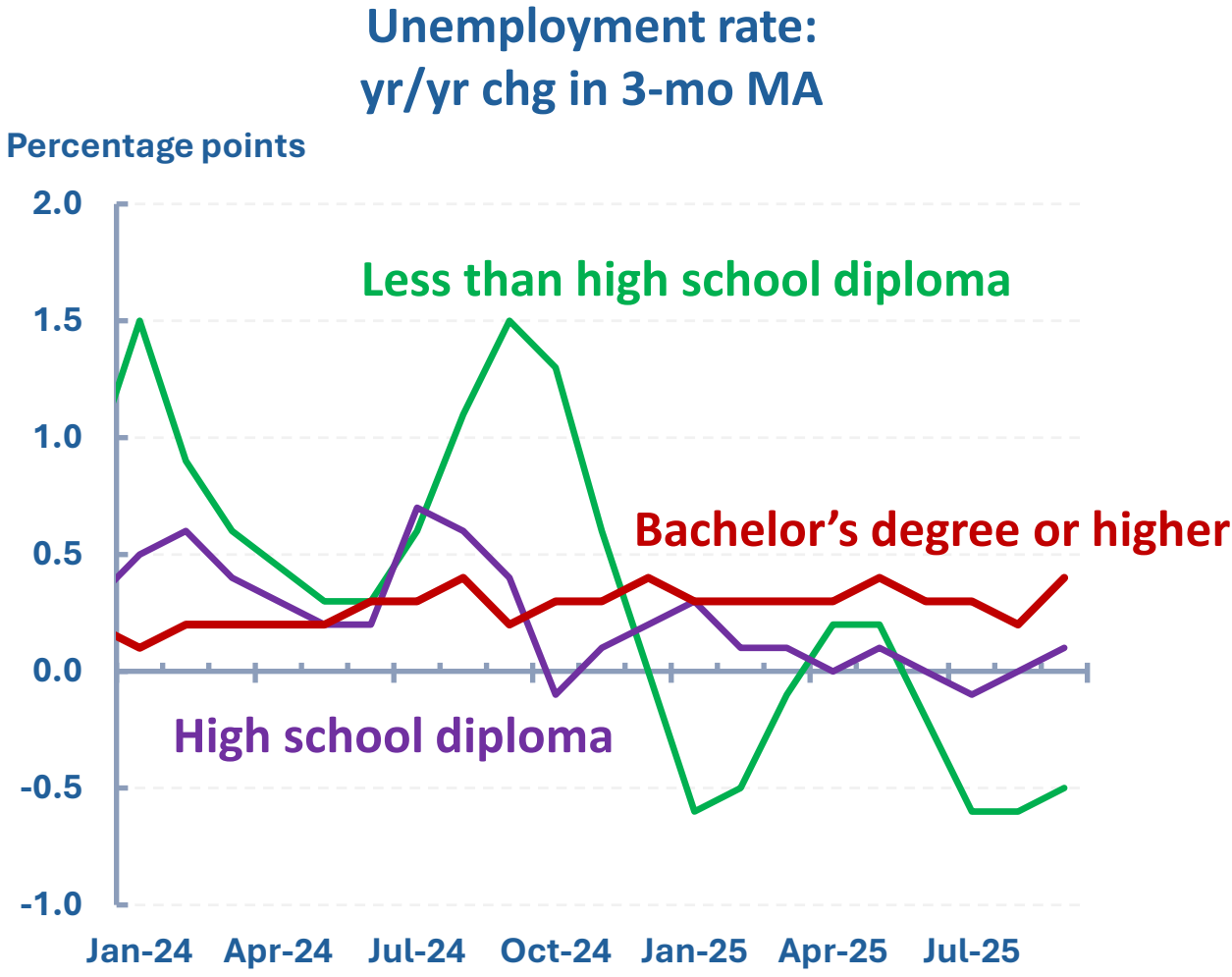
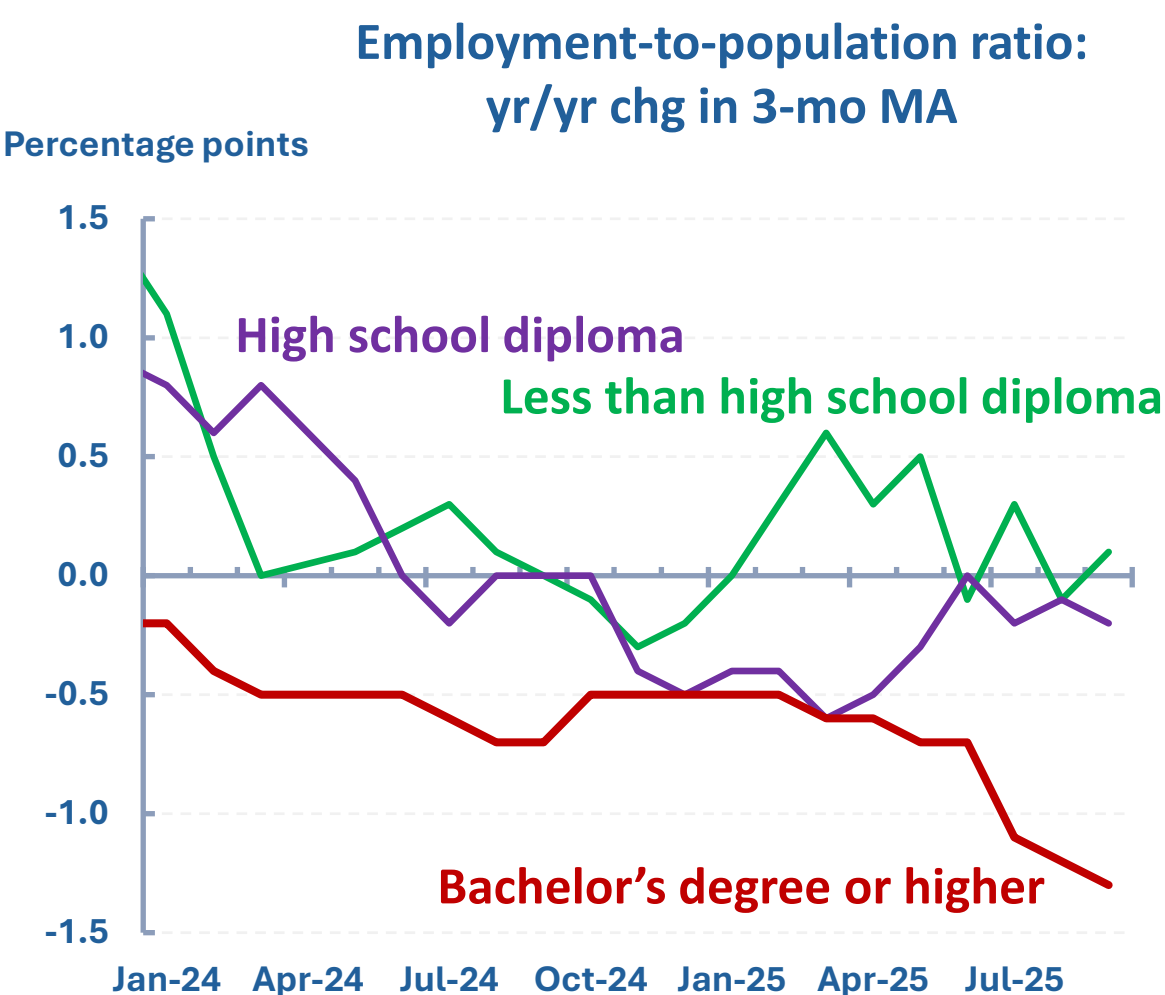
Source: Bureau of Labor Statistics via Haver Analytics
Monthly data: Last obs. Sep 2025

Figure 7. Labor market conditions have softened more for younger ages



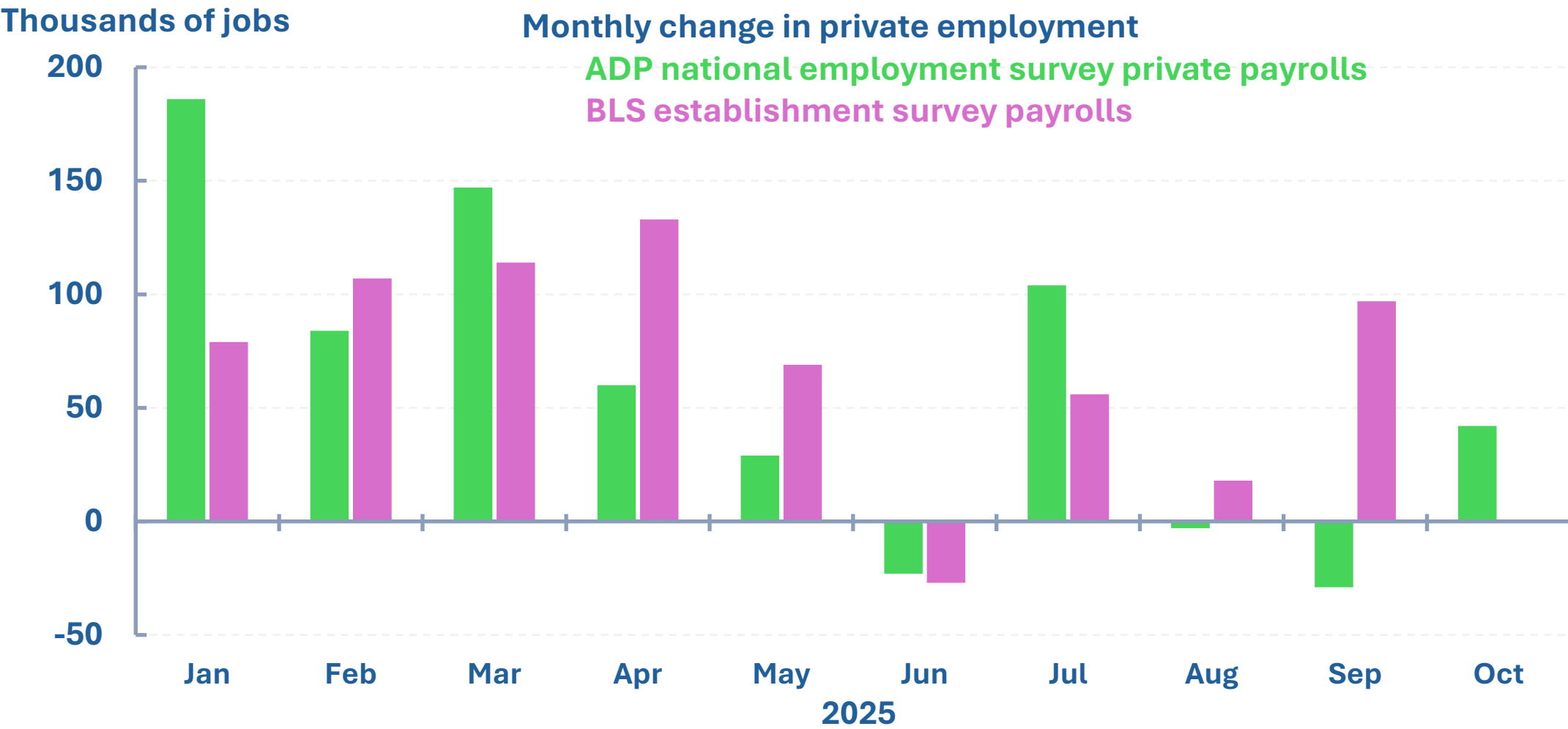
Source: Bureau of Labor Statistics via Haver Analytics
Monthly data: Last obs. Sep 2025

