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Executive Summary: US Economic Outlook

November 2022



Contacts

Joel Prakken

VP & Co-Head US Economics
joel.prakken@ihsmarkit.com

Chris Varvares

VP & Co-Head US Economics
chris.varvares@ihsmarkit.com

Ben Herzon

Executive Director
ben.herzon@ihsmarkit.com

Ken Matheny

Executive Director
ken.matheny@ihsmarkit.com

Kathleen Navin

Executive Director
kathleen.navin@ihsmarkit.com

Patrick Newport

Executive Director
patrick.newport@ihsmarkit.com

Michael Zdinak

Director
michael.zdinak@ihsmarkit.com

Michael Konidaris

Associate Director
michael.konidaris@ihsmarkit.com

Mike Montgomery

Associate Director
mike.montgomery@ihsmarkit.com

Juan Turcios

Principal Economist
juan.turcios@ihsmarkit.com

Akshat Goel

Senior Economist
akshat.goel@ihsmarkit.com

Gordon Greer III

Senior Economist
gordon.greer@ihsmarkit.com

Lawrence Nelson

Senior Economist
lawrence.nelson@ihsmarkit.com

Caroline Foshee

Economist
caroline.foshee@ihsmarkit.com

Forecast overview

Unsustainable Q3 surge in net exports conceals slowing domestic demand; modest recession looms

- We've revised up our projection of real GDP growth in 2023 from -0.5% to -0.2%.¹ The base forecast still includes a mild recession starting late in the fourth quarter of this year, with an anemic recovery taking hold in third quarter of next year. We project GDP to grow a below-trend 1.3% in 2024.
- Driven by a large but unsustainable surge in net exports, real GDP grew 2.6% in Q3, matching our final tracking estimate but modestly above October's forecast of 2.3%. In addition, final sales to private domestic purchasers, while decelerating, posted a small increase in Q3 rather than the small decline we anticipated, strengthening the profile of monthly GDP heading into the fourth quarter. In response, we revised up our forecast of Q4 growth from -1.2% to -0.4%.
- At its November meeting, the Federal Reserve raised its policy rate 75 basis points, indicated it expects to raise rates further, — albeit perhaps more slowly — and reiterated its intent to quell inflation at the risk of causing a recession. We've revised our monetary policy assumptions to show the Fed raising its policy rate to the range of 4.75% - 5.00% by March of 2023, and not reversing course until the spring of 2024.
- Over the last several months Treasury yields have jumped, spreads to private yields and the mortgage rate have widened, stock prices have slumped, house prices abruptly have begun declining, the dollar has appreciated further, and financial market volatility has increased notably. Against the backdrop of waning pandemic-era fiscal support, it is this recent sharp and broad tightening of financial conditions that we expect to tip the economy into recession.
- With GDP declining in 2023 and growing below trend in 2024, the unemployment rate rises to 5.7% by late 2023 before declining to 4.5% by 2026. Given the upward revision to projected near-term GDP growth, this month we project the peak unemployment rate will be 0.3 percentage point lower than in October's forecast.

The recession is investment-driven

- We project consumer spending to post modest gains this year and next, but expect investment spending to decline in both 2022 and 2023. Within investment, the sharpest and earliest declines are in the residential component. Housing has been hit especially hard by the recent tightening of financial conditions, which has seen not only a sharp rise in Treasury yields, but also a widening of the spread from Treasury yields to the conventional mortgage rate.

House prices and rents

- House prices fell in September—the third consecutive monthly decline—and by more than we anticipated. In response, we've revised down our projection of house prices to show a peak-to-trough decline of 10% by early 2024. In addition, recent work on lags from marginal to average rents encouraged us to revise up our projection of shelter costs. Consequently, the forecast shows, by 2025, a steep 22% decline in the ratio of house prices to imputed owners' rent, as the housing market adjusts to recent imbalances.

Vehicle production to dampen cycle

- Higher financing rates and a decline in employment will slow the recovery of vehicle sales. However, with inventories lean and rental fleets aging, we expect an increasing supply of chips to encourage a countercyclical increase in assemblies as the industry first meets pent-up demand and then turns towards replenishing depleted stocks.

Inflation remains elevated, but will ease sequentially

- We expect core PCE² inflation to drop sharply, from 4.8% in Q4 of this year to 2.6% by Q4 2023 as supplies of commodities improve, then decline more slowly to 2.0% by 2025 in response to softening labor markets conditions. The forecast of core PCE inflation has been revised up 0.1 - 0.2 percentage point over 2023–2025, reflecting the lower peak unemployment rate and the upward revisions in our forecast of rents. We project the CPI to rise 8.1% this year, 4.3% next year, and 2.7% in 2024.

Hurricane Ian losses

- Current production lost to Ian is not readily observable in the National Accounts. However, BEA did report that disaster-related insurance benefits paid in Q3 were \$185 billion at an annual rate, suggesting insured losses were \$46 billion.

Student debt forgiveness

- The forecast assumes student loan forbearance is extended through December. It does not yet include President Biden's program to forgive approximately one-third of student debt, as the plan remains mired in legal challenges. However, our analysis is that such debt forgiveness would have relatively minor impacts on the forecast.

1. This forecast was issued on 7 November 2022. Unless otherwise noted, all quarterly growth rates are stated as compound annual rates, all expenditure components of GDP are in chained 2012 dollars, and all annual growth rates are full-year over full-year percent changes.

2. PCE is the acronym for personal consumption expenditures.

Forecast at a glance

Base forecast (November 2022) 2022:Q4 - 2026:Q4

	Major economic indicators																	
	% ch. from prior quarter, annual rate						% ch. from prior year, or annual average						% ch. from fourth quarter of prior year, or fourth-quarter average					
	2022.2	2022.3	2022.4	2023.1	2023.2	2023.3	2021	2022	2023	2024	2025	2026	2021.4	2022.4	2023.4	2024.4	2025.4	2026.4
Key indicators of real activity																		
Real gross domestic product	-0.6	2.6	-0.4	-2.0	-0.4	1.0	5.9	1.8	-0.2	1.3	1.8	1.9	5.7	0.0	0.0	1.6	1.9	1.9
Contributions to growth (% points):																		
Final sales to domestic purchasers	0.2	0.5	-0.1	-0.9	-0.2	0.4	7.0	1.6	-0.1	1.1	1.8	1.7	5.5	0.5	0.1	1.6	1.7	1.7
Net exports of goods & services	1.2	2.8	0.0	-0.5	0.3	0.1	-1.3	-0.5	0.4	0.0	0.0	0.1	-0.8	0.2	0.0	-0.1	0.1	0.1
Change in private inventories	-1.9	-0.7	-0.4	-0.5	-0.6	0.4	0.2	0.6	-0.5	0.2	0.1	0.0	0.7	-0.8	0.0	0.1	0.1	0.0
Major components of real GDP																		
Personal consumption expend.	2.0	1.4	1.5	-0.4	0.8	0.7	8.3	2.7	0.8	1.1	1.7	1.9	7.2	1.6	0.5	1.4	1.8	2.0
Nonres. fixed investment	0.1	3.7	-1.0	-4.1	-3.0	-1.2	6.4	3.2	-1.5	-0.2	1.1	1.7	5.0	2.6	-2.1	0.4	1.4	1.9
Residential investment	-17.8	-26.4	-24.1	-15.5	-12.0	-1.7	10.7	-10.4	-15.7	6.0	7.5	2.4	-0.3	-18.3	-6.7	10.9	4.1	1.8
Change in private inventories *	110.2	61.9	41.3	14.8	-14.3	8.0	-19.4	107.0	10.9	45.2	58.0	66.6	197.6	41.3	35.0	49.0	62.1	68.5
Exports of goods & services	13.8	14.4	-0.2	-3.0	0.0	1.5	6.1	7.3	2.1	3.6	4.3	3.8	6.5	5.5	0.4	4.7	4.1	3.5
Imports of goods & services	2.2	-6.9	-0.4	1.2	-2.2	0.5	14.1	8.5	-0.8	2.7	3.4	2.3	10.1	2.9	0.4	4.1	2.6	2.3
Gov't consump. & gross invest.	-1.6	2.4	1.0	3.4	1.0	1.0	0.6	-0.9	1.6	1.0	0.8	0.6	0.5	-0.1	1.6	0.9	0.8	0.4
Pvt. housing starts (thous. units)	1647	1461	1372	1256	1193	1169	1605	1550	1197	1295	1406	1394	1679	1372	1169	1381	1406	1382
Light vehicle sales (mil. units)	13.3	13.4	14.0	14.1	14.3	14.9	14.9	13.7	14.7	15.8	16.3	16.4	13.0	14.0	15.4	16.0	16.4	16.3
Industrial production, total	5.2	2.9	0.3	-2.8	-2.9	-0.4	4.9	4.3	-0.5	0.5	1.6	1.6	4.5	3.3	-1.3	1.0	1.9	1.4
Industrial production, mfg	3.2	1.9	0.4	-3.1	-2.7	0.0	5.7	3.6	-0.7	1.1	1.8	1.7	4.2	2.3	-1.0	1.6	1.8	1.6
Capacity utilization (mfg, %)	79.5	79.7	79.6	78.8	77.9	77.5	77.1	79.5	77.9	77.5	77.6	77.6	78.6	79.6	77.5	77.5	77.6	77.5
Nonfarm payroll employ. (mil.)	151.6	152.7	153.4	153.3	152.4	151.5	146.1	152.0	152.0	151.5	152.5	153.2	148.6	153.4	150.9	152.0	152.8	153.5
Average monthly chg. (thous.)	349	381	146	-122	-355	-271	562	354	-226	112	61	57	637	146	-154	92	60	52
Private nonfarm hours	2.9	2.4	1.6	-2.3	-3.6	-2.9	5.2	3.7	-1.0	-0.4	1.0	0.7	5.3	2.6	-2.7	1.1	0.8	0.6
Civilian unemployment rate (%)	3.6	3.5	3.7	4.0	4.7	5.3	5.4	3.7	4.9	5.3	4.8	4.6	4.2	3.7	5.7	5.0	4.7	4.5
Prices, Productivity, & Costs																		
CPI, all items, all urban	10.5	5.7	5.4	3.7	2.2	3.1	4.7	8.1	4.3	2.7	2.3	2.2	6.7	7.7	3.0	2.6	2.1	2.2
CPI excl food & energy, all urban	6.6	6.4	5.7	4.8	3.6	3.3	3.6	6.2	4.8	2.8	2.4	2.2	5.0	6.3	3.7	2.6	2.3	2.3
PCE price index	7.3	4.2	4.5	3.1	1.8	2.6	4.0	6.3	3.4	2.3	2.1	2.0	5.7	5.9	2.5	2.2	2.0	2.0
PCE price excl food & energy	4.7	4.5	4.8	3.9	3.1	2.9	3.5	5.0	3.8	2.5	2.1	2.0	4.7	4.9	3.1	2.3	2.0	2.0
PPI finished goods	22.3	-0.6	3.3	1.6	-0.4	1.0	8.9	13.5	2.3	0.9	1.4	1.5	13.0	10.4	1.0	0.9	1.4	1.5
Compensation per hour	4.5	3.8	4.1	5.1	4.7	3.9	4.8	4.9	4.4	4.0	3.9	3.7	5.2	3.6	4.4	4.0	3.8	3.6
Output per hour	-4.1	0.3	-2.8	-1.2	2.4	3.6	2.4	-1.7	0.0	1.5	1.0	1.4	1.9	-3.1	2.0	0.5	1.3	1.4
Unit labor cost	8.9	3.5	7.1	6.4	2.2	0.3	2.4	6.8	4.4	2.4	2.8	2.2	3.2	7.0	2.3	3.4	2.4	2.2
CoreLogic house price index **	3.4	-1.5	-3.0	-2.5	-2.0	-1.0	15.7	13.0	-6.7	-1.0	2.4	3.9	18.0	3.7	-5.9	0.9	3.2	4.2
Price of WTI crude oil (\$/barrel)	108.72	93.18	89.88	84.29	78.66	81.46	67.99	96.56	82.30	82.71	84.47	84.16	77.43	89.88	84.80	85.09	83.93	84.75
Price of Brent crude oil (\$/barrel)	113.33	100.77	96.64	89.60	83.67	86.67	70.70	102.73	87.48	87.42	89.59	90.53	79.67	96.64	90.00	89.83	89.59	91.41
Selected Financial Variables																		
Federal funds rate (%)	0.77	2.19	3.65	4.52	4.85	4.85	0.08	1.68	4.77	4.33	2.97	2.63	0.08	3.65	4.86	3.65	2.63	2.63
Yield on 10-Yr Treasury Notes (%)	2.93	3.11	4.03	4.10	3.93	3.77	1.44	3.00	3.86	3.33	3.20	3.19	1.54	4.03	3.62	3.23	3.20	3.19
Baa corporate bond yield (%)	5.11	5.43	6.38	6.45	6.33	6.17	3.45	5.24	6.24	5.53	5.39	5.35	3.38	6.38	6.01	5.42	5.39	5.33
Broad trade-wtd US\$ (Jan 2006=100)	119.1	123.7	127.5	128.5	128.7	128.3	113.1	121.5	128.1	122.7	117.5	114.9	115.0	127.5	126.9	120.3	116.3	114.2
S&P 500 stock index, period end	3785	3586	3775	3774	3806	3828	4766	3775	3833	4056	4166	4316	4766	3775	3833	4056	4166	4316
S&P 500 stock index, average	4110	3974	3757	3775	3790	3817	4267	4077	3803	3970	4111	4237	4601	3757	3830	4042	4151	4295
Incomes & Related Measures																		
Corporate profits w/ IVA & CCAdj	19.7	11.0	-8.0	-13.5	-2.8	5.2	22.6	8.0	-2.1	0.6	0.6	3.1	22.3	5.3	-0.9	-1.8	1.9	3.5
Real disposable personal income	-1.5	1.7	3.2	4.6	2.6	3.4	1.9	-6.2	3.0	3.3	2.5	2.5	-0.4	-2.0	3.4	3.0	2.5	2.5
Personal saving rate (%)	3.4	3.3	3.6	4.5	4.9	5.6	11.9	3.6	5.2	7.2	8.0	8.5	7.3	3.6	6.0	7.5	8.1	8.6
Fed. surplus (unified, FY, bil. \$)	613	-3441	-1029	-1542	-309	-1142	-2776	-1375	-1006	-1509	-1733	-1882	-1511	-1029	-1674	-1988	-2162	-2287

