US ECONOMICS ANALYST

Looking for Pockets of Overheating

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- We see little sign of overheating at a macroeconomic level today. The labor market is in balance, wage pressures are moderate, and overall industrial capacity utilization is not particularly high. But some Fed officials have highlighted resource constraints connected to the AI boom as a source of inflationary pressure, which raises the broader question of whether there are pockets of overheating beneath the surface. We use industry-level data, including alternative data measures of utilization rates in the services sector, to assess the extent of capacity constraints.
- We find few pockets of overheating in the labor market. Across most industries, the jobs-workers gap has fallen below its pre-pandemic level, and in the few industries where it remains somewhat elevated, such as wholesale trade and healthcare, it has eased significantly from its pandemic peak. Nor do we find signs of regional labor shortages: our new measure of tightness and wage pressures based on Beige Book commentary sits roughly in line with its historical average across all 12 Fed Districts. Consistent with this, the breadth of elevated wage growth remains moderate: about 35% of industries are seeing nominal wage growth above 4%—the pace we estimate is consistent with 2% inflation—somewhat above the 25% average over 1990-2019 but well below the 90% peak in 2022.
- We also see only limited evidence of capacity constraints binding in the manufacturing sector. Most manufacturing industries operate well below their maximum potential output, and only a few are nearing their peak rates of capacity utilization reached in recent business cycles—notably, electrical equipment and machinery manufacturers, likely reflecting AI-related demand. Overtime hours worked, which tend to lead pickups in capacity utilization, also remain well below their sector-specific peaks.
- We estimate capacity utilization across seven services industries that account for about 30% of GDP using alternative data such as transportation load factors and hotel occupancy rates. Here too, most industries remain well below their peak utilization rates of the past two decades, with the exception of professional services—where certain consulting activities are likely supporting the AI transition. We also find that our combined services capacity utilization index helps to forecast services inflation, but at the moment it is running only slightly above its long-run average and implies only modest additional inflationary

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pressure in the services sector.

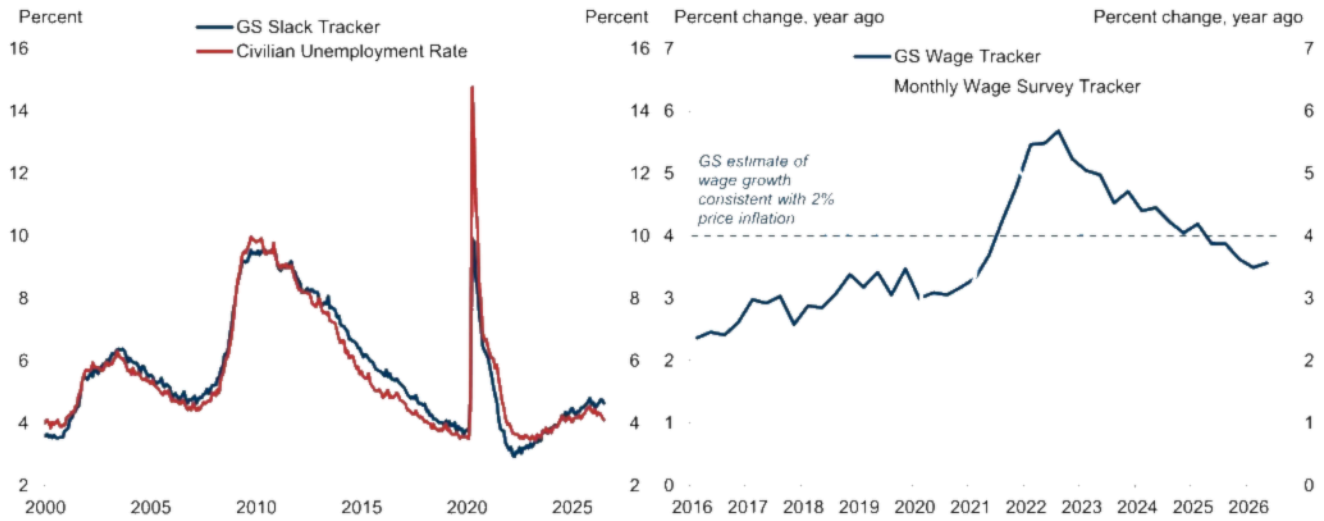
- We combine our labor market, manufacturing sector, and service sector measures of capacity constraints into a composite bottlenecks indicator that tracks the share of industries where the jobs-workers gap, wage growth, or capacity constraints are particularly elevated. Our bottlenecks tracker has ticked up slightly in recent months—largely reflecting a widening of the jobs-workers gap in a few sub-sectors whose labor markets firmed after the weakness in 2025—but remains in line with its pre-pandemic level. This suggests that pressures are not unusually broad-based and that pockets of overheating remain limited so far.

