FEDERAL RESERVE BANK
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How AI and Supply Shocks Are Impacting the Economy

Bellevue Chamber of Commerce, Bellevue, Washington

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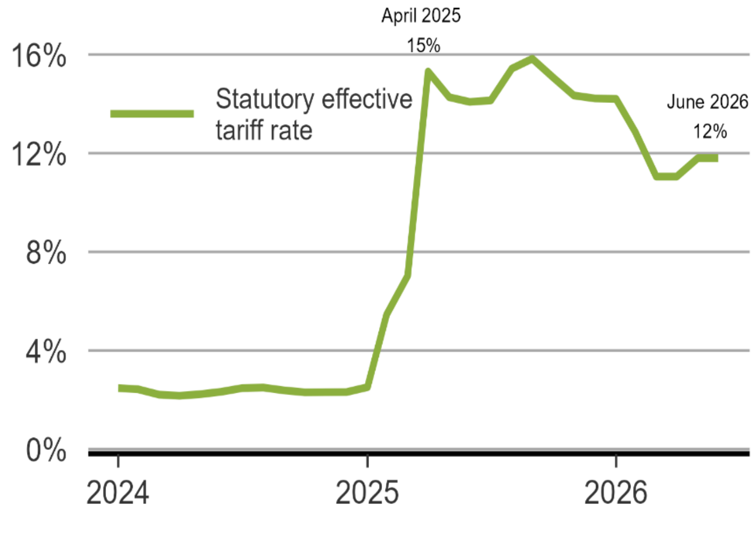
Sylvain Leduc

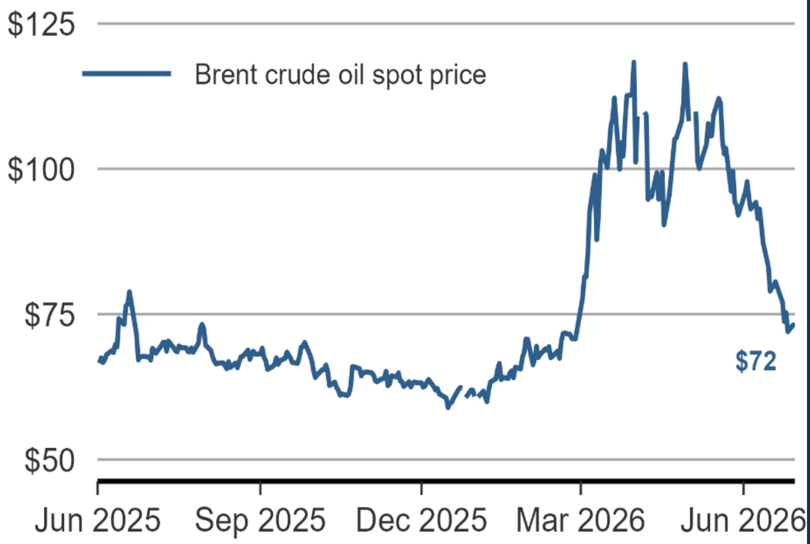
Executive Vice President & Director of Research

Two recent large negative supply shocks

U.S. effective tariff rates and crude oil prices



Source: Yale Budget Lab



Source: Intercontinental Exchange

The Fed has two mandates

Maximum Employment

Price Stability

Supply shocks are tricky for policymakers

Negative supply shocks tend to:

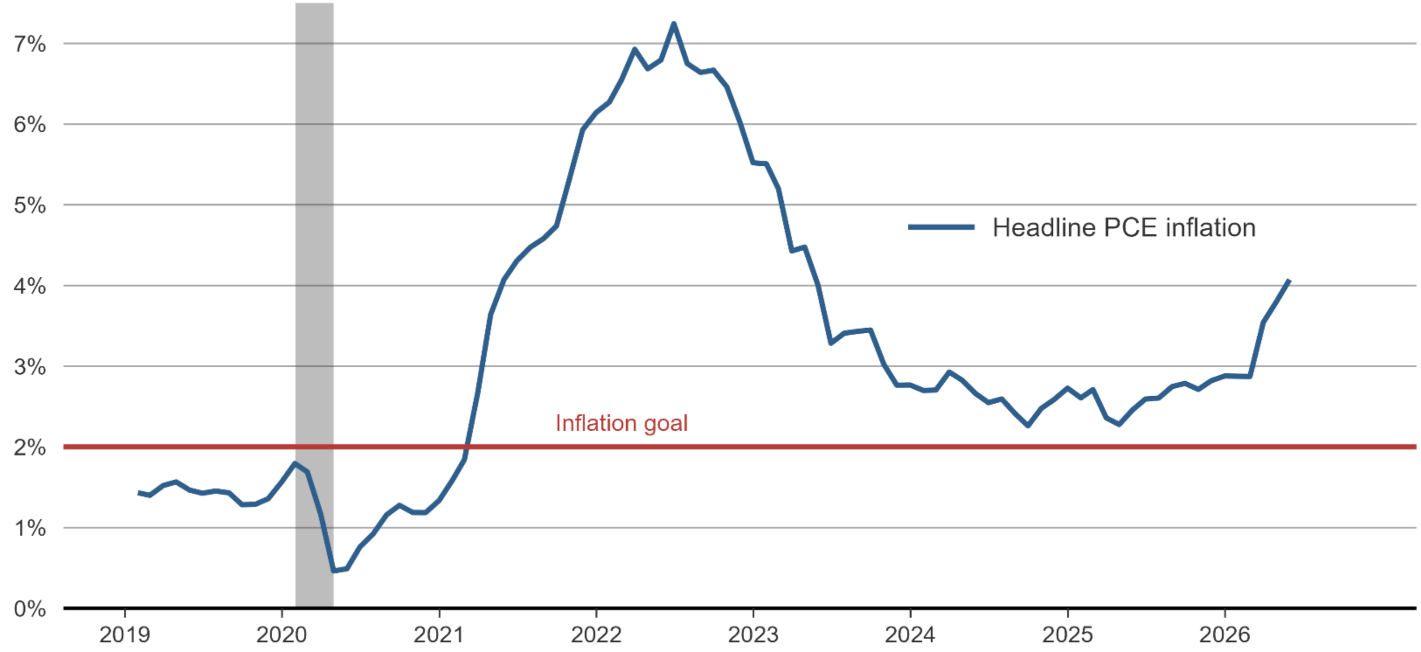
Increase inflation	→	*higher* policy rate
Lower employment	→	*lower* policy rate