Figure 8. Labor market conditions have softened more for the more highly educated



Source: Bureau of Labor Statistics via Haver Analytics
Monthly data: Last obs. Sep 2025

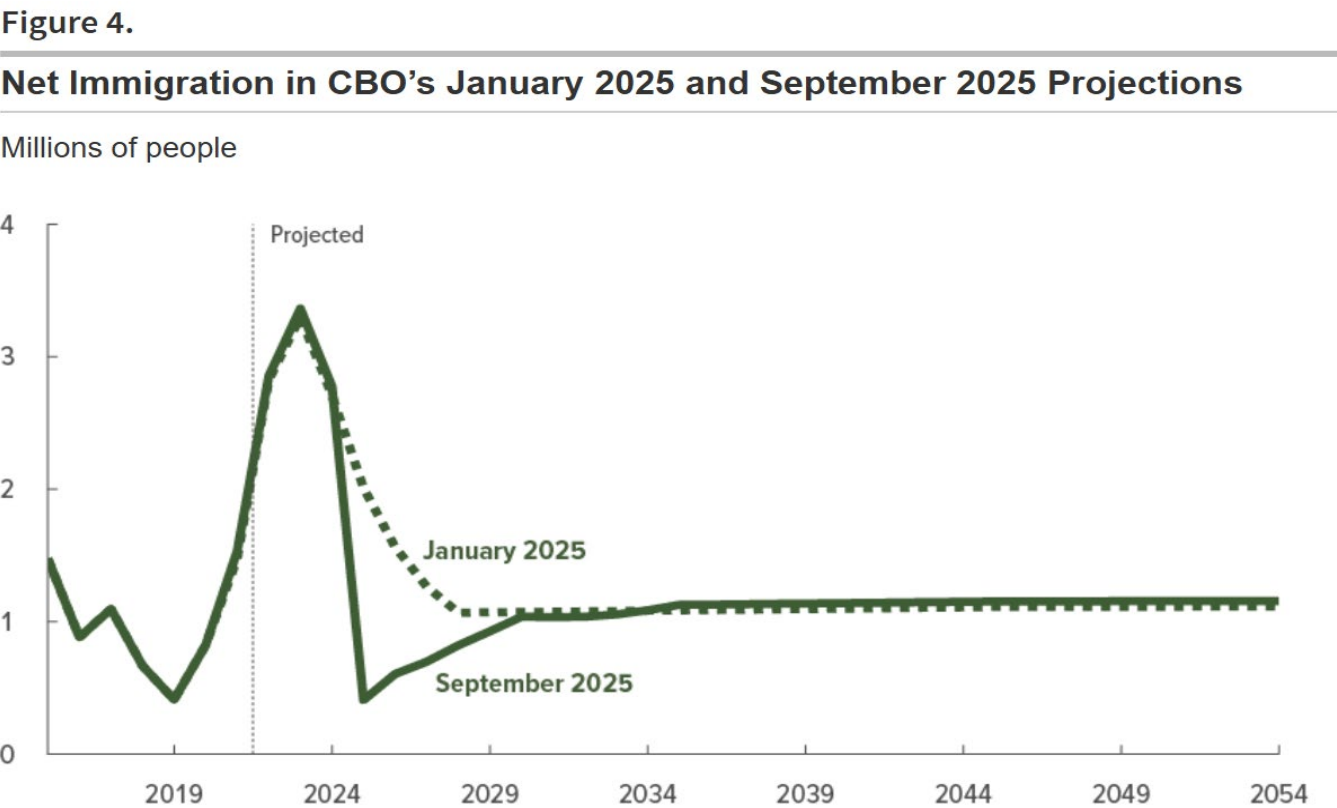
Figure 9. ADP private payrolls improved in October



Source: Bureau of Labor Statistics for private payroll employment and ADP via Haver Analytics

Monthly data: Last obs. Sep 2025 for BLS payrolls and Oct 2025 for ADP

Figure 10. CBO projections indicate a sharp decline in net immigration this year. Employment growth may be strong enough to keep the unemployment rate near current levels.



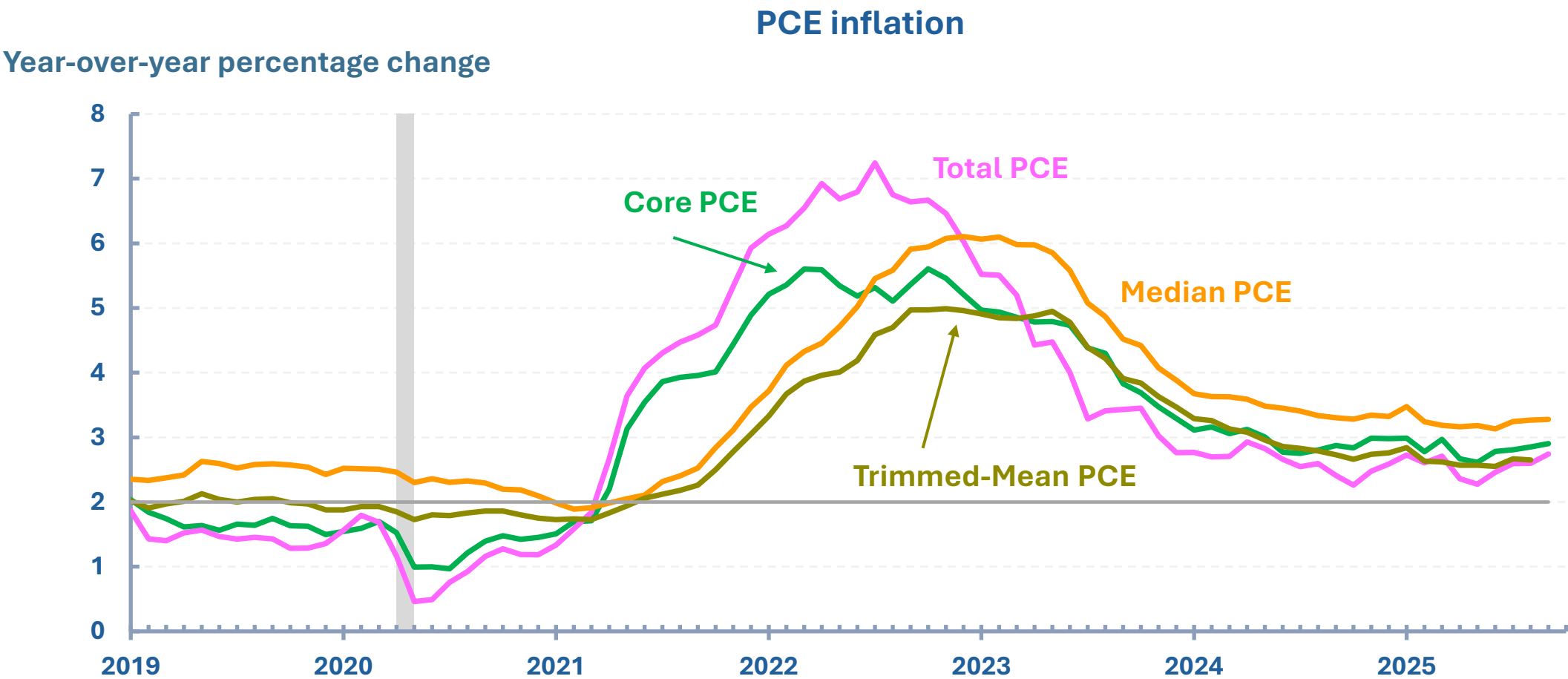
Source: Congressional Budget Office, *An Update to the Demographic Outlook, 2025-2054*, September 2025
Annual data and projections: data 2017-2021, projections 2022-2054

Estimates of breakeven monthly employment growth

Source	Monthly Net Immigration	Breakeven Employment Growth Estimate
AEI Scenario I (July 2025)	-44K	32K
AEI Scenario II (July 2025)	10K	64K
Goldman Sachs (July 2025)	41K	82K

