US Economics Analyst

A Recession Is Not Inevitable (Mericle)

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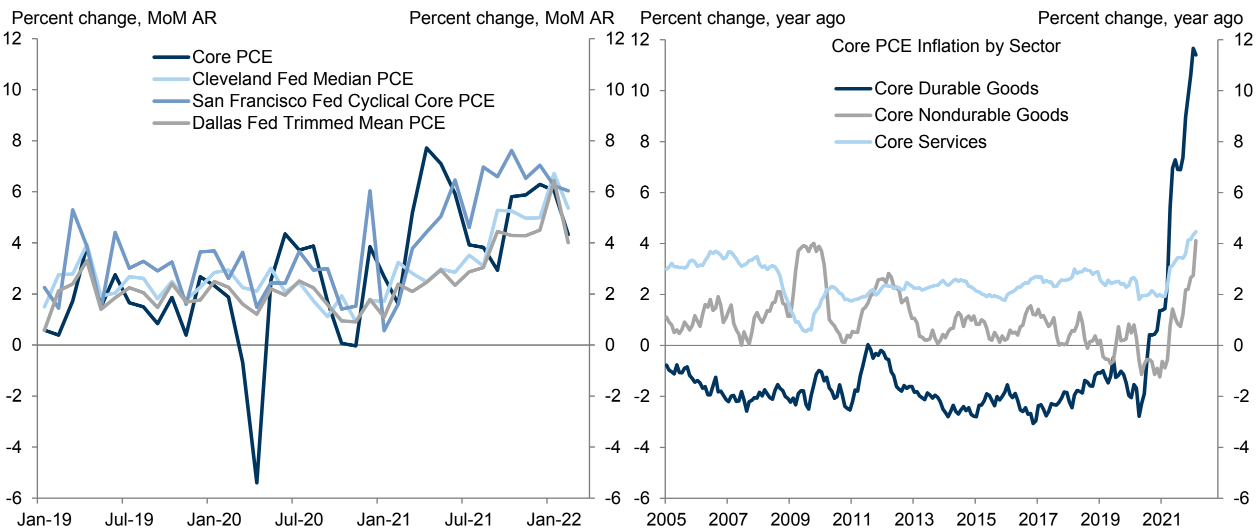
- History proves, some investors argue, that the inflation overshoot and overheated labor market have made a recession all but inevitable. Both inflation and wage growth have become much broader-based, and we agree that bringing them down will be very challenging. But such claims exaggerate the lessons of a handful of past episodes and understate the uniqueness of the current situation. We discuss what we know and don't know about the inflation outlook, and what these nuances imply about the plausibility of the Fed taming inflation without a recession.
- The most immediate unknown is how long supply-side problems will last. We are forecasting a large decline in core inflation this year and next driven largely by goods prices. The pandemic and the war in Ukraine pose obvious risks to this assumption, and more prolonged problems would make it harder to calm inflation. Ultimately though, for the inflation overshoot to be truly persistent, it will have to be driven mainly by high inflation expectations and wage growth.
- If the economy had definitively entered a wage-price spiral with inflation expectations and wage growth firmly entrenched well above target-consistent levels, then a recession might be the only solution. But reality is more complex and presents a mix of both concerning and reassuring signals. Short-term inflation expectations are much too high, but much of this appears attributable to energy price spikes, and long-term expectations remain well anchored. Wage growth has also run much too hot and the labor market is clearly imbalanced, but temporary factors have also contributed, and surveys show that companies expect to raise wages more slowly this year.
- These nuances make it hard to fit the current situation into a single historical box. Comparisons with the soft landing in the mid-1990s, say, are too reassuring because reversing overheating is harder than just preventing it. But inflation expectations are not sufficiently unanchored to justify comparisons with the 1970s either. We see traces of both postwar inflation surges driven by supply-demand imbalances that faded and the wage-price spiral of the late 1960s. Historical comparison therefore offers reason for both comfort and concern, but not a definitive conclusion.
- We recently introduced a framework for analyzing whether the Fed can tame inflation without a recession in a series of four steps. We first ask how much

wage growth needs to slow, then how much the jobs-workers gap needs to shrink to achieve that, then how much of a decline in job openings that would take assuming some rebound in labor supply, and finally how much that requires GDP growth to slow. Our answer is that we do not need a recession but probably do need growth to slow to a somewhat below-potential pace, a path that raises recession risk.