* billions of chained 2012 \$

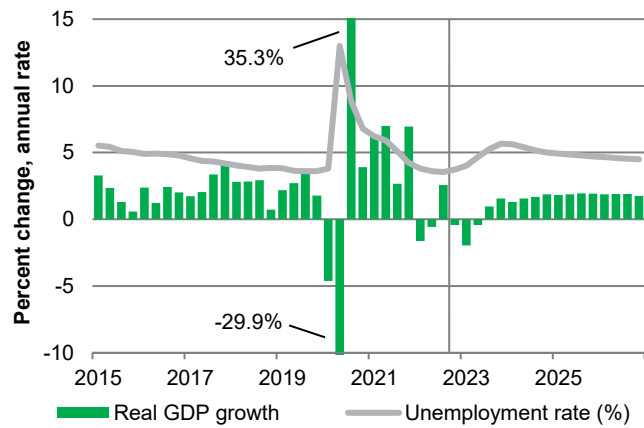
** % change, not annualized

Source: IHS Markit

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Forecast at a glance

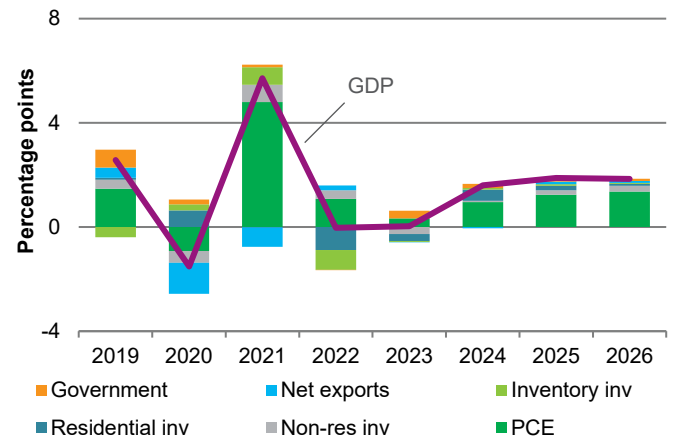
Recession begins in 2022 Q4, runs thru 2023 Q2



Source: IHS Markit, BEA, BLS

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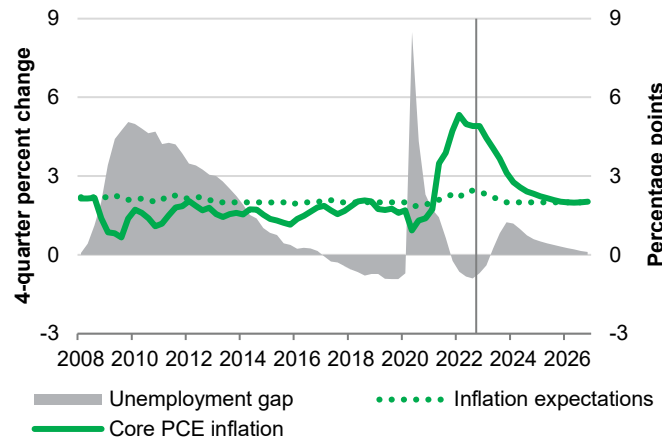
Contributions to GDP growth (Q4/Q4)



Source: IHS Markit, BEA

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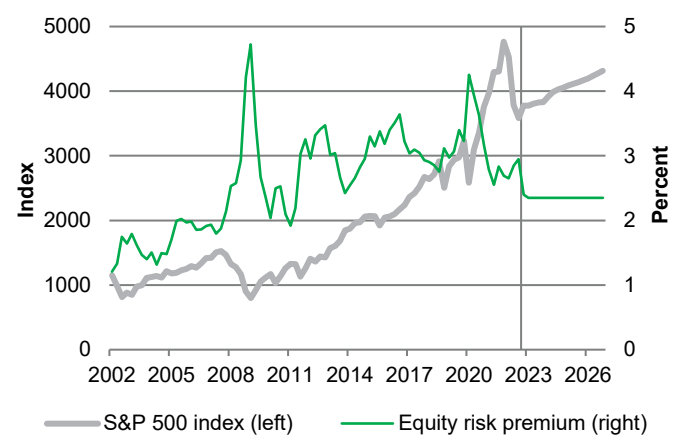
Core PCE inflation declines to 2% after surge



Source: IHS Markit, Philly Fed, BEA, BLS

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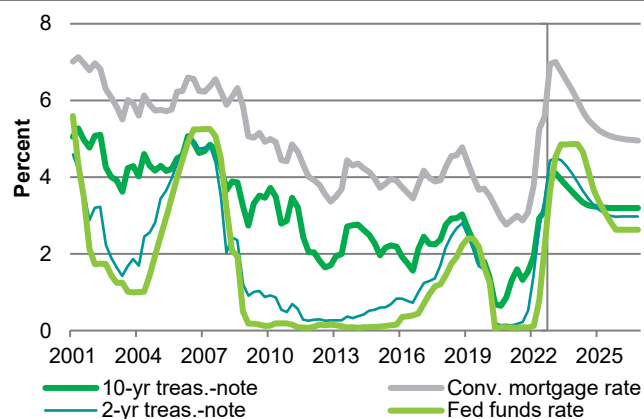
Equities decline over 2022, rise steadily thereafter



Source: IHS Markit, S&P

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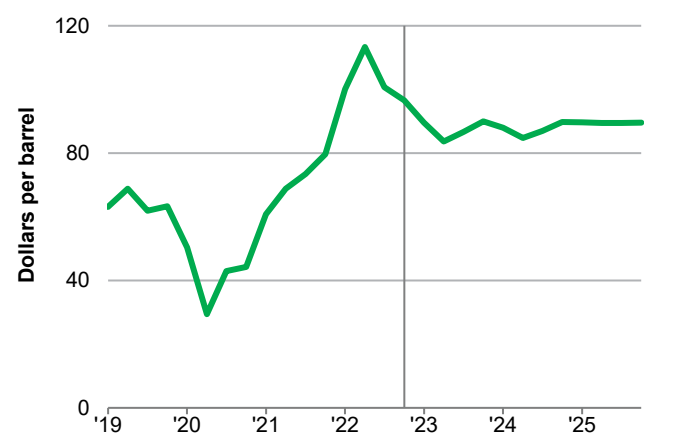
Fed increases the funds rate to 5% by Mar 2023, term yields flatten after rapid rise



Source: IHS Markit, FRB

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Price of Brent crude oil



Source: IHS Markit

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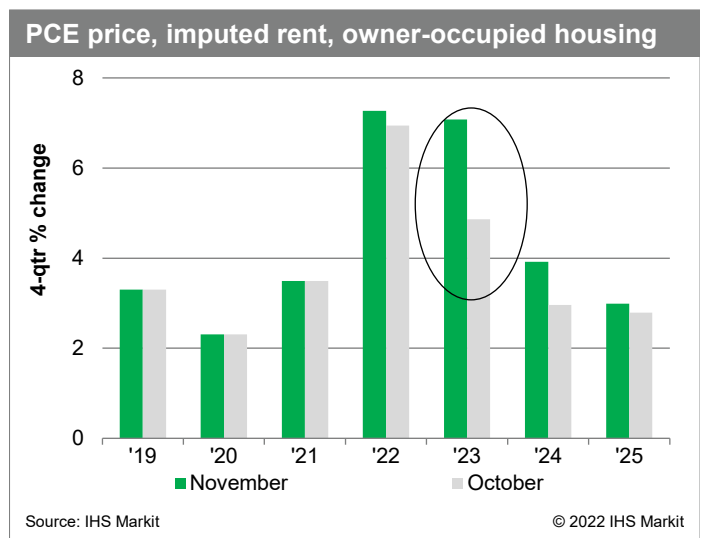
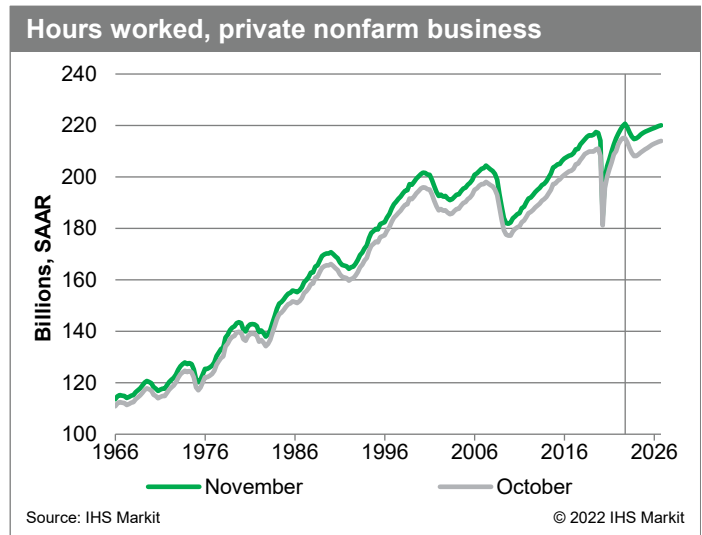
What's New

Details of Q3 history suggest upward revision to Q4 growth; new estimate of hours; higher rent inflation

BEA's advance estimate of Q3 real GDP growth, released 27 October, was 2.6%, matching our final tracking estimate but above October's forecast of 2.3%. Third-quarter growth was more than accounted for by an unsustainable surge in net exports, as exports grew rapidly (14.4%) while imports contracted (-6.9%). Final sales to private domestic purchasers — arguably the best gauge of aggregate demand — grew just 0.1%. Within private final sales, both PCE (1.4%) and nonresidential fixed investment (3.7%) advanced, but residential investment contracted sharply (-26.4%). A decline in inventory investment subtracted 0.7 percentage point from Q3 growth. GDP price inflation dropped sharply, from 9.0% in Q2 to 4.1% in Q3, as commodity supplies improved, but core PCE inflation remained stubbornly high at 4.5%. Details in the report suggested a stronger entry into Q4 than previously expected, especially for PCE, encouraging us to revise up our forecast of Q4 GDP growth up from -1.2% to -0.4%. Coming late this year, the effect was to raise the annual growth rate of GDP next year from -0.5% to -0.2% (chart, top).

The BLS published revised histories for productivity and costs that incorporated not only September's annual revision of the National Accounts, but also a 2% - 3% upward revision in hours worked reflecting improved estimates of "off the clock" hours logged by non-production workers (chart, middle). The effect was to raise the average workweek in the nonfarm business sector, lower the levels of productivity and hourly compensation, but with no impact on unit labor costs. Over most of history, the growth of hours, productivity, and hourly compensation were little affected. However, the revised measures of compensation and output per hour did rise faster following the pandemic than shown in the previous estimates.

We've raised our forecast of core PCE inflation, measured 4th-quarter-to-4th-quarter, by 0.1 - 0.2 percentage point over 2023 through 2025. This partly reflects an upward revision in our projection for shelter costs. Typical rent contracts are for one year. In addition, the BLS surveys its panel of renters over a six-month span. This implies that average rents measured in the CPI and the PCE price index — both owners' equivalent rent and renters' rent — can lag behind marginal rents embodied in new contracts by up to 18 months. Given that marginal rents have risen sharply of late, the long lags to average rents imply that shelter costs will continue to advance strongly well into 2023 even as the rental market begins to cool. Based on new modeling of this link from marginal to average rents, we've revised up our forecast for owners' equivalent rent sharply over the four quarters of 2023 from 4.9% to 7.1% (chart, bottom), by itself enough to add approximately 0.3 percentage point to our forecast of core PCE inflation.