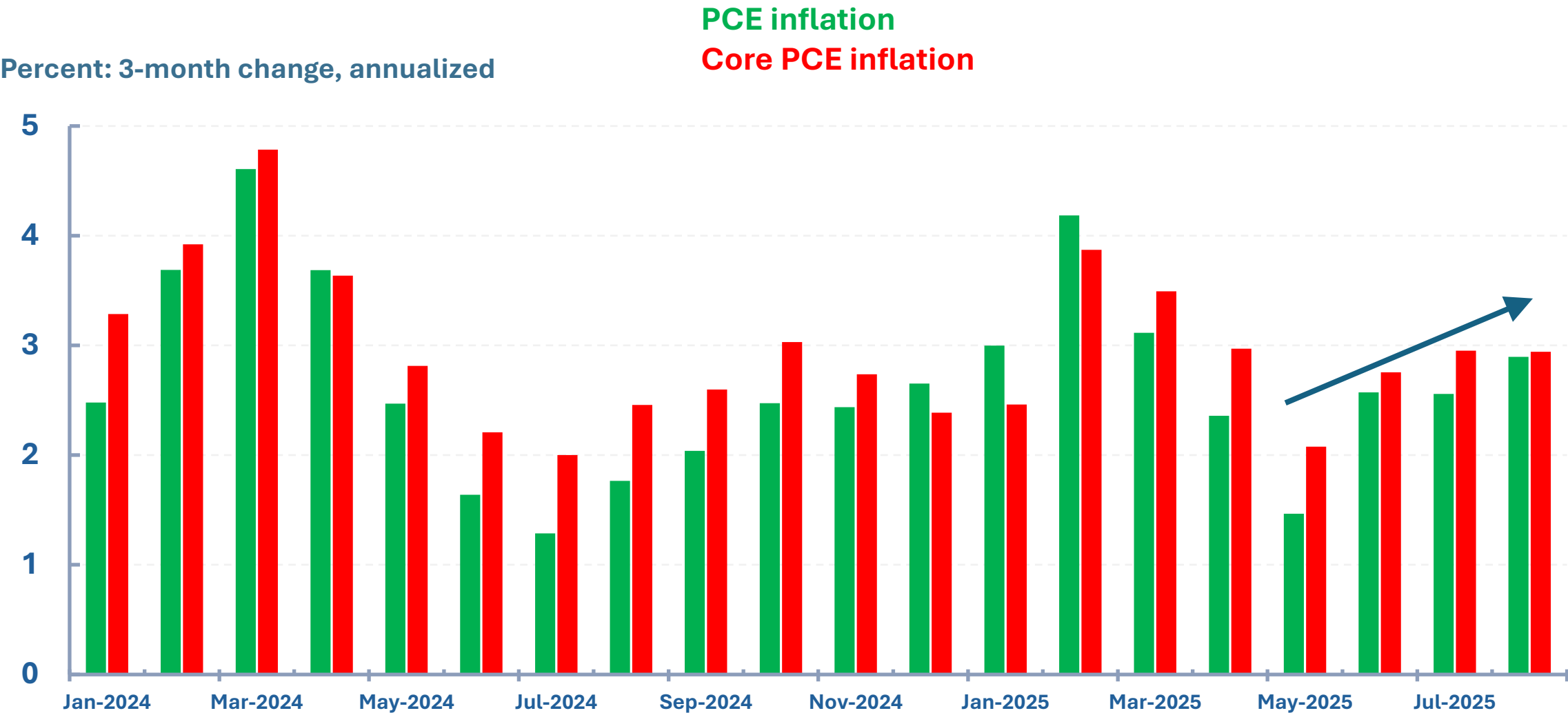
Source: Alexander Bick, “Lower Immigration Projections Mean Lower Breakeven Employment Growth Estimates,” On the Economy Blog, Federal Reserve Bank of St. Louis, Aug 28, 2025

Figure 11. Inflation has been sticky this year. It has been above the 2 percent target for over four years.



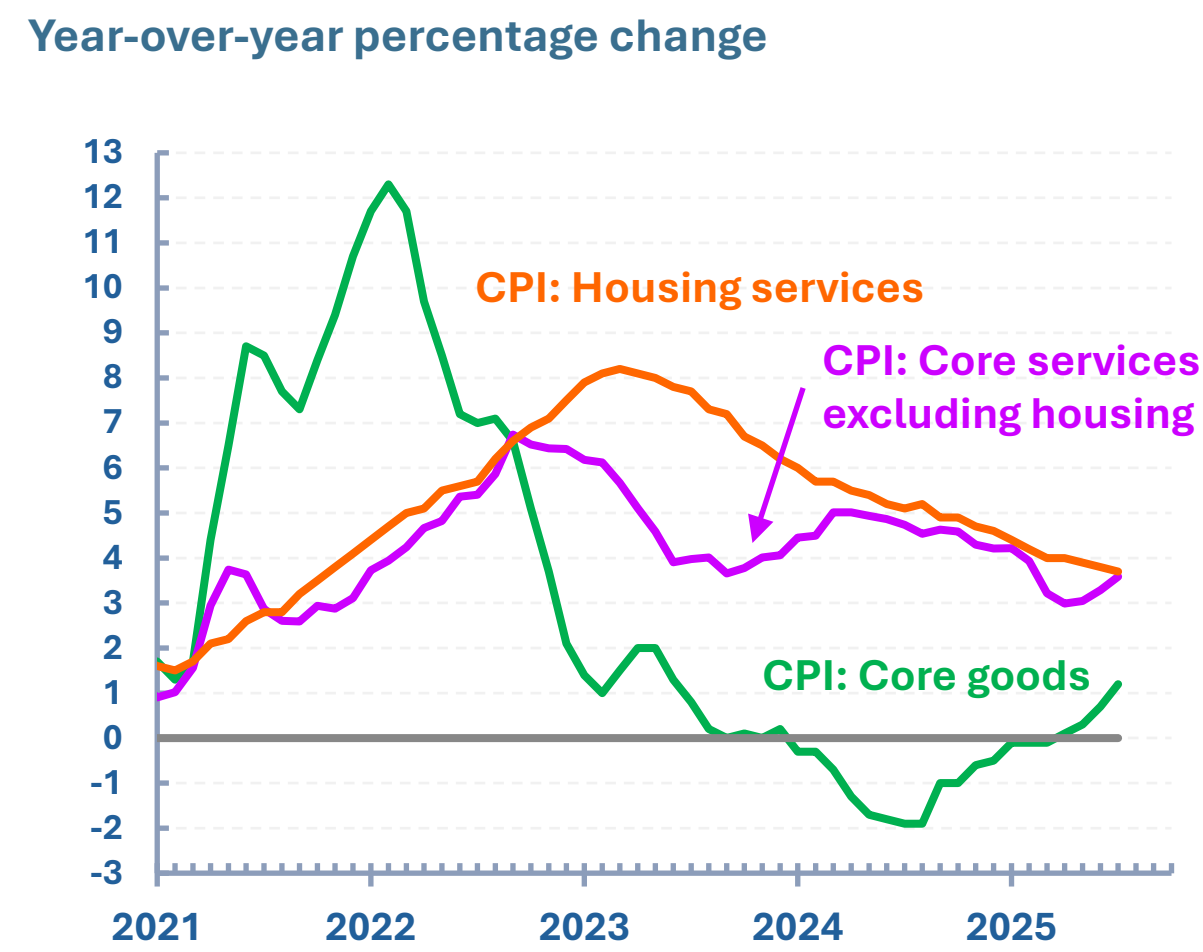
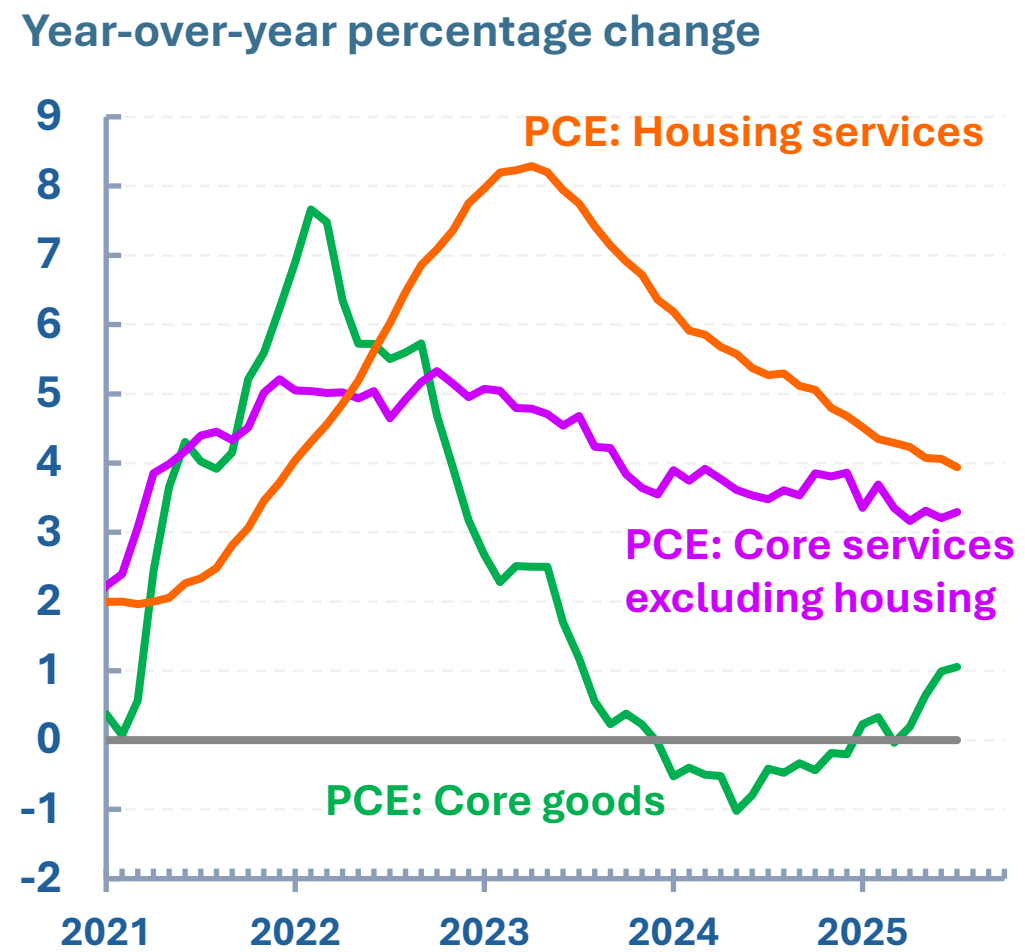
Source: Cleveland Fed for median PCE, Dallas Fed for trimmed-mean PCE, Bureau of Economic Analysis for others, via Haver Analytics
Monthly data: Last obs. Aug 2025