A Recession Is Not Inevitable

History proves, some investors argue, that the inflation overshoot and overheated labor market have made a recession all but inevitable. Both inflation and wage growth have become broader-based than they were last summer, as shown in Exhibit 1, and we agree that bringing them down will be very challenging. But such historical claims exaggerate the lessons of a handful of past episodes and understate the uniqueness of the current situation. In today's note, we discuss what we know and don't know about the inflation outlook, and what these nuances imply about the plausibility of the Fed taming inflation without a recession.

Exhibit 1: Inflation Is Trending Higher and Much Broader-Based, and Bringing It Down Will Be Challenging

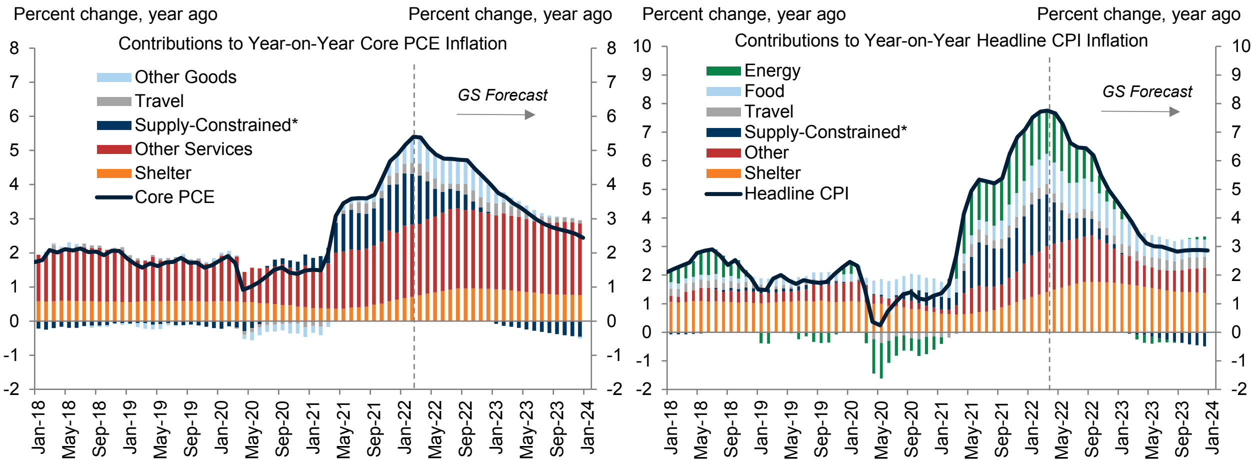


Source: Department of Commerce, Federal Reserve, Goldman Sachs Global Investment Research

The most immediate unknown is how long supply-side problems will last. We are forecasting a large decline in core inflation this year and next, driven mostly by an initial stabilization in goods prices followed by a partial normalization of price levels—which would imply a period of moderate deflationary payback—starting late this year and continuing in 2023 and 2024, as shown in Exhibit 2. The FOMC's inflation forecast similarly calls for a gradual decline part way back toward 2% over the next few years, and lower goods inflation likely also plays a large role in its forecast. These categories remain significant because, while high inflation is now broader-based, it is still the case that supply-constrained durable goods categories account for a bit more than half of the overshoot in core PCE inflation.

The Russian invasion of Ukraine, restrictions in China, and the path of the virus all have the potential to worsen supply-side problems and pose risks to our assumption that goods inflation will come down sharply. This would be a serious problem because the longer the disinflationary impulse from the goods sector takes to materialize, the greater the odds that inflation will stay high enough for long enough to raise long-run inflation expectations. Fed officials might also feel the need to act more aggressively if goods prices fail to support their expectation that inflation will at least head in the right direction this year.