Looking for Pockets of Overheating

We see little sign of overheating at a macroeconomic level today. The labor market is in balance and wage pressures are moderate. As the left panel of Exhibit 1 shows, our slack tracker—a composite of ten measures of labor market utilization scaled to the unemployment rate—is 1pp higher than late last cycle, when the Fed struggled to sustain 2% inflation. The right panel shows that wage growth is running below the rate we estimate is compatible with 2% inflation. Aggregate measures of industrial capacity utilization are not particularly high either.

But some Fed officials have recently highlighted resource constraints connected to the AI boom as a source of inflationary pressure, which raises the broader question of whether there are pockets of overheating beneath the surface. In this week's *Analyst*, we use industry-level data, including alternative data measures of utilization rates in the service sector, to assess the extent of capacity constraints.

Exhibit 1: Our Slack and Wage Trackers Suggest That the Economy Is Not Experiencing Macroeconomic Overheating



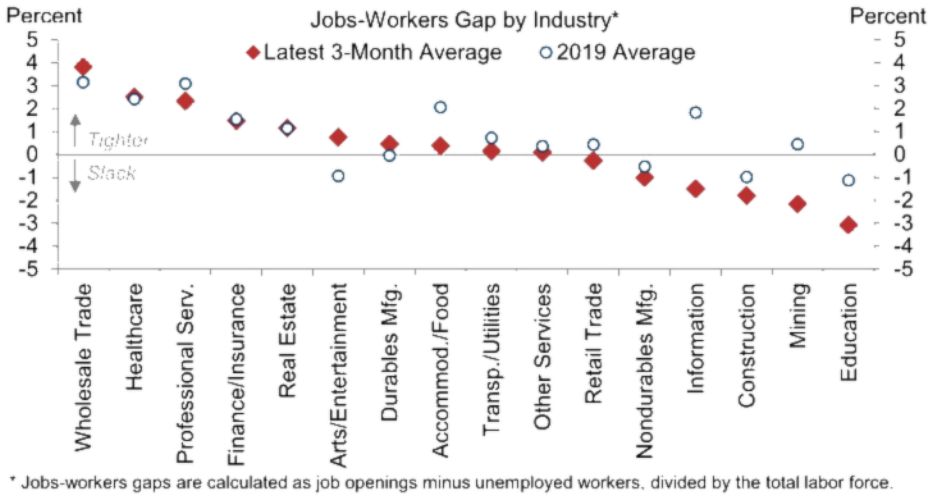
Source: Goldman Sachs Global Investment Research, US Bureau of Labor Statistics

Limited Bottlenecks in the Labor Market

We find few pockets of overheating in the labor market. To gauge tightness at the industry level, we calculate a jobs-workers gap for each sector—the difference between job openings and unemployed workers, scaled by the size of the sector's labor force. As we noted in the past, this measure has captured labor market tightness better than the unemployment rate and other standard indicators in recent years. Exhibit 2 shows that across most industries, the jobs-workers gap has fallen below its pre-pandemic level and looks fairly low. In the few industries where it remains somewhat elevated, such as wholesale trade, healthcare, and professional services, it has eased significantly from its pandemic peak and has not shown signs of renewed pressure.

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Exhibit 2: Across Most Industries, the Jobs-Workers Gap Has Now Fallen Below Its Pre-Pandemic Level and Looks Fairly Low



* Jobs-workers gaps are calculated as job openings minus unemployed workers, divided by the total labor force.

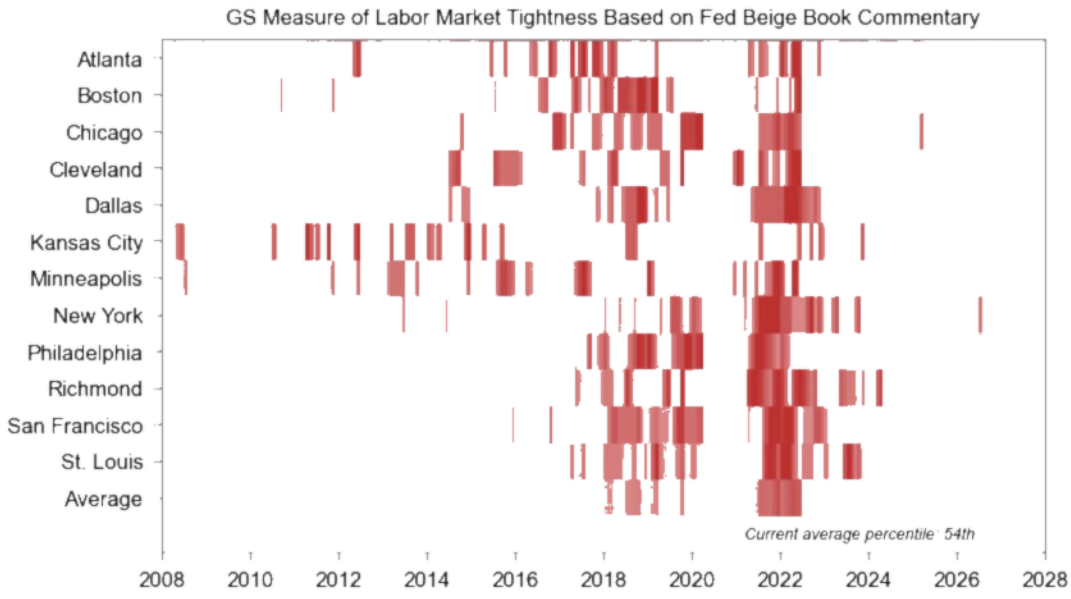
Source: Goldman Sachs Global Investment Research, US Bureau of Labor Statistics

