Global Investment Research

US Economic Outlook

Jobless Growth

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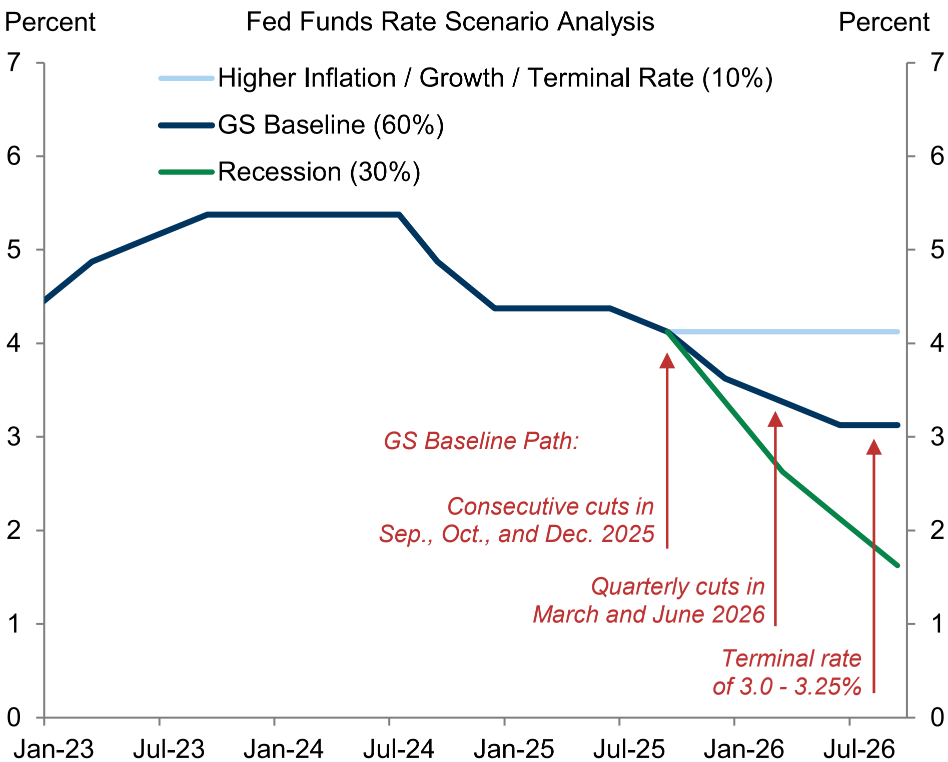
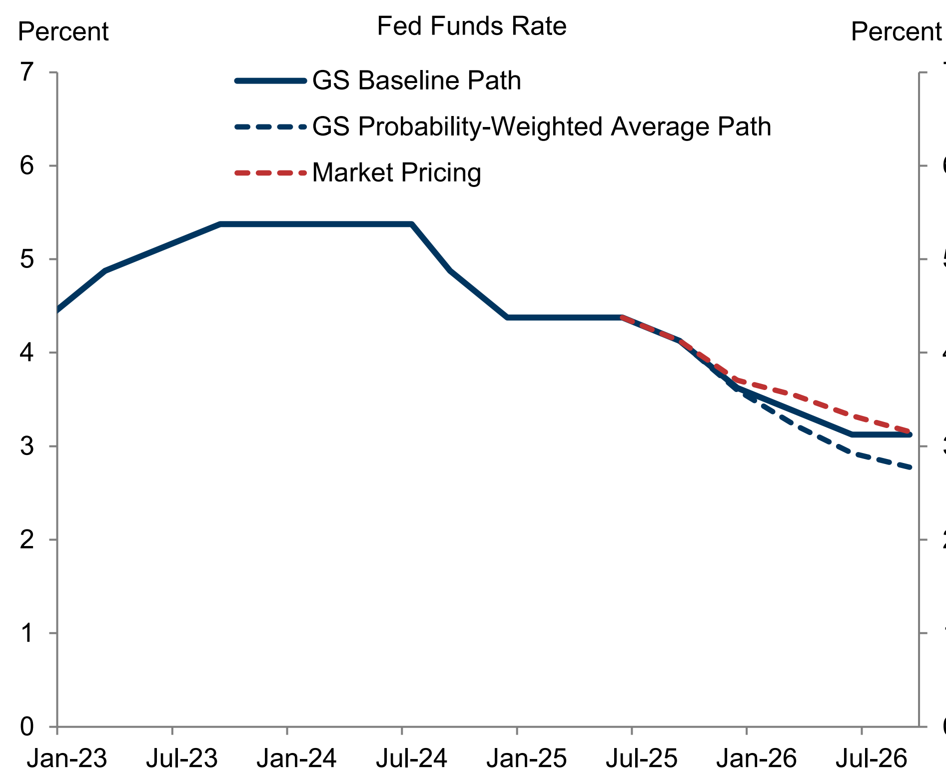
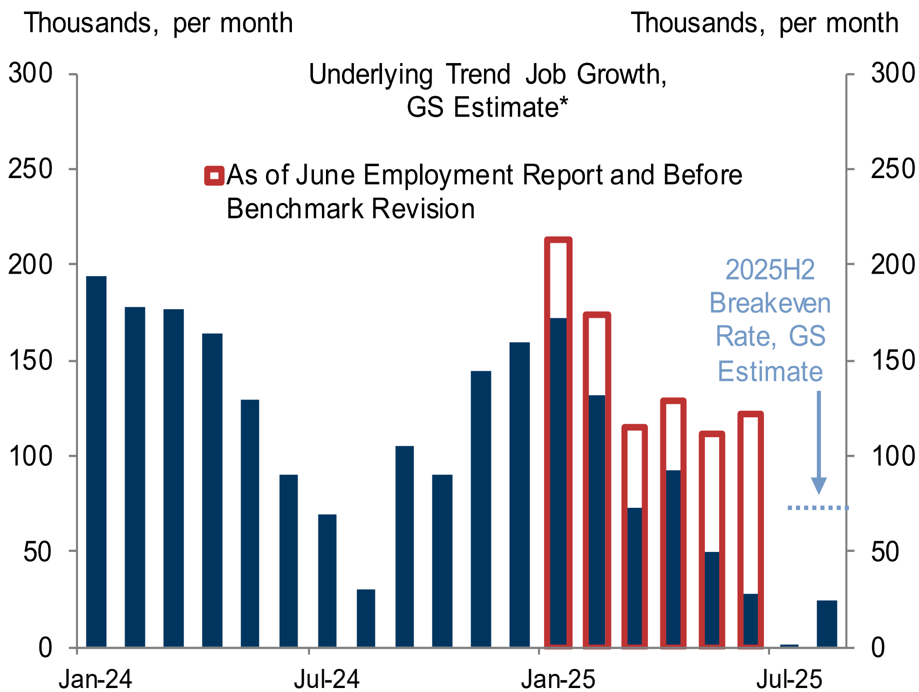
Fed: We Expect Two More 25bp Cuts This Year and Two More in 2026 to a Terminal Rate of 3.0-3.25%



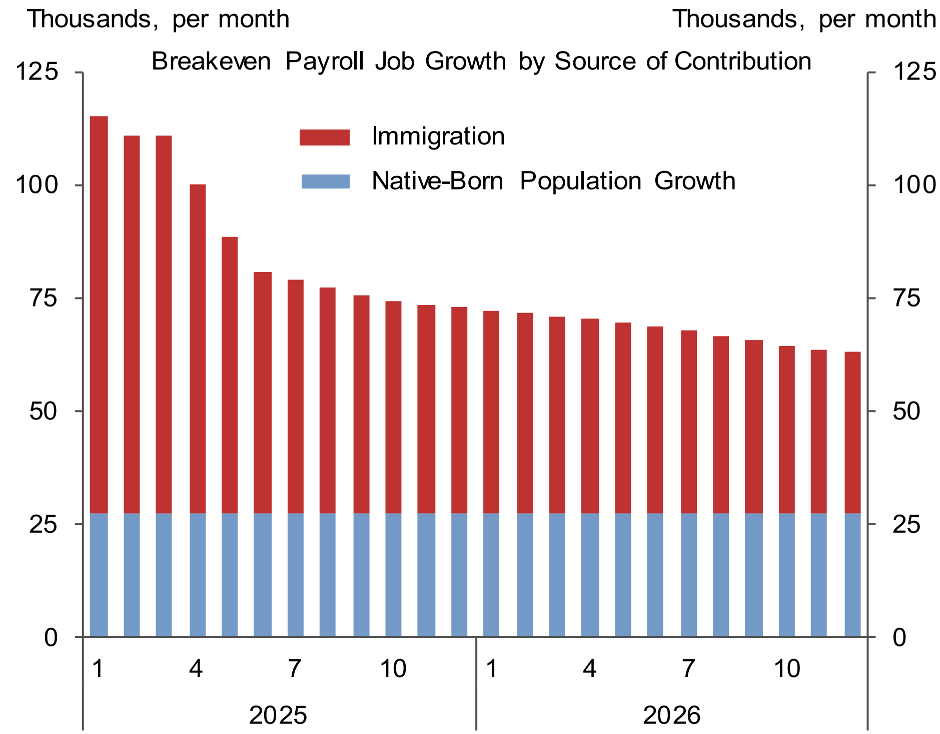


Source: Goldman Sachs Global Investment Research.

Labor Market: Job Growth Has Slowed to 25k/Month, Below Our 70k/Month Estimate of the Breakeven Rate



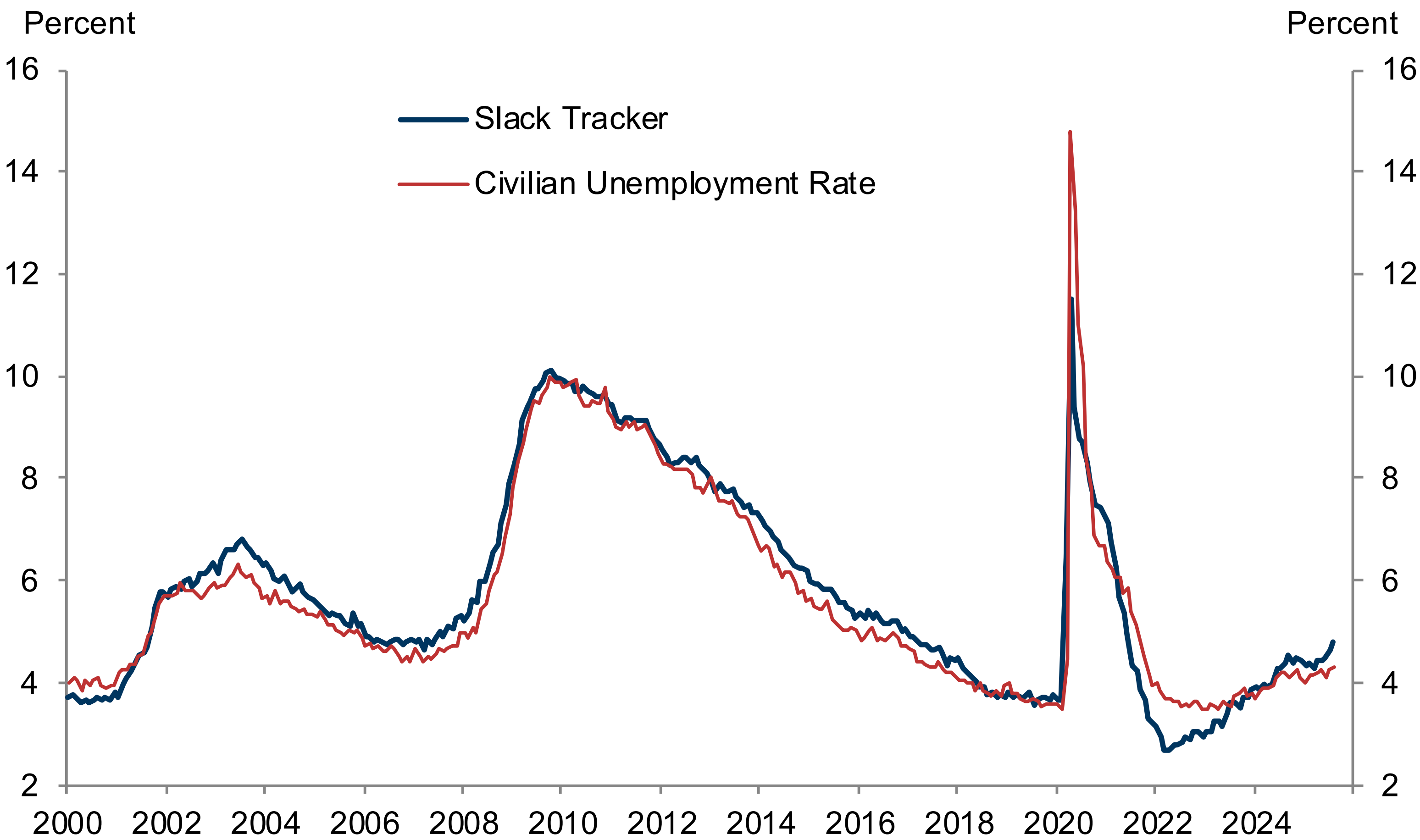
* We estimate this as 0.75*3-month average payroll growth + 0.25*9-month average payroll-adjusted household employment growth; see "How to Read the Employment Report." We adjust for the earlier undercounting of immigration; see "Do the Official Statistics Fully Capture the Recent Surge in Immigration?" We adjust for potential revisions to payroll growth from the incorporation of QCEW data.



*Cyclical labor force participation rate and multiple job holders.

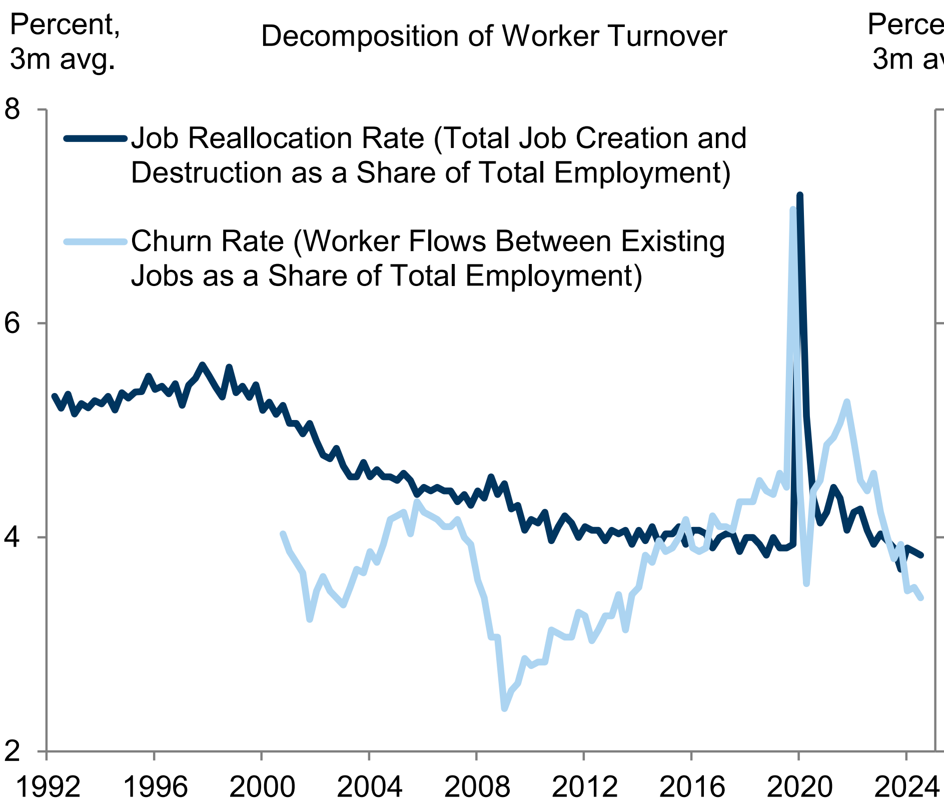
Source: Goldman Sachs Global Investment Research.