Exhibit 2: Further Supply-Side Problems Are a Risk to Our Expectation of a Slowdown in Goods Inflation, Which Accounts for the Entirety of Our Forecasted Decline in Core Inflation in 2022



* New, used, and rental cars, furniture, sporting equipment, household appliances, sports and recreational vehicles, and video, audio, photo, and info. equipment.

* New and used cars, car parts, and household furnishings and operations.

Source: Department of Commerce, Department of Labor, Goldman Sachs Global Investment Research

Ultimately though, for the inflation overshoot to be truly persistent year after year, it will have to be driven mainly by two key factors, inflation expectations and wage growth. These are the core inflation drivers that we argued a year ago matter most for the Fed. If we thought that the economy had definitively entered a wage-price spiral with inflation expectations and wage growth firmly entrenched well above target-consistent levels, then we would agree that a recession might be needed to bring inflation down. But in both cases reality is more complex and presents a mix of concerning and reassuring signals.

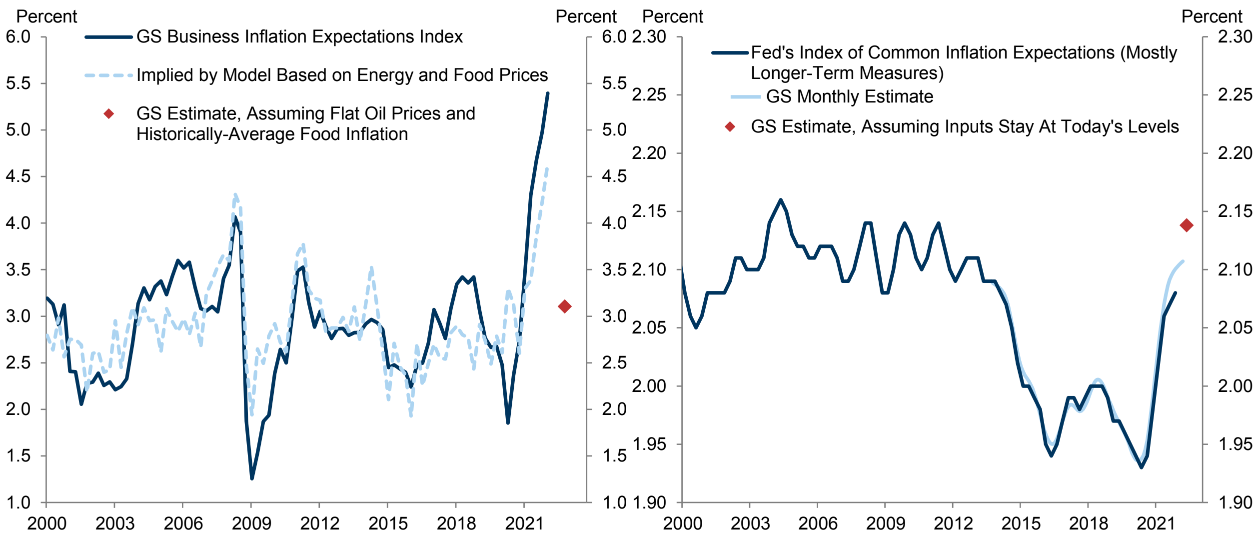
We start with inflation expectations. Last year we argued that a key difference with the inflationary overheating of the 1960s and 1970s is that today central bankers better understand the role of expectations in inflation dynamics and have many measures to track them in real time. But in practice, this wealth of data on expectations has turned out to be somewhat tricky to interpret.

It is clearly the case that short-term inflation expectations are much too high. Consumer year-ahead expectations run in the 5-6% range. Even more concerning, a composite measure of business inflation expectations that we introduced last year and update in our Monthly Inflation Monitor is now running above 5%, its highest level in its 22-year history, and this statistical signal is reinforced by anecdotal evidence of businesses becoming accustomed to raising prices more frequently and aggressively and exploring measures such as shortening contract horizons and adding price escalator clauses. We do think that high short-term expectations add to the near-term momentum of actual inflation.