Recent research by San Francisco Fed economists suggests that the breadth of local labor market pressures is also a useful leading indicator of national tightness.[1] To obtain a timely geographic gauge, we turn to the Beige Book commentary on labor market conditions across the 12 Fed Districts.[2] We construct a new District-level measure of labor market tightness by identifying a wide range of words and expressions used to characterize labor shortages and wage pressures in the Beige Book over the past two decades. Exhibit 3 shows that our measure—which accurately captured the broad-based overheating during the pandemic recovery—remains contained and roughly in line with its historical average across all 12 Districts.

[1] Garimella, Jordà and Singh (2025), "Tracking Labor Market Stress," *San Francisco Fed Economic Letter*.

[2] The Bureau of Labor Statistics has recently discontinued the regular monthly release of state-level job openings data, which prevents us from calculating jobs-workers gaps across states.

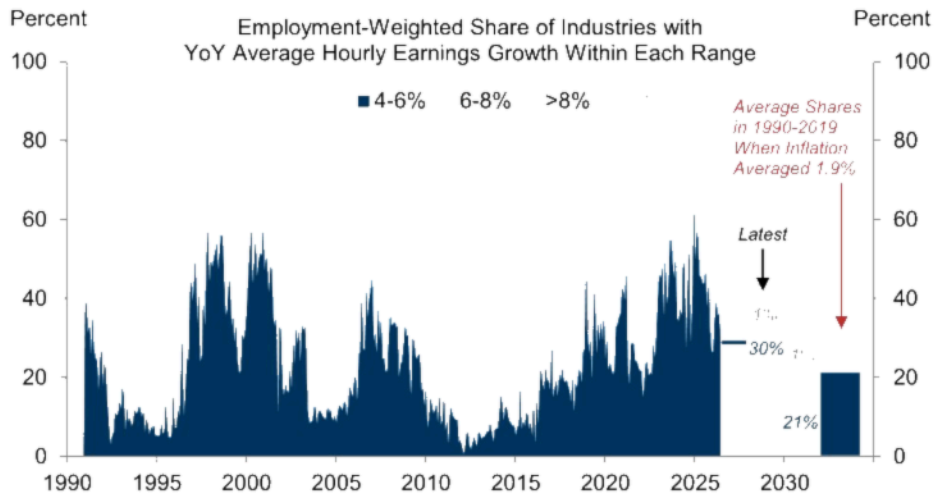
Exhibit 3: Fed Beige Book Mentions of Labor Shortages Are Roughly in Line with Their Historical Average Across All 12 Districts



Source: Goldman Sachs Global Investment Research, Federal Reserve

Consistent with the signal from the industry-level and regional data, the breadth of elevated wage growth across industries remains moderate. We measure wage growth for about 90 sub-industries and calculate the employment-weighted share of industries where year-over-year nominal wage growth exceeds 4%—the pace we estimate is compatible with 2% inflation at the current pace of productivity growth. Exhibit 4 shows that about 35% of industries are currently seeing nominal wage growth above 4% (and only 5% above 6%). This is somewhat above the 25% average over 1990-2019—when the pace of wage growth compatible with 2% inflation was similarly around 4%—but well below the roughly 90% peak in 2022.