Figure 12. The 3-month changes in total and core PCE inflation have moved up since May



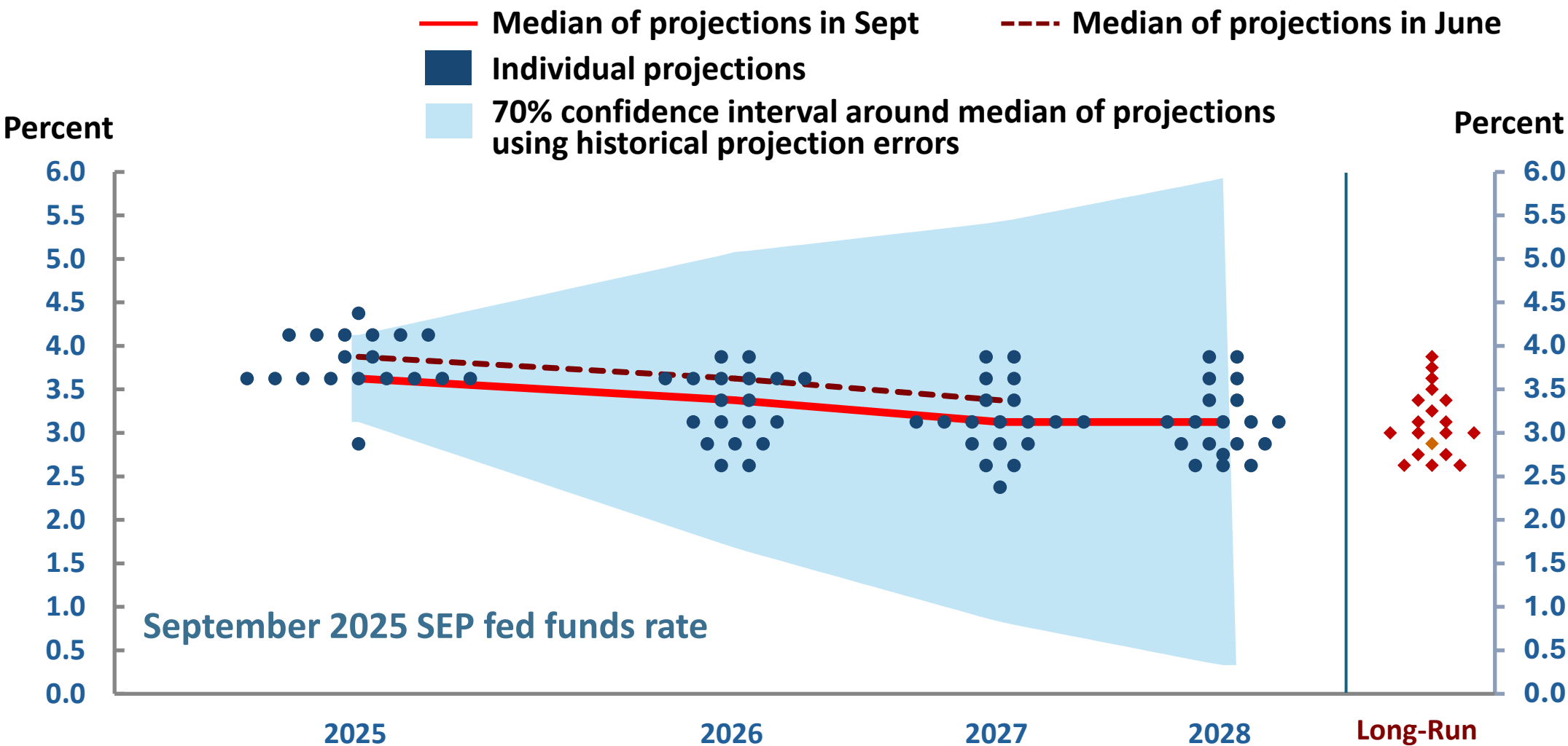
Source: Bureau of Economic Analysis
Monthly data: 3-month change, annualized: Last obs. Aug 2025

Figure 13. Higher tariffs are showing up in higher prices of goods.
Housing services inflation has fallen over time but core services ex housing inflation is rising again.



Source: Bureau of Economic Analysis for PCE inflation and Bureaus of Labor Statistics for CPI inflation
via Haver Analytics
Monthly data: Last obs. Aug 2025 for PCE inflation and Sep 2025 for CPI inflation

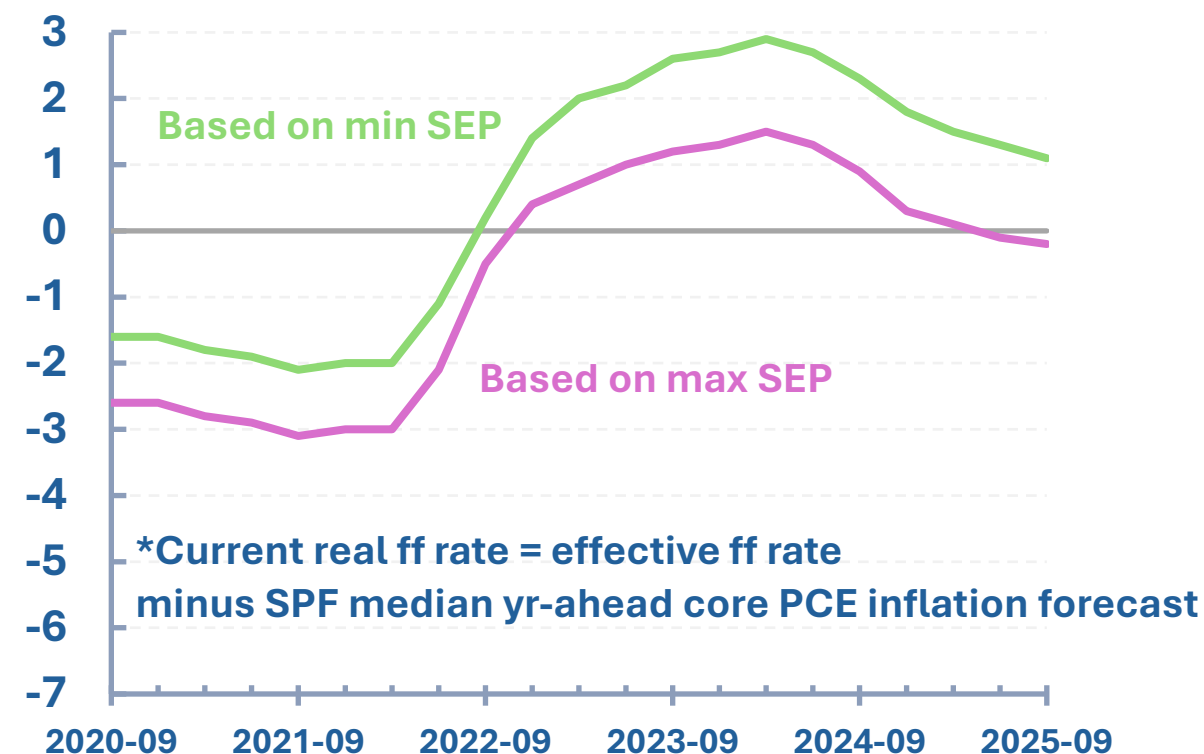
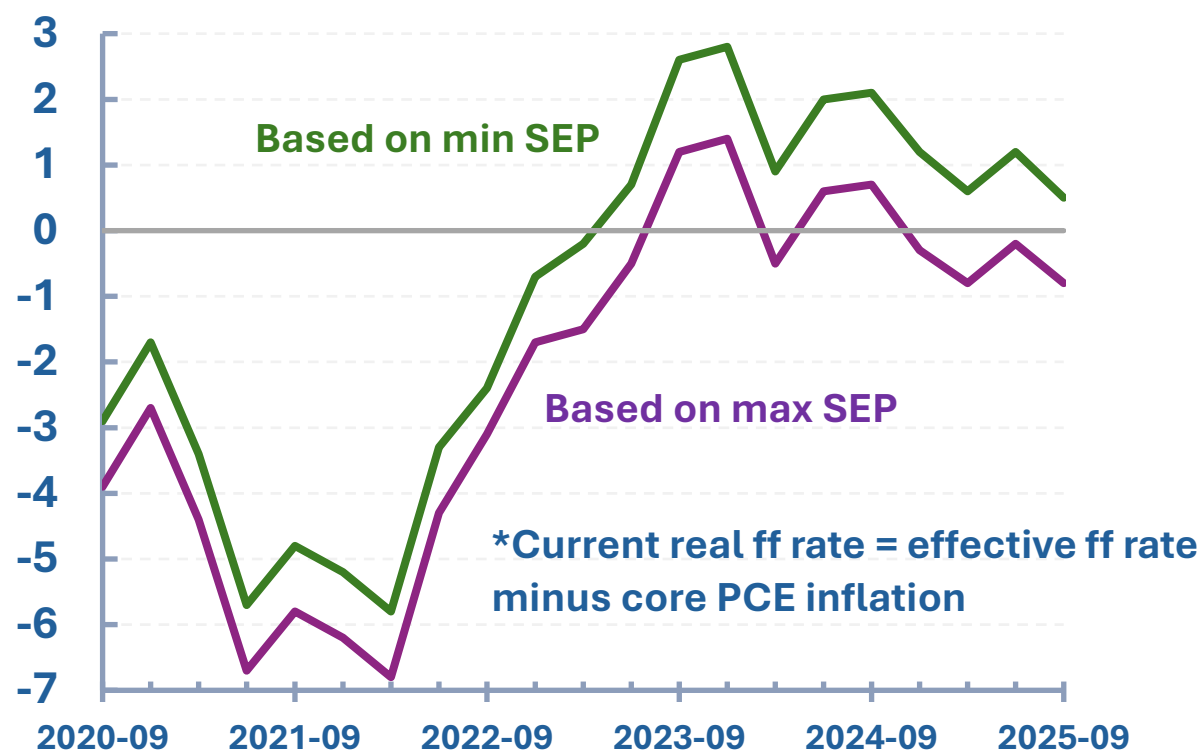
Figure 14. The median policy path among FOMC participants moved down in September but there is a diversity of views about appropriate policy



Source: FOMC's Summary of Economic Projections (SEP), June and September 2025.
Fan chart based on historical forecast errors from Table 2 of September 2025 SEP, based on
D. Reifschneider and P. Tulip, Board of Governors FEDS Working Paper 2017-020 (Feb. 24, 2017).