The Labor Market Has Softened More Than Necessary and More Than the Unemployment Rate Alone Suggests

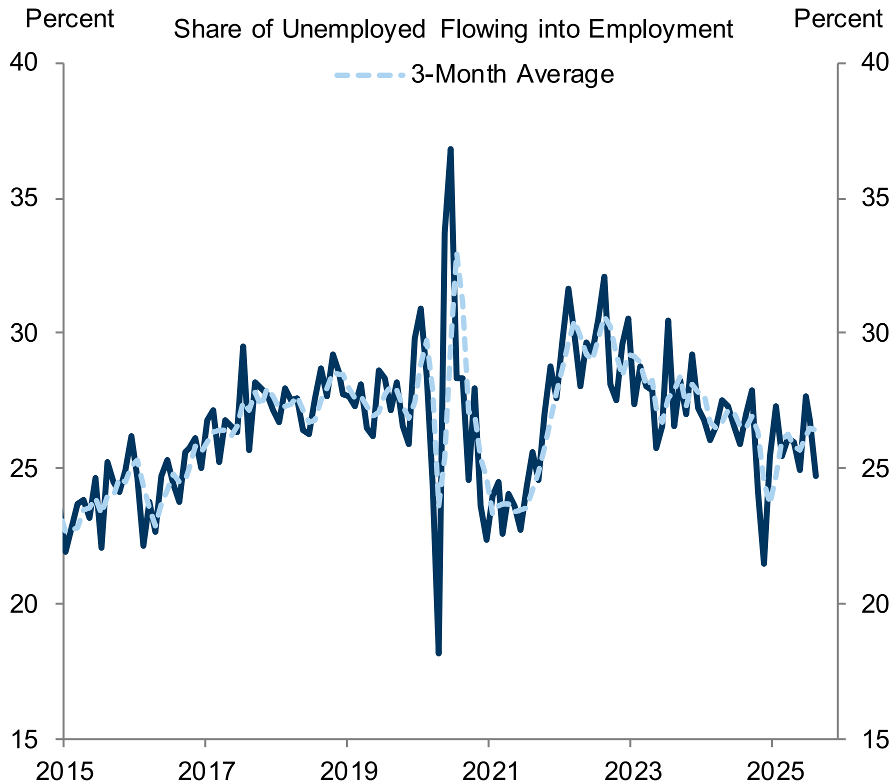


Source: Goldman Sachs Global Investment Research.

The Low-Hiring, Low-Firing Labor Market Also Risks Locking Out the Unemployed and New Graduates

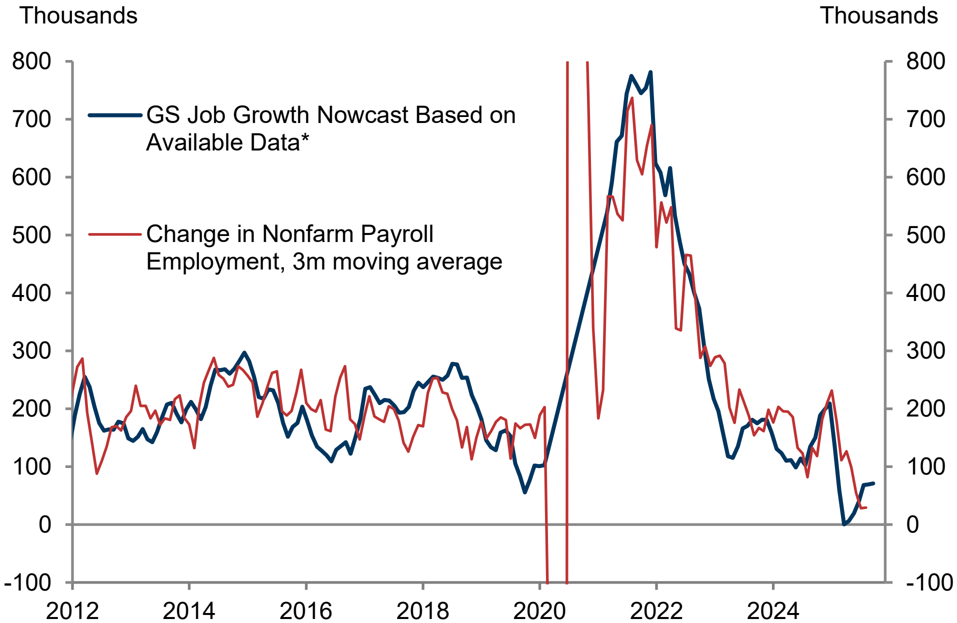


Note: The churn rate can be computed between 2000Q4 (first available JOLTS release) and 2024Q4 (latest available BED release).

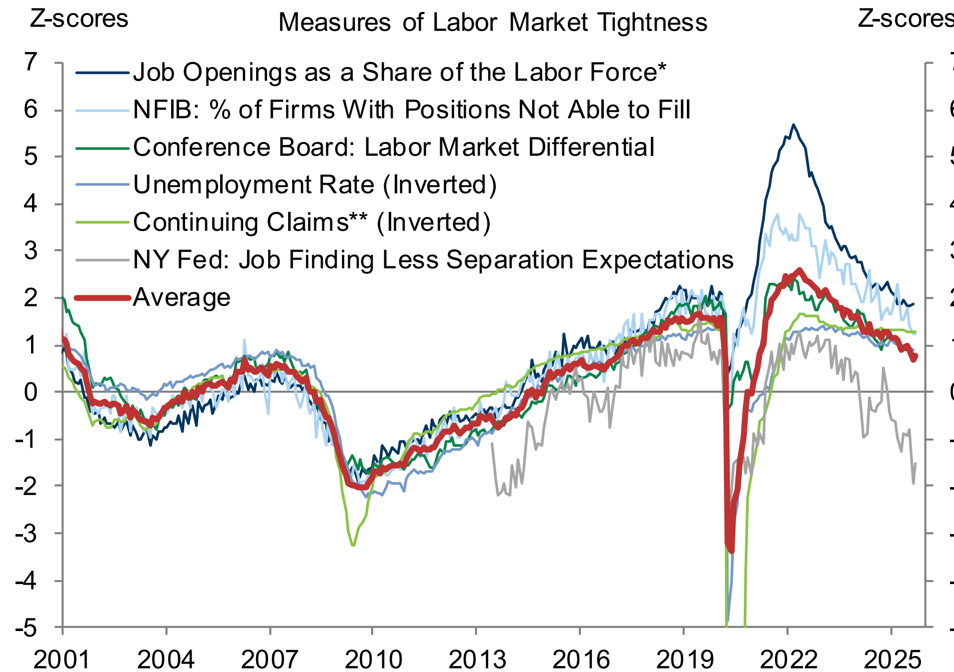


Source: Goldman Sachs Global Investment Research.

Alternative Data Available During the Shutdown Show Better Job Growth but Further Softening in September



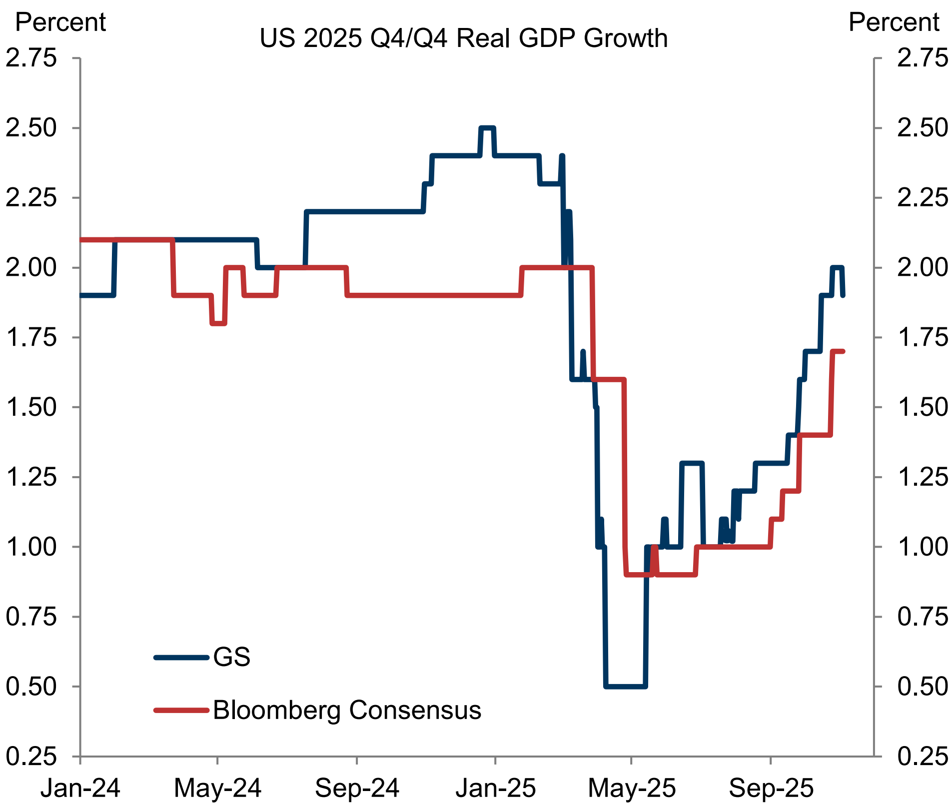
* Includes hiring plans from Manpower and NFIB; household expectations for job growth and changes in the unemployment rate from UMich and Conference Board; measures of job growth from ADP, Intuit, Homebase, and Revelio; layoffs consisting of initial claims, WARN notices, and Challenger job cuts; and the employment components of our manufacturing and nonmanufacturing survey trackers.

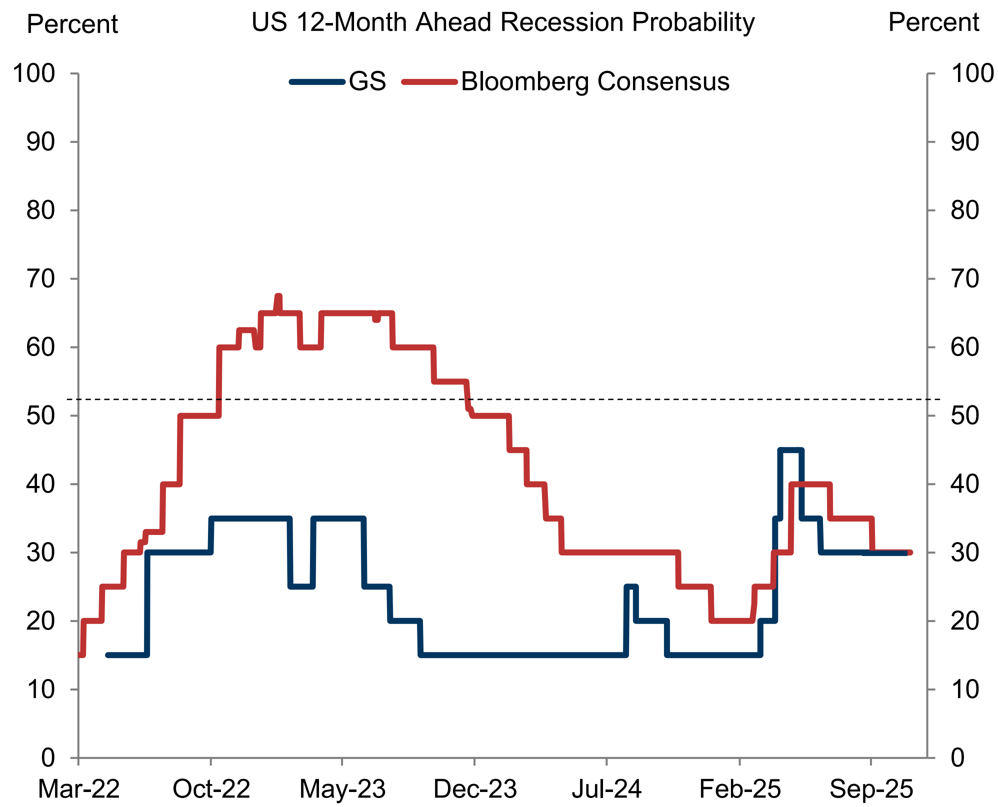


* For 2020-present, uses average job openings implied by JOLTS, Indeed, and LinkUp.
** As a share of covered employment.

Source: Goldman Sachs Global Investment Research.