The view just ahead

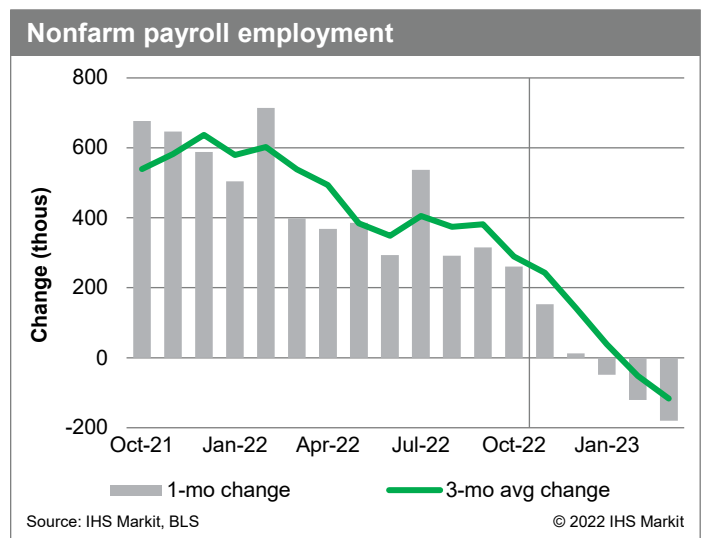
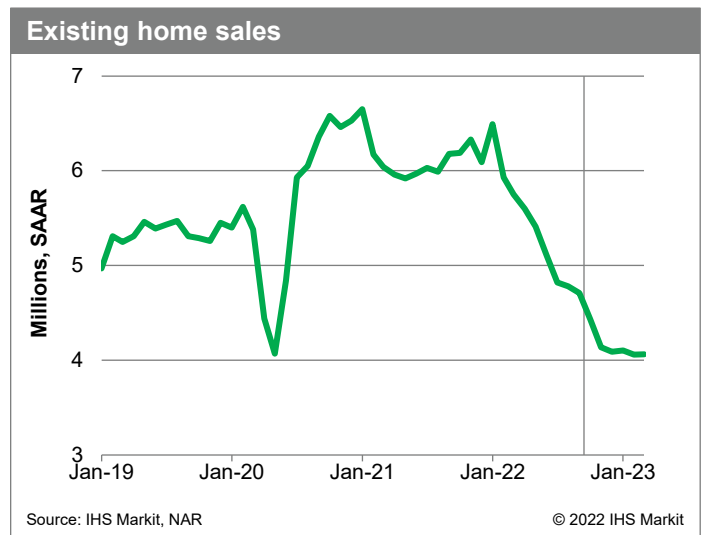
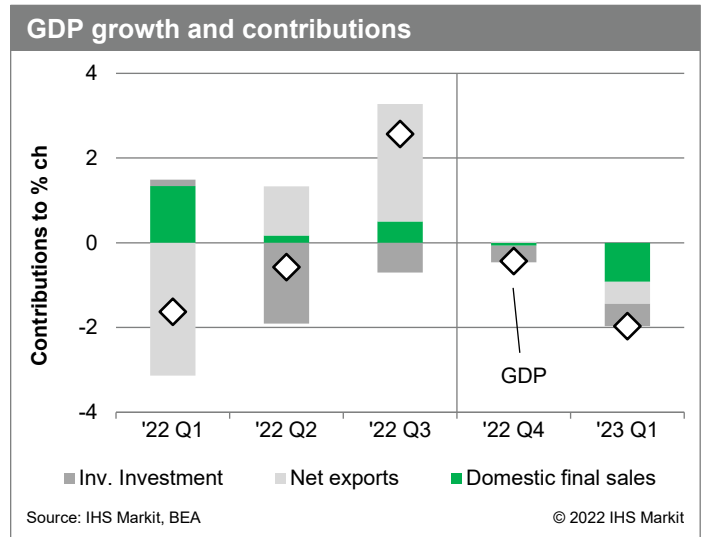
Mild recession beginning in the fourth quarter

We continue to expect that the US economy will tip into recession at some point in the fourth quarter, most likely in December. While GDP growth was solid in the third quarter (+2.6%), it was more than accounted for by a large and unsustainable contribution from net exports. Final sales to domestic purchasers, a better measure of underlying demand, rose only 0.5% in the third quarter following 0.2% growth in the second quarter. Over the fourth and first quarters, we look for final sales to domestic purchases to decline 0.1% and 0.9%, respectively.

The forecasted near-term weakness in final sales to domestic purchasers is expected to be exhibited in several indicators. Single-family housing permits have been plummeting under the weight of sinking affordability. After reaching a peak of about 1.2 million (annual rate) in February, single-family housing permits sunk all the way to about 0.9 million in September and are forecast to fall further to 0.7 to 0.8 million during the first quarter of next year. Existing home sales are exhibiting a similar pattern, having reached a peak of 6.5 million (annual rate) in January and fallen to 4.7 million by September; we assume existing home sales decline further to a pace of 4.1 million by the first quarter. Real (inflation-adjusted) spending on private nonresidential structures has been trending lower since early 2020 and is expected to continue along this trend over the fourth and first quarters. Real orders for nondefense capital goods excluding aircraft and computers have been weakening much of this year. We assume they weaken further in coming months, reflecting elevated borrowing costs and risk spreads. Real orders for computers and related products, on the other hand, have firmed recently, and light vehicle sales to the business sector (consumer leases and fleet sales) appear to be rising.

Labor markets have been holding up well, although the trend in payroll gains is weakening. Over the three months ending in October, payroll gains averaged 289 thousand per month, below the average over the prior three months (ending in July) of 405 thousand per month. The unemployment rate has been trending sideways since last spring. Over the next several months, we assume that payroll employment peaks (in December) and then begins declining in the first quarter. We also assume that the unemployment rate begins trending up within the next couple of months.

Consumer inflation remains stubbornly high, although we expect it to ease somewhat over the next several months. Over the twelve months ending in September, the PCE price index rose 6.2% and the core PCE price index rose 5.1%. As labor markets weaken, and as some consumer commodities prices decelerate, we look for overall and core PCE (12-month) inflation to slow to 4.1% and 4.4%, respectively, by March.



Growth

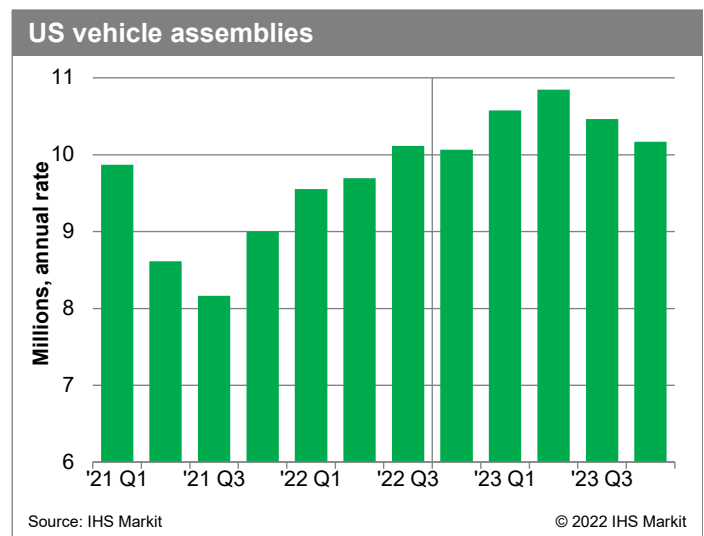
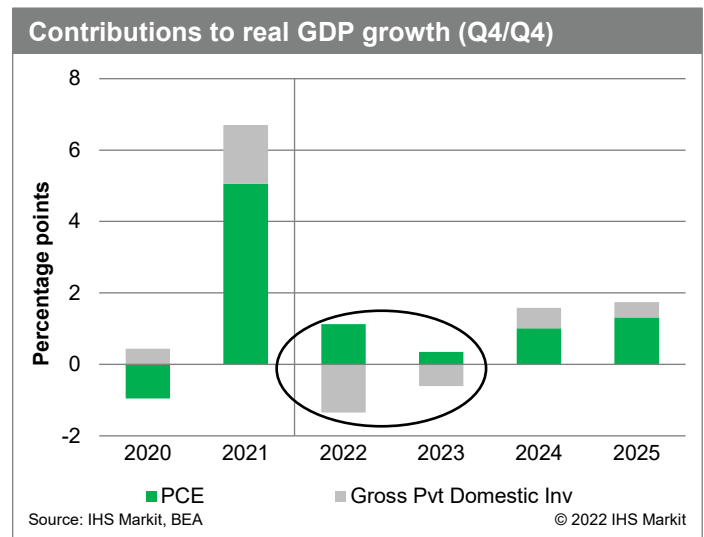
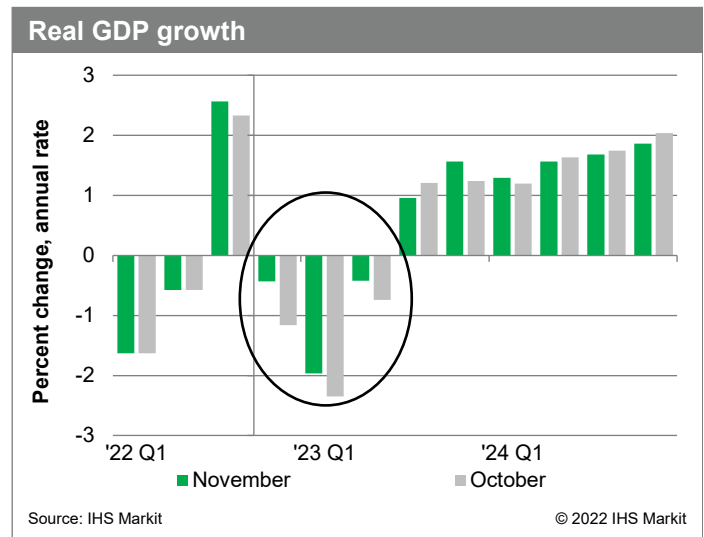
An investment-led recession, but one mild by historical standards

Real GDP grew 2.6% in Q3. This reversed a first-half decline and was above October’s forecast of 2.3%. However, there is sound reason to expect a sharp deceleration of GDP in Q4. Surging net exports contributed 2.8 percentage points to Q3 growth, more than accounting for the overall increase. This is unsustainable, especially as exports of goods exceed levels we consider consistent with fundamentals that themselves are deteriorating as global growth slows and the dollar appreciates. Meanwhile, in response to tightening financial conditions, growth of final sales to private domestic purchasers has slowed sequentially from 2.6% in the fourth quarter of 2021 to just 0.1% in the third quarter of this year. Weakness has emerged in spending on structures — both residential and nonresidential — business purchases of equipment, and consumer spending on goods. Retail and wholesale inventories, while not obviously excessive, are rising faster than sales, portending further declines in inventory investment that has already fallen sharply since early in the year.

While we expect the economy to contract in Q4, details of the estimate for Q3 GDP do suggest a stronger monthly profile entering the quarter than previously anticipated. Consequently, we revised up our estimate of Q4 growth by 0.8 percentage point to -0.4% (chart, top). With the upside surprise to Q3, this raised our forecast of GDP growth for 2022 by 0.1 percentage point to 1.8% and for 2023 by 0.3 percentage point to -0.2%.

The recession shown in this month’s forecast begins late in the fourth quarter of this year and ends in the second quarter of 2023 (chart, top). The peak-to-trough decline in output over those three quarters is 0.7%. Before the “Great Recession” of 2008-2009, the average peak-to-trough decline of GDP during post-WWII recessions was 1.7%. Hence, we characterize the coming recession as quite mild by historical standards. A recovery, initially anemic, begins in 2023 Q3 but gains momentum in 2024 when the Fed reverses course and begins lowering interest rates in response to declining inflation. The previous peak of GDP is surpassed in 2024 Q1 when the next expansion begins. The unemployment rate rises 2.2 percentage points, peaking at 5.7% early in the recovery, before then declining gradually towards the full-employment rate of 4.3%.

The downturn is investment-driven (chart, middle), although we do expect a small decline in PCE in the first quarter of 2023 when consumer spending on goods contracts while spending on services decelerates. And, as a shortage of micro-processor eases, we anticipate an unusual countercyclical pattern in vehicle production to dampen first the contraction of GDP as inventories are rebuilt from today’s depleted levels, then the early recovery of GDP as the pace of assemblies subsides over the second half of next year (chart, bottom).



Sector highlights

Consumer spending expanded through September; payroll employment continued to rise through October

Consumer markets: Our outlook for consumer spending is shaped by the normalization of spending habits, strong but weakening consumer fundamentals, and the impact of current events on consumer demand. Real personal consumption expenditures (PCE) rose 0.3% in September, exceeding expectations, with August's level revised higher as well. Spending on services rose 0.3%, led by an increase in spending on travel, accommodations, food service, and healthcare; spending on goods rose 0.4%, led by spending on nondurable goods. Real PCE for goods has declined 4.8% since peaking in March 2021 while real PCE for services has risen 7.7% over the same period. The personal saving rate fell to 3.1%, continuing its downward drift as declining real incomes have forced some consumers to draw down on savings; after growing 1.9% in 2021, real disposable income is expected to decline 6.2% in 2022. Tighter financial conditions have lowered our forecast of equity values and real household net worth for 2023 and as a result, consumer spending is projected to slow in the short term. We expect growth of real PCE to slow from 2.7% in 2022 to 0.8% in 2023 before firming to 1.1% in 2024.

Labor markets: Nonfarm payroll employment rose 261 thousand in October. The consensus and our expectations were for smaller gains. Revisions to prior months were mixed. Civilian employment (Household Survey), on the other hand, declined 328 thousand, and the unemployment rate rose 0.2 percentage point to 3.7%. Private payroll employment rose 233 thousand in October and the private workweek was unchanged at 34.5 hours. Combined with a 0.4% increase in average hourly earnings (AHE) in October, these developments set private wages and salaries on track for more growth in the fourth quarter than we had expected prior to October's employment situation report. While labor markets remain tight, October's employment report had signs of softness worth noting. For one, the October gain in payrolls was the smallest in some time, and the trend in payroll gains (the six-month moving average) is clearly softening. Average hourly earnings, moreover, are decelerating. Over the three months ending in October, AHE rose at a 3.9% annual rate, down from 5.2% over the prior three months (ending in July). Also, the labor-force participation rate declined 0.1 percentage point to 62.2% in October — weighed down by an aging working-age population — and has trended sideways since February 2022.