Policymakers take a balanced approach

Inflation

Inflation has been rising over the past year

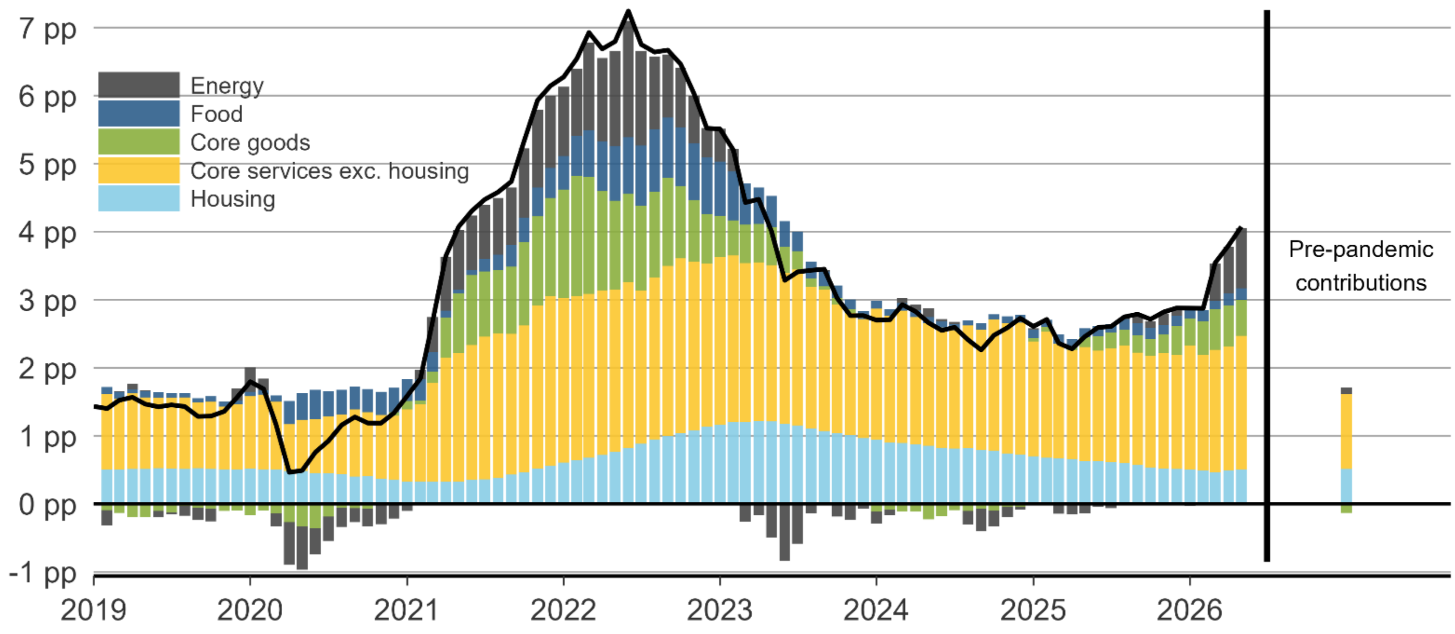
Headline PCE inflation



Note: Seasonally adjusted 12-month percent change. Shaded area denotes NBER recession dates.
Source: Bureau of Economic Analysis

Energy and goods prices are boosting inflation

Headline PCE inflation and contributions



Source: Bureau of Economic Analysis and FRBSF staff calculations.

Markets expect inflation to fall

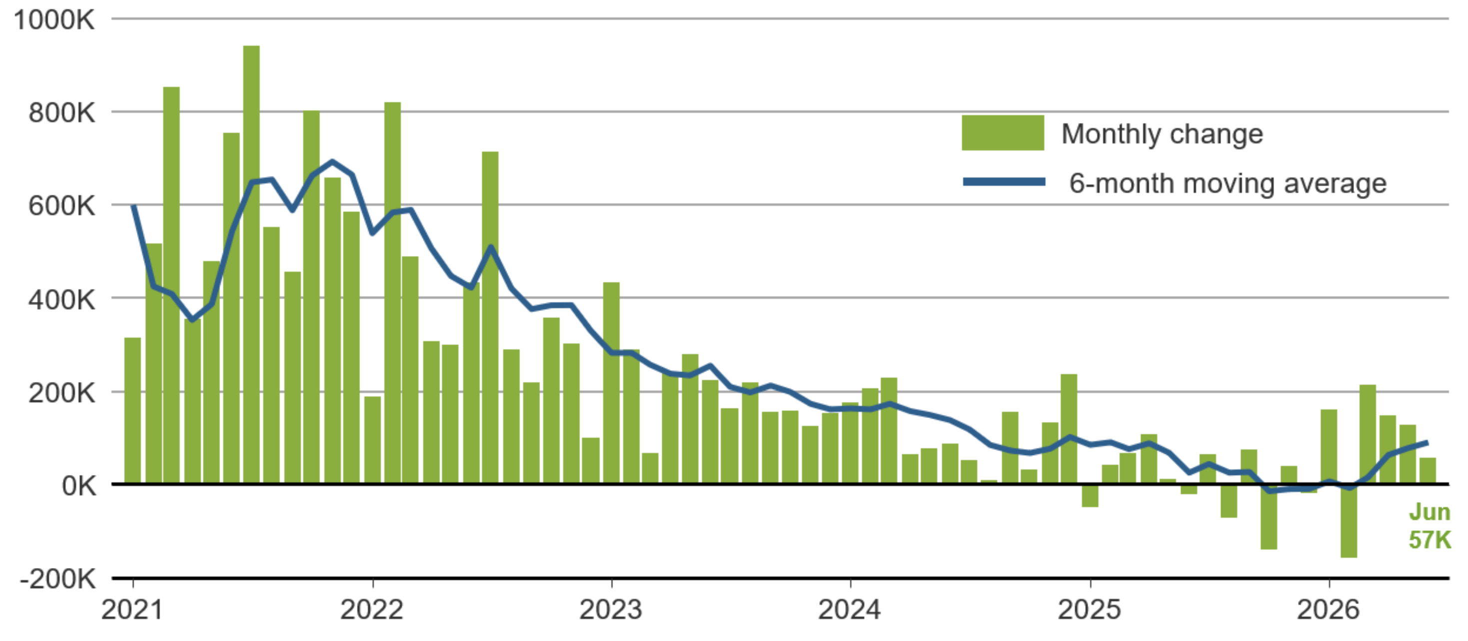
Year-ahead breakeven inflation rate

Note: Forward rate shown on a CPI inflation basis
Source: Bloomberg and FRBSF staff calculations.