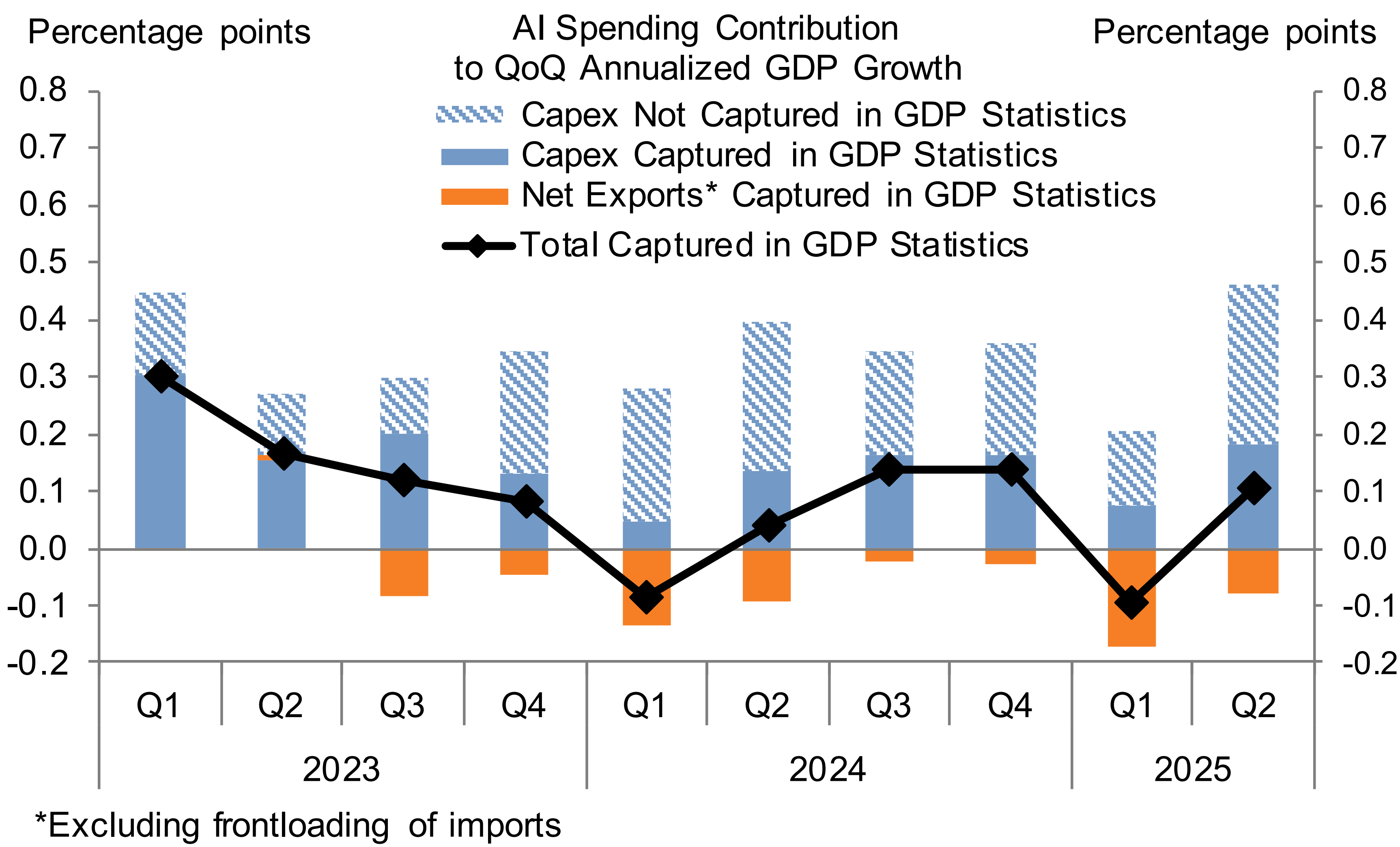
GDP Growth: Looks Better Than Initially Expected—We Are Tracking Q3 Growth at 3.6% and 2025 Q4/Q4 at 1.9%





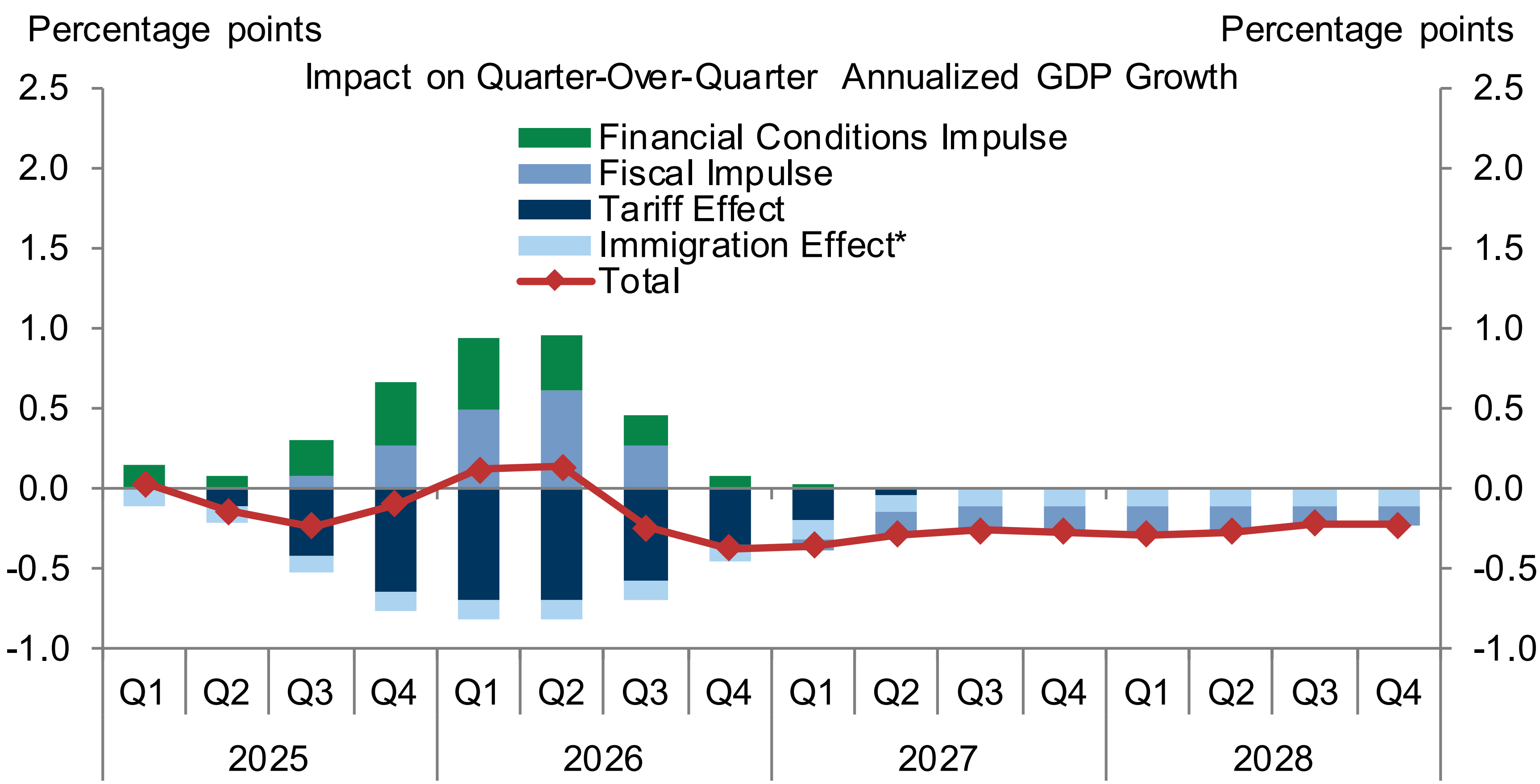
Source: Goldman Sachs Global Investment Research.

The Economy Is Not Just Holding Up Because of AI, Whose (Measured) Impact Is Smaller Than Thought



Source: Goldman Sachs Global Investment Research.

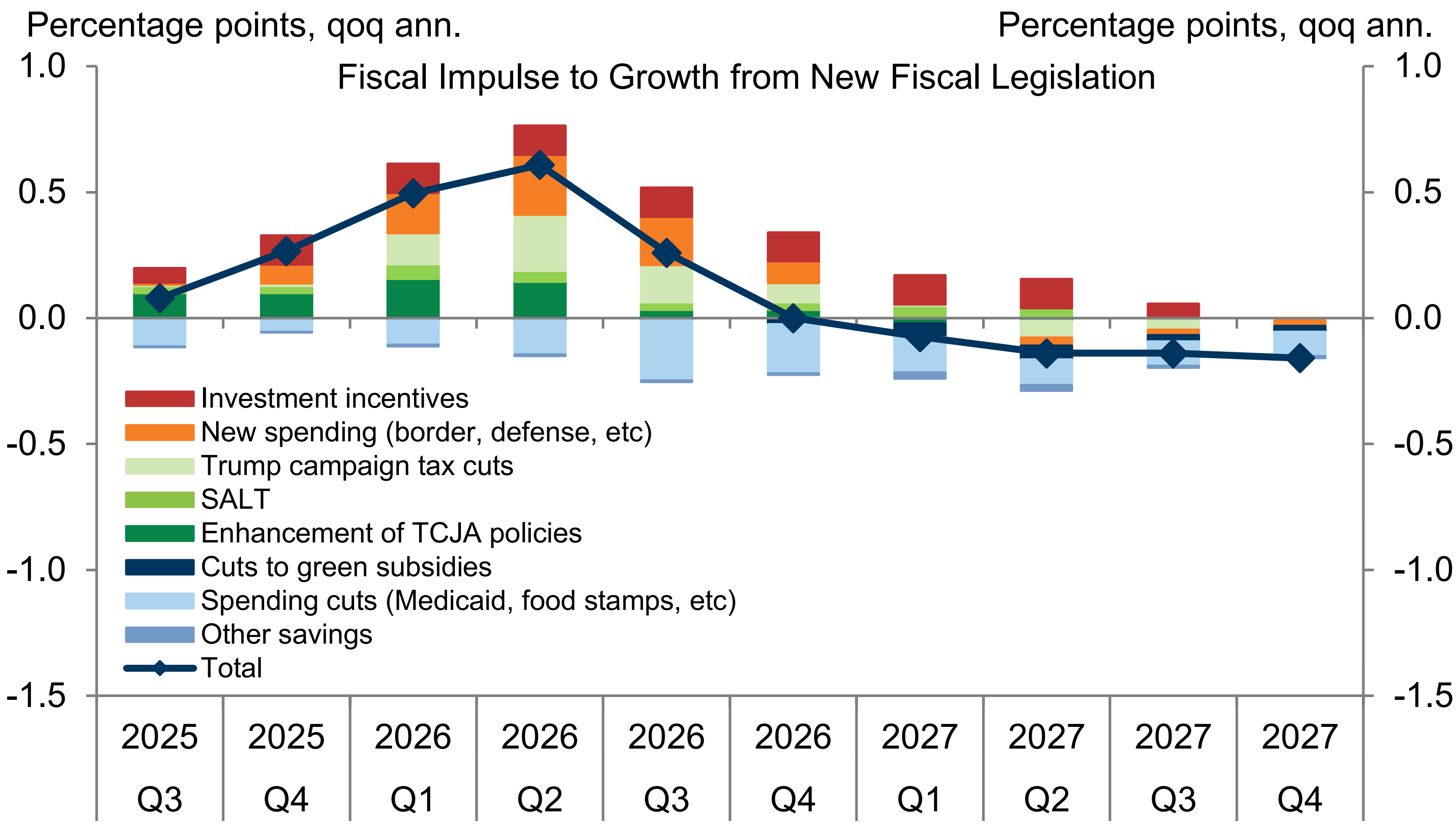
And This Should Be the Hard Period—The Tariff Drag Will Abate, and the Fiscal Boost Will Kick in Next Year ...



* Impact of current immigration rate relative to the average pre-pandemic rate of about 1mn per year.

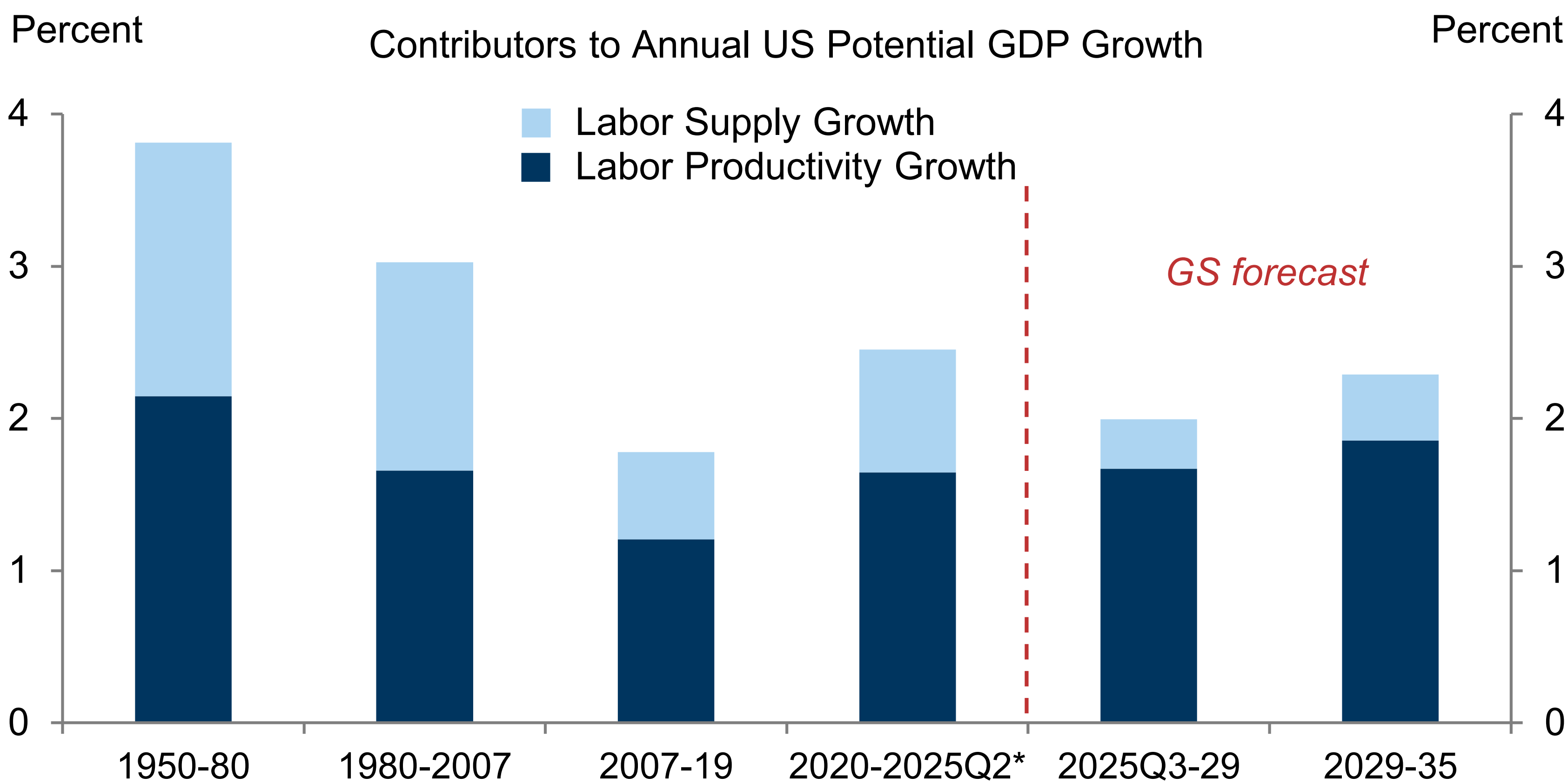
Source: Goldman Sachs Global Investment Research.

... As Front-Loaded Tax Cuts and Spending Increases Provide a Positive Impulse Before Spending Cuts Arrive



Source: Goldman Sachs Global Investment Research.