Business investment: Business fixed investment (BFI) is forecast to grow 3.2% this year followed by a 1.5% decline next year and a 0.2% decline in 2024. After that, growth of BFI is

expected to turn positive, averaging 1.6% over the subsequent three years. Weakness in BFI next year reflects tightening financial conditions — prompted by the Fed to tamp down demand and inflation — and weak output (a recession). Growth of BFI this year reflects increases in equipment spending (4.5%) and intellectual property products (8.5%) only partially offset by a 9.4% decline in structures investment. Within structures, spending within petroleum and mining remains robust, reflecting past increases in petroleum prices; spending in other areas remains weak.

Housing and construction: When it comes to monetary policy and housing, the Fed has done its job. The hikes in interest rates have led to falling house prices and a slowdown in the growth of rents. They have also resulted in plunging housing starts and cratering home sales. The payoffs will start showing up in the second quarter of next year as inflation from shelter starts falling. In our forecast, nominal house prices, as measured by the CoreLogic HPI, decline 10% from a second-quarter peak through early 2024—or 16% over seven quarters after accounting for CPI inflation. Housing starts fall from 1.61 million in 2021 to 1.55 million in 2022 (previously 1.56 million last month) and 1.20 million in 2023 (previously 1.22 million). Total home sales (new plus existing) are expected to fall from a 14-year high of 6.90 million in 2021 to 5.75 million (previously 5.79 million.) in 2022 and 4.45 million in 2023 (previously 4.53 million.)

International trade: The Fed's broad dollar index now hovers 1.0% below the all-time high reached on September 28. It has appreciated 11% in the last year; the subindexes, the emerging market economies, and the advanced foreign economies indexes are up 7% and 16%, respectively. The dollar is strong for two fundamental reasons: rapidly rising US interest rates and more favorable terms of trade. We expect it to rise another 1% and peak in the second quarter of next year before waning over the next four years. The profile is not much changed from last month. The import price index that excludes fuel declined in September for the fifth consecutive month. In the forecast, import prices swing from double-digit annualized growth in the first and second quarters to eight subsequent quarters of declining prices as an easing of bottlenecks and other disruptions and weaker domestic demand eliminate trade as a source of inflation. In the forecast, real imports decline unevenly through the first half of next year and subsequently mostly grow at low single-digit rates. Real exports decline over the first two quarters of the forecast.

Key forecast assumptions

From pandemic to endemic; removal of policy stimulus; global slowdown; reversal of food, energy prices

COVID-19: The transition from pandemic to endemic continues as the number of cases remain subdued and behavior adjusts to risks of living with the virus. The CDC extends the Public Health Emergency (PHE) 90 days through mid-January.

Federal fiscal policy: The forecast includes COVID relief measures enacted during the pandemic, the Infrastructure Investment and Jobs Act (IIJA), the Consolidated Appropriations Act of 2022 funding federal government for fiscal year 2022 (and extended in real terms), the Inflation Reduction Act, and assumes current tax policy. It does not yet include President Biden’s plan to forgive a portion of student debt. Federal payments to states authorized under the American Rescue Plan jumped in Q2 with a second tranche of funds, but pandemic relief payments will shrink to near zero in 2023 (chart, top).

State and local fiscal policy: Strong revenues, reinforced by federal pandemic relief monies and IIJA funding, limit cyclical state and local fiscal contractions. IIJA spending is reflected in state and local gross investment. A temporary six point increase in the Federal Medical Assistance Percentage to Medicaid ends in the first quarter of 2023 when the PHE expires.

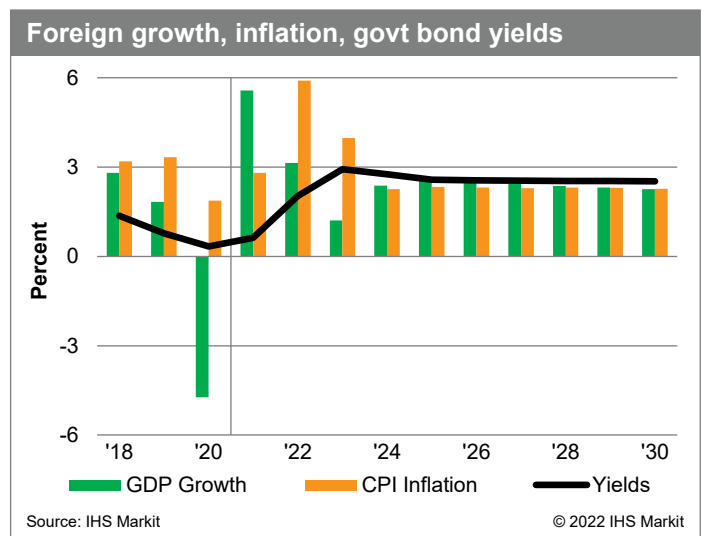
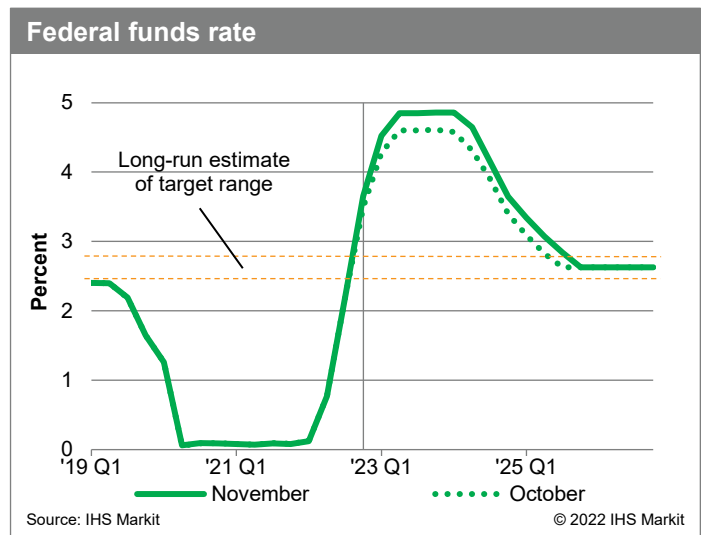
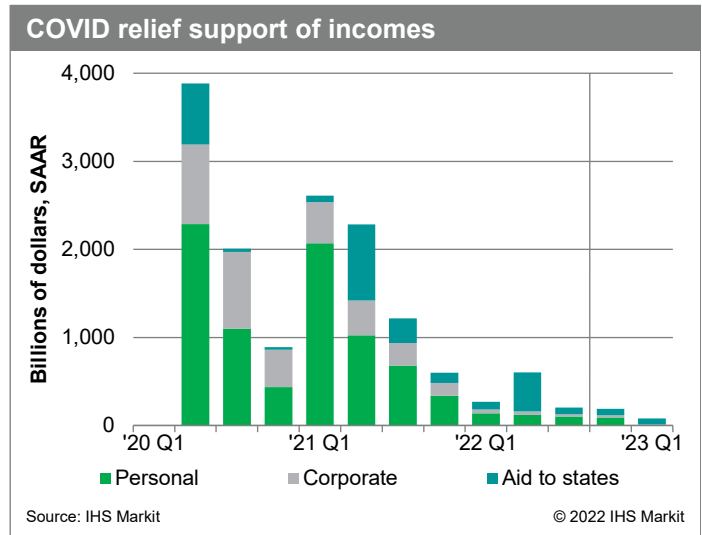
Monetary policy: The Fed raises its policy rate by March to the range of 4.75% - 5%, temporarily overshooting the terminal range of 2.5% - 2.75% (chart, middle), and allows its balance sheet to decline by about one third through 2024.

Tariffs and trade: Tariffs enacted by the US and China since 2017 remain in effect.

Global growth: Growth of real, trade-weighted foreign GDP slows from 3.1% in 2022 to 1.2% in 2023, close to our characterized of a global recession. Foreign CPI inflation jumps from 2.8% in 2021 to 5.9% in 2022 before receding to 2.3% by 2024. Foreign sovereign bond yields climb from 0.6% in 2021 to 2.9% by 2023 as central banks tighten monetary policy in response to the recent surge in inflation (chart, bottom).

Oil prices: The potential for supply disruptions sent the price of Brent crude up to \$113 per barrel in the second quarter of 2022. However, slowing global growth will cause the price to ease to \$87 next year despite cuts in production recently announced by the OPEC+ countries and the EU sanctioning of Russian exports.

Farm prices: The price of US farm output, currently more than double its pandemic low, will remain elevated through 2022 consequent to the disruption, through this year’s global crop cycle, of agricultural exports from Russia and Ukraine. Farm prices begin to ease in 2023 as global harvests increase.



Alternative scenarios

Two alternative outcomes for the US economy

As a result of the downgrade to the growth and inflation outlook in our base forecast last month, our assessment of the risks around the baseline forecast has become a bit more balanced compared to previous months. Nevertheless, relative to our updated base forecast, we continue to see risks as being tilted to the downside. Downside risks stem largely from the possibility that the Russia-Ukraine conflict drags on longer leading to persistently higher energy prices and an intensification of supply-chain issues. Posing upside risks are a stronger rise in productivity, extending the gains that firms achieved during the pandemic, more resilience on the part of consumers, and a quicker end to the Russia-Ukraine conflict, which would allow for a further decline in energy prices. As a result, we assign a 55% probability to our baseline forecast, 30% to the Pessimistic, and 15% to the Optimistic scenario.

Pessimistic Scenario: Recovery stumbles as Russia-Ukraine conflict intensifies, grinds on (30% probability)

This pessimistic scenario is characterized by weaker consumer spending and a deeper three-quarter recession than in the base forecast, with a peak-to-trough decline in GDP of 1.7%, versus 0.7% in the base forecast. Underlying this narrative is the assumption that the Russia-Ukraine conflict intensifies and drags on, leading to higher price paths for energy commodities, other industrial commodities and grains, wider risk spreads, and a more pronounced slowdown in foreign growth. In addition, a slower correction of supply-chain issues prolongs delays in the production of consumer durable goods.

As a result, personal consumption expenditures (PCE) decline through early 2023, versus a small increase in the base forecast. Annually, PCE rises 2.5% in 2022 and 0.1% in 2023, versus increases of 2.7% and 0.8% in the base case, measured year-over-year.

GDP declines at an average rate of 2.2% through mid-2023, versus an average decline of 0.9% in the baseline, and remains subdued relative to the base through mid-2025. On an annual basis, GDP rises 1.7% in 2022 and declines 1.1% in 2023, versus growth of 1.8% and a decline of 0.2% in the base case.

Slumping consumer demand and persistent supply-chain issues lead businesses to scale back investment plans. Overall business fixed investment rises 3.0% over 2022, and falls 4.5% over 2023 and 3.7% over 2024.

The unemployment rate in this scenario rises from 3.5% in the third quarter of this year to 7.5% by early 2024, before declining to 5.6% by the end of the forecast horizon.

The price of Brent oil rises to \$111 per barrel by fourth quarter of this year, \$14 dollars higher than the baseline, before moderating to \$106 per barrel by late 2024, \$16 higher than the base. PCE inflation is higher than the baseline early in the scenario, but subsequently falls below baseline in early 2024 and remains soft through 2026, as a result of the elevated slack.

Optimistic Scenario: Faster resolution to the Russia-Ukraine conflict and improving supply chain drive faster growth (15% probability)

The optimistic scenario is characterized by stronger growth of consumer spending and stronger productivity relative to the baseline. We assume the consumer and business response to the Infrastructure Investment and Jobs Act (IIJA) is more robust than in the base, while a quicker resolution to the Russia-Ukraine conflict allows for a lower path of energy prices. Moreover, we assume firms return to being able to effect the kinds of large productivity gains they achieved early in the pandemic, which improves corporate profitability.

This scenario assumes that the impact of the IIJA is more robust than in the base forecast. Moreover, it constitutes another source of modest upside risk over 2023–2026.

GDP manages to rise in the fourth quarter before declining slightly in the first quarter. Growth resumes in the second quarter and GDP rises 0.7% in 2023, year-over-year, compared to a decline of 0.2% in the baseline.

The strength of the scenario early is due to a robust re-acceleration in consumer spending, thanks to a lower path of energy prices, and less risk aversion. The price of Brent oil stays \$4 below baseline through early 2023 before converging to baseline. Consumer spending rises 2.8% over 2022 and 1.7% over 2023, versus 2.7% and 0.8% in the base forecast.

Business fixed investment remains elevated relative to the baseline thanks to strong demand faced by business, and elevated cashflows. Business fixed investment declines only 0.1% over 2023, compared to a decline of 1.5% in the baseline.

The unemployment rate remains at 3.5% by end of 2022, but then edges higher as a result of the below-trend growth of GDP. PCE inflation exceeds the baseline through mid-2024, and then hovers just barely above the FOMC's 2% target through the end of the forecast horizon. The Fed funds rate follows the baseline through mid-2023, but then rises above the baseline path for as long as core inflation remains elevated.