That said, much of the rise in short-term inflation expectations can be explained by spikes in energy and food prices, as shown on the left of Exhibit 3. This implies that if commodity prices level off, that alone might generate a meaningful decline in short-term expectations. In addition, while short-term expectations are very high, long-term inflation expectations remain well anchored on the Fed's target. Our higher-frequency, unsmoothed version of the Fed's Index of Common Inflation Expectations—which summarizes mainly long-term expectations of consumers, investors, and forecasters—is now running at the top of its 25-year range but not above it, as shown on the right of Exhibit 3.

It is hard to know how much weight to put on high short-term inflation expectations versus anchored long-term expectations. We previously showed that, absent further inflationary shocks, roughly three-fourths of the gap tends to be closed by short-term expectations converging toward long-term expectations. But we do not have a large historical dataset of inflation surges that unanchor one but not the other—the long-term measures only date to the late 1970s—so there is considerable uncertainty.

Exhibit 3: Short-Term Inflation Expectations Are Clearly Much Too High, But Much of This Appears to Be Driven by Commodity Price Spikes, and Long-Term Expectations Remain Well Anchored

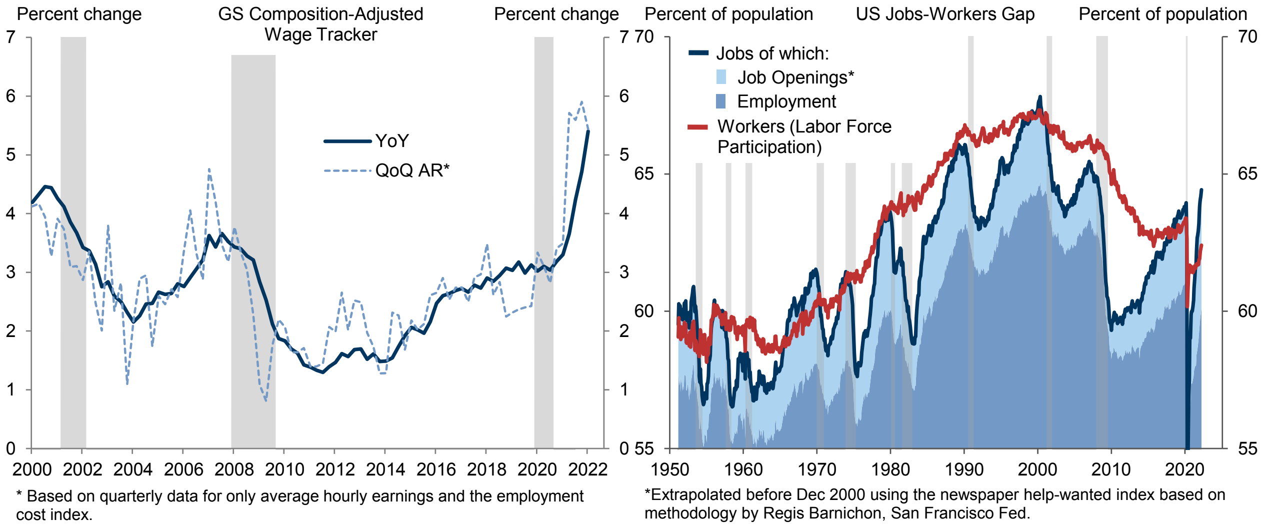


Source: Federal Reserve, Goldman Sachs Global Investment Research

We turn next to wage growth. Wage growth has clearly been running much too hot to be compatible with the Fed's 2% inflation goal. Our composition-adjusted wage tracker has risen about 5.5% over the last year, as shown on the left of Exhibit 4. After subtracting 1.5-2% productivity growth, this implies unit labor cost growth of 3.5-4% and similar inflation pressure. While the initial surge in wage growth last summer was dominated by low-paid workers and seemed to largely reflect labor shortages caused in part by temporary unemployment benefits, strong wage growth has become more broadly based.