Figure 15. FOMC participants have different views about the restrictiveness of current policy

Percent Restrictiveness of policy = Current real ff rate* – SEP projection of long-run real ff rate



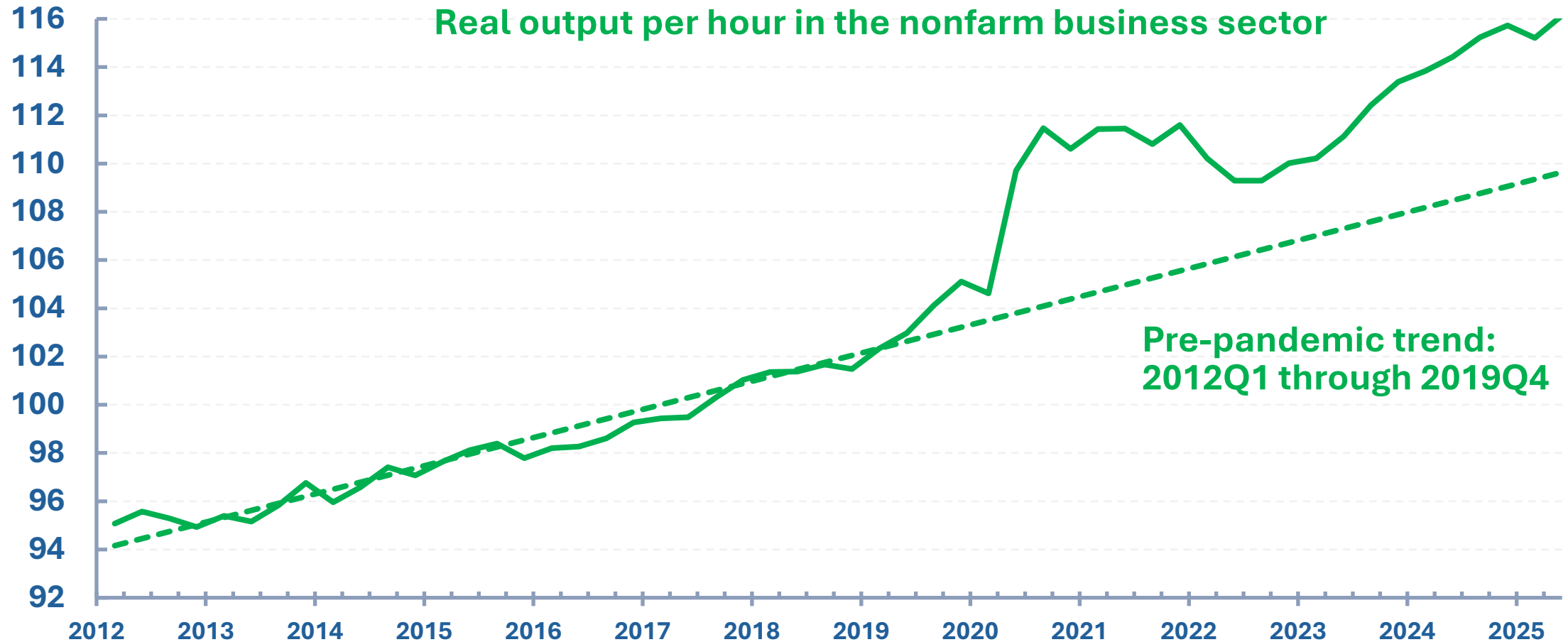
Source: FOMC Summary of Economic Projections and Bureau of Economic Analysis via Haver Analytics, Federal Reserve Bank of Philadelphia, and author's calculations.

In left panel, for last observation, core PCE inflation is SPF projection from 2025Q3 SPF.

Quarterly data: Last obs. Sept 2025

Figure 16. Productivity growth in the U.S. is growing well above its pre-pandemic trend

Index = 100 in 2017

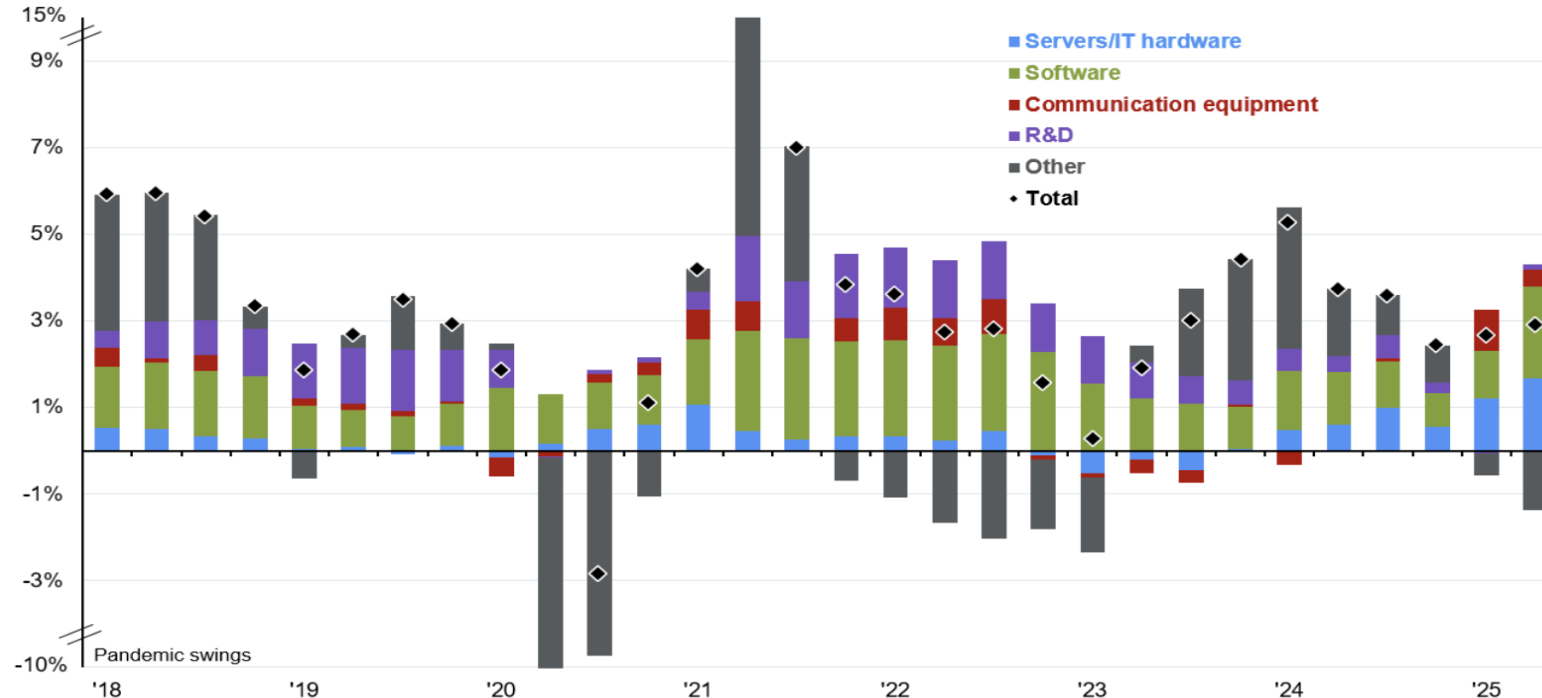


Source: Bureau of Labor Statistics via Haver Analytics and author's calculations
Quarterly data: Last obs. 2025Q2

Figure 17. AI may help drive a sustained increase in productivity growth in the U.S. but the timing and magnitude are not clear

Tech-related spend in total business investment

Contributions to year-over-year growth in inflation-adjusted private fixed investment