US Macro Forecast Snapshot

	Baseline (55%)	Pessimistic (30%)	Optimistic (15%)
GDP growth	Real GDP rises 1.8% in 2022 as the aggressive recovery following the pandemic-induced downturn begins to chill. A recession drops output by 0.2% in 2023 before rising modestly at 1.3% in 2024.	Real GDP rises 1.7% in 2022 and contracts 1.1% in 2023 in response to sustained weakness through the end of this year leading into next year. Growth resumes at 0.9% in 2024.	Real GDP rises 1.9% in 2022 as the relative strength in consumer spending supports growth. Growth persists at 0.7% in 2023 and 1.3% in 2024.
Consumer spending	Consumption slips from 8.3% in 2021 to a more subtle 2.7% in 2022. Growth continues in 2023 and 2024 at 0.8% and 1.1%, respectively.	Spending rises 2.5% in 2022, before slipping to 0.1% in 2023. Growth picks up to 1.2% in 2024.	Spending rises 2.8% in 2022 and 1.7% in 2023, before growth eases to 1.1% in 2024.
Business fixed investment	Increases 3.2% in 2022 with growth turning negative in 2023 and 2024 by 1.5% and 0.2%, respectively.	Grows 3.0% in 2022, before contracting 4.5% in 2023 and 3.7% in 2024.	Rises 3.4% in 2022, falls 0.1% in 2023, and grows 0.4% in 2024.
Housing	Housing starts shrink from 1.61 million in 2021 to 1.55 million in 2022 before continuing downward to 1.20 million in 2023 and popping slightly up to 1.29 million in 2024.	Housing starts drop in 2022 to 1.55 million before declining further to 1.11 million in 2023, then rise to 1.18 million in 2024.	Housing starts edge down from 1.61 million in 2021 to 1.55 million in 2022. Starts then fall to 1.23 million in 2023 and pick up to 1.33 million in 2024.
Exports	Grows 7.3% in 2022, 2.1% in 2023, and 3.6% in 2024.	Increases 7.3% in 2022, 0.2% in 2023, and 2.9% in 2024.	Rises 7.3% in 2022, 3.4% in 2023, and 3.7% in 2024.
Fiscal policy	The forecast includes the Inflation Reduction Act. The forecast assumes student loan forbearance is extended through December but does not include the President's plan to forgive one third of student debt, which is facing political and legal challenges.	Same fiscal assumptions as in baseline.	Same fiscal assumptions as in baseline.
Monetary policy	We expect the upper end of the federal funds rate target to reach 4.85% by mid-2023	The federal funds rates reaches an upper limit of 4.85% in mid-2023 before descending to an upper limit of 0.63% by 2025, where it remains throughout the forecast window.	Similar path to baseline, but more overshoot of the long-run federal funds rate over 2023–2026
Credit conditions	Eased in 2021 and remain mostly stabilized in 2022–2024.	Remain slightly tighter than in baseline.	Slightly looser than in baseline.
Productivity growth	Drops from 2.4% in 2021 to -1.7% in 2022, then rises to 0.0% in 2023 and	Falls to -1.7% in 2022 before jumping to 0.7% in 2023 and 2.6% in 2024.	Falls to -1.7% in 2022 before climbing to 0.6% in 2023 and 1.4% in 2024.
Consumer confidence	Dips through the middle of next year before gently escalating	Remains below the baseline over the entire forecast interval.	Outperforms baseline over the entire forecast interval.
Oil prices (Dollars/barrel)	Average price of Brent crude oil rises from \$71/barrel in 2021 to \$103 in 2022 before falling to \$87 in 2023 and 2024.	Brent crude oil averages \$106 in 2022, \$105 in 2023, and \$104 in 2024.	Brent crude oil averages \$101 in 2022 before declining to \$86 in 2023 and inching up to \$87 in 2024.
Stock markets	The year-end value of the S&P 500 rose 26.9% in 2021. The index experiences declines of 20.8% over 2022 before entering positive-growth territory at 1.5% in 2023 and 5.8% in 2024.	The year-end value of the S&P 500 rose 26.9% in 2021. It falls 22.8% in 2022 and another 3.1% in 2023 before recovering 6.4% in 2024.	The year-end value of the S&P 500 rose 26.9% in 2021, and it will experience a decline of 17.7% in 2022 before growing 6.7% in 2023 and 5.1% in 2024.
Inflation (PCE)	Core personal consumption (PCE) price inflation rises from 3.5% in 2021 to 5.0% in 2022, before moderating to 3.8% in 2023 and 2.5% in 2024.	Core PCE price inflation registers 5.1% growth in 2022, but slows to 4.2% in 2023 and 2.4% in 2024.	Core PCE price inflation rises to 5.0% in 2022, slowing to 3.8% in 2023 and 2.8% in 2024.
Foreign growth	Eurozone GDP rises 3.1% in 2022 and is flat in 2023 after a 5.2% rebound in 2021, while China's growth slows from 8.1% in 2021 to 3.0% in 2022 and 4.4% in 2023.	Global economy suffers from Russia-Ukraine conflict, and COVID-19-related setbacks endure.	Global economy recovers more quickly than in baseline amid a faster resolution to the Russia-Ukraine conflict.
US dollar	The broad real dollar appreciates through early next year before gently falling through the end of the forecast horizon.	Rises through first quarter of 2023 before decreasing slowly.	The broad dollar strengthens slightly more than in the baseline.

Alternative Scenarios of the US Economy

	Annual rates						Annual averages						Q4/Q4					
	2022.3	2022.4	2023.1	2023.2	2023.3	2023.4	2021	2022	2023	2024	2025	2026	2021	2022	2023	2024	2025	2026
Pessimistic Scenario: Recovery stumbles as Russia-Ukraine conflict intensifies, grinds on (Prob. = 30%)																		
Composition of Real GDP, Percent Change																		
Gross Domestic Product	2.6	-2.1	-3.4	-1.1	0.2	1.1	5.9	1.7	-1.1	0.9	1.7	2.1	5.7	-0.5	-0.8	1.3	1.8	2.1
Total Consumption	1.4	-0.5	-1.8	1.0	0.8	1.2	8.3	2.5	0.1	1.2	1.6	2.1	7.2	1.1	0.3	1.4	1.8	2.2
Nonresidential Fixed Investment	3.7	-5.2	-8.3	-4.7	-5.3	-4.5	6.4	3.0	-4.5	-3.7	-0.7	1.9	5.0	1.5	-5.7	-2.6	0.5	2.4
Residential Fixed Investment	-26.4	-25.2	-17.4	-17.1	-7.0	2.1	10.7	-10.5	-18.0	5.1	8.7	2.4	-0.3	-18.6	-10.2	12.3	4.6	1.6
Exports	14.4	-0.4	-5.1	-3.5	-2.1	1.5	6.1	7.3	0.2	2.9	4.9	4.3	6.5	5.5	-2.3	5.2	4.6	4.0
Imports	-6.9	-2.5	-1.1	-3.7	-0.3	0.5	14.1	8.4	-2.2	2.3	3.6	2.4	10.1	2.4	-1.2	4.3	2.7	2.4
Federal Government	3.7	1.5	5.7	0.3	0.3	0.1	2.3	-2.8	2.0	0.4	0.6	0.4	0.4	-0.9	1.6	0.5	0.7	0.2
State & Local Government	1.7	0.7	1.6	1.0	1.0	1.5	-0.5	0.3	1.1	1.3	1.2	1.1	0.6	0.4	1.3	1.2	1.2	1.0
Prices & Wages, Percent Change																		
Consumer Prices	5.7	6.2	5.8	3.9	3.7	3.8	4.7	8.2	5.4	2.9	1.9	1.7	6.7	7.9	4.3	2.3	1.7	1.6
Producer Prices, Finished Goods	-0.6	4.5	3.3	0.8	1.6	2.4	8.9	13.6	3.4	1.0	0.9	1.0	13.0	10.7	2.0	0.6	0.9	1.0
Compensation per hour	3.8	4.4	5.8	5.1	3.8	3.2	4.8	4.9	4.6	3.4	2.9	2.8	5.2	3.7	4.5	3.2	2.8	2.8
Other Key Measures, Percent Change																		
Productivity	0.3	-2.2	-1.3	4.1	4.8	4.9	2.4	-1.7	0.7	2.6	0.8	1.0	1.9	-3.0	3.1	1.1	0.9	0.9
Total Industrial Production	2.9	0.1	-4.2	-6.2	-4.2	-2.3	4.9	4.2	-2.2	-1.9	0.9	2.2	4.5	3.2	-4.2	-0.6	1.7	2.2
Payroll Employment	3.1	1.2	-2.0	-4.0	-3.7	-3.1	2.8	4.0	-1.1	-1.5	0.6	0.8	4.3	3.1	-3.2	0.0	0.7	1.0
Incomes, Percent Change																		
Personal Income	5.5	5.3	4.8	1.7	2.1	1.6	7.4	2.2	3.9	3.4	4.5	4.5	6.9	4.9	2.5	4.3	4.6	4.5
After-Tax Profits (Four-qr.% change)	11.0	-10.8	-16.8	4.7	5.4	7.4	22.6	7.8	-2.3	2.3	0.2	1.6	22.3	4.5	-0.3	0.2	0.4	1.6
	Levels						Annual averages						Q4 values					
Other Key Measures																		
Brent Crude, Spot Price (\$/bbl)	100.77	110.64	105.47	100.87	105.11	108.15	70.70	106.23	104.90	103.79	105.56	106.21	79.67	110.64	108.15	106.30	105.33	107.06
Nonfarm Inven. Chg. (Bil.2012 \$)	78.7	57.2	24.7	-18.3	6.7	31.2	-16.0	120.8	11.1	41.0	58.3	68.4	202.2	57.2	31.2	47.9	61.5	70.0
Light Vehicle Sales (Mil. units, saar)	13.4	13.8	13.3	13.1	13.2	13.4	14.9	13.7	13.2	13.7	14.3	14.7	13.0	13.8	13.4	13.9	14.4	14.8
Housing Starts (Mil. units, saar)	1.5	1.4	1.2	1.1	1.1	1.0	1.6	1.5	1.1	1.2	1.3	1.3	1.7	1.4	1.0	1.3	1.3	1.3
Unemployment Rate (%)	3.5	4.2	4.9	5.9	6.7	7.3	5.4	3.8	6.2	7.3	6.5	5.9	4.2	4.2	7.3	7.0	6.3	5.6
Federal Surplus (Unified, FY, bil. \$)	-3441.3	-1031.0	-1550.3	-336.5	-1191.7	-1745.4	-2580.4	-1255.5	-1206.0	-1693.8	-1859.6	-1931.9	-1510.8	-1031.0	-1745.4	-2092.6	-2227.9	-2279.1
Financial Markets, NSA, Quarter Average																		
Federal Funds Rate (%)	2.19	3.65	4.52	4.85	4.75	4.15	0.08	1.68	4.57	2.62	1.02	0.63	0.08	3.65	4.15	1.64	0.63	0.63
10-Year Treasury Note Yield (%)	3.11	3.97	3.89	3.63	3.43	3.16	1.44	2.99	3.53	2.69	2.37	2.27	1.54	3.97	3.16	2.50	2.32	2.24
	Annual rates						Annual averages						Q4/Q4					
Optimistic Scenario: Faster resolution to the Russia-Ukraine conflict and improving supply chain drive faster growth (Prob. = 15%)																		
Composition of Real GDP, Percent Change																		
Gross Domestic Product	2.6	1.1	-0.5	0.5	1.2	1.5	5.9	1.9	0.7	1.3	1.8	1.8	5.7	0.4	0.7	1.5	1.9	1.7
Total Consumption	1.4	3.3	1.1	1.6	0.9	0.8	8.3	2.8	1.7	1.1	1.7	1.8	7.2	2.0	1.1	1.3	1.8	1.8
Nonresidential Fixed Investment	3.7	1.7	-1.8	-2.2	-0.3	0.2	6.4	3.4	-0.1	0.4	1.8	1.9	5.0	3.3	-1.0	1.0	2.1	1.8
Residential Fixed Investment	-26.4	-22.9	-14.0	-11.5	-1.1	3.8	10.7	-10.4	-14.9	6.0	7.5	2.8	-0.3	-18.0	-6.0	10.8	4.1	2.3
Exports	14.4	0.3	-1.2	2.3	3.9	4.1	6.1	7.3	3.4	3.7	3.9	3.5	6.5	5.7	2.3	3.8	4.0	3.2
Imports	-6.9	1.4	3.6	-1.3	1.0	2.1	14.1	8.6	0.4	2.5	3.5	2.4	10.1	3.4	1.3	3.6	3.0	2.2
Federal Government	3.7	1.6	5.7	0.4	0.4	0.1	2.3	-2.8	2.1	0.4	0.5	0.3	0.4	-0.9	1.6	0.5	0.5	0.0
State & Local Government	1.7	2.3	1.8	0.7	1.5	1.9	-0.5	0.4	1.5	1.4	0.9	0.8	0.6	0.7	1.5	1.1	0.9	0.7
Prices & Wages, Percent Change																		
Consumer Prices	5.7	1.0	4.4	4.5	3.2	3.5	4.7	7.8	4.1	3.1	2.4	2.2	6.7	6.5	3.9	2.8	2.2	2.3
Producer Prices, Finished Goods	-0.6	-1.3	2.0	2.3	1.4	1.9	8.9	13.2	2.2	1.3	1.4	1.5	13.0	9.2	1.9	1.2	1.4	1.6
Compensation per hour	3.8	4.0	4.8	5.8	4.5	4.1	4.8	4.9	4.6	4.5	4.2	4.0	5.2	3.6	4.8	4.5	4.1	3.9
Other Key Measures, Percent Change																		
Productivity	0.3	-2.5	0.2	3.0	3.8	3.4	2.4	-1.7	0.6	1.4	1.0	1.5	1.9	-3.1	2.6	0.3	1.5	1.4
Total Industrial Production	2.9	2.6	-3.2	-1.5	0.9	1.4	4.9	4.4	0.3	1.2	2.0	1.6	4.5	3.9	-0.6	1.6	2.2	1.2
Payroll Employment	3.1	2.5	-0.3	-1.9	-2.2	-1.7	2.8	4.1	0.2	-0.2	0.7	0.4	4.3	3.4	-1.5	0.9	0.5	0.4
Incomes, Percent Change																		
Personal Income	5.5	8.0	4.8	4.2	4.5	3.9	7.4	2.4	5.3	4.8	4.5	4.3	6.9	5.6	4.3	5.0	4.4	4.3
Corporate profits w/ IVA & CCAAdj	11.0	-2.7	-7.5	-1.7	3.0	8.5	22.6	8.4	0.5	-0.5	1.0	3.4	22.3	6.8	0.4	-2.8	2.6	3.7
	Levels						Annual averages						Q4 values					
Other Key Measures																		
Brent Crude, Spot Price (\$/bbl)	100.77	90.00	84.60	82.00	86.67	90.00	70.70	101.07	85.82	87.42	89.59	90.53	79.67	90.00	90.00	89.83	89.59	91.41
Nonfarm Inven. Chg. (Bil.2012 \$)	78.7	58.0	29.9	2.4	2.4	19.2	-16.0	121.0	13.5	17.4	42.6	61.2	202.2	58.0	19.2	18.8	52.9	64.3
Light Vehicle Sales (Mil. units, saar)	13.4	14.1	14.1	14.4	15.0	15.6	14.9	13.7	14.8	16.1	16.5	16.5	13.0	14.1	15.6	16.3	16.5	16.5
Housing Starts (Mil. units, saar)	1.461	1.386	1.280	1.223	1.193	1.202	1.6	1.6	1.2	1.3	1.4	1.4	1.7	1.4	1.2	1.4	1.4	1.4
Unemployment Rate (%)	3.5	3.5	3.8	4.4	5.0	5.4	5.4	3.6	4.6	5.0	4.5	4.3	4.2	3.5	5.4	4.7	4.4	4.3
Federal Surplus (Unified, FY, bil. \$)	-3441.3	-1014.9	-1504.0	-255.0	-1084.8	-1620.7	-2580.4	-1251.4	-1116.1	-1533.8	-1736.9	-1896.5	-1510.8	-1014.9	-1620.7	-1935.9	-2129.8	-2277.8
Financial Markets, NSA, Quarter Average																		
Federal Funds Rate (%)	2.19	3.65	4.52	4.85	4.85	5.09	0.08	1.68	4.83	4.55	3.22	2.74	0.08	3.65	5.09	3.87	2.87	2.63
10-Year Treasury Note Yield (%)	3.11	4.09	4.25	4.10	3.98	3.83	1.44	3.02	4.04	3.49	3.30	3.25	1.54	4.09	3.83	3.37	3.28	3.23