It is also clear that a major reason for the acceleration in wage growth from the 3% peak late last cycle to 5.5% now is that the labor market is extremely tight, much more so than the unemployment rate suggests. The right side of Exhibit 4 shows that our jobs-workers gap—a measure of total labor demand relative to total labor supply—is now much larger than it was before the pandemic and in fact the largest it has ever been in postwar US history.

Exhibit 4: Wage Growth Is Running Too Hot, Supported by the Largest Jobs-Workers Gap in US History



Source: Department of Labor, Goldman Sachs Global Investment Research

But here, too, it is hard to know how much of the increase in wage growth is due to the tighter labor market and how much is due to temporary factors. These could include compensation for unusually large cost of living increases over the last year, generous one-time raises to compensate workers for pandemic hardship, and fiscal measures such as last year's enhanced unemployment benefits that temporarily reduced labor supply and contributed to the surge in wage growth for low-paid workers.

Surveys indicate that companies apparently see last year's large pay raises as a one-time exception, not the new normal. Across a dozen surveys covering thousands of employers, the median respondent forecasts that their wage and salary costs will rise 3.6% from 2021 to 2022, as shown in Exhibit 5. Nearly all surveys ask about total labor costs, which should include both raises and pay for new employees, meaning that the median response seems to imply wage growth of less than 3% after accounting for employment growth. It is tempting to dismiss this as wishful thinking, but survey data have been a good leading indicator of wage growth in the past.

Wage growth needs to fall from 5.5% about half way back to its 3% pre-pandemic rate—that is, to about 4-4.5%—in order to be compatible with the FOMC's forecast that inflation will fall to the low-to-mid 2s in the years ahead. We think that policymakers will need to narrow the jobs-workers gap meaningfully to achieve this, but the survey evidence suggests that the fading of some temporary factors might help too.

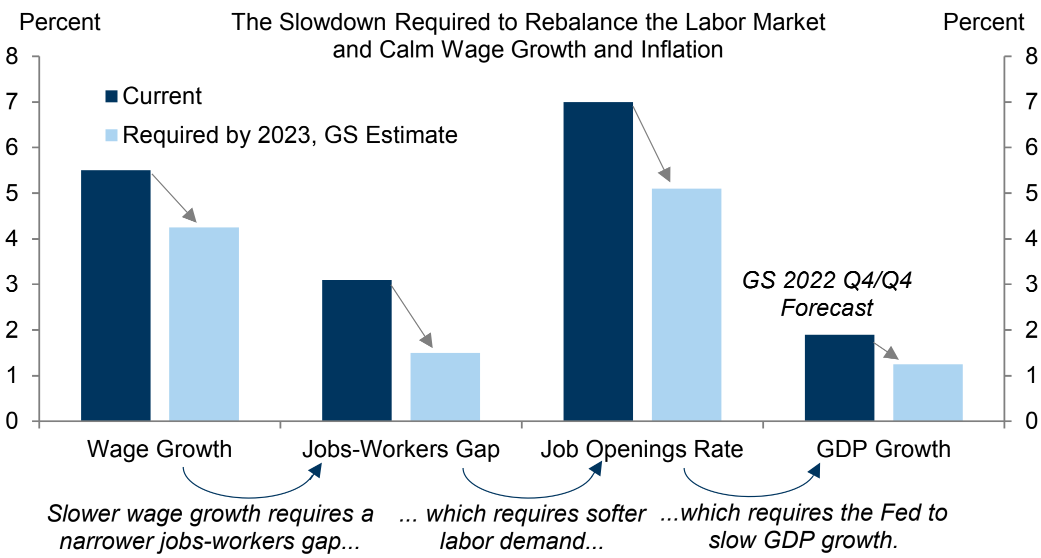
Exhibit 5: Companies Expect Much More Moderate Wage Growth This Year

Source: Federal Reserve, XpertHR, The Management Association, Salary.com, Payscale, Willis Tower Watson, Economic Research Institute, Mercer, The Conference Board, Empsights, Goldman Sachs Global Investment Research