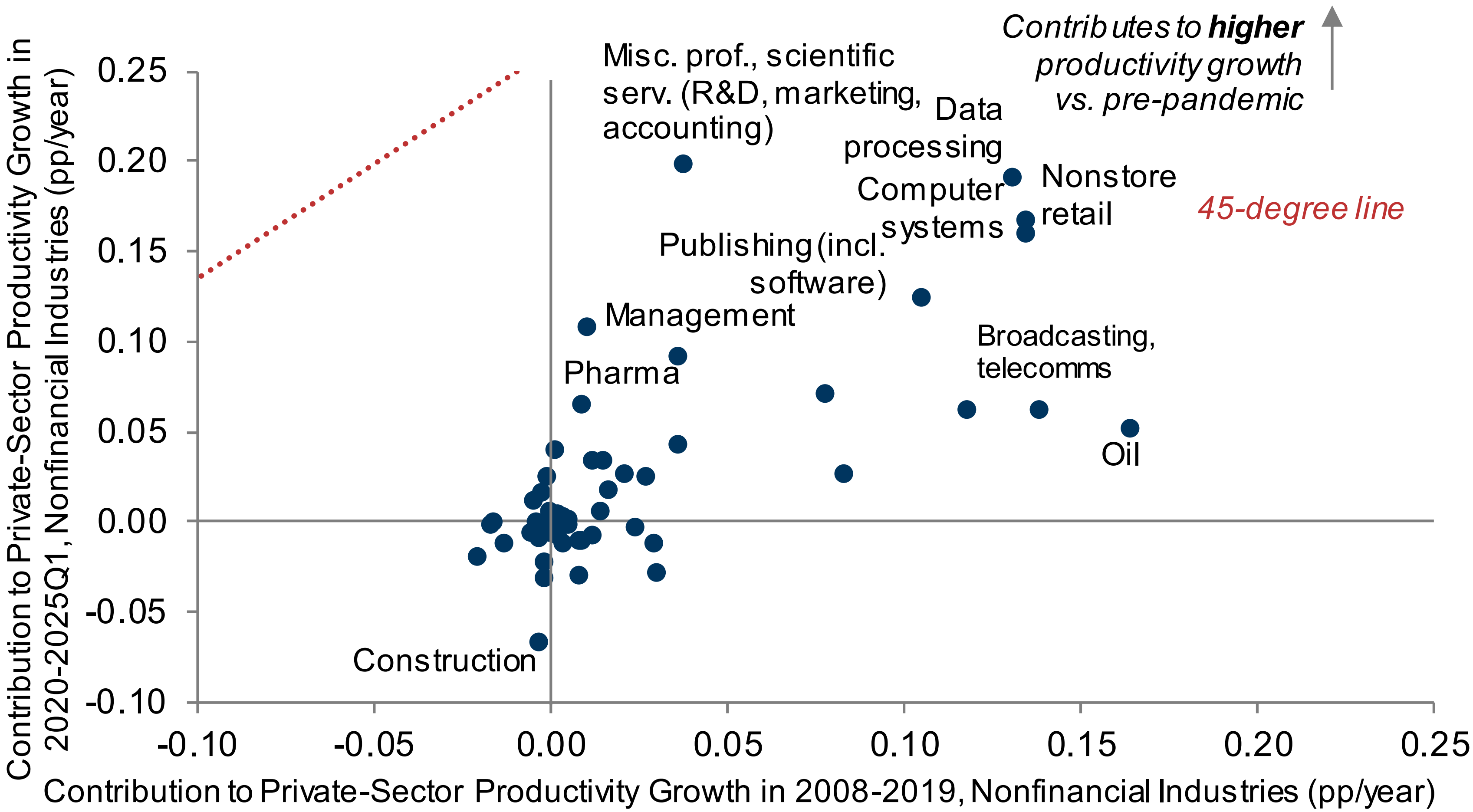
Jobless Growth: Solid GDP Growth Alongside Modest Job Growth Is Likely to Be Normal in the Future



* Includes our estimates of the contributions from undermeasured AI investment in GDP, the impact of the QCEW revisions on hours, and the undermeasurement of hours in the productivity statistics.

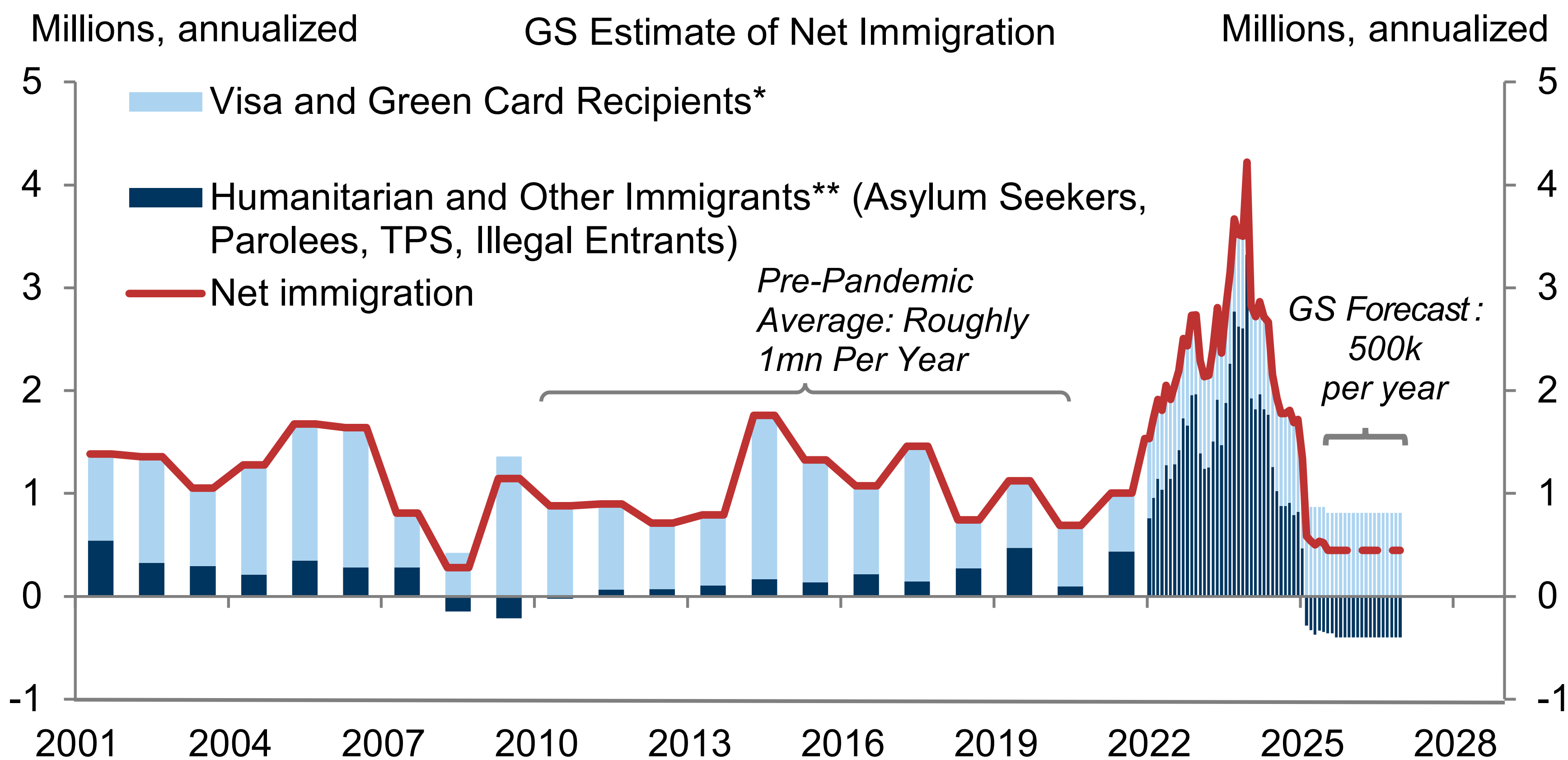
Source: Goldman Sachs Global Investment Research.

Tech and High-Skilled Industries Have Led a Rebound in Productivity Growth, Which AI Should Push Even Higher



Source: Goldman Sachs Global Investment Research.

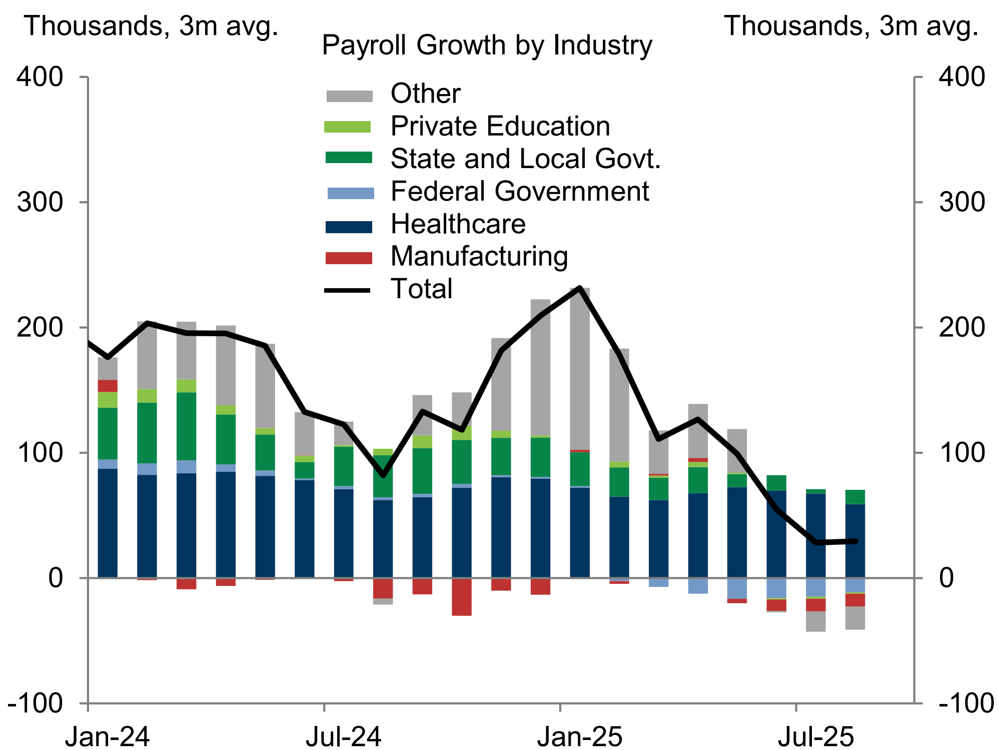
Population Aging and Below-Normal Immigration Will Keep Labor Supply Growth Low in the Years Ahead

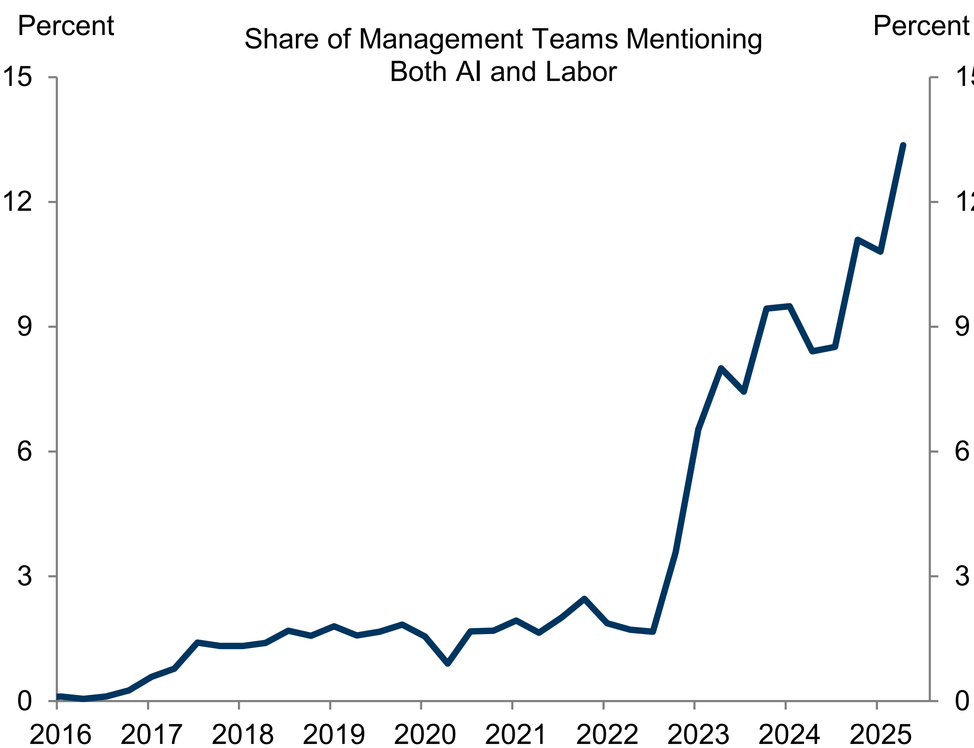


*Based on CBO estimates.
**Based on immigration court cases and immigration enforcement data from the DHS, CBP, and ICE.

Source: Goldman Sachs Global Investment Research.

Will Rapid Technological Progress Prevent Labor Demand from Keeping up with Even Modest Labor Supply Growth?