Source: IHS Markit

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Monthly Economic Indicators

	Sep. 2021	Oct. 2021	Mar. 2022	Apr. 2022	May. 2022	Jun. 2022	Jul. 2022	Aug. 2022	Sep. 2022	Oct. 2022	2019	2020	2021
Industrial Markets													
Industrial Prod. Total (2017=100.0)	99.8	101.4	103.6	104.3	104.2	104.1	104.9	104.8	105.2		102.5	95.3	100.0
Percent Change	-1.0	1.5	0.7	0.7	-0.1	-0.1	0.7	-0.1	0.4		-0.7	-7.0	4.9
Percent Change Year Earlier	3.9	4.7	4.8	5.3	4.4	3.9	3.9	3.9	5.3				
Capacity Utilization, Manufacturing (%)	77.1	78.3	79.8	80.0	79.6	79.1	79.5	79.7	80.0		76.9	72.4	77.1
Unemployment Rate (%)	4.7	4.6	3.6	3.6	3.6	3.6	3.5	3.7	3.5	3.7	3.7	8.1	5.4
Payroll Employment (Mil.)	147.328	148.005	150.856	151.224	151.610	151.903	152.440	152.732	153.047	153.308	150.894	142.146	146.102
Change (Mil.)	0.424	0.677	0.398	0.368	0.386	0.293	0.537	0.292	0.315	0.261	1.996	-8.748	3.956
Leading Indicator (2016=1.000)	1.176	1.181	1.193	1.187	1.179	1.171	1.164	1.164	1.159		1.126	1.080	1.156
Percent Change	0.2	0.4	-0.1	-0.5	-0.7	-0.7	-0.6	0.0	-0.4		1.5	-4.1	7.1
New Orders, Mfg. (Bil. \$)	491.9	500.9	531.4	535.0	544.4	554.2	548.4	549.5	551.0		462.0	428.2	485.2
Percent Change	-0.3	1.8	1.8	0.7	1.8	1.8	-1.0	0.2	0.3		-4.8	-7.3	13.3
Inv. Chg., Mfg. & Trade (Bil. \$)	18.6	23.3	54.2	30.8	38.3	33.5	13.0	20.1			41.3	-56.2	210.6
Merchandise Trade Bal. (Bil. \$)	-95.1	-85.3	-125.7	-106.8	-103.5	-99.1	-90.2	-85.8	-91.9		-845.8	-902.3	-1076.8
Consumer Markets													
Disposable Income (Bil. 2012\$)	15580	15585	15064	15075	15070	15013	15094	15123	15130		14908	15836	16130
Percent Change	-1.4	0.0	-0.4	0.1	0.0	-0.4	0.5	0.2	0.0		3.5	6.2	1.9
Personal Income (Bil. \$)	20910	21073	21434	21504	21624	21749	21834	21918	21997		18587	19832	21295
Percent Change	-0.8	0.8	0.5	0.3	0.6	0.6	0.4	0.4	0.4		5.1	6.7	7.4
Personal Saving Rate (%)	7.9	7.3	3.8	3.7	3.6	3.0	3.5	3.4	3.1		8.8	16.8	11.8
Consumer Expenditures (Bil. \$)	16268	16474	17054	17116	17231	17437	17398	17495	17608		14393	14116	15903
Percent Change	0.8	1.3	1.2	0.4	0.7	1.2	-0.2	0.6	0.6		3.5	-1.9	12.7
Retail Sales (Bil. \$)	632.0	640.9	670.0	674.7	677.1	684.1	681.1	684.0	684.0		6175.6	6210.4	7434.8
Percent Change	1.1	1.4	1.2	0.7	0.4	1.0	-0.4	0.4	0.0		3.1	0.6	19.7
Non-Auto. Retail Sales (Bil. \$)	511.1	518.2	541.4	543.9	550.7	557.0	556.6	555.9	556.4		4938.1	5002.1	5955.3
Percent Change	1.1	1.4	2.0	0.5	1.3	1.1	-0.1	-0.1	0.1		3.2	1.3	19.1
New Light-Vehicle Sales (Mil.)	12.3	13.2	13.6	14.3	12.6	13.0	13.3	13.2	13.6	14.9	17.0	14.5	14.9
Housing Starts (Mil.)	1.559	1.563	1.716	1.805	1.562	1.575	1.377	1.566	1.439		1.291	1.395	1.605
New Home Sales (Mil.)	0.732	0.671	0.707	0.619	0.636	0.571	0.543	0.677	0.603		0.683	0.831	0.769
Existing Home Sales (Mil.)	6.180	6.190	5.750	5.600	5.410	5.110	4.820	4.780	4.710		5.325	5.638	6.127
Chg. Consumer Install. Credit (Bil. \$)	23.7	20.8	45.3	31.3	26.9	39.7	23.8	30.2	25.0		185.1	-7.3	246.0
Prices and Wages													
CPI, All Urban Consumers	2.742	2.766	2.877	2.887	2.915	2.953	2.953	2.956	2.968		2.556	2.588	2.710
Percent Change Year Earlier	5.4	6.2	8.6	8.2	8.5	9.0	8.5	8.2	8.2		1.8	1.2	4.7
Core Cons. Price Defl. (2012=100.0)	118.4	118.9	121.7	122.0	122.5	123.3	123.3	124.0	124.5		112.0	113.5	117.4
Percent Change Year Earlier	3.9	4.3	5.4	5.0	4.9	5.0	4.7	4.9	5.1		1.7	1.3	3.5
PPI, Finished Goods	2.26959	2.30088	2.46507	2.48565	2.52907	2.59786	2.5499	2.52151	2.52997		2.057	2.030	2.210
Percent Change Year Earlier	11.9	12.7	15.2	15.6	16.5	18.1	15.2	12.7	11.5		0.8	-1.3	8.9
PPI, Industrial Commodities (NSA)	2.372	2.433	2.615	2.662	2.752	2.835	2.745	2.715	2.714		2.007	1.939	2.284
Percent Change Year Earlier	21.3	24.3	21.1	22.1	22.6	23.9	17.6	15.7	14.4		-1.5	-3.4	17.8
Avg. Private Hourly Earnings (\$)	26.26	26.42	27.06	27.18	27.32	27.45	27.57	27.67	27.77	27.86	23.51	24.69	25.90
Percent Change Year Earlier	5.9	6.4	6.7	6.6	6.4	6.4	6.2	6.0	5.8	5.5	3.5	5.0	4.9
Brent Crude, Spot Price (\$/bbl.)	74.49	83.54	117.25	104.89	113.11	121.99	111.93	100.64	89.75	93.40	64.34	41.77	70.70
Percent Change Year Earlier	82.1	82.1	79.2	61.9	65.1	66.7	49.0	42.0	20.5	11.8	-9.3	-35.1	69.3
Henry Hub Spot Natural Gas (\$/mmbtu)	5.16	5.51	4.90	6.60	8.14	7.69	7.28	8.81	7.93		2.57	2.03	3.91
Percent Change Year Earlier	168.5	130.8	87.1	147.9	179.6	136.1	89.8	116.1	53.6		-18.9	-20.8	92.3
Financial Markets, Period Average													
Federal Funds Rate (%)	0.08	0.08	0.20	0.33	0.77	1.21	1.68	2.33	2.56	3.08	2.16	0.38	0.08
3-Month T-Bill Rate (%)	0.04	0.05	0.44	0.76	0.98	1.49	2.23	2.63	3.13	3.72	2.06	0.37	0.04
Commercial Bank Prime Rate (%)	3.25	3.25	3.37	3.50	3.94	4.38	4.85	5.50	5.73	6.25	5.28	3.54	3.25
10-Year Treasury Note Yield (%)	1.37	1.58	2.13	2.75	2.90	3.14	2.90	2.90	3.52	3.98	2.14	0.89	1.44
Conv. Mortgage Rate, FHLMC (%)	2.87	3.06	4.05	4.92	5.23	5.48	5.47	5.22	6.11	6.90	3.94	3.12	2.95
M1 Money Supply (Bil. \$)	19873	20064	20699	20618	20628	20557	20533	20473	20284		3846	12790	19374
Percent Change	0.7	1.0	0.2	-0.4	0.0	-0.3	-0.1	-0.3	-0.9		4.5	232.6	51.5
M2 Money Supply (Bil. \$)	20966	21144	21740	21644	21649	21608	21636	21632	21503		14818	17655	20519
Percent Change	0.6	0.8	0.1	-0.4	0.0	-0.2	0.1	0.0	-0.6		5.1	19.1	16.2