These nuances of the inflation picture make it hard to fit the current situation into a single historical box. Comparisons with soft landings like the mid-1990s tightening cycle, for example, are too reassuring because reversing overheating is likely to be harder than just preventing it, and today, inflation, short-term inflation expectations, and wage growth are running hotter relative to the inflation goal than in those episodes. But comparisons with the 1970s are also too extreme because long-term inflation expectations are not currently unanchored. Instead, we see partial traces of both much earlier postwar inflation surges driven by supply-demand imbalances that largely faded on their own, as well as the wage-price spiral that got under way in the overheated labor market of the late 1960s. Historical comparison therefore offers reasons for both comfort and concern, but not any definitive conclusions.

We recently introduced an analytical framework for thinking about whether the Fed can restore balance to the labor market and tame inflation without a recession. Our approach to answering this question proceeds in a series of four steps, illustrated in Exhibit 6. First, we ask how much wage growth needs to slow to be compatible with the Fed's projection that inflation will gradually fall toward the 2% target. Second, we ask how much the jobs-workers gap needs to shrink to achieve that slowdown in wage growth. Third, we estimate how far the elevated level of job openings would have to fall for reduced labor demand coupled with an assumed 1-1.5 million worker recovery in labor supply to shrink the jobs-workers gap sufficiently. Finally, we ask how much GDP growth would need to slow to reduce job openings by that amount, based on the statistical relationship between the two. Our conclusion is that we do not need a recession but probably do need growth to slow to a somewhat below-potential pace of about 1-1.5% for a year, a path that would raise recession risk above normal levels.

Exhibit 6: Our Analysis Suggests That It Is Possible to Calm Wage Growth and Inflation Without a Recession, but We Will Probably Need a Period of Somewhat Below-Potential Growth



Source: Department of Labor, Department of Commerce, Goldman Sachs Global Investment Research

Our analysis implies that the Fed needs to slow GDP growth about ½-1pp more than our below-consensus 2022 forecast of 1.9% (Q4/Q4) implies. Our usual rule of thumb implies that this would require another 50-100bp of FCI tightening, which may require signaling and delivering a higher terminal funds rate than our baseline forecast of 3-3¼% (which is now fully priced). We also see further upside risk to the funds rate path from the possibility that housing and autos, two of the most interest rate sensitive sectors of the economy, are currently constrained more by supply than demand and might therefore respond less to rate hikes than usual.

We recently gave recession odds of 15% over the next year and 35% over the next two years. The odds would of course rise further at longer horizons. The possibility that overheating could force the Fed's hand and end in recession is probably best thought of at a 2-3 year horizon, where the total odds are somewhat higher still. But we think it is premature to conclude that a recession is the only possible solution to the inflation problem and therefore already an inevitability over the next few years.