Exhibit 4: Wage Growth Remains Above the 4% Rate We Estimate Is Compatible with 2% Inflation in Industries Accounting for 35% of Employment, Somewhat Above the 25% Average Over 1990-2019



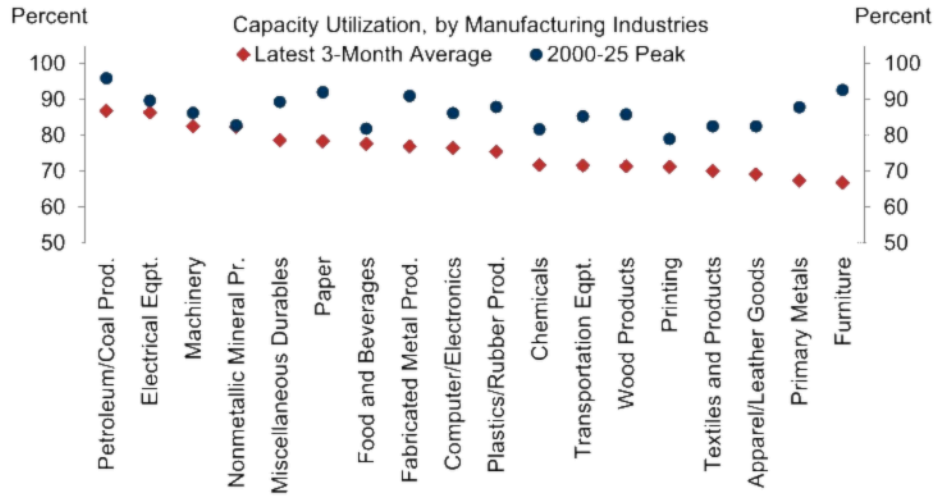
Source: Goldman Sachs Global Investment Research, US Bureau of Labor Statistics

Manufacturing Capacity Constraints Appear Limited to a Few Sectors Supporting the AI Buildout

We also see only limited evidence of capacity constraints binding in the manufacturing sector. Exhibit 5 shows that most manufacturing industries are currently operating well below their maximum potential output, leaving room to expand production with existing capacity.

We also consider a more stringent measure of spare capacity suggested by Fed economists that caps attainable utilization at each sector's observed peak rate over recent business cycles, on the grounds that firms rarely reach reported full capacity and the highest rate achieved in practice is a more realistic ceiling.[3] Even on this measure, only a few industries are nearing their limits—notably electrical equipment and machinery manufacturers, which are likely supporting the AI infrastructure buildout. Capacity utilization is not available at the sub-industry level in these two sectors, but more granular industrial production data show rapid growth in batteries, communication wire and cable, and power transmission equipment—consistent with these sectors nearing their capacity limits amid strong AI-related demand.

Exhibit 5: Most Manufacturing Industries Still Have Room to Expand Production, Though Electrical Equipment and Machinery Manufacturers—Which Are Likely Supporting the AI Infrastructure Buildout—Have Recently Neared Their Capacity Peaks

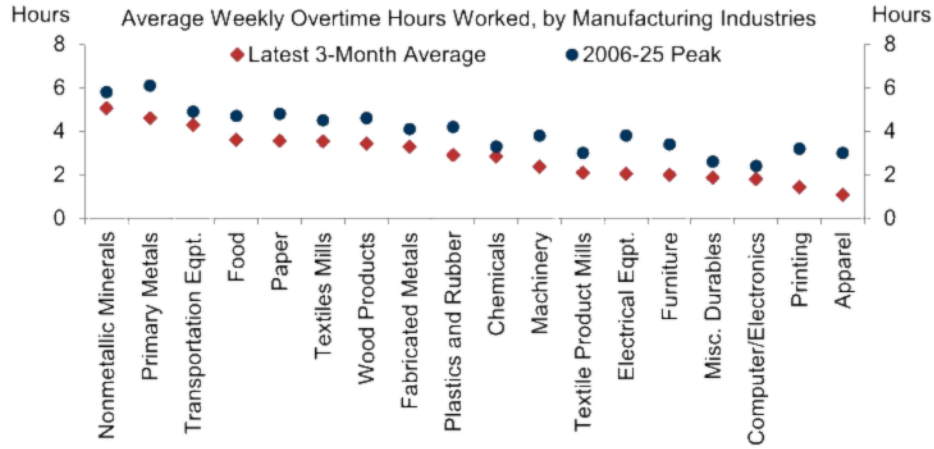


Source: Goldman Sachs Global Investment Research, Federal Reserve

What is the risk of further capacity pressures in the pipeline? A useful leading indicator is overtime hours worked, which have historically tended to precede pickups in capacity utilization. Using a panel of about 20 major manufacturing industries over the last two decades, we estimate that average weekly overtime hours lead capacity utilization by 3-6 months on average. Exhibit 6 shows that overtime hours currently remain below their peaks in recent business cycles across most sectors, suggesting limited risk of emerging capacity pressures.

[3] Braun, Decker and Kamal (2025), "Can Tariffs Spur Higher Factory Floor Utilization?," *FEDS Notes*.