Source: IHS Markit

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Monthly Economic Indicators

	Sep. 2021	Oct. 2021	Mar. 2022	Apr. 2022	May. 2022	Jun. 2022	Jul. 2022	Aug. 2022	Sep. 2022	Oct. 2022	2019	2020	2021
Industrial Markets													
Industrial Prod. Total (2012=100.0)	99.8	101.4	103.6	104.3	104.2	104.1	104.9	104.8	105.2		102.5	95.3	100.0
Percent Change (Q4/Q4 for Annual Values)	-1.0	1.5	0.7	0.7	-0.1	-0.1	0.7	-0.1	0.4		-2.0	-4.4	4.5
Percent Change Year Earlier	3.9	4.7	4.8	5.3	4.4	3.9	3.9	3.9	5.3				
Capacity Utilization, Manufacturing (%)	77.1	78.3	79.8	80.0	79.6	79.1	79.5	79.7	80.0		76.9	72.4	77.1
Unemployment Rate (%)	4.7	4.6	3.6	3.6	3.6	3.6	3.5	3.7	3.5	3.7	3.7	8.1	5.4
Payroll Employment (Mil.)	147.328	148.005	150.856	151.224	151.610	151.903	152.440	152.732	153.047	153.308	150.894	142.146	146.102
Change (Mil.)	0.424	0.677	0.398	0.368	0.386	0.293	0.537	0.292	0.315	0.261	1.996	-8.748	3.956
Leading Indicator (2016=1.000)	1.176	1.181	1.193	1.187	1.179	1.171	1.164	1.164	1.159		1.126	1.080	1.156
Percent Change (Q4/Q4 for Annual Values)	0.2	0.4	-0.1	-0.5	-0.7	-0.7	-0.6	0.0	-0.4		-0.4	-1.8	7.9
New Orders, Mfg. (Bil. \$)	491.9	500.9	531.4	535.0	544.4	554.2	548.4	549.5	551.0		462.0	428.2	485.2
Percent Change (Q4/Q4 for Annual Values)	-0.3	1.8	1.8	0.7	1.8	1.8	-1.0	0.2	0.3		-6.0	-0.8	12.4
Inv. Chg., Mfg. & Trade (Bil. \$)	18.6	23.3	54.2	30.8	38.3	33.5	13.0	20.1			41.3	-56.2	210.6
Merchandise Trade Bal. (Bil. \$)	-95.1	-85.3	-125.7	-106.8	-103.5	-99.1	-90.2	-85.8	-91.9		-845.8	-902.3	-1076.8
Consumer Markets													
Disposable Income (Bil. 2012\$)	15580	15585	15064	15075	15070	15013	15094	15123	15130		14908	15836	16130
Percent Change (Q4/Q4 for Annual Values)	-1.4	0.0	-0.4	0.1	0.0	-0.4	0.5	0.2	0.0		2.8	3.7	-0.4
Personal Income (Bil. \$)	20910	21073	21434	21504	21624	21749	21834	21918	21997		18587	19832	21295
Percent Change (Q4/Q4 for Annual Values)	-0.8	0.8	0.5	0.3	0.6	0.6	0.4	0.4	0.4		4.5	5.1	6.9
Personal Saving Rate (%)	7.9	7.3	3.8	3.7	3.6	3.0	3.5	3.4	3.1		8.8	16.8	11.8
Consumer Expenditures (Bil. \$)	16268	16474	17054	17116	17231	17437	17398	17495	17608		14393	14116	15903
Percent Change (Q4/Q4 for Annual Values)	0.8	1.3	1.2	0.4	0.7	1.2	-0.2	0.6	0.6		3.7	-0.2	13.2
Retail Sales (Bil. \$)	632.0	640.9	670.0	674.7	677.1	684.1	681.1	684.0	684.0		6175.6	6210.4	7434.8
Percent Change (Q4/Q4 for Annual Values)	1.1	1.4	1.2	0.7	0.4	1.0	-0.4	0.4	0.0		3.7	4.4	17.3
Non-Auto. Retail Sales (Bil. \$)	511.1	518.2	541.4	543.9	550.7	557.0	556.6	555.9	556.4		4938.1	5002.1	5955.3
Percent Change (Q4/Q4 for Annual Values)	1.1	1.4	2.0	0.5	1.3	1.1	-0.1	-0.1	0.1		3.8	4.1	18.9
New Light-Vehicle Sales (Mil.)	12.3	13.2	13.6	14.3	12.6	13.0	13.3	13.2	13.6	14.9	17.0	14.5	14.9
Housing Starts (Mil.)	1.559	1.563	1.716	1.805	1.562	1.575	1.377	1.566	1.439		1.291	1.395	1.605
New Home Sales (Mil.)	0.732	0.671	0.707	0.619	0.636	0.571	0.543	0.677	0.603		0.683	0.831	0.769
Existing Home Sales (Mil.)	6.180	6.190	5.750	5.600	5.410	5.110	4.820	4.780	4.710		5.325	5.638	6.127
Chg. Consumer Install. Credit (Bil. \$)	23.7	20.8	45.3	31.3	26.9	39.7	23.8	30.2	25.0		185.1	-7.3	246.0
Prices and Wages													
CPI, All Urban Consumers	2.742	2.766	2.877	2.887	2.915	2.953	2.953	2.956	2.968		2.556	2.588	2.710
Percent Change Year Earlier (Q4/Q4 for Annual Values)	5.4	6.2	8.6	8.2	8.5	9.0	8.5	8.2	8.2		2.0	1.2	6.7
Core Cons. Price Defl. (2012=100.0)	118.4	118.9	121.7	122.0	122.5	123.3	123.3	124.0	124.5		112.0	113.5	117.4
Percent Change Year Earlier (Q4/Q4 for Annual Values)	3.9	4.3	5.4	5.0	4.9	5.0	4.7	4.9	5.1		1.6	1.4	4.7
PPI, Finished Goods	2.26959	2.30088	2.46507	2.48565	2.52907	2.59786	2.5499	2.52151	2.52997		2.057	2.030	2.210
Percent Change Year Earlier (Q4/Q4 for Annual Values)	11.9	12.7	15.2	15.6	16.5	18.1	15.2	12.7	11.5		0.9	-1.2	13.0
PPI, Industrial Commodities (NSA)	2.372	2.433	2.615	2.662	2.752	2.835	2.745	2.715	2.714		2.007	1.939	2.284
Percent Change Year Earlier (Q4/Q4 for Annual Values)	21.3	24.3	21.1	22.1	22.6	23.9	17.6	15.7	14.4		-2.8	-0.6	23.4
Avg. Private Hourly Earnings (\$)	26.26	26.42	27.06	27.18	27.32	27.45	27.57	27.67	27.77	27.86	23.51	24.69	25.90
Percent Change Year Earlier (Q4/Q4 for Annual Values)	5.9	6.4	6.7	6.6	6.4	6.4	6.2	6.0	5.8	5.5	3.5	5.0	6.4
Brent Crude, Spot Price (\$/bbl.)	74.49	83.54	117.25	104.89	113.11	121.99	111.93	100.64	89.75	93.40	64.34	41.77	70.70
Percent Change Year Earlier (Q4/Q4 for Annual Values)	82.1	82.1	79.2	61.9	65.1	66.7	49.0	42.0	20.5	11.8	-6.0	-30.1	79.9
Henry Hub Spot Natural Gas (\$/mmbtu)	5.16	5.51	4.90	6.60	8.14	7.69	7.28	8.81	7.93		2.57	2.03	3.91
Percent Change Year Earlier (Q4/Q4 for Annual Values)	168.5	130.8	87.1	147.9	179.6	136.1	89.8	116.1	53.6		-36.6	5.1	89.0
Financial Markets, Period Average													
Federal Funds Rate (%)	0.08	0.08	0.20	0.33	0.77	1.21	1.68	2.33	2.56	3.08	2.16	0.38	0.08
3-Month T-Bill Rate (%)	0.04	0.05	0.44	0.76	0.98	1.49	2.23	2.63	3.13	3.72	2.06	0.37	0.04
Commercial Bank Prime Rate (%)	3.25	3.25	3.37	3.50	3.94	4.38	4.85	5.50	5.73	6.25	5.28	3.54	3.25
10-Year Treasury Note Yield (%)	1.37	1.58	2.13	2.75	2.90	3.14	2.90	2.90	3.52	3.98	2.14	0.89	1.44
Conv. Mortgage Rate, FHLMC (%)	2.87	3.06	4.05	4.92	5.23	5.48	5.47	5.22	6.11	6.90	3.94	3.12	2.95
M1 Money Supply (Bil. \$)	19873	20064	20699	20618	20628	20557	20533	20473	20284		3846	12790	19374
Percent Change (Q4/Q4 for Annual Values)	0.7	1.0	0.2	-0.4	0.0	-0.3	-0.1	-0.3	-0.9		6.3	344.0	15.0
M2 Money Supply (Bil. \$)	20966	21144	21740	21644	21649	21608	21636	21632	21503		14818	17655	20519
Percent Change (Q4/Q4 for Annual Values)	0.6	0.8	0.1	-0.4	0.0	-0.2	0.1	0.0	-0.6		6.7	24.3	12.6

Source: IHS Markit

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Summary of the US Economy

	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4	2024:1	2024:2	2024:3	2024:4	2025:1	2025:2
Composition of Real GDP, Percent Change, Annual Rate													
Gross Domestic Product	-0.6	2.6	-0.4	-2.0	-0.4	1.0	1.6	1.3	1.6	1.7	1.9	1.8	1.9
Final Sales of Domestic Product	1.3	3.3	0.0	-1.5	0.1	0.5	1.0	1.2	1.5	1.7	1.8	1.7	1.8
Gross Domestic Income	0.1	2.4	-0.5	-2.0	-0.5	0.9	1.5	1.3	1.5	1.6	1.8	1.8	1.8
Avg. of GDP and GDI	-0.3	2.5	-0.4	-2.0	-0.4	0.9	1.5	1.3	1.5	1.7	1.8	1.8	1.8
Total Consumption	2.0	1.4	1.5	-0.4	0.8	0.7	0.9	1.0	1.4	1.6	1.6	1.7	1.8
Durables	-2.8	-0.8	-1.3	-5.9	1.2	2.5	3.4	3.1	3.9	4.6	4.2	3.7	3.9
Nondurables	-2.5	-1.4	-0.9	-4.7	0.6	0.0	0.1	0.3	0.7	0.7	0.7	0.9	1.1
Services	4.6	2.8	2.9	2.0	0.8	0.6	0.7	0.8	1.1	1.4	1.5	1.6	1.7
Nonresidential Fixed Investment	0.1	3.7	-0.9	-4.1	-3.0	-1.2	0.0	-0.1	0.2	0.6	1.1	1.3	1.3
Equipment	-2.0	10.8	0.3	-5.4	-5.1	-2.1	-0.3	-0.2	0.6	1.3	2.1	2.5	2.3
Information Processing Equipment	-6.3	10.0	8.2	2.0	-4.3	-3.5	-2.1	-2.5	-2.5	-1.1	-0.3	0.7	2.7
Industrial Equipment	-6.1	-12.7	-3.2	-7.8	-10.0	-7.2	-1.6	0.7	-0.7	1.4	2.4	2.8	1.7
Transportation equipment	11.6	92.1	-3.7	-13.6	3.0	8.9	3.4	-0.6	5.6	2.5	2.5	1.9	0.0
Aircraft	20.7	312.5	-55.8	-9.9	14.6	18.9	2.8	-6.5	0.7	-1.0	-3.5	-0.5	-1.6
Other Equipment	-0.1	-8.6	-4.5	-6.6	-8.8	-5.0	0.7	3.5	1.9	4.3	5.5	5.7	4.6
Intellectual Property Products	8.9	6.9	1.6	-2.8	-1.7	-0.8	-0.1	-0.6	-0.5	-0.3	0.0	0.0	0.1
Structures	-12.7	-15.3	-8.7	-4.0	-1.4	-0.2	0.9	1.4	0.7	1.0	1.3	1.7	2.0
Commercial & Health Care	-12.7	-20.1	-20.4	-11.3	-15.0	2.3	3.5	1.7	-2.0	1.1	-1.6	-1.7	-1.5
Manufacturing	-11.8	-24.9	5.9	-5.3	-18.0	-10.5	-13.9	-13.5	-19.5	-15.2	-14.4	-9.7	-2.9
Power & Communication	-29.7	-12.4	-12.3	-3.7	7.6	-7.7	-8.5	-4.3	0.4	2.5	1.7	3.5	4.7
Mining & Petroleum	3.1	-8.8	2.9	6.2	40.2	17.9	26.2	24.7	20.2	3.4	7.7	6.4	3.2
Other	-4.2	-4.7	-0.4	2.7	-1.6	-4.3	-5.0	-4.1	1.4	8.3	9.6	7.6	6.7
Residential Fixed Investment	-17.8	-26.4	-24.1	-15.5	-12.0	-1.7	3.6	7.6	12.1	12.6	11.6	7.1	4.4
Exports	13.8	14.4	-0.2	-3.0	0.0	1.5	3.3	4.2	4.5	5.3	4.7	4.1	3.9
Imports	2.2	-6.9	-0.4	1.2	-2.2	0.5	2.1	3.2	4.1	4.8	4.3	3.2	2.6
Federal Government	-3.4	3.7	1.5	5.7	0.5	0.3	0.1	0.4	0.5	0.3	0.8	0.2	0.5
State & Local Government	-0.6	1.7	0.8	2.0	1.4	1.3	1.8	1.6	1.1	1.0	0.8	0.9	0.9
Billions of Dollars													
Real GDP	19895.3	20021.7	20000.0	19900.8	19879.6	19927.3	20005.1	20069.7	20148.0	20232.4	20325.9	20417.3	20511.9
Nominal GDP	25248.5	25663.3	25955.5	26086.7	26250.0	26494.8	26761.5	26999.3	27236.0	27492.6	27764.1	28029.5	28304.1
Prices & Wages, Percent Change, Annual Rate													
GDP Deflator	9.0	4.1	5.1	4.1	3.0	2.8	2.5	2.3	2.0	2.1	2.1	2.0	2.1
Consumer Prices	10.5	5.7	5.4	3.7	2.2	3.1	3.1	2.8	2.2	2.6	2.7	2.2	2.1
Producer Prices, Finished Goods	22.3	-0.6	3.3	1.6	-0.4	1.0	1.7	0.7	0.1	1.2	1.8	1.5	1.4
Employment Cost Index - Total Comp.	6.3	4.3	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.2	4.2	4.2
Other Key Measures													
Brent Crude, Spot Price (\$/bbl)	113.33	100.77	96.64	89.60	83.67	86.67	90.00	88.00	84.83	87.00	89.83	89.71	89.55
Productivity (%ch., saar)	-4.1	0.3	-2.8	-1.2	2.4	3.6	3.3	0.8	0.2	0.3	0.9	1.1	1.3
Total Industrial Production (%ch., saar)	5.2	2.9	0.3	-2.8	-2.9	-0.4	0.9	1.0	0.7	0.9	1.3	1.9	1.8
Factory Operating Rate	79.5	79.7	79.6	78.8	77.9	77.5	77.5	77.5	77.5	77.5	77.5	77.6	77.6
Nonfarm Inven. Chg. (Bil. 2012 \$)	123.6	78.7	56.2	20.0	-18.0	-5.3	18.3	24.5	28.8	29.7	35.3	41.3	45.8
Consumer Sentiment Index	57.9	56.1	58.0	54.0	52.6	55.8	59.9	66.3	73.1	79.8	85.6	88.1	90.4
Light Vehicle Sales (Mil. units, saar)	13.30	13.38	14.03	14.05	14.28	14.88	15.44	15.66	15.78	15.90	16.01	16.16	16.27
Housing Starts (Mil. units, saar)	1.647	1.461	1.372	1.256	1.193	1.169	1.169	1.209	1.264	1.324	1.381	1.401	1.415
Exist. House Sales (Total, Mil. saar)	5.373	4.770	4.220	4.062	3.712	3.866	3.841	3.927	4.100	4.308	4.489	4.614	4.617
Unemployment Rate (%)	3.6	3.5	3.7	4.0	4.7	5.3	5.7	5.6	5.4	5.2	5.0	4.9	4.8
Payroll Employment (%ch., saar)	3.3	3.1	1.8	-0.3	-2.3	-2.3	-1.6	0.1	1.0	1.1	0.8	0.6	0.5
Federal Surplus (Unified, nsa, bil. \$)	153.2	-860.3	-256.4	-377.3	-120.2	-354.1	-384.5	-481.6	-195.1	-387.6	-455.2	-536.7	-239.3
Current Account Balance (Bil. \$)	-1004.4	-879.7	-860.9	-875.7	-817.8	-807.1	-817.9	-822.0	-827.4	-847.5	-877.1	-892.7	-896.9
Financial Markets, NSA, Quarter Average													
Federal Funds Rate (%)	0.77	2.19	3.65	4.52	4.85	4.85	4.86	4.86	4.65	4.16	3.65	3.34	3.07
3-Month Treasury Bill Rate (%)	1.08	2.66	3.97	4.50	4.70	4.62	4.56	4.52	4.30	3.82	3.34	3.05	2.79
10-Year Treasury Note Yield (%)	2.93	3.11	4.03	4.10	3.93	3.77	3.62	3.47	3.34	3.27	3.23	3.21	3.20
30-Year Fixed Mortgage Rate (%)	5.21	5.60	6.95	7.00	6.76	6.52	6.27	5.99	5.71	5.48	5.34	5.21	5.12
S&P 500 Stock Index	4110	3974	3757	3775	3790	3817	3830	3876	3953	4009	4042	4071	4099
(Four-Quarter % change)	-1.7	-10.1	-18.3	-15.5	-7.8	-3.9	2.0	2.7	4.3	5.0	5.5	5.0	3.7
Exchange Rate, Broad Index of Partners	1.300	1.350	1.394	1.402	1.404	1.399	1.384	1.365	1.348	1.330	1.312	1.298	1.286
(% change, annual rate)	13.0	16.2	13.6	2.4	0.6	-1.3	-4.3	-5.4	-5.0	-5.1	-5.3	-4.3	-3.7
Incomes													
Personal Income (% ch., saar)	5.9	5.5	6.9	4.2	3.0	3.8	3.6	5.4	4.6	4.4	4.3	5.0	4.4
Real Disposable Income (%ch., saar)	-1.5	1.7	3.1	4.6	2.6	3.4	2.9	4.2	3.5	2.3	2.0	3.0	2.5
Saving Rate (%)	3.4	3.3	3.6	4.5	4.9	5.5	6.0	6.7	7.2	7.4	7.5	7.8	7.9
After-Tax Profits (Billions of \$)	3043	3002	2932	2864	2812	2836	2895	2941	2896	2891	2896	2968	2973
(Four-quarter % change)	7.7	6.2	6.2	1.1	-7.6	-5.5	-1.3	2.7	3.0	1.9	0.1	0.9	2.6