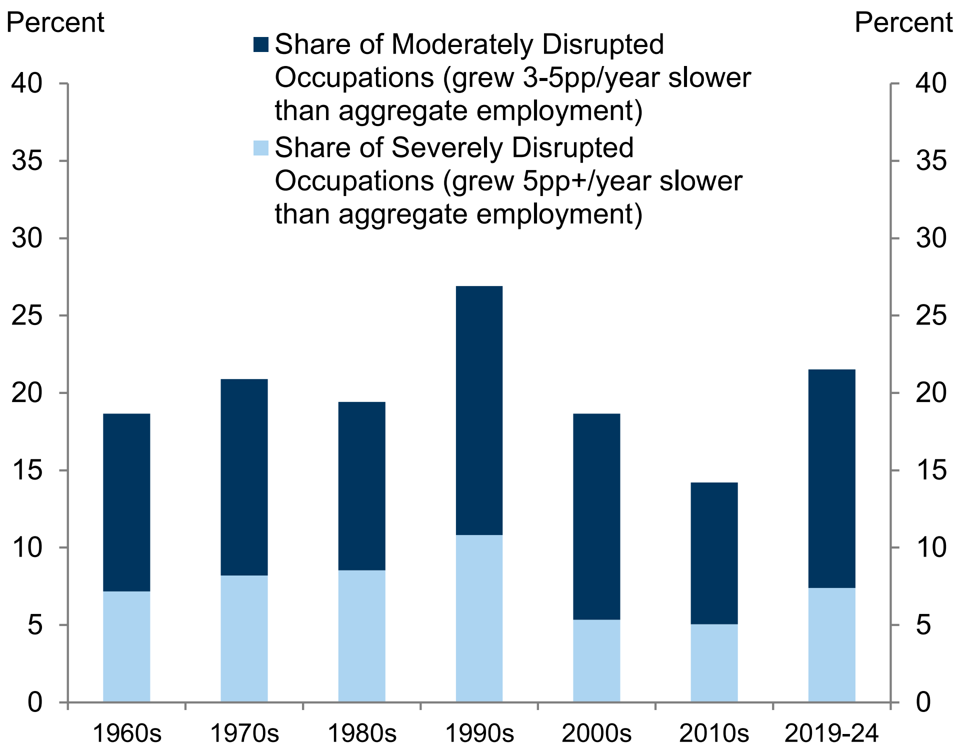


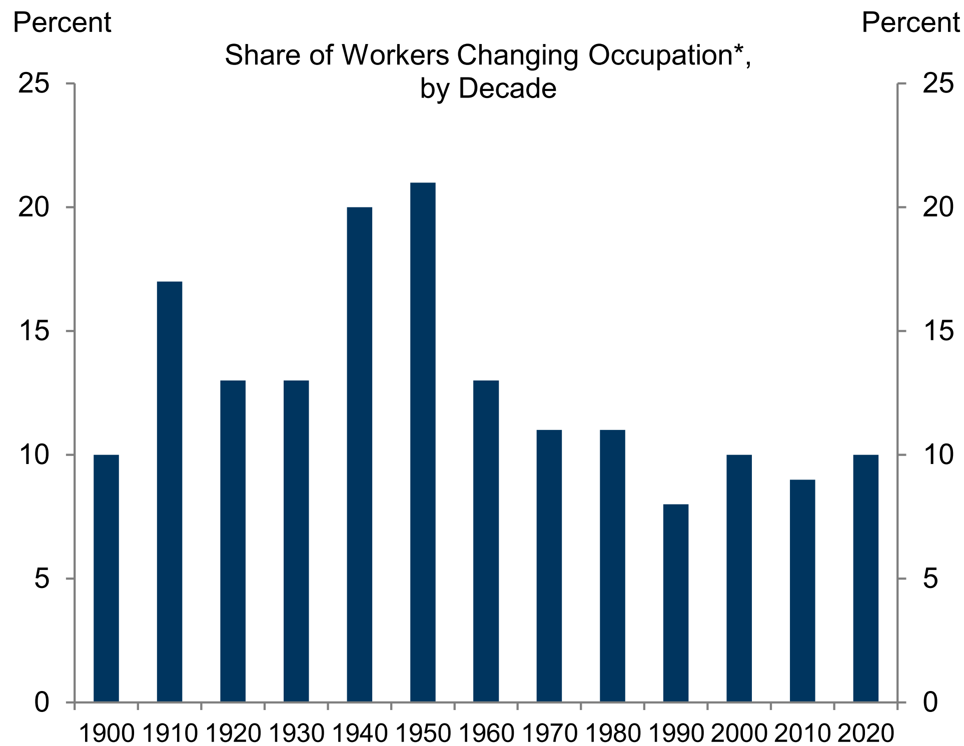


Note: Share of management teams that mentioned both AI and employment-related words in the same sentence on Russell 3000 quarterly conference calls.

Source: Goldman Sachs Global Investment Research.

Still Largely a Hypothetical Concern—Occupational Disruption Has Not Been That High in the Last Decade ...

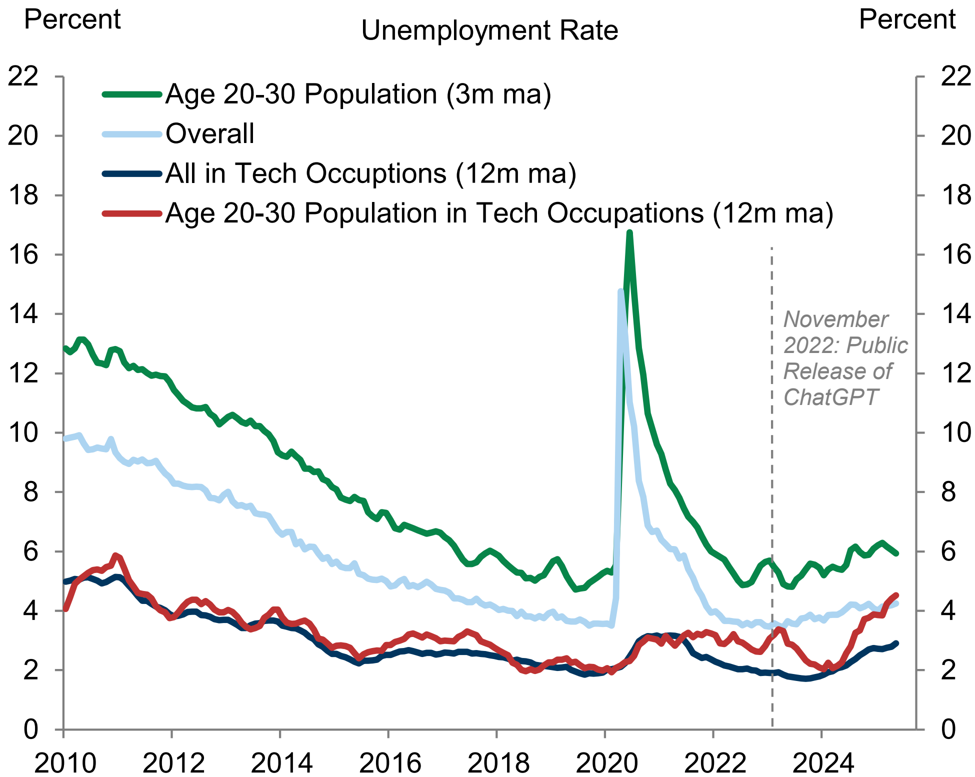


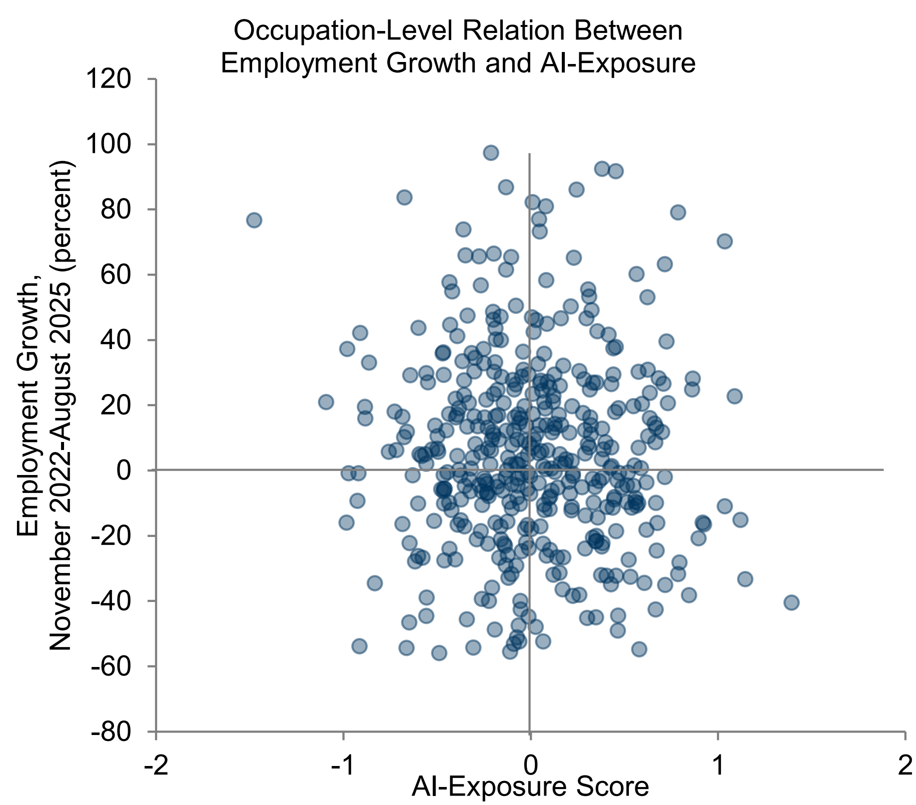


* Source: Yale Budget Lab, Jed Kolko. The value for the 2020 decade is computed by assuming for 2026-29 the same pace of workers' transitions observed in 2020-25.

Source: Goldman Sachs Global Investment Research.

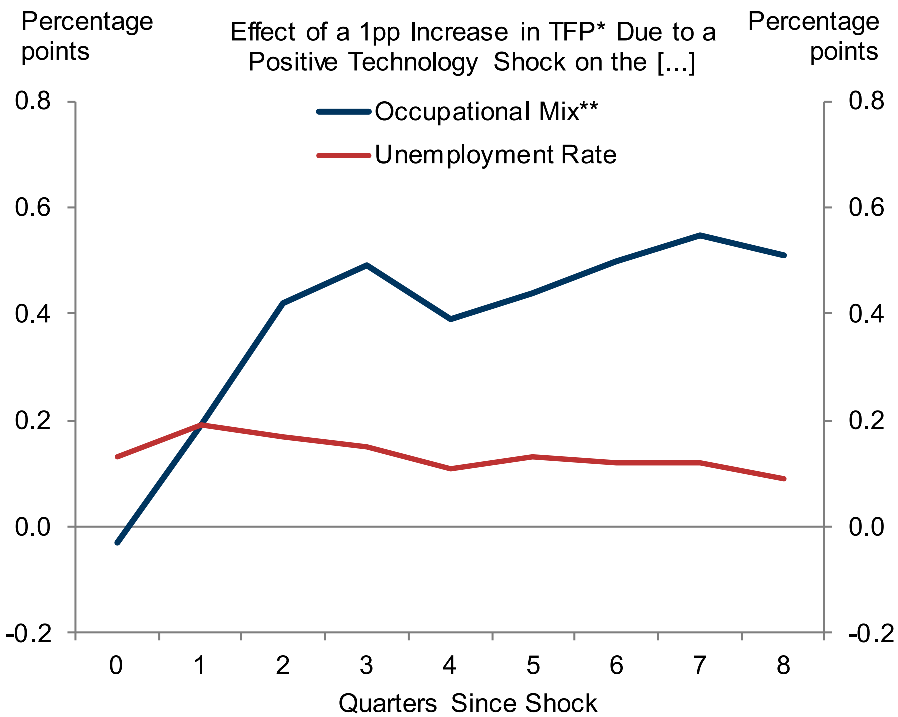
... and AI Is Weighing on Hiring of Young Tech Workers but Hasn't Yet Had a Major Impact on the Labor Market



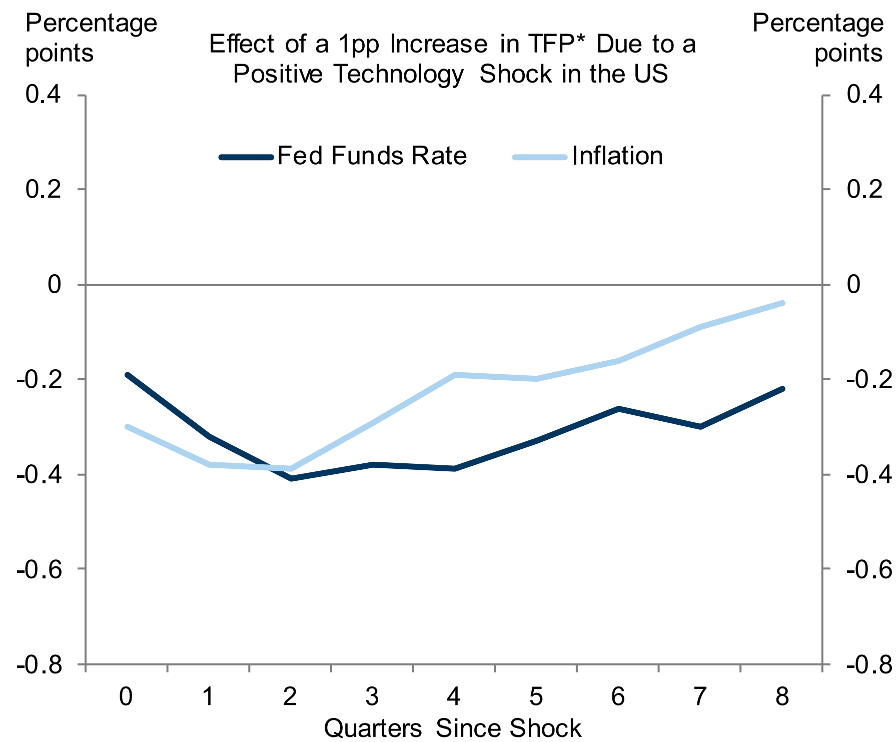


Source: Goldman Sachs Global Investment Research.

But Faster Technological Change Usually Means Slightly Higher Unemployment, Lower Inflation, and Lower Rates



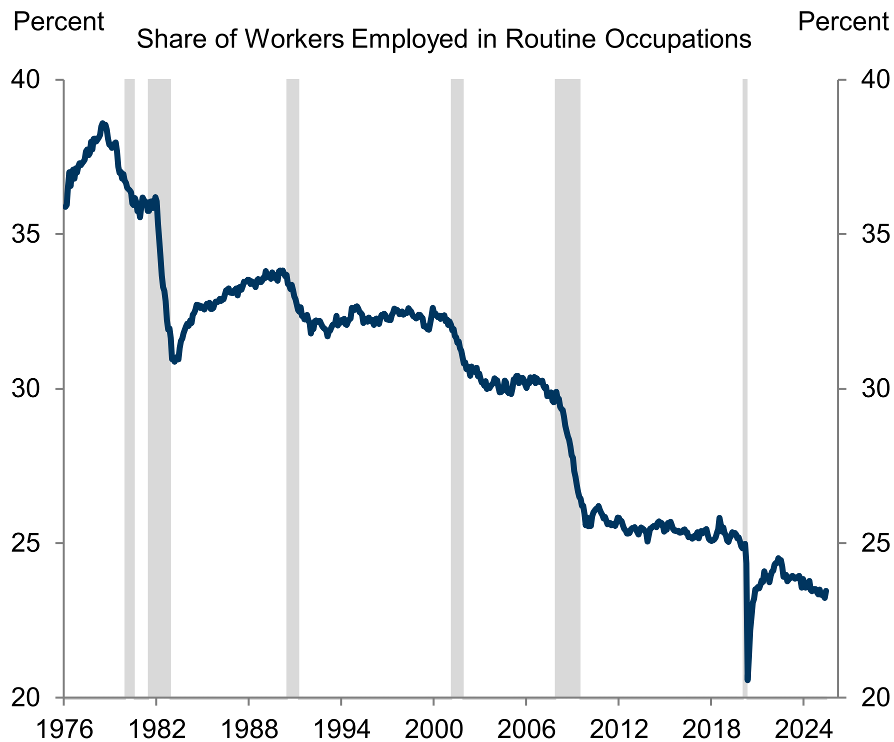
* TFP shocks based on the Basu, Fernald and Kimball (2006) methodology.
** Share of w orkers changing occupation in a given quarter (Yale Budget Lab data).