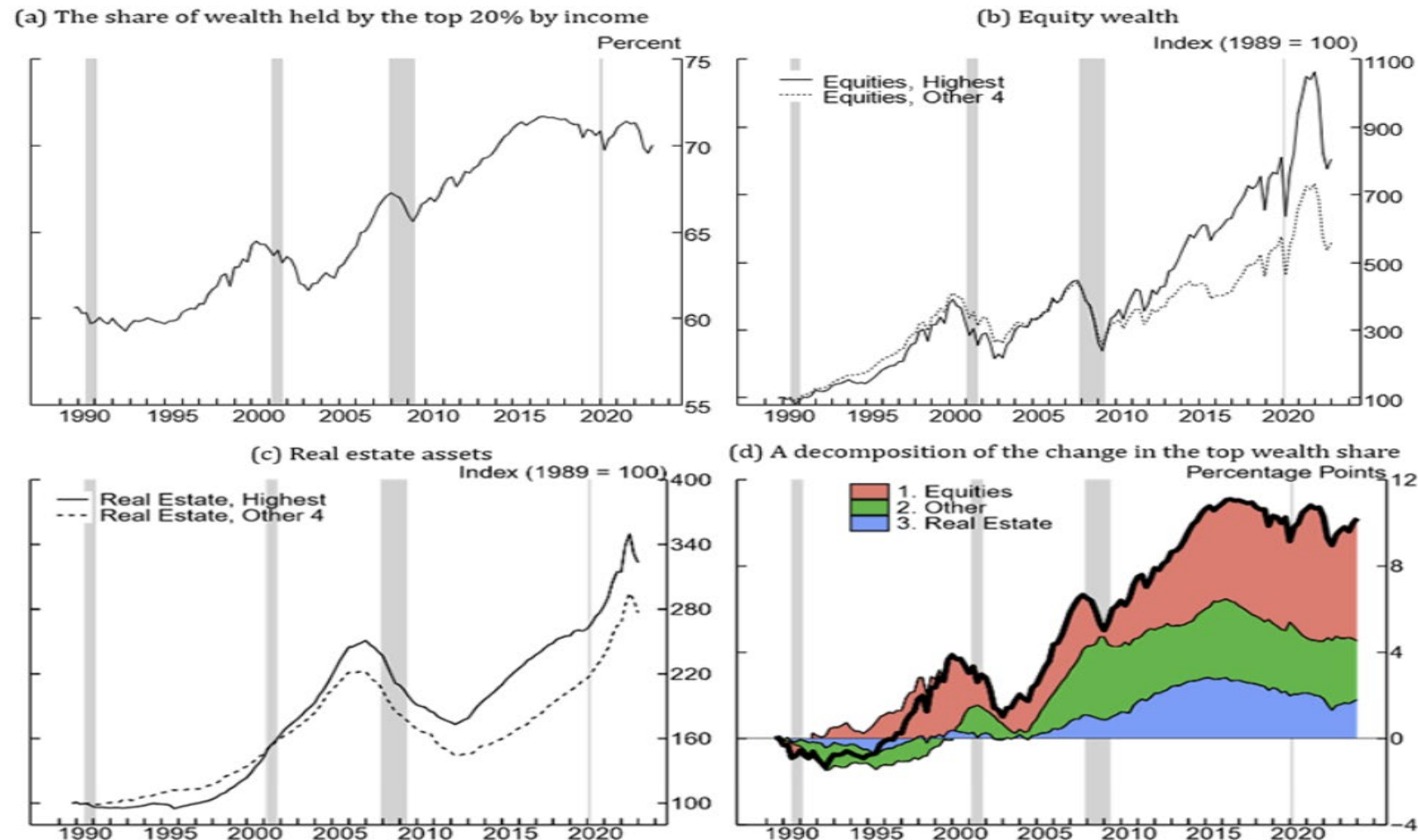


Source: U.S. Bureau of Economic Analysis, FactSet, J.P. Morgan Asset Management. Refers to real gross private fixed domestic investment, chain-weighted to 2017. Data are as of September 10, 2025.

Source: Stephanie Aliaga, “Is AI Already Driving U.S. Growth,” On the Minds of Investors, JP Morgan Asset Management, September 12, 2025.

(<https://am.jpmorgan.com/us/en/asset-management/adv/insights/market-insights/market-updates/on-the-minds-of-investors/is-ai-already-driving-us-growth/>)

Figure 18. The distribution of wealth has become more skewed => average MPC out of wealth has fallen over time (from 3.3 cts/\$ before 2012 to 2.7 cts/\$ after 2012)



Panel (a): Share of nominal net worth held by top 20% of households by income.

Panels (b) and (c) : Real asset holding by highest 20% and bottom 80% of households by income.
(Indexed to 100 in 1983Q3, through 2024Q4; deflated by PCE deflator)

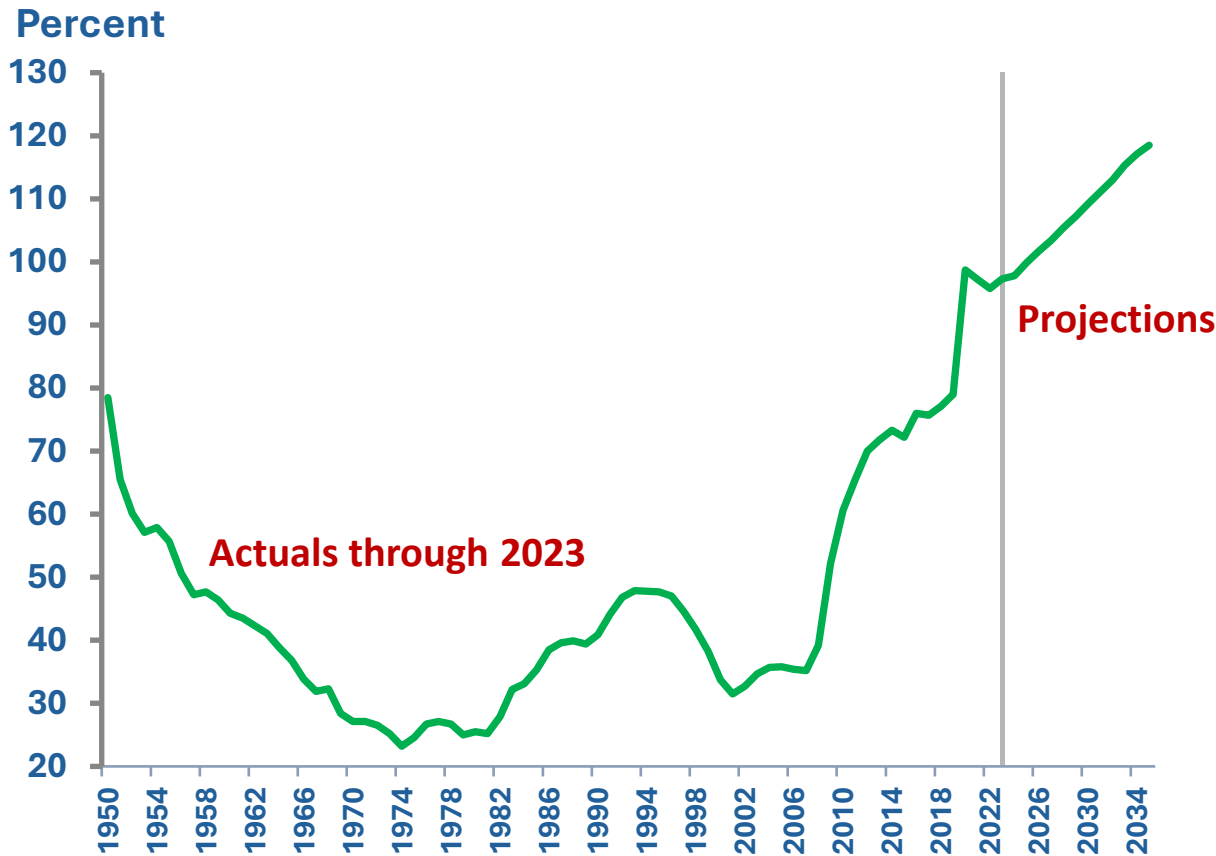
Panel (d): Decomposition of change in share of wealth held by top 20% of households by income.

Source: Samara Beach, William Gamber, and Patrick Moran, “Wealth Heterogeneity and Consumer Spending, FEDS Notes, Board of Governors of the Federal Reserve System, August 5, 2025.
(<https://www.federalreserve.gov/econres/notes/feds-notes/wealth-heterogeneity-and-consumer-spending-20250805.html>)

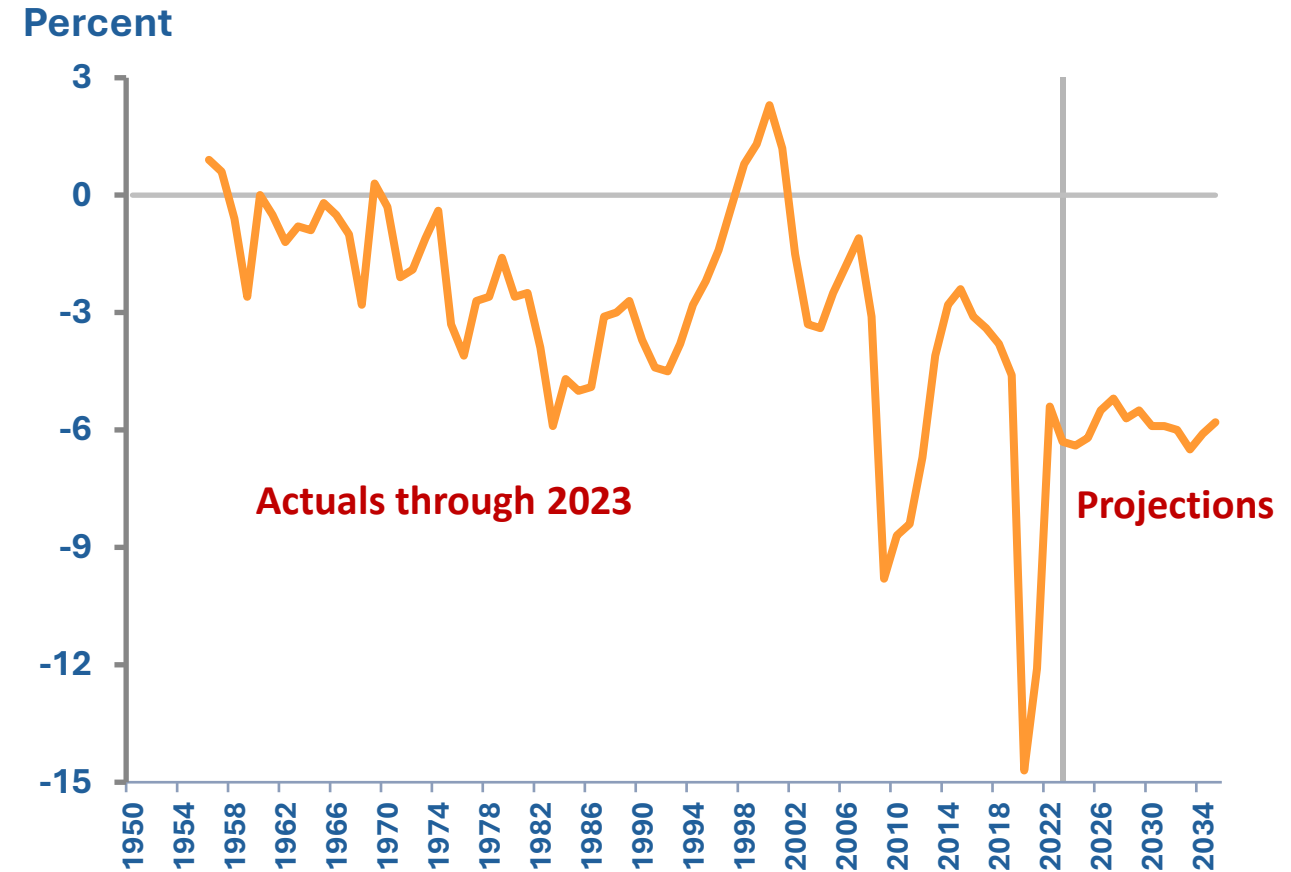
Figure 19. U.S. federal debt is projected to rise as a percent of GDP as deficits remain large