Resilient labor markets and consumer spending

Job gains have picked up in recent months

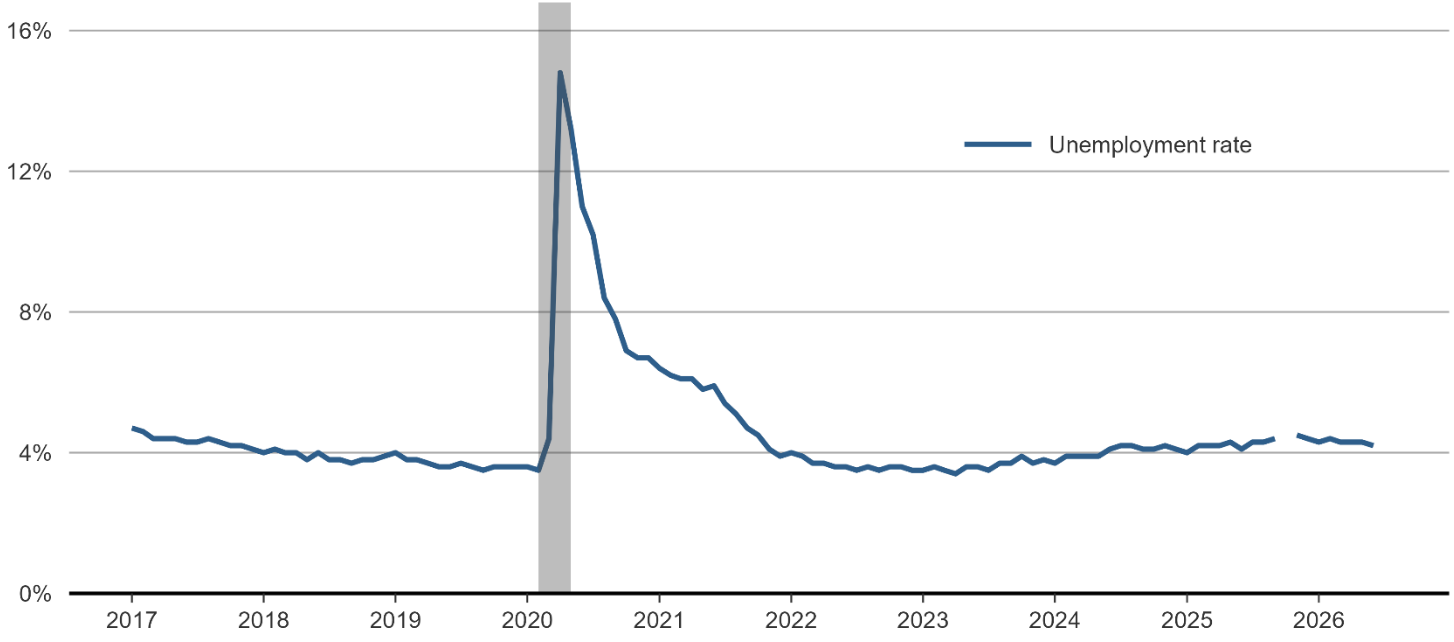
Monthly gains in payroll employment



Source: Bureau of Labor Statistics.