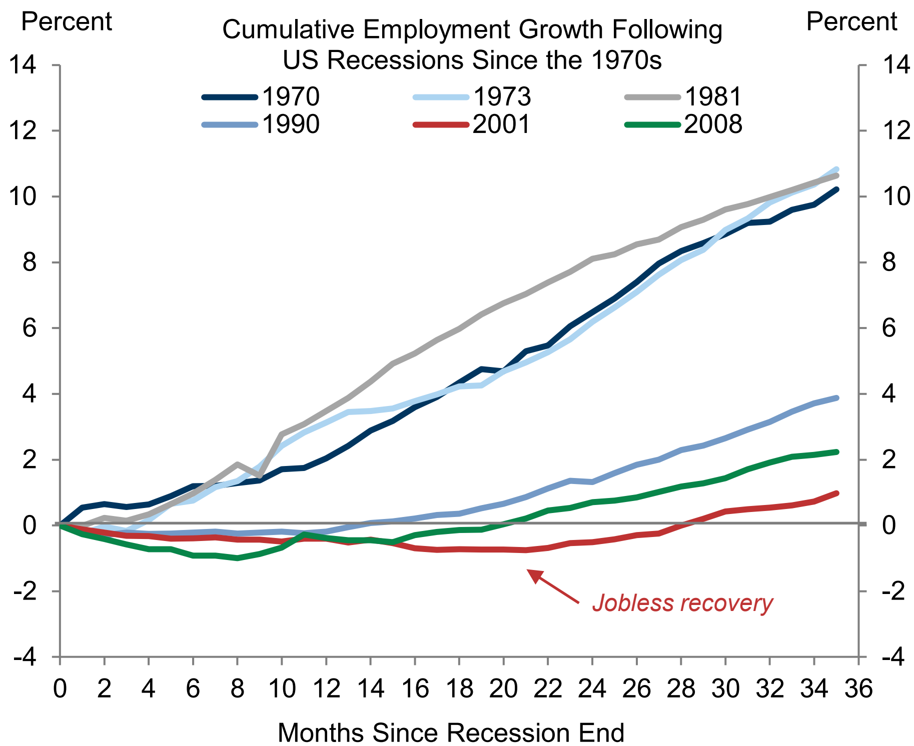


* TFP shocks based on the Basu, Fernald and Kimball (2006) methodology.

Source: Goldman Sachs Global Investment Research.

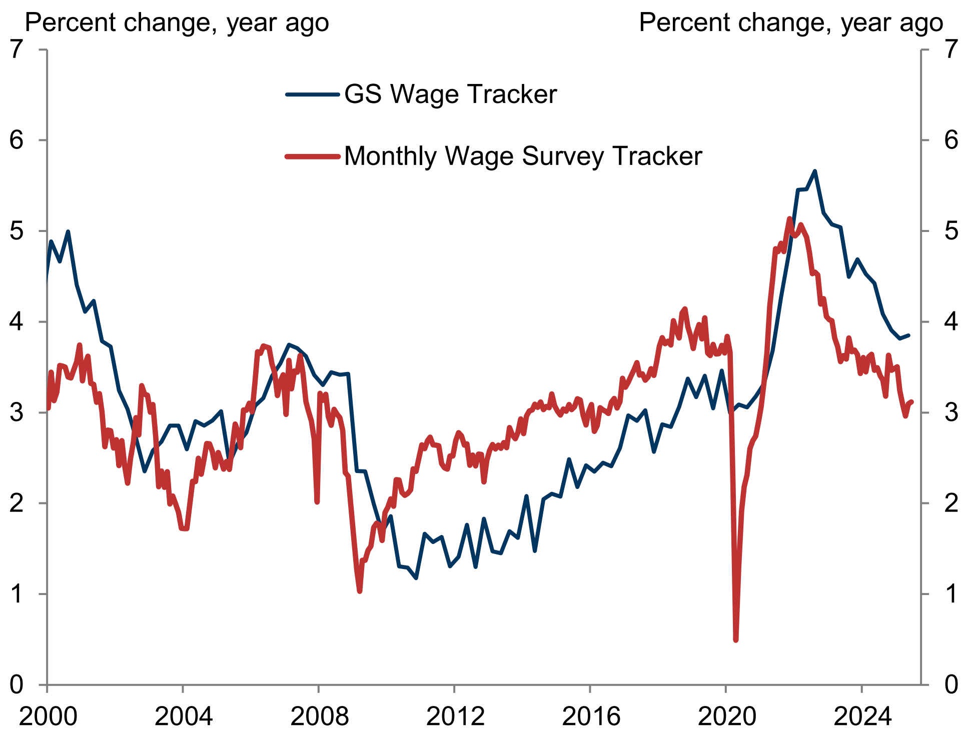
The Full Consequences Might Not Become Clear Until a Recession, Like the “Jobless Recovery” After 2001

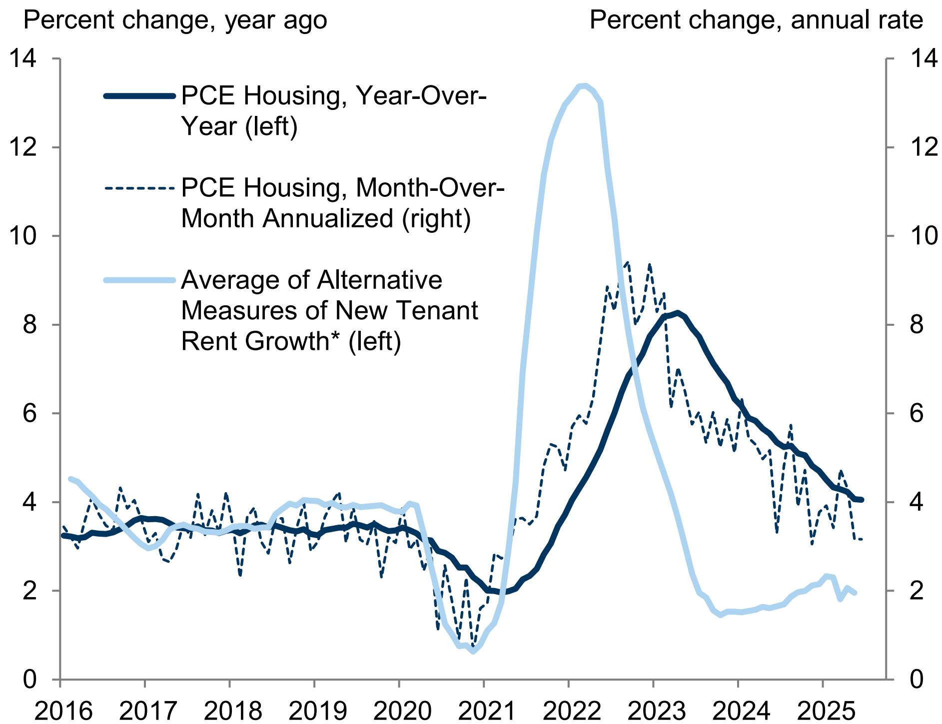




Source: Goldman Sachs Global Investment Research.

Inflation: A Two-Part Story of a Still Falling Underlying Trend Alongside a Moderate One-Time Tariff Bump

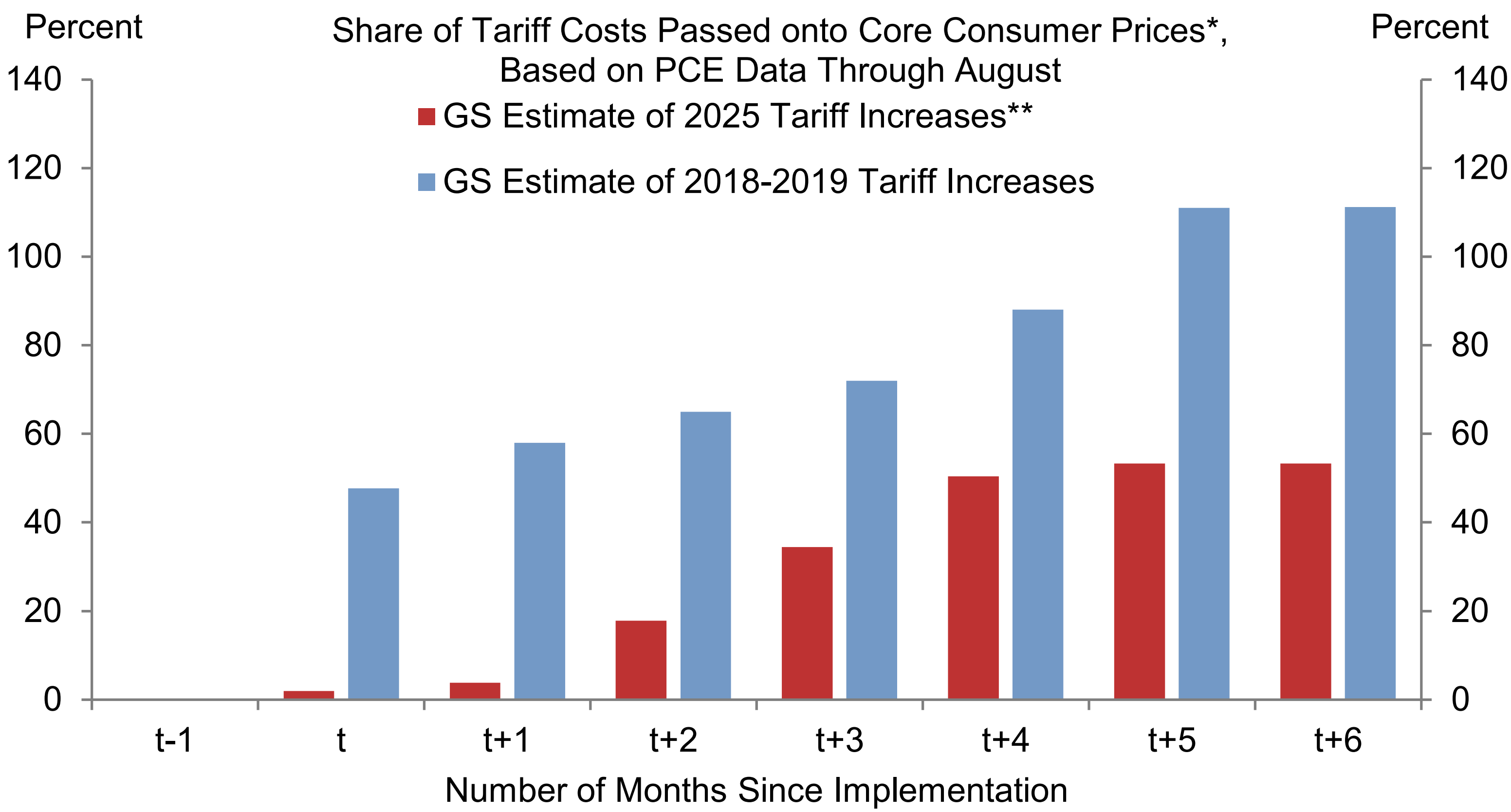




*Average of Costar, Yardi, and Zillow measures of rent growth.

Source: Goldman Sachs Global Investment Research.

After Six Months, the Passthrough Rate from Tariffs to Consumer Prices Has Reached 55%, Lower Than in 2019

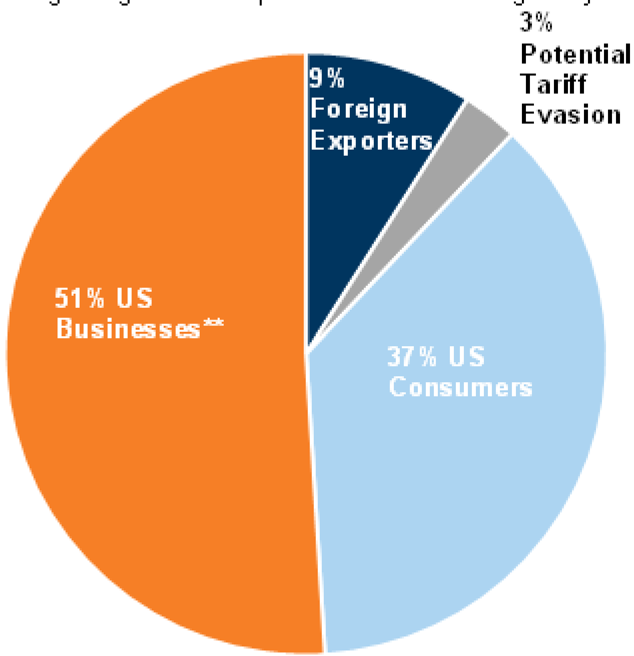


*This estimation method may capture spillover effects (e.g. domestic and any foreign producers not directly affected by tariffs might raise their prices to take advantage of tariff protection).
**The effect for t+6 is estimated based on the initial 10% China tariff implemented in February, the effect for t+5 is estimated based on tariffs implemented in February and March, and the effect for t+4 is estimated based on tariffs implemented in February, March, and April including the 10% "reciprocal" tariff.

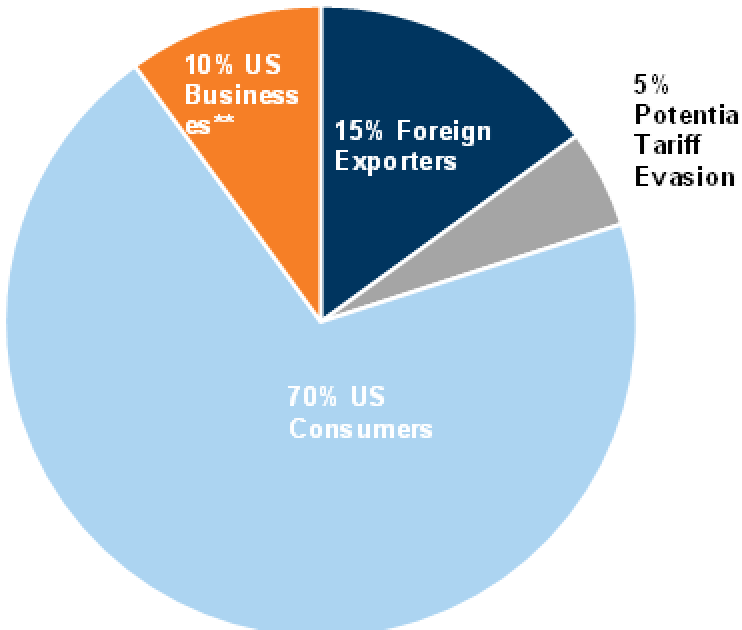
Source: Goldman Sachs Global Investment Research.