CBO baseline budget projections

Gross federal debt held by the public
as a percent of GDP

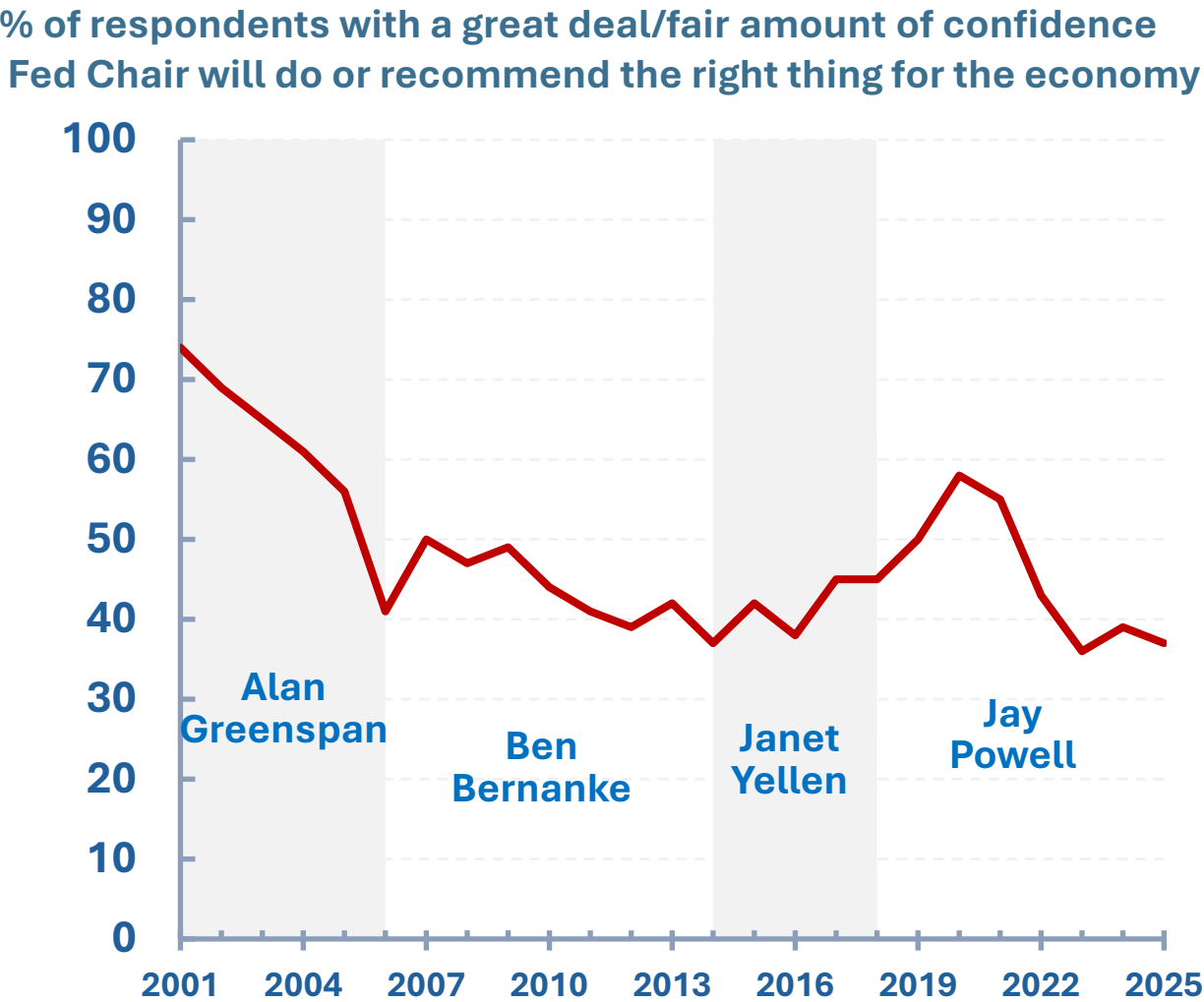


Surplus/Deficit as a percent of GDP



Source: Congressional Budget Office via Haver Analytics
Annual data: Last obs. Fiscal year 2023

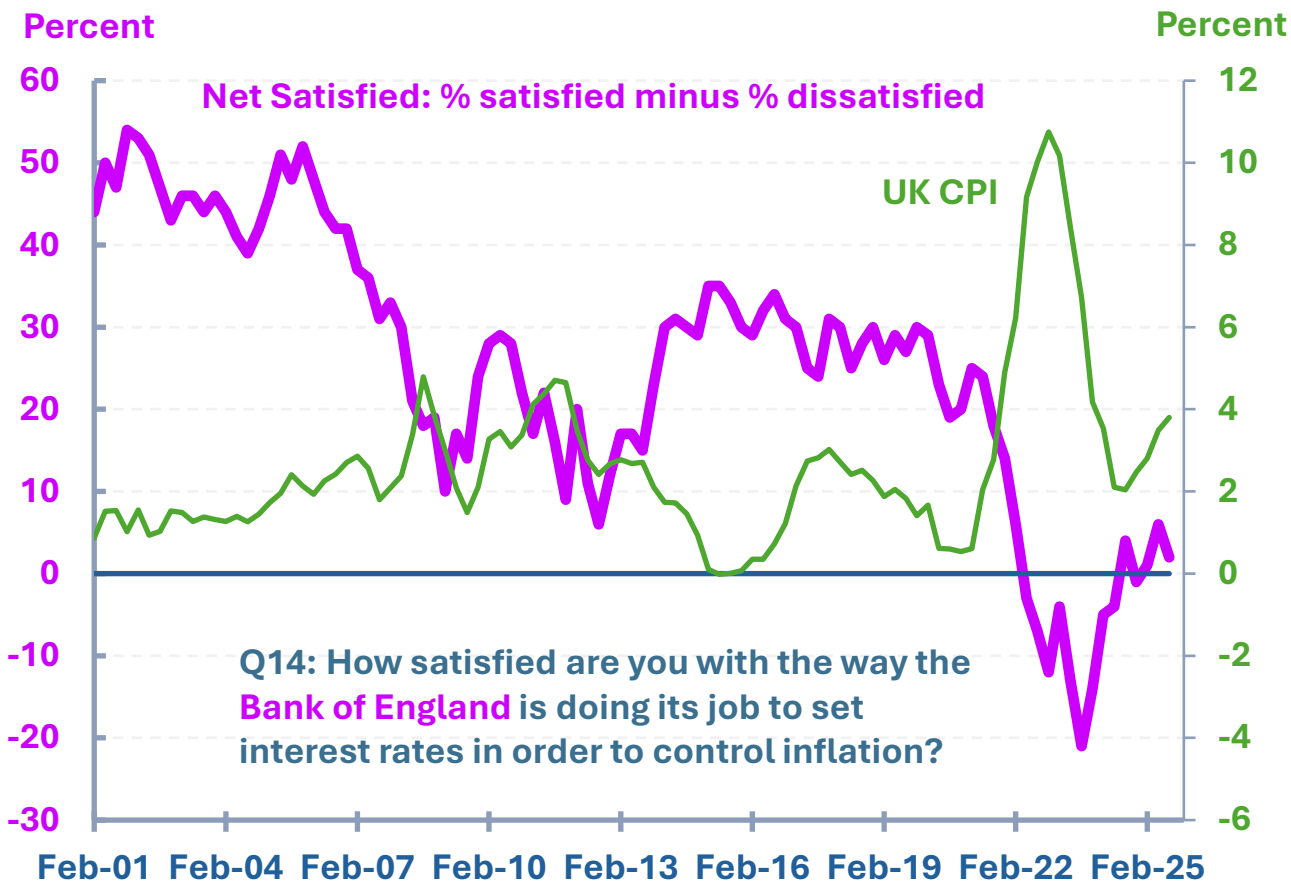
Figure 20. Confidence in U.S. institutions, including the Fed, has fallen



Source: Gallup data; See Brenan (2024 and 2025); also see Goldman Sachs Research (2025)
Annual data: Last obs. 2025

Figure 21. Satisfaction in central banks has fallen over the past few years

Bank of England



Source: Net Satisfied is from Bank of England/IPSO Inflation Attitude Survey; Inflation is from UK Office of National Statistics via Haver Analytics
Quarterly data: Last obs. Aug 2025 for Attitude Survey; 2025Q3 for UK inflation

European Central Bank

Chart 1

Trust in the ECB according to the Eurobarometer and the Consumer Expectations Survey

(left-hand scale: net trust in the ECB across euro area respondents (Eurobarometer), percentages; right-hand scale: average trust in the ECB (CES), scale of 0 to 10)



Sources: Standard Eurobarometer, ECB Consumer Expectations Survey and ECB calculations.
Notes: Standard Eurobarometer data cover survey waves 51 (spring 1999) to 100 (autumn 2023). Net trust is the percentage of respondents answering "tend to trust" minus the percentage answering "tend not to trust". Respondents who answered "don't know" are disregarded. CES data are a weighted average and cover monthly survey waves from April 2020 to December 2023. The CES trust question is answered on a scale of 0 to 10 (with 0 being no trust at all and 10 being complete trust).