David Mericle

The US Economic and Financial Outlook

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

	2020	2021	2022	2023	2024	2025	2022				2023			
			(f)	(f)	(f)	(f)	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
OUTPUT AND SPENDING														
Real GDP	**-3.4**	**5.7**	3.1	2.0	1.9	1.9	1.5	2.0	2.3	2.0	2.0	2.0	2.0	2.0
Real GDP (annual=Q4/Q4, quarterly=yoy)	**-2.3**	**5.5**	1.9	2.0	1.9	1.9	4.3	3.2	3.1	1.9	2.1	2.1	2.0	2.0
Consumer Expenditures	**-3.8**	**7.9**	3.2	2.1	1.9	1.9	3.6	2.0	2.5	2.0	2.0	2.0	2.0	2.0
Residential Fixed Investment	**6.8**	**9.2**	0.8	1.4	2.0	2.0	11.3	-3.0	0.0	1.0	2.5	2.3	2.0	2.0
Business Fixed Investment	**-5.3**	**7.4**	4.5	3.4	3.5	3.6	7.2	4.2	3.0	3.2	3.4	3.4	3.4	3.4
Structures	**-12.5**	**-8.0**	-0.3	1.4	2.6	3.0	8.2	0.0	0.0	1.0	2.0	2.0	2.0	2.0
Equipment	**-8.3**	**13.1**	3.3	2.5	2.8	3.0	5.1	3.0	2.5	2.5	2.5	2.5	2.5	2.5
Intellectual Property Products	**2.8**	**10.0**	8.1	5.2	4.7	4.5	9.0	7.5	5.0	5.0	5.0	5.0	5.0	5.0
Federal Government	**5.0**	**0.6**	-2.5	-0.8	-0.1	0.0	-1.2	-1.0	-1.0	-1.0	-1.0	-1.0	0.0	0.0
State & Local Government	**0.9**	**0.4**	1.8	1.6	1.0	1.0	2.2	2.5	2.5	2.5	1.0	1.0	1.0	1.0
Net Exports ($bn, '12)	**-943**	**-1,284**	-1,473	-1,439	-1,421	-1,444	-1,456	-1,479	-1,479	-1,478	-1,466	-1,444	-1,430	-1,416
Inventory Investment ($bn, '12)	**-42**	**-33**	150	95	60	60	155	155	145	145	125	100	85	70
Industrial Production, Mfg.	**-6.6**	**6.2**	2.6	1.7	1.7	1.6	1.1	1.4	1.6	1.7	1.6	1.8	1.8	1.8
HOUSING MARKET														
Housing Starts (units, thous)	**1,397**	**1,605**	1,699	1,720	--	--	1,753	1,687	1,658	1,699	1,719	1,765	1,703	1,692
New Home Sales (units, thous)	**828**	**773**	800	889	887	887	770	786	806	838	861	903	901	891
Existing Home Sales (units, thous)	**5,638**	**6,127**	5,845	5,786	5,854	5,921	**6,063**	5,799	5,772	5,744	5,760	5,778	5,795	5,812
Case-Shiller Home Prices (%yoy)*	**9.5**	**18.8**	8.7	2.7	3.5	3.8	18.5	16.1	12.2	8.7	--	--	--	--
INFLATION (% ch, yr/yr)														
Consumer Price Index (CPI)**	**1.3**	**7.1**	6.1	2.8	2.6	2.4	**8.0**	8.3	7.8	6.5	5.0	3.4	2.9	2.8
Core CPI **	**1.6**	**5.5**	4.4	2.6	2.6	2.5	**6.3**	5.5	5.3	4.7	3.8	3.3	2.8	2.7
Core PCE** †	**1.5**	**4.9**	4.0	2.4	2.3	2.2	5.3	4.9	4.7	4.2	3.6	3.1	2.7	2.5
LABOR MARKET														
Unemployment Rate (%)^	**6.7**	**3.9**	3.3	3.2	3.2	3.2	**3.6**	3.4	3.3	3.3	3.3	3.3	3.2	3.2
U6 Underemployment Rate (%)^	**11.7**	**7.3**	6.4	6.1	6.1	5.9	**6.9**	6.5	6.4	6.4	6.3	6.3	6.2	6.1
Payrolls (thous, monthly rate)	**-774**	**562**	268	109	85	65	**562**	200	180	130	110	110	110	107
Employment-Population Ratio (%)^	**57.4**	**59.5**	60.6	60.6	60.5	60.3	**60.1**	60.4	60.6	60.6	60.6	60.6	60.6	60.6
Labor Force Participation Rate (%)^	**61.5**	**61.9**	62.7	62.6	62.5	62.3	**62.4**	62.5	62.6	62.7	62.7	62.7	62.7	62.6
Average Hourly Earnings (%yoy)	**4.9**	**4.2**	5.3	4.7	4.1	3.9	**5.4**	5.4	5.3	5.0	4.9	4.9	4.6	4.4
GOVERNMENT FINANCE														
Federal Budget (FY, $bn)	**-3,129**	**-2,772**	-1,100	-1,050	-1,150	-1,300	--	--	--	--	--	--	--	--
FINANCIAL INDICATORS														
FF Target Range (Bottom-Top, %)^	**0-0.25**	**0-0.25**	2.25-2.5	3-3.25	3-3.25	3-3.25	**0.25-0.5**	1.25-1.5	1.75-2	2.25-2.5	2.5-2.75	2.75-3	3-3.25	3-3.25
10-Year Treasury Note^	**0.93**	**1.52**	2.70	2.80	2.70	2.65	**2.32**	2.50	2.60	2.70	2.75	2.80	2.80	2.80
Euro (€/$)^	**1.22**	**1.13**	1.15	1.25	1.30	1.30	**1.11**	1.09	1.12	1.15	1.18	1.20	1.23	1.25
Yen ($/¥)^	**103**	**115**	116	110	105	105	**121**	125	119	116	115	113	112	110