Exhibit 6: Overtime Hours Worked—a Leading Indicator of Capacity Utilization—Point to Limited Emerging Capacity Pressures, as Most Industries Remain Well Below Their Peaks Over the Past Two Decades



Note: Peaks are calculated since 2006, when average overtime hours at the NAICS3 industry level first become available in the establishment survey.

Source: Goldman Sachs Global Investment Research, US Bureau of Labor Statistics

Our New Measure of Services Capacity Constraints Also Shows Limited Pressures

While the Fed provides estimates of capacity utilization for the manufacturing, mining, and utilities sectors—which together account for roughly 15% of the economy—the statistical agencies do not provide comparable estimates for other sectors. The ISM publishes a semi-annual survey of nonmanufacturing operating rates, but its low frequency limits its usefulness as a timely gauge of tightness, and its interpretation is complicated because it relies on a single generic survey question rather than concrete operational measures that best capture capacity in each industry, as we previously noted.

To obtain a broader gauge of capacity constraints across the economy, we draw on alternative data—including measures our equity analysts regularly use to monitor sector activity, such as transportation load factors and hotel occupancy rates—to estimate capacity utilization across seven services industries that together account for about 30% of GDP. Exhibit 7 summarizes the measures we use to proxy utilization in each of these industries.

Exhibit 7: We Use Alternative Data to Estimate Capacity Utilization Across Seven Services Industries That Together Account for About 30% of US GDP

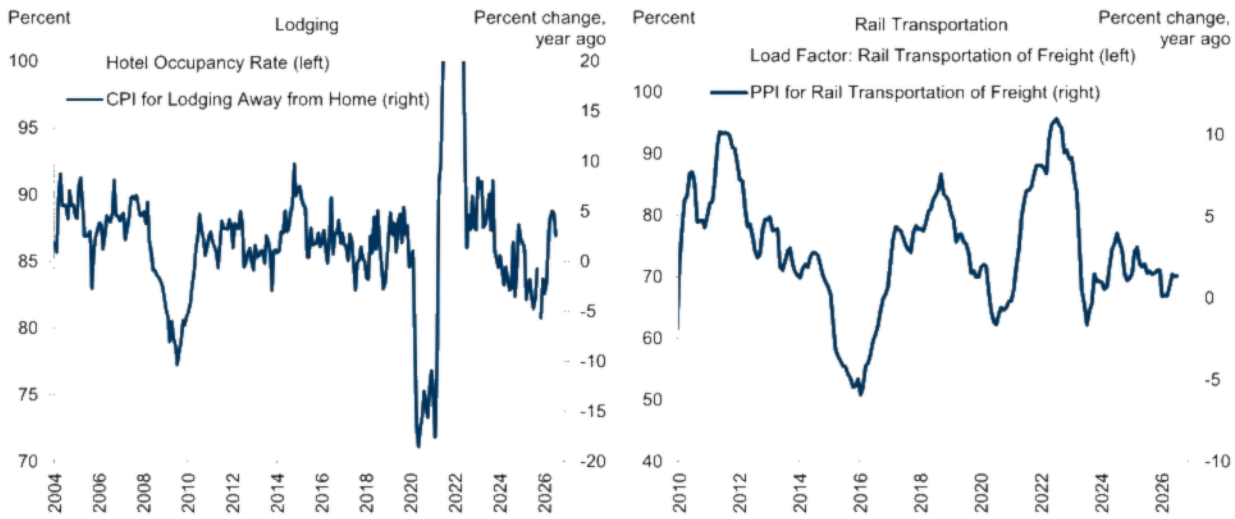
GS Services Capacity Utilization Tracker - Components	
Industry	Measures of Capacity Utilization
Transportation	Load factors for domestic commercial flights and for domestic freight transportation by air cargo, truck and rail.
Warehousing	Share of total available warehouse storage capacity currently used to hold inventory.
Retail Trade	Real sales per square foot in retail stores.
Professional and Business Services	Average workweek in professional industries that rely on billable hours (e.g., legal services, accounting, management consulting).
Accommodation	Hotel occupancy rate (share of total available guest rooms that are occupied).
Real Estate	Vacancy rates for owner- and renter-occupied homes and apartments.
Construction	Average operating hours for machinery used in the construction industry.

Note: For ease of exposition, we group construction with the services industries throughout the report, even though it is not formally classified as such.

Source: Goldman Sachs Global Investment Research

A key validation of our measures is that they signal emerging price pressures at the detailed sector level. As an illustration, Exhibit 8 plots two of them—hotel occupancy rates and rail freight load factors—against the relevant CPI and PPI inflation series. In both cases, pickups in utilization have largely been accompanied by rising prices.