Source: Trust in ECB is from Eurobarometer; See Ehrmann (2024)

Figure 22. FOMC kept underpredicting inflation

Quarterly FOMC SEP Median PCE Inflation Projections for 2021 and 2022 and Actual Inflation

Q4-over-Q4 percentage change

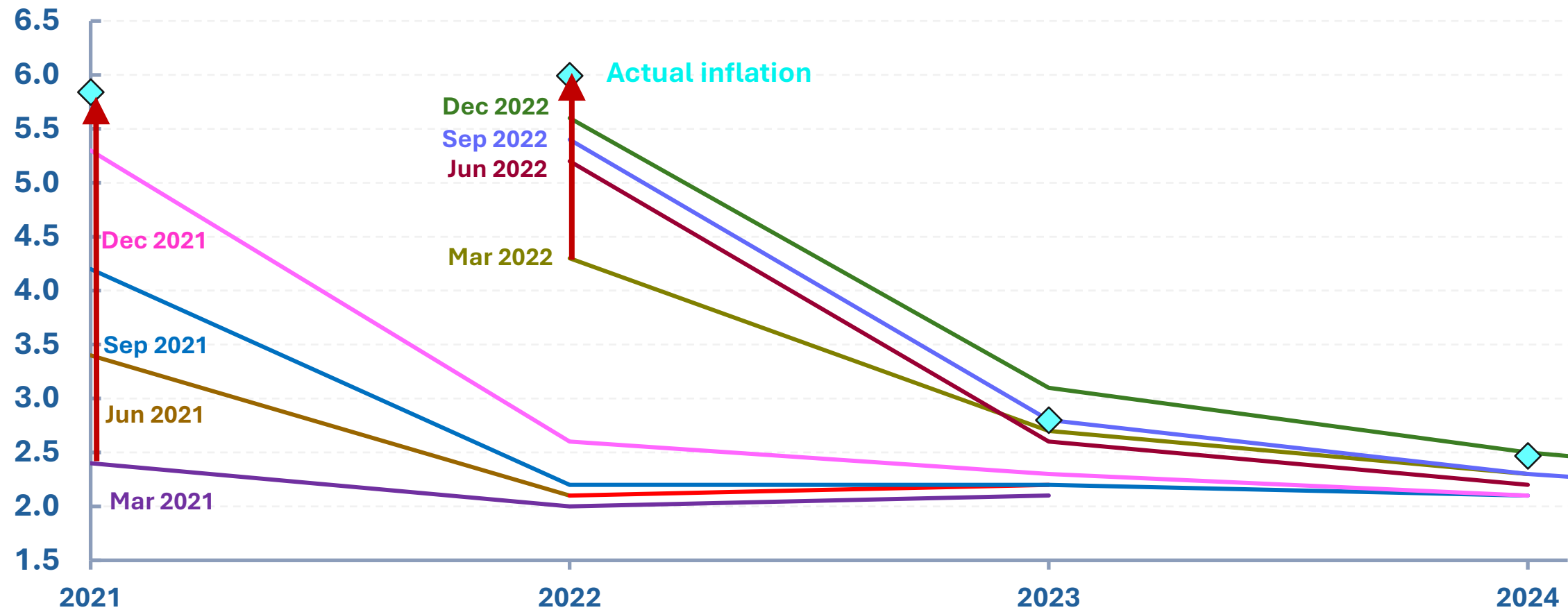
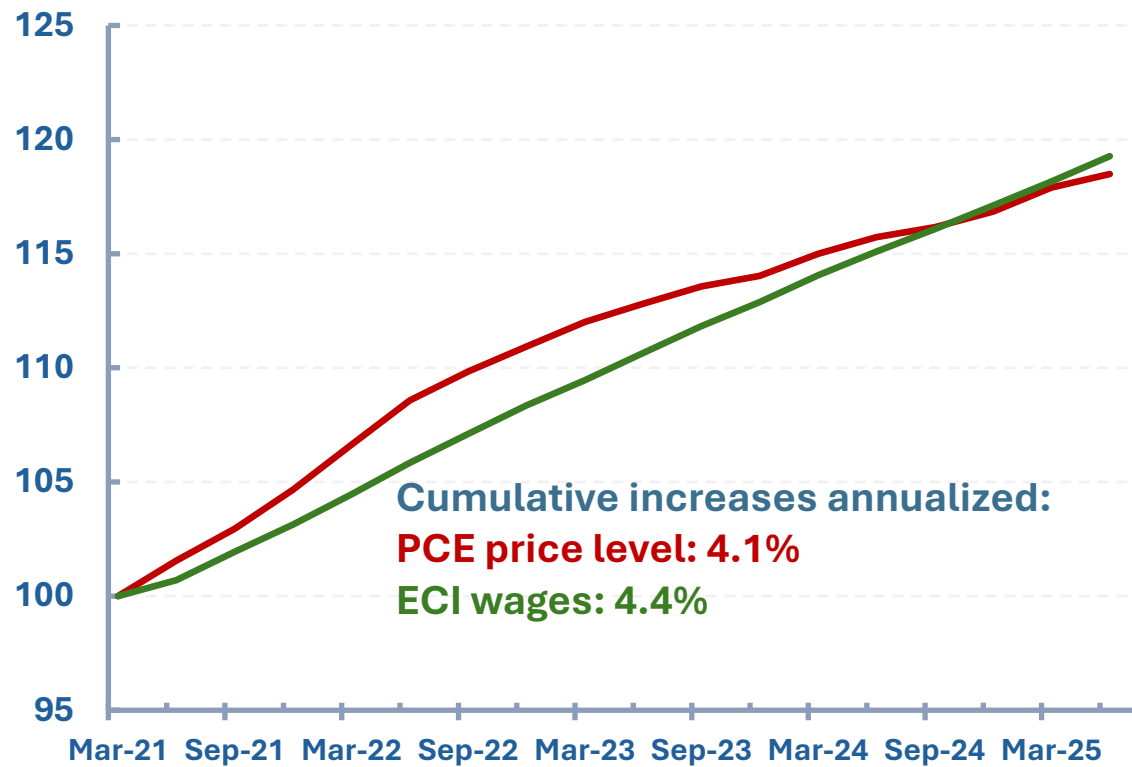


Figure 23. By some measures, wage increases have not made up for inflation

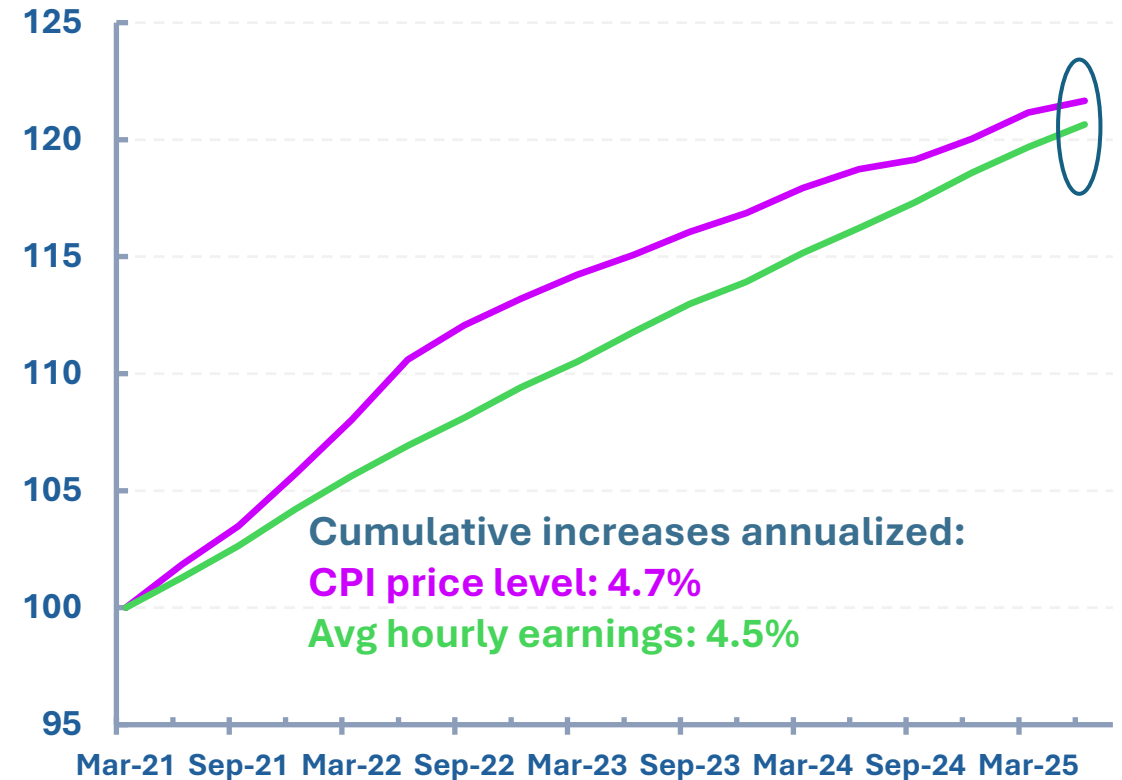
PCE price level and **ECl: wages**
(indexed so 2021Q1 = 100)

Index: 2021Q1 = 100



CPI price level and **Avg hourly earnings**
(indexed so 2021Q1 = 100)

Index: 2021Q1 = 100



Source: Bureau of Economic Analysis and Bureau of Labor Statistics via Haver Analytics
Quarterly data: Last obs. 2025 Q2

Figure 24: Central bank independence yields better economic outcomes

Central bank independence:

- Authority of central bankers to make monetary policy decisions independently from short-run political interference
 - Government sets monetary policy goals
 - Central bank decides how best to achieve those goals
- Independent \neq **unaccountable**
- **Benefits**
 - Long-term focus since monetary policy affects economy with a lag
 - Government has incentive to set interest rates low: spur economic growth and ignore longer-run inflation cost (esp. before elections)
 - Government can use inflation to keep debt-service costs low and inflate away debt
 - **Research: Independence => lower, more stable inflation; without cost of more variable growth**

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