The labor market has been resilient

Unemployment rate

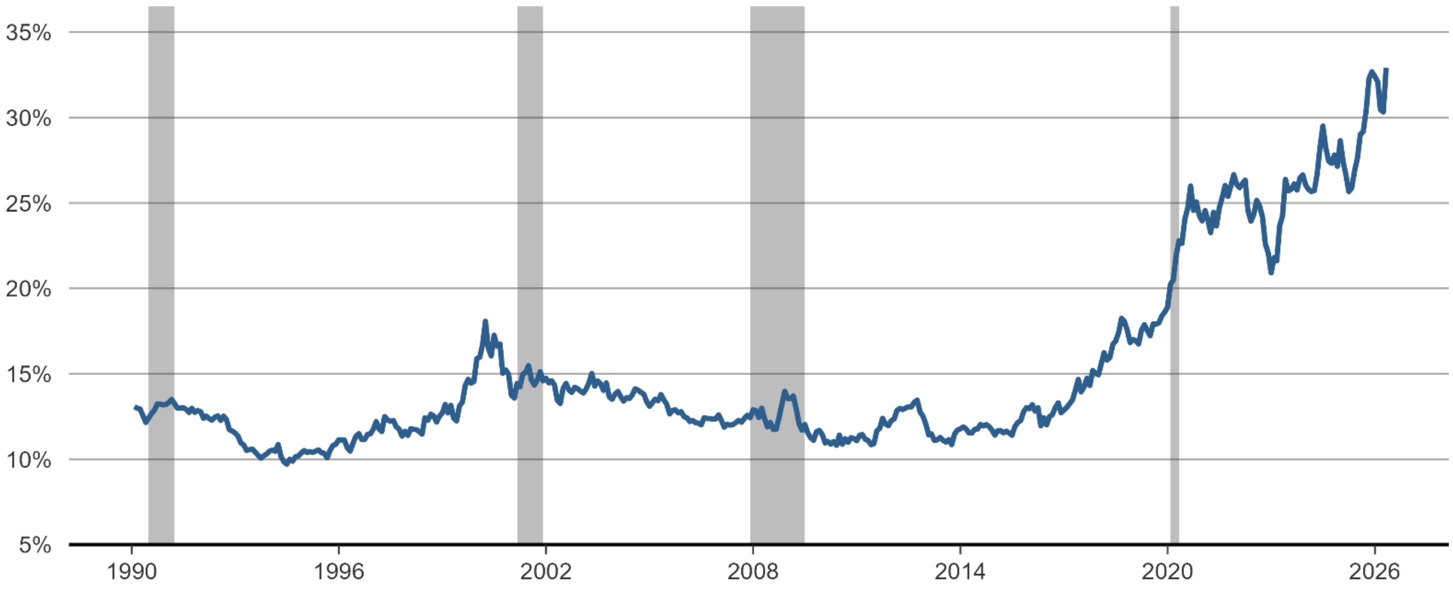


Note: Shaded areas denote NBER recession dates.
Source: Bureau of Labor Statistics

What is supporting growth?

A few firms are gaining from AI enthusiasm

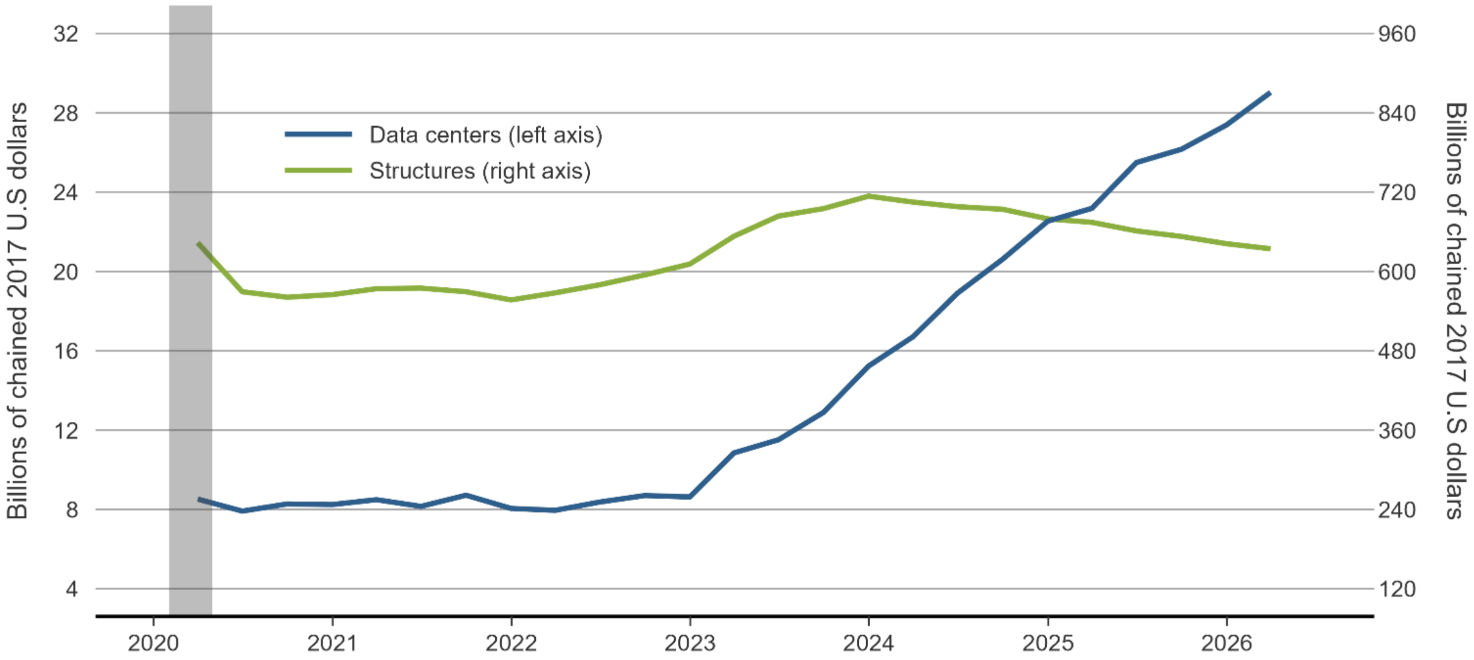
Market capitalization share of top five firms in S&P 500



Note: Shaded areas denote NBER recession dates.
Source: Bloomberg and FRBSF staff calculations.