Exhibit 8: Our Alternative Measures of Capacity Utilization Help Predict Sector-Level Price Pressures in Services Industries



Source: Goldman Sachs Global Investment Research, US Bureau of Labor Statistics

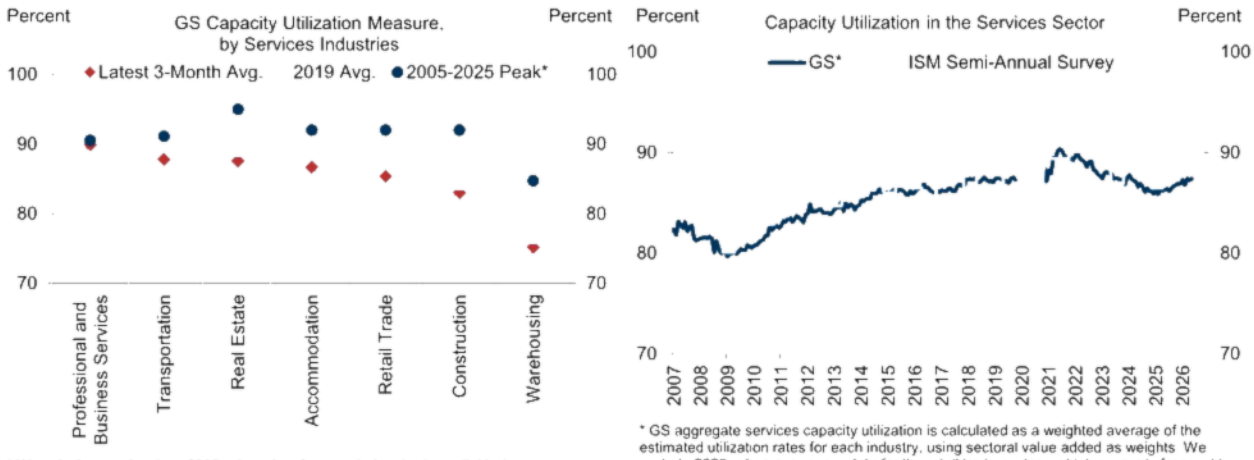
The left panel of Exhibit 9 shows that, as in manufacturing, most of these industries remain well below their peak utilization rates of the past two decades. The main

exception is professional and business services. While we have argued that many occupations in this industry are ultimately at higher risk of displacement from AI, activity may be running closer to capacity for now—for instance, job growth has picked up since late 2025 in consulting services—as firms in this sector help companies manage the transition to AI.

We next aggregate our sector-level measures into a services capacity utilization index, using each sector's share of GDP as weights. The right panel of Exhibit 9 shows that our aggregate estimate of capacity utilization in services has returned to its pre-pandemic level. Capacity utilization measured by the ISM semi-annual survey is currently running higher than our estimate. However, commentary in the latest ISM report noted that companies across the services sector expect capacity to expand at a robust pace through the rest of 2026, which should lower the ISM utilization rate and narrow this gap.

Our index also helps to forecast services inflation: it adds explanatory power to a Phillips curve model that already includes the services unemployment rate. With services capacity constraints running just above their long-run average, we estimate that they are currently adding only modest inflationary pressure—about 10bp to year-over-year core services ex-housing PCE inflation, down from a 30-40bp contribution in 2021-22.

Exhibit 9: All Services Sectors Except Professional and Business Services Appear to Have Spare Capacity, and Our Aggregate Estimate of Services Capacity Utilization Has Returned to Its Pre-Pandemic Level



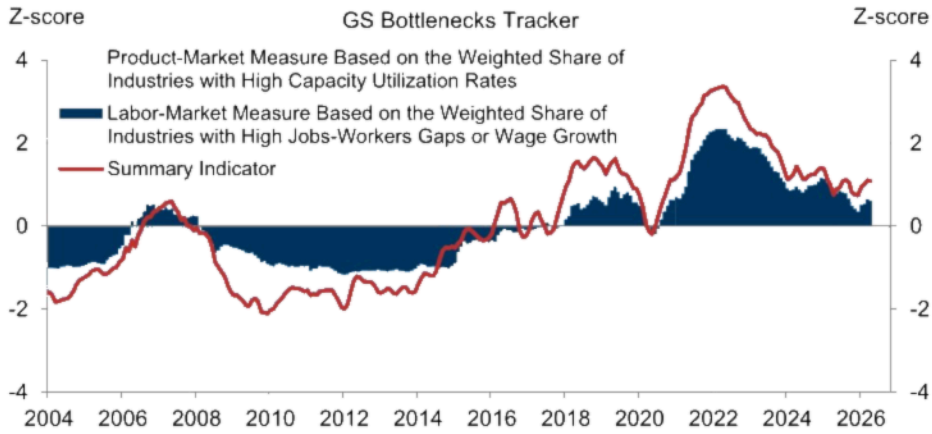
Source: Goldman Sachs Global Investment Research, Institute for Supply Management

Our Composite Bottlenecks Indicator Suggests Pressures Are Not Broad-Based

We conclude by combining our labor market, manufacturing, and services measures of capacity pressures into a composite bottlenecks indicator that tracks the share of industries where the jobs-workers gap, wage growth, or capacity constraints are particularly elevated.