* 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.

Source: Goldman Sachs Global Investment Research

Economic Releases

Date		Time (ET)	Indicator	Estimate GS	Consensus	Last Report
Mon	**Apr 25**	10:00	Dallas Fed Manufacturing Index (April)	n.a.	4.5	8.7
Tue	**Apr 26**	**8:30**	**Durable Goods Orders (March)**	**+0.7%**	**+1.0%**	**-2.1%**
		8:30	**Durable Goods Orders Ex-Transport**	**+0.7%**	**+0.5%**	**-0.6%**
		8:30	**Core Capital Goods Orders**	**+0.7%**	**+0.5%**	**-0.2%**
		8:30	**Core Capital Goods Shipments**	**+0.7%**	**+0.5%**	**+0.3%**
		9:00	FHFA House Price Index (February)	n.a.	+1.5%	+1.6%
		9:00	**S&P/Case-Shiller Home Price Index (February)**		**+1.50%**	**+1.79%**
		10:00	**Consumer Confidence (April)**		**108.0**	**107.2**
		10:00	Richmond Fed Manufacturing Index (April)	n.a.	8	13
		10:00	**New Home Sales (March)**		**+0.4%**	**-2.0%**
Wed	**Apr 27**	**8:30**	**Advance Goods Trade Balance (March)**	**-$110.0bn**	**-$105.0bn**	**-$106.3bn**
		8:30	**Wholesale Inventories (March preliminary)**		**+1.8%**	**+2.5%**
		8:30	**Pending Home Sales (March)**		**-0.5%**	**-4.1%**
Thu	**Apr 28**	**8:30**	**Initial Jobless Claims**		**180k**	**184k**
		8:30	Continuing Claims	n.a.	1,393k	1,417k
		8:30	**Real GDP (Q1 advance)**	**+1.5%**	**+1.0%**	**+6.9%**
		8:30	**Personal Consumption (Q1 advance)**	**+3.6%**	**+3.4%**	**+2.5%**
		11:00	Kansas City Fed Manufacturing Index (April)	n.a.	35	37
Fri	**Apr 29**	**8:30**	**Employment Cost Index (Q1)**	**+1.3%**	**+1.1%**	**+1.0%**
		8:30	**Personal Income (March)**		**+0.4%**	**+0.5%**
		8:30	**Personal Spending (March)**		**+0.6%**	**+0.2%**
		8:30	**PCE Price Index (March)**	**+0.83%**	**+0.9%**	**+0.6%**
		8:30	**Core PCE Price Index (March)**	**+0.25%**	**+0.3%**	**+0.4%**
		9:45	**Chicago Purchasing Managers' Index (April)**	**62.9**	**61.0**	**62.9**
		10:00	**UMich Consumer Sentiment (April final)**		**65.7**	**65.7**

Source: Goldman Sachs Global Investment Research

Disclosure Appendix

Reg AC

We, Jan Hatzius, Alec Phillips, David Mericle, Spencer Hill, CFA, Joseph Briggs, Ronnie Walker and Manuel Abecasis, hereby certify that all of the views expressed in this report accurately reflect our personal views, which have not been influenced by considerations of the firm's business or client relationships.

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