Investment in data centers is rising steadily

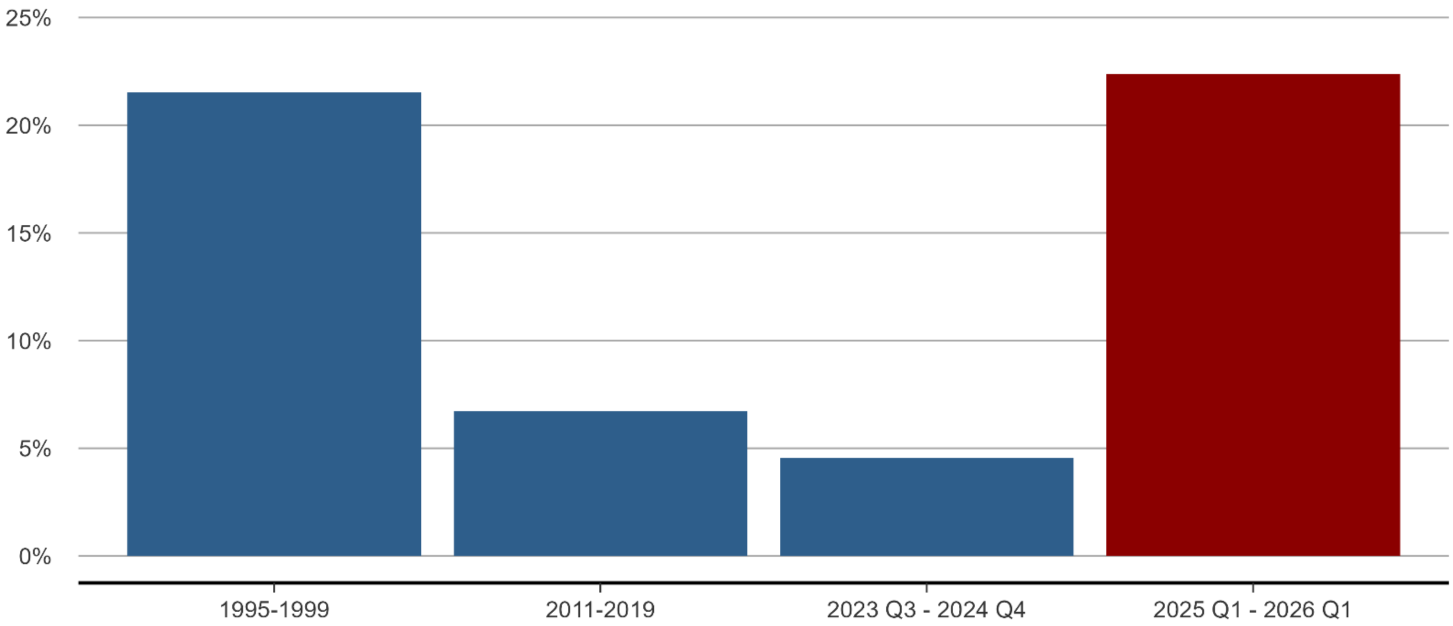
Real private investment: Data centers and structures



Note: Seasonally adjusted quarterly data. Shaded areas denote NBER recession dates.
Source: Bureau of Economic Analysis