We Expect US Consumers to Eventually Bear 70% of the Cost of the Tariffs as Businesses Pass Costs Along

Division of Tariff Costs* as of August, Based on Estimates Derived from PCE Data Through August and Import Price Data Through July



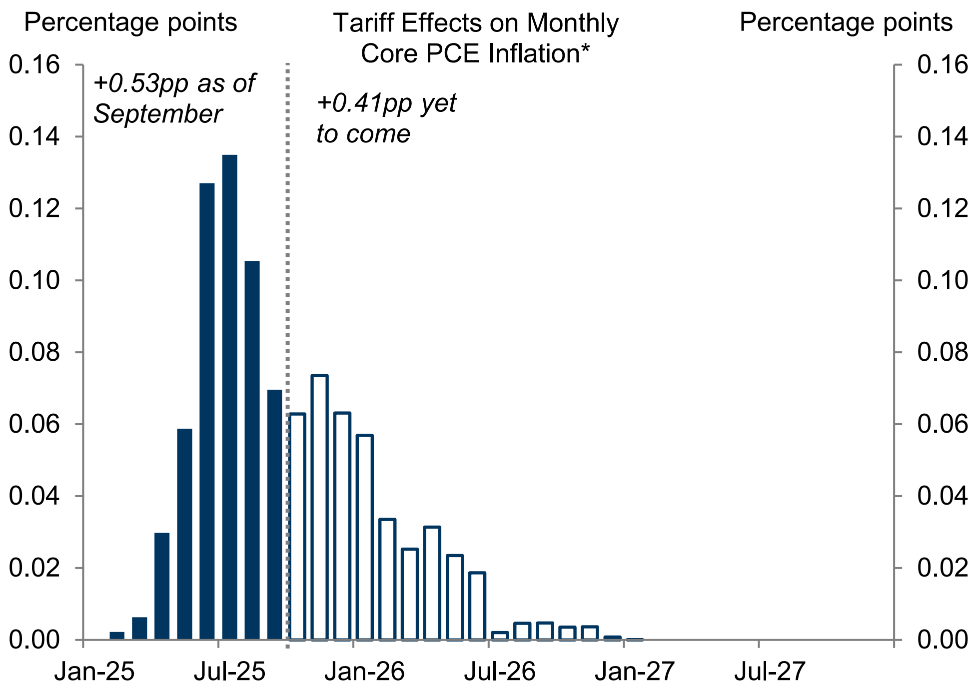
GS Baseline of Eventual Division of Tariff Costs*



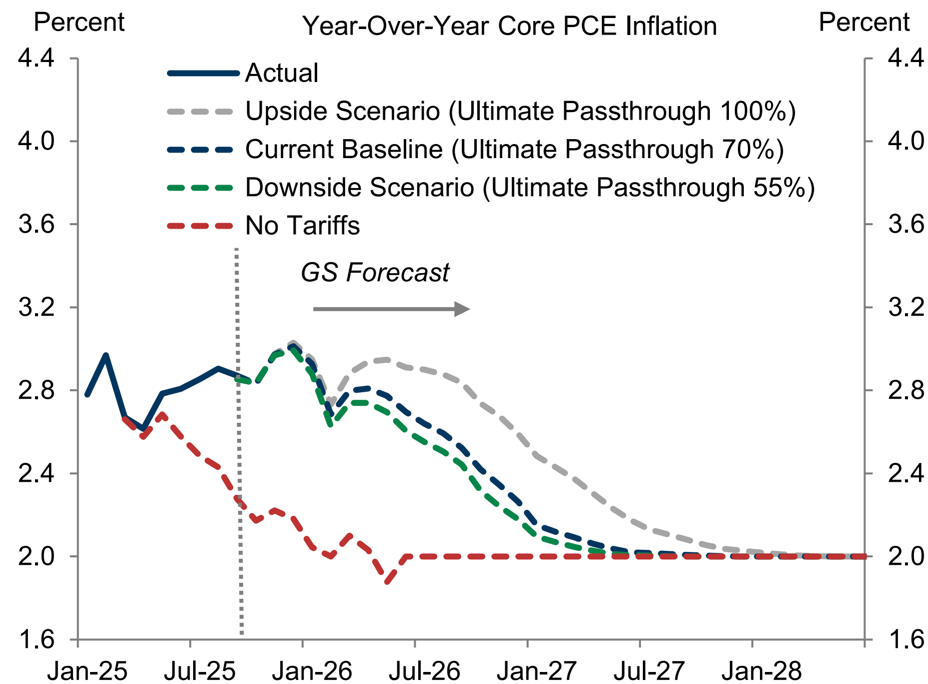
*Tariffs in effect from February to October.
**The share of tariff costs borne by US businesses is a net amount. Some businesses probably absorbed a larger share of tariff costs, while other businesses that competed with imported goods likely raised their prices.

Source: Goldman Sachs Global Investment Research.

A One-time Tariff Bump Pushes Core PCE Inflation to 3.0% Even as the Underlying Trend Approaches 2%

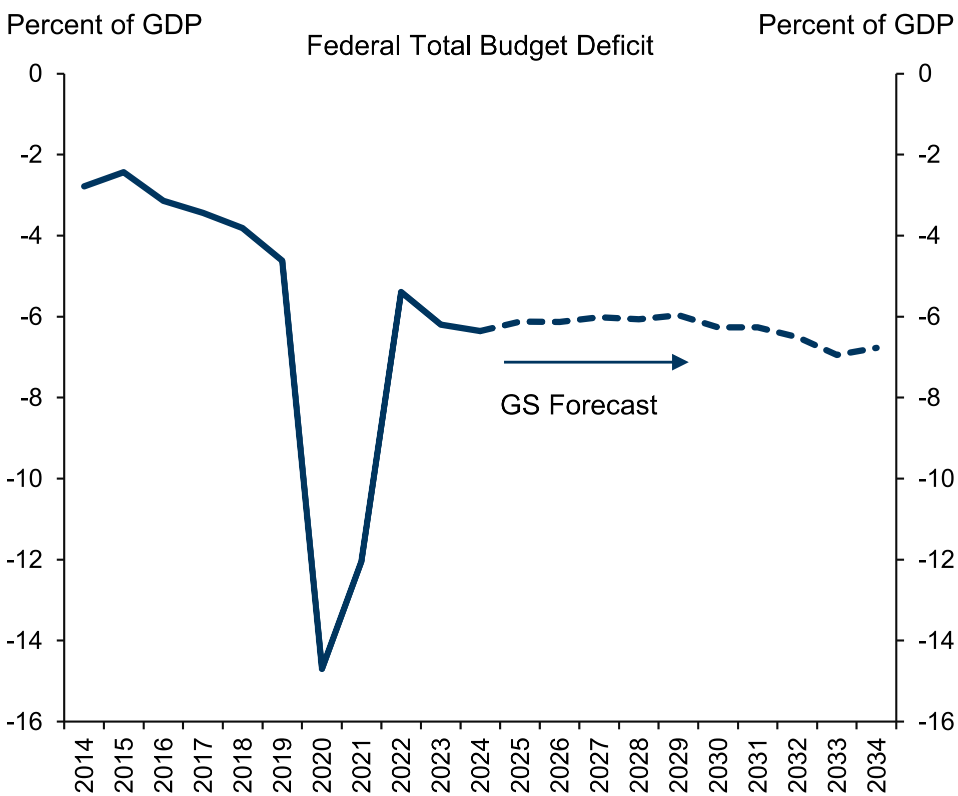


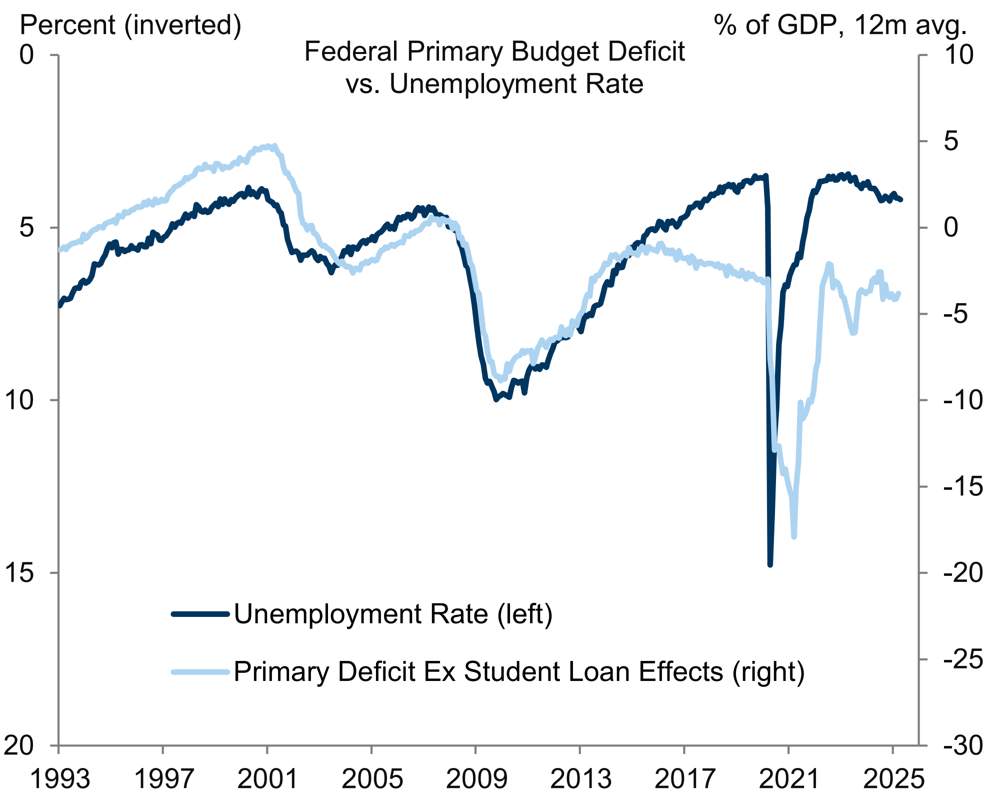
*Our baseline assumes the passthrough to core consumer prices will rise from 60% at t+7 to 70% at t+10.



Source: Goldman Sachs Global Investment Research.

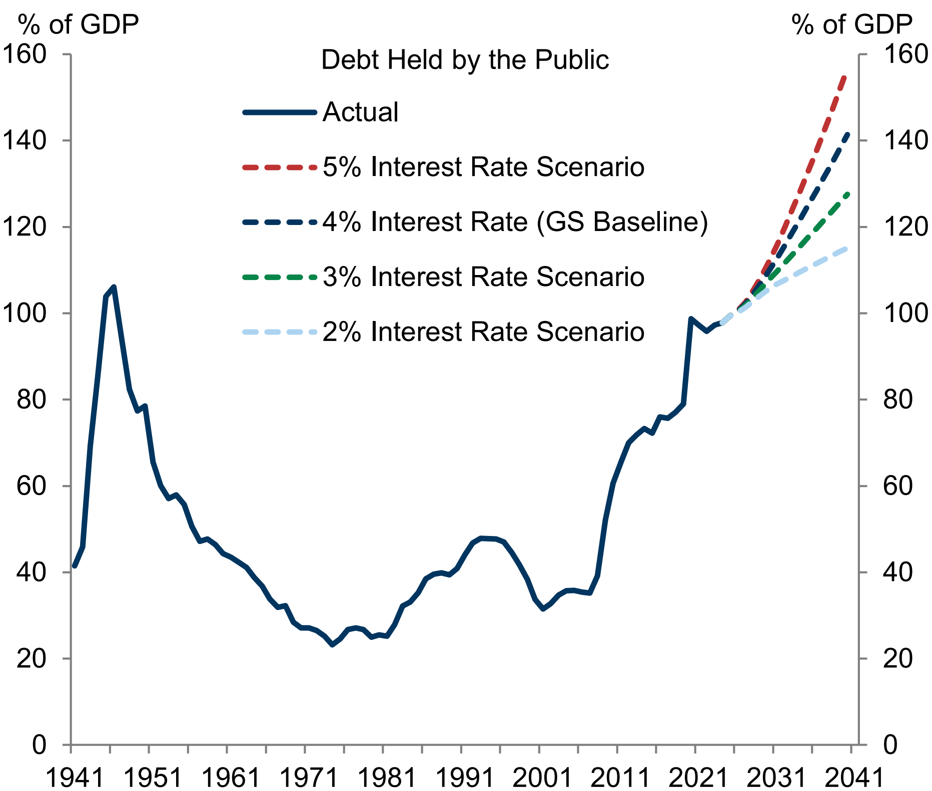
Fiscal Sustainability: Tax & Spending Changes + Tariffs + Rising Interest Expense Keep Deficit on a Similar Path

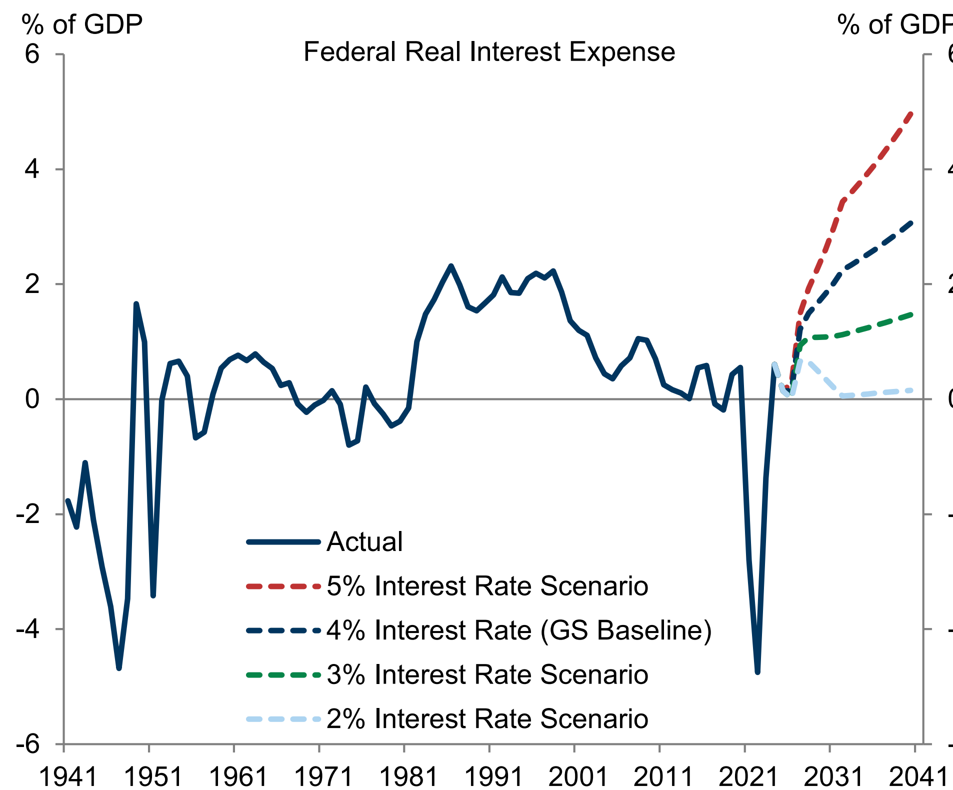




Source: Goldman Sachs Global Investment Research.

Higher Market Interest Rates Have Made the Fiscal Trajectory Look Far Worse Than It Did Last Cycle





Source: Bureau of Labor Statistics, Haver Analytics, Goldman Sachs Global Investment Research.