Exhibit 10 shows that our bottlenecks tracker has ticked up slightly in recent months but remains in line with its pre-pandemic level. The uptick largely reflects a widening of the jobs-workers gap in a few sub-sectors whose labor markets firmed after the weakness in the second half of 2025. On net, our tracker suggests that capacity pressures are not unusually broad-based and that pockets of overheating remain limited so far.

Exhibit 10: Our Composite Indicator of Product- and Labor-Market Bottlenecks Shows That the Breadth of Pressures Across Sectors Has Ticked Up in Recent Months but Remains in Line with Pre-Pandemic Levels



Note: The industry shares used to calculate the product- and labor-market measures are weighted by industry-level value added and employment, respectively.

Source: Goldman Sachs Global Investment Research

Pierfrancesco Mei

The US Economic and Financial Outlook

THE US ECONOMIC AND FINANCIAL OUTLOOK

(% change on previous period, annualized, except where noted)

	2023	2024	2025	2026	2027	2026 Q1	2026 Q2	2026 Q3	2026 Q4	2027 Q1	2027 Q2	2027 Q3	2027 Q4
OUTPUT AND SPENDING													
Real GDP	**2.9**	**2.8**	**2.1**	*2.1*	*2.1*	**2.1**	**1.5**	*2.7*	*1.5*	*2.2*	*2.3*	*2.3*	*2.3*
Real GDP (annual=Q4/Q4, quarterly=yoy)	**3.4**	**2.4**	**2.0**	*2.0*	*2.3*	**2.7**	**2.1**	*1.7*	*2.0*	*2.0*	*2.2*	*2.1*	*2.3*
Consumer Expenditures	**2.6**	**2.9**	**2.6**	*2.0*	*2.0*	**0.5**	**3.2**	*1.8*	*1.5*	*1.9*	*2.0*	*2.1*	*2.2*
Residential Fixed Investment	**-7.8**	**3.2**	**-2.2**	*-3.6*	*1.3*	**-7.8**	**1.5**	*-3.1*	*1.5*	*2.0*	*2.0*	*2.0*	*2.3*
Business Fixed Investment	**7.3**	**2.9**	**4.1**	*7.0*	*6.0*	**10.6**	**8.4**	*8.8*	*6.9*	*4.9*	*4.9*	*4.9*	*4.9*
Structures	**16.7**	**1.1**	**-5.3**	*-4.0*	*2.3*	**-4.7**	**-5.0**	*3.9*	*-0.2*	*3.5*	*3.5*	*3.5*	*3.5*
Equipment	**2.9**	**3.5**	**8.3**	*10.8*	*7.2*	**15.8**	**15.2**	*11.9*	*9.5*	*5.0*	*5.0*	*5.0*	*5.0*
Intellectual Property Products	**6.2**	**3.5**	**5.6**	*9.2*	*6.4*	**13.8**	**8.8**	*8.0*	*7.8*	*5.5*	*5.5*	*5.5*	*5.5*
Federal Government	**3.3**	**3.8**	**-1.2**	*-2.1*	*0.3*	**9.4**	**-4.1**	*-2.0*	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*
State & Local Government	**3.6**	**3.8**	**2.5**	*1.4*	*0.9*	**1.6**	**1.1**	*0.1*	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*
Net Exports ($bn, '17)	**-925**	**-1,033**	**-1,091**	*-1,103*	*-1,217*	**-1,002**	**-1,075**	*-1,165*	*-1,178*	*-1,193*	*-1,209*	*-1,225*	*-1,241*
Inventory Investment ($bn, '17)	**47**	**44**	**29**	*4*	*54*	**-17**	**-51**	*54*	*30*	*40*	*50*	*60*	*65*
Nominal GDP	**6.7**	**5.3**	**5.0**	*5.9*	*4.8*	**5.8**	**7.9**	*4.5*	*3.8*	*4.9*	*4.8*	*4.7*	*4.5*
Industrial Production, Mfg.	**-1.0**	**-1.0**	**0.8**	*1.9*	*3.7*	**1.4**	**4.8**	*4.9*	*3.5*	*3.4*	*3.4*	*3.4*	*3.4*
HOUSING MARKET													