Strong AI-induced equipment investment

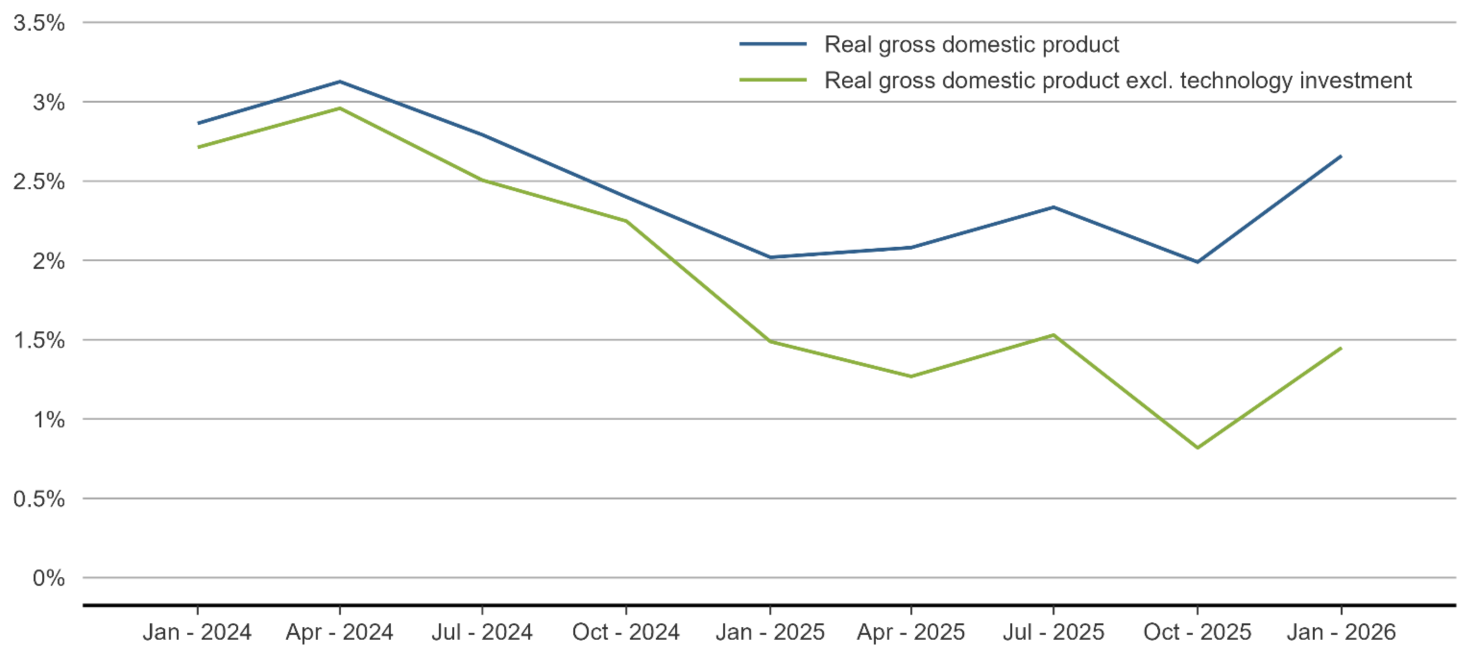
Real investment in information processing equipment



Note: Average 4-quarter percent change in chained 2017 dollars, seasonally adjusted.
Source: Bureau of Economic Analysis

AI-related investments supporting growth

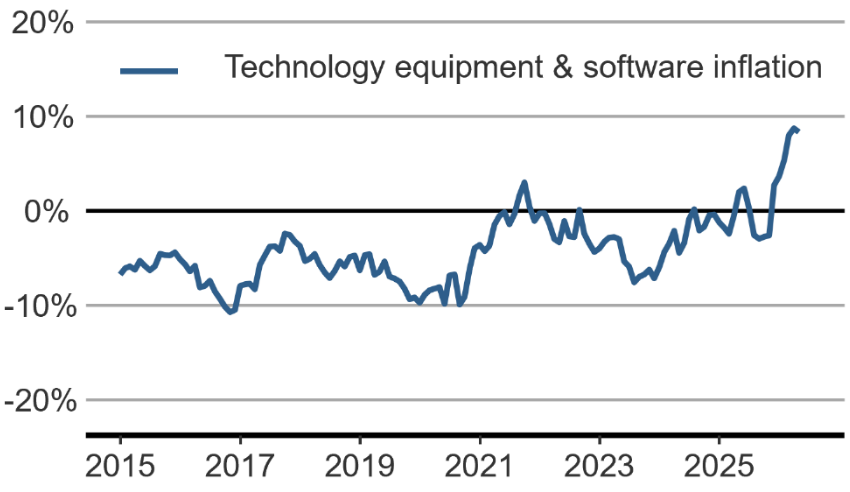
Real investment in information processing equipment