The Longer We Wait to Undertake Deficit Reduction, the Larger the Fiscal Consolidation Will Have to Be

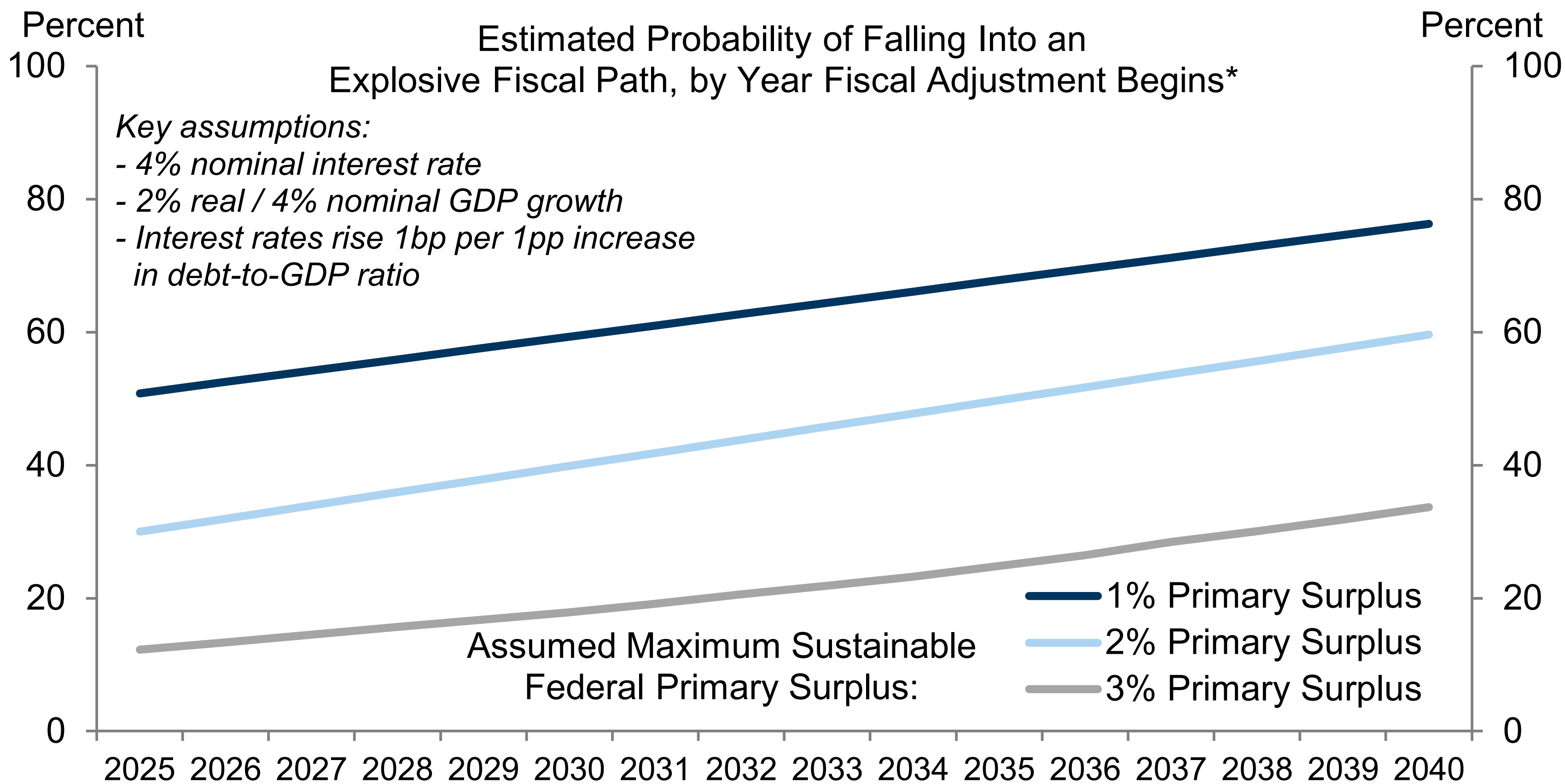
Deficits, Debt, and Fiscal Consolidation Required by Year*

	2025	2029	2035
US Fiscal Position, GS Forecasts			
Primary Balance (% of GDP)	-3.0%	-2.9%	-2.9%
Overall Budget Balance (% of GDP)	-6.1%	-6.6%	-7.8%
Debt-to-GDP	99.7%	107.1%	125.0%
Primary Balance Required			
1) Primary Balance Required to Stabilize the Debt-to-GDP Ratio	0.7%	0.8%	1.1%
2) Primary Balance Required to Keep Real Interest Expenses Below 2% of GDP	0.5%	0.8%	1.5%
3) Primary Balance Required to Keep Real Interest Expenses Below 2% of GDP, Interest Rates Rise by 2bp for Every 1pp Increase in the Debt-to-GDP Ratio	0.5%	1.0%	2.5%
Primary Balance Improvement Required			
1) Primary Balance Improvement Required to Stabilize the Debt-to-GDP Ratio	3.7pp	3.7pp	4.0pp
2) Primary Balance Improvement Required to Keep Real Interest Expenses Below 2% of GDP	3.5pp	3.7pp	4.4pp
3) Primary Balance Improvement Required to Keep Real Interest Expenses Below 2% of GDP, Interest Rates Rise by 2bp for Every 1pp Increase in the Debt-to-GDP Ratio	3.5pp	3.9pp	5.4pp

* Fiscal projections assume that there is a 15% probability of recession each year and that recessions result in a 5pp cumulative increase in the primary deficit. We also assume that interest rates increase by 1bp for every 1pp increase in the debt-to-GDP ratio unless otherwise indicated.

Source: Bureau of Labor Statistics, Haver Analytics, Goldman Sachs Global Investment Research.

The Risk of Falling onto an Explosive Debt Path Rises the Longer We Let the Debt and Interest Expense Grow



* We assume that deficit reduction starts in the year shown and takes 10 years to reach the targeted primary surplus. We simulate shocks to growth, interest rates, and the deficit based on historical data and assess how probable it is that after 25 years the debt/GDP ratio rises to a level where the economy cannot avoid an explose debt trajectory even with the maximum assumed primary budget surplus.

Source: Bureau of Labor Statistics, Haver Analytics, Goldman Sachs Global Investment Research.

US Economic Forecasts

THE US ECONOMIC AND FINANCIAL OUTLOOK
(% change on previous period, annualized, except where noted)

	2022	2023	2024	2025	2026	2027	2025 Q1	2025 Q2	2025 Q3	2025 Q4	2026 Q1	2026 Q2	2026 Q3	2026 Q4
OUTPUT AND SPENDING														
Real GDP	2.5	2.9	2.8	2.0	2.4	2.1	-0.6	3.8	3.6	1.0	3.1	2.0	2.0	2.0
Real GDP (annual=Q4/Q4, quarterly=yoy)	1.3	3.4	2.4	1.9	2.3	2.1	2.0	2.1	2.1	1.9	2.9	2.4	2.0	2.3
Consumer Expenditures	3.0	2.6	2.9	2.5	1.8	2.0	0.6	2.5	3.0	1.3	1.6	1.8	1.8	1.7
Residential Fixed Investment	-8.1	-7.8	3.2	-1.8	-1.7	1.9	-1.0	-5.1	-2.8	-5.0	-2.5	1.0	2.0	2.0
Business Fixed Investment	6.5	7.3	2.9	3.7	2.5	3.8	9.5	7.3	2.4	-1.4	2.4	3.8	4.0	4.0
Structures	3.5	16.7	1.1	-5.3	-1.9	2.6	-3.1	-7.5	-7.1	-3.0	-2.0	1.0	2.0	2.0
Equipment	2.8	2.9	3.5	7.4	1.6	3.4	21.3	8.5	4.0	-7.0	2.0	4.0	4.0	4.0
Intellectual Property Products	11.7	6.2	3.5	5.7	5.7	4.7	6.5	15.0	6.0	5.0	5.0	5.0	5.0	5.0
Federal Government	-3.3	3.3	3.8	-1.2	1.7	0.9	-5.6	-5.3	3.0	-17.5	22.5	0.0	1.0	1.0
State & Local Government	0.0	3.6	3.8	2.3	0.7	1.2	1.9	3.1	1.0	0.5	0.3	0.3	0.5	1.0
Net Exports ($bn, '17)	-1,024	-925	-1,033	-1,081	-877	-909	-1,381	-1,058	-997	-890	-867	-872	-880	-889
Inventory Investment ($bn, '17)	146	47	44	36	25	61	172	-18	-8	0	10	20	30	40
Nominal GDP	9.8	6.7	5.3	4.8	4.9	4.1	2.9	6.0	6.5	4.0	5.7	4.2	4.1	3.9
Industrial Production, Mfg.	2.7	-0.5	-0.5	1.2	2.1	3.0	3.6	1.8	2.4	0.2	2.5	2.8	2.9	2.9
HOUSING MARKET														
Housing Starts (units, thous)	1,552	1,421	1,371	1,291	1,224	1,315	1,401	1,354	1,234	1,176	1,179	1,209	1,239	1,269
New Home Sales (units, thous)	637	665	685	656	670	644	655	670	620	680	690	690	662	638
Existing Home Sales (units, thous)	5,083	4,103	4,067	3,983	3,978	4,132	4,127	3,990	3,888	3,926	3,937	3,956	3,989	4,030
Case-Shiller Home Prices (%yoy)*	7.5	5.3	3.8	0.4	0.7	2.2	3.8	2.3	1.4	0.4	-0.4	0.4	0.6	0.7
INFLATION (% ch, yr/yr)														
Consumer Price Index (CPI)**	6.4	3.3	2.9	2.7	2.3	2.1	2.7	2.5	2.9	2.9	2.6	2.8	2.5	2.3
Core CPI **	5.7	3.9	3.2	3.0	2.4	2.2	3.1	2.8	3.1	3.0	2.8	2.9	2.7	2.4
Core PCE** †	5.0	3.1	3.0	3.0	2.3	2.0	2.8	2.7	2.9	2.9	2.8	2.8	2.6	2.3
LABOR MARKET														
Unemployment Rate (%)^	3.5	3.8	4.1	4.5	4.3	4.1	4.2	4.1	4.4	4.5	4.5	4.5	4.4	4.3
U6 Underemployment Rate (%)^	6.6	7.2	7.5	8.3	8.1	7.7	7.9	7.7	8.2	8.3	8.4	8.3	8.2	8.1
Payrolls (thous, monthly rate)	380	216	168	66	105	115	111	55	47	50	80	110	115	115
Employment-Population Ratio (%)^	60.1	60.1	60.0	59.5	59.5	59.5	59.9	59.7	59.6	59.5	59.5	59.5	59.5	59.5
Labor Force Participation Rate (%)^	62.3	62.5	62.5	62.3	62.2	62.0	62.5	62.3	62.3	62.3	62.3	62.2	62.2	62.2
Average Hourly Earnings (%yoy)	5.4	4.4	3.9	3.7	3.3	3.2	3.9	3.8	3.7	3.5	3.3	3.3	3.3	3.3
GOVERNMENT FINANCE														
Federal Budget (FY, $bn)	-1,376	-1,694	-1,833	-1,775	-2,000	-2,100	--	--	--	--	--	--	--	--
FINANCIAL INDICATORS														
FF Target Range (Bottom-Top, %)^	4.25-4.5	5.25-5.5	4.25-4.5	3.5-3.75	3-3.25	3-3.25	4.25-4.5	4.25-4.5	4-4.25	3.5-3.75	3.25-3.5	3-3.25	3-3.25	3-3.25
10-Year Treasury Note^	3.88	3.88	4.58	4.20	4.20	4.25	4.23	4.24	4.16	4.20	4.20	4.20	4.20	4.20
Euro (€/$)^	1.07	1.11	1.04	1.19	1.25	1.25	1.08	1.18	1.17	1.19	1.23	1.23	1.24	1.25
Yen ($/¥)^	132	141	157	145	127	120	150	144	148	145	137	137	136	127

* Weighted average of metro-level HPIs for 381 metro cities where the weights are dollar values of housing stock reported in the American Community Survey. Annual numbers are Q4/Q4.
** Annual inflation numbers are December year-on-year values. Quarterly values are Q4/Q4.
† PCE = Personal consumption expenditures. ^ Denotes end of period.
Note: Published figures in bold.

GS Market Strategy Forecasts

	Current	GS Forecasts			Forward pricing			Upside vs. forward pricing		
	Level	3m	6m	12m	3m	6m	12m	3m	6m	12m
Equities										
S&P 500	6875	6800	7000	7200	6940	6993	7093	-2%	0%	2%
STOXX Europe 600	577	560	570	580	579	577	575	-3%	-1%	1%
Topix	3325	3300	3300	3400	3329	3302	3285	-1%	0%	4%
MSCI AC Asia-Pac ex Japan	732	720	730	755	737	742	745	-2%	-2%	1%
MSCI EM	1408	1400	1425	1480	1420	1427	1437	-1%	0%	3%
10 Year Government Bond Yields										
US	3.98%	4.20%	4.20%	4.20%	4.04%	4.08%	4.17%	16 bps	12 bps	3 bps
Germany	2.62%	3.00%	3.03%	3.18%	2.68%	2.73%	2.82%	32 bps	30 bps	36 bps
Japan	1.67%	1.71%	1.77%	1.86%	1.76%	1.82%	1.94%	-5 bps	-6 bps	-8 bps
UK	4.40%	4.37%	4.28%	4.25%	4.51%	4.56%	4.67%	-14 bps	-27 bps	-42 bps
2 Year Government Bond Yields										
US	3.49%	3.44%	3.38%	3.35%	3.45%	3.43%	3.45%	-1 bps	-5 bps	-10 bps
Germany	1.97%	2.10%	2.12%	2.20%	2.02%	2.04%	2.10%	8 bps	8 bps	10 bps
Japan	0.95%	1.03%	1.15%	1.36%	1.03%	1.08%	1.16%	0 bps	6 bps	21 bps
UK	3.78%	3.84%	3.78%	3.75%	3.73%	3.72%	3.81%	10 bps	6 bps	-6 bps
Corporate Bond Spreads (bps, upside vs. spot)										
Bloomberg USD IG	74	85	85	85				11	11	11
Bloomberg USD HY	272	300	300	300				28	28	28
EM Hard Currency Sovereign	271			330						59
Commodities										
WTI Crude Oil ($/bbl)	61.3	59.0	56.0	49.0	60.3	60.0	59.9	-2%	-7%	-18%
Brent Crude Oil ($/bbl)	65.6	63.0	60.0	53.0	64.0	63.7	63.6	-2%	-6%	-17%
LME Copper ($/mt)	11,029	10,390	10,415	10,580	11,033	11,023	10,967	-6%	-6%	-4%
TTF Natural Gas (EUR/MWh)	31.3	39	34	29	31.8	29.9	31.1	23%	14%	-7%
NYMEX Natural Gas ($/mmBtu)	3.44	4.50	4.50	4.50	4.06	3.63	4.24	11%	24%	6%
FX (upside vs. USD)										
EUR/USD	1.16	1.20	1.22	1.25	1.17	1.18	1.18	2%	4%	6%
USD/JPY	153	150	148	145	151	150	148	1%	2%	2%
USD/CNY	7.09	7.00	6.90	6.90	7.05	7.02	6.97	1%	2%	1%

Source: Goldman Sachs Global Investment Research.