Housing Starts (units, thous)	**1,421**	**1,370**	**1,356**	*1,347*	*1,372*	**1,418**	**1,299**	*1,323*	*1,348*	*1,362*	*1,365*	*1,375*	*1,385*
New Home Sales (units, thous)	**666**	**684**	**679**	*630*	*649*	**622**	**590**	*649*	*661*	*636*	*642*	*649*	*670*
Existing Home Sales (units, thous)	**4,103**	**4,067**	**4,076**	*4,168*	*4,255*	**4,053**	**4,160**	*4,226*	*4,234*	*4,243*	*4,251*	*4,260*	*4,268*
Case-Shiller Home Prices (%yoy)*	**5.3**	**3.8**	**1.3**	*1.1*	*2.4*	**0.8**	**1.1**	*1.6*	*1.1*	*1.1*	*2.0*	*2.2*	*2.4*
INFLATION (% ch, yr/yr)													
Consumer Price Index (CPI)**	**3.3**	**2.9**	**2.7**	*3.0*	*1.9*	**2.7**	**3.8**	*3.3*	*3.1*	*2.7*	*1.8*	*2.0*	*2.0*
Core CPI **	**3.9**	**3.2**	**2.6**	*2.3*	*1.9*	**2.5**	**2.7**	*2.3*	*2.4*	*2.1*	*1.9*	*1.9*	*1.9*
Core PCE** †	**3.1**	**3.0**	**3.0**	*3.0*	*2.2*	**3.1**	**3.4**	*3.2*	*3.1*	*2.6*	*2.3*	*2.3*	*2.2*
LABOR MARKET													
Unemployment Rate (%)^	**3.8**	**4.1**	**4.4**	*4.2*	*4.2*	**4.3**	**4.2**	*4.1*	*4.2*	*4.2*	*4.2*	*4.2*	*4.2*
U6 Underemployment Rate (%)^	**7.2**	**7.6**	**8.4**	*8.1*	*8.1*	**8.0**	**7.9**	*8.0*	*8.1*	*8.1*	*8.1*	*8.1*	*8.1*
Payrolls (thous, monthly rate)	**210**	**122**	**10**	*55*	*50*	**73**	**77**	*21*	*48*	*50*	*50*	*50*	*50*
Employment-Population Ratio (%)^	**60.1**	**59.9**	**59.7**	*58.8*	*58.7*	**59.2**	**59.0**	*58.9*	*58.8*	*58.8*	*58.8*	*58.7*	*58.7*
Labor Force Participation Rate (%)^	**62.5**	**62.5**	**62.4**	*61.4*	*61.3*	**61.9**	**61.5**	*61.4*	*61.4*	*61.3*	*61.3*	*61.3*	*61.3*
Average Hourly Earnings (%yoy)	**4.4**	**3.9**	**4.0**	*3.9*	*3.8*	**4.0**	**4.0**	*3.9*	*3.8*	*3.8*	*3.8*	*3.8*	*3.8*
GOVERNMENT FINANCE													
Federal Budget (FY, $bn)	**-1,694**	**-1,833**	**-1,775**	*-2,100*	*-2,100*	--	--	--	--	--	--	--	--
FINANCIAL INDICATORS													
FF Target Range (Bottom-Top, %)^	**5.25-5.5**	**4.25-4.5**	**3.5-3.75**	*3.5-3.75*	*3-3.25*	**3.5-3.75**	**3.5-3.75**	*3.5-3.75*	*3.5-3.75*	*3.5-3.75*	*3.25-3.5*	*3.25-3.5*	*3-3.25*
10-Year Treasury Note^	**3.88**	**4.58**	**4.18**	*4.40*	*4.25*	**4.30**	**4.44**	*4.45*	*4.40*	*4.35*	*4.30*	*4.25*	*4.25*
Euro (€/$)^	**1.11**	**1.04**	**1.17**	*1.12*	*1.14*	**1.15**	**1.14**	*1.14*	*1.12*	*1.12*	*1.12*	*1.13*	*1.14*
Yen ($/¥)^	**141**	**157**	**157**	*164*	*145*	**159**	**163**	*162*	*164*	*164*	*165*	*157*	*145*

* 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.

Source: Goldman Sachs Global Investment Research

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Disclosure Appendix

Reg AC

I, Pierfrancesco Mei, hereby certify that all of the views expressed in this report accurately reflect my personal views, which have not been influenced by considerations of the firm's business or client relationships.

Unless otherwise stated, the individuals listed on the cover page of this report are analysts in Goldman Sachs' Global Investment Research division.

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