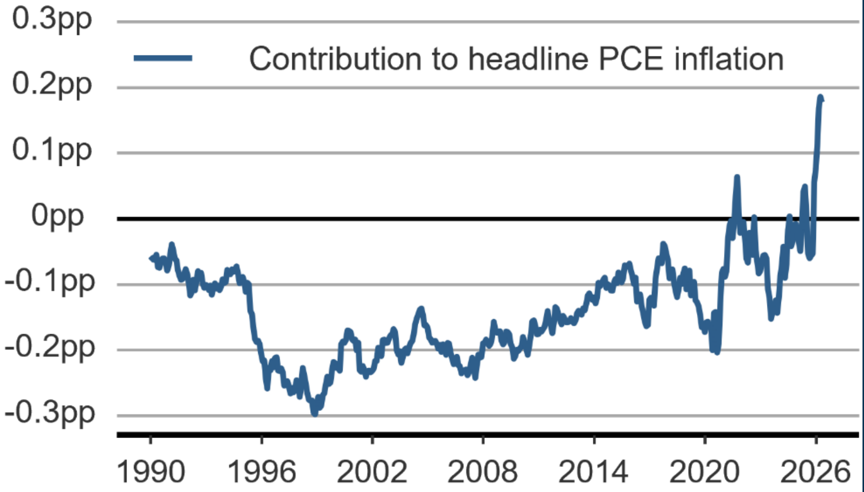
Note: Real GDP growth shown as year-over-year percentage change (seasonally adjusted 2017 chained dollars).
Source: Bureau of Economic Anaylsis

Tech prices pushing inflation up a bit

Technology equipment & software inflation and contribution to PCE inflation



Note: 12-month percent change, seasonally adjusted.
Source: Bureau of Economic Analysis

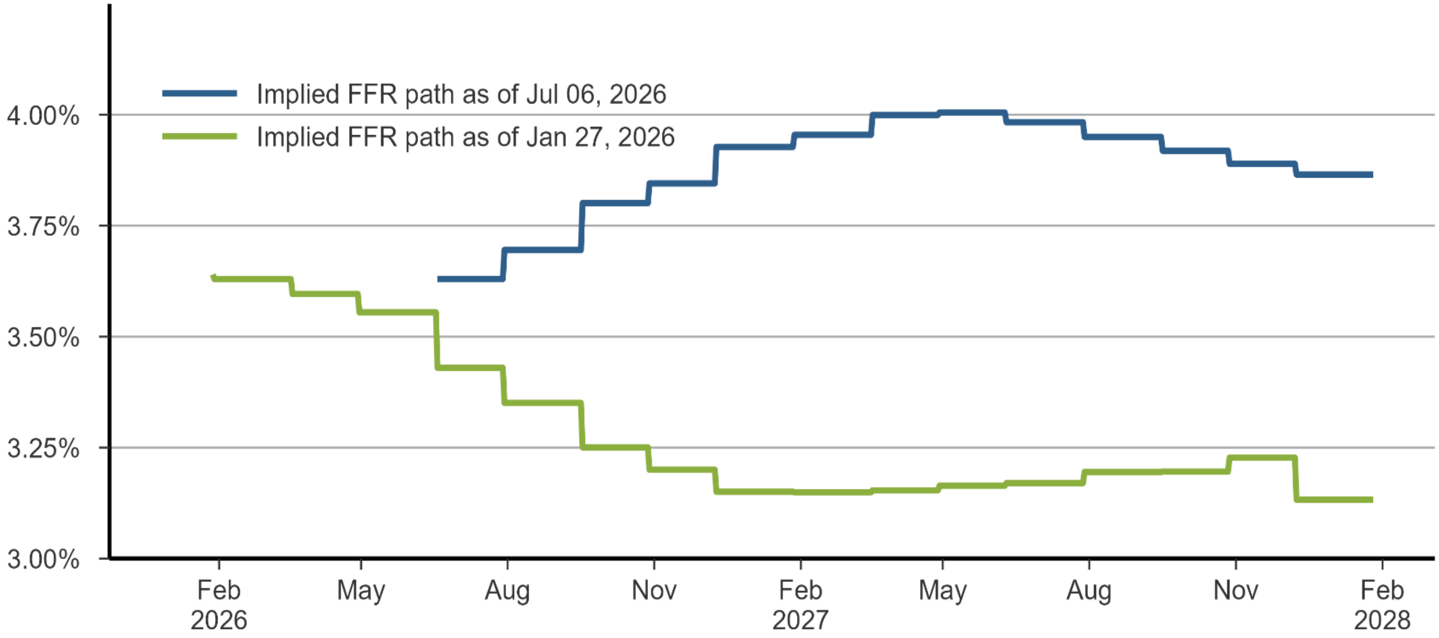


Source: Bureau of Economic Analysis and FRBSF staff calculations

What is the Fed expected to do?

Markets expect the Fed to be on hold

Federal funds rate futures



Note: Effective FFR path as implied from futures contracts covering announced FOMC meeting dates through January 2028.
Source: Bloomberg and FRBSF staff calculations