Source: IHS Markit

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Summary of the US Economy

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Composition of Real GDP, Percent Change													
Gross Domestic Product	2.7	1.7	2.2	2.9	2.3	-2.8	5.9	1.8	-0.2	1.3	1.8	1.9	1.8
Final Sales of Domestic Product	2.4	2.2	2.2	2.8	2.3	-2.2	5.7	1.1	0.3	1.2	1.8	1.9	1.8
Gross Domestic Income	2.5	0.9	2.3	2.9	2.2	-2.3	5.5	2.5	-0.2	1.3	1.8	1.8	1.7
Avg. of GDP and GDI	2.6	1.3	2.3	2.9	2.3	-2.5	5.7	2.1	-0.2	1.3	1.8	1.9	1.7
Total Consumption	3.3	2.5	2.4	2.9	2.0	-3.0	8.3	2.7	0.8	1.1	1.7	1.9	2.1
Durables	7.6	5.4	6.4	6.8	3.8	10.0	18.5	-0.4	-1.3	3.4	4.0	3.7	3.7
Nondurables	3.4	2.5	2.6	2.5	2.8	2.7	8.8	-0.8	-1.6	0.4	0.9	1.2	1.4
Services	2.6	2.0	1.7	2.4	1.5	-6.6	6.3	4.4	1.9	0.9	1.6	1.8	2.0
Nonresidential Fixed Investment	2.3	0.9	4.1	6.5	3.6	-4.9	6.4	3.2	-1.5	-0.2	1.1	1.7	2.0
Equipment	3.0	-1.8	2.8	6.6	1.3	-10.5	10.3	4.5	-1.5	-0.3	2.1	2.8	3.2
Information Processing Equipment	6.2	4.4	7.1	7.8	2.6	1.3	9.8	7.7	1.4	-2.4	0.8	2.5	2.2
Industrial Equipment	0.1	-1.5	4.5	5.9	3.4	-8.2	11.9	4.7	-7.5	-1.5	2.1	2.6	4.2
Transportation equipment	10.5	-5.6	-1.4	5.1	-3.2	-30.6	15.7	2.8	6.1	3.2	1.5	1.0	2.6
Aircraft	1.7	-10.7	36.2	-6.5	-41.6	34.5	29.0	4.1	4.8	1.6	-0.2	4.0	4.8
Other Equipment	-6.6	-5.8	0.1	7.1	2.6	-7.0	5.5	1.0	-5.8	1.0	5.0	5.1	4.6
Intellectual Property Products	3.8	8.8	5.6	8.1	7.3	4.8	9.7	8.5	0.5	-0.5	0.0	0.5	0.9
Structures	-0.9	-4.3	4.4	4.1	2.3	-10.1	-6.4	-9.4	-5.8	0.7	1.6	2.1	2.0
Commercial & Health Care	12.1	16.7	3.2	1.3	1.5	3.2	-7.6	-15.0	-12.7	0.0	-0.5	1.9	4.9
Manufacturing	34.4	-4.8	-13.5	-1.8	5.6	-9.5	-0.7	-2.3	-10.1	-14.9	-9.1	-0.7	-6.0
Power & Communication	3.4	2.2	-4.6	-5.7	7.4	-1.7	-8.4	-19.5	-7.3	-2.8	2.5	0.5	3.9
Mining & Petroleum	-28.6	-41.8	40.4	27.8	-0.3	-38.4	14.0	13.8	11.8	19.9	5.6	3.3	1.1
Other	10.5	7.2	3.9	1.4	-0.6	-12.9	-17.8	-7.0	-1.5	-0.8	6.7	3.9	1.1
Residential Fixed Investment	10.2	6.6	4.0	-0.6	-1.0	7.2	10.7	-10.4	-15.7	6.0	7.5	2.4	0.5
Exports	0.3	0.4	4.3	2.8	0.5	-13.2	6.1	7.3	2.1	3.6	4.3	3.8	3.4
Imports	5.2	1.5	4.5	4.2	1.1	-9.0	14.1	8.5	-0.8	2.7	3.4	2.3	2.5
Federal Government	0.0	0.5	0.4	3.0	3.9	6.2	2.3	-2.8	2.1	0.4	0.5	0.3	-0.3
State & Local Government	3.0	2.8	0.4	0.9	3.0	0.4	-0.5	0.3	1.4	1.4	0.9	0.8	0.6
Billions of Dollars													
Real GDP	17390.3	17680.3	18076.7	18609.1	19036.1	18509.1	19609.8	19960.3	19928.2	20194.0	20562.0	20950.2	21320.0
Nominal GDP	18206.0	18695.1	19477.3	20533.1	21381.0	21060.5	23315.1	25401.9	26398.3	27373.0	28448.2	29603.3	30799.4
Prices & Wages, Percent Change													
GDP Deflator	1.0	1.0	1.9	2.4	1.8	1.3	4.5	7.0	4.1	2.3	2.1	2.1	2.2
Consumer Prices	0.1	1.3	2.1	2.4	1.8	1.2	4.7	8.1	4.3	2.7	2.3	2.2	2.2
Producer Prices, Finished Goods	-3.3	-1.0	3.2	3.0	0.8	-1.3	8.9	13.5	2.3	0.9	1.4	1.5	1.8
Employment Cost Index - Total Comp.	2.1	2.1	2.5	2.9	2.7	2.7	3.6	5.2	4.7	4.4	4.2	4.0	3.6
Other Key Measures													
Brent Crude, Spot Price (\$/bbl)	52.68	44.24	54.83	70.96	64.34	41.77	70.70	102.73	87.48	87.42	89.59	90.53	93.16
Productivity (%ch.)	1.2	0.5	1.3	1.5	1.9	4.4	2.4	-1.7	0.0	1.5	1.0	1.4	1.4
Total Industrial Production (%ch.)	-1.4	-2.2	1.4	3.2	-0.7	-7.0	4.9	4.3	-0.5	0.5	1.6	1.6	1.4
Factory Operating Rate	76.1	75.4	76.2	78.1	76.9	72.4	77.1	79.5	77.9	77.5	77.6	77.6	77.3
Nonfarm Inven. Chg. (Bil. 2012 \$)	136.5	41.2	41.7	73.8	88.3	-46.9	-16.0	120.5	3.7	29.6	47.3	59.6	60.9
Consumer Sentiment Index	92.9	91.8	96.8	98.4	96.0	81.5	77.6	58.8	55.6	76.2	91.3	97.3	96.7
Light Vehicle Sales (Mil. units)	17.41	17.48	17.15	17.22	16.96	14.47	14.95	13.71	14.66	15.84	16.29	16.37	16.21
Housing Starts (Mil. units)	1.107	1.177	1.205	1.247	1.291	1.395	1.605	1.550	1.197	1.295	1.406	1.394	1.380
Exist. House Sales (Total, Mil. units)	5.228	5.437	5.527	5.334	5.325	5.638	6.127	5.105	3.870	4.206	4.627	5.160	5.446
Unemployment Rate (%)	5.3	4.9	4.4	3.9	3.7	8.1	5.4	3.7	4.9	5.3	4.8	4.6	4.4
Payroll Employment (%ch.)	2.1	1.8	1.6	1.6	1.3	-5.8	2.8	4.1	0.0	-0.3	0.7	0.5	0.4
Federal Surplus (Unified, FY, bil. \$)	-475.4	-581.6	-680.9	-873.0	-1022.0	-3348.2	-2580.4	-1254.1	-1236.1	-1519.6	-1685.1	-1767.0	-1878.6
Current Account Balance (Bil. \$)	-408.5	-396.2	-361.0	-439.8	-446.0	-619.7	-846.4	-968.8	-829.6	-843.5	-892.1	-867.4	-841.4
Financial Markets, NSA, Quarter Average													
Federal Funds Rate (%)	0.13	0.40	1.00	1.83	2.16	0.38	0.08	1.68	4.77	4.33	2.97	2.63	2.63
3-Month Treasury Bill Rate (%)	0.05	0.32	0.93	1.94	2.06	0.37	0.04	2.00	4.60	3.99	2.70	2.37	2.37
10-Year Treasury Note Yield (%)	2.14	1.84	2.33	2.91	2.14	0.89	1.44	3.00	3.86	3.33	3.20	3.19	3.19
30-Year Fixed Mortgage Rate (%)	3.85	3.65	3.99	4.54	3.94	3.12	2.95	5.38	6.64	5.63	5.11	4.98	4.94
S&P 500 Stock Index	2061	2092	2448	2745	2912	3219	4267	4077	3803	3970	4111	4237	4410
(Percent change)	6.8	1.5	17.0	12.1	6.1	10.5	32.6	-4.4	-6.7	4.4	3.6	3.1	4.1
Exchange Rate, Broad Index of Partners	1.180	1.235	1.232	1.223	1.263	1.285	1.235	1.326	1.397	1.339	1.282	1.253	1.235
(% change, annual rate)	13.1	4.6	-0.3	-0.7	3.3	1.7	-3.9	7.4	5.4	-4.2	-4.2	-2.2	-1.5
Incomes													
Personal Income (% ch.)	4.7	2.6	4.6	5.0	5.1	6.7	7.4	2.3	4.6	4.4	4.5	4.5	4.6
Real Disposable Income (%ch.)	4.0	1.8	2.7	3.3	3.5	6.2	1.9	-6.2	2.9	3.3	2.5	2.5	2.6
Saving Rate (%)	7.5	7.0	7.3	7.6	8.8	16.8	11.9	3.6	5.2	7.2	7.9	8.4	8.9
After-Tax Profits (Billions of \$)	1732	1758	1897	1960	2007	2111	2750	2953	2852	2906	2980	3105	3252
(Percent change)	-6.8	1.5	7.9	3.3	2.4	5.2	30.3	7.4	-3.4	1.9	2.5	4.2	4.7

Source: IHS Markit

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Summary of the US Economy

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Composition of Real GDP, Percent Change (Q4/Q4)													
Gross Domestic Product	1.9	2.0	2.8	2.3	2.6	-1.5	5.7	0.0	0.0	1.6	1.9	1.9	1.7
Final Sales of Domestic Product	1.8	2.2	2.9	2.1	3.0	-1.8	4.8	0.7	0.1	1.5	1.8	1.8	1.8
Gross Domestic Income	1.2	1.2	2.9	2.9	2.1	0.1	4.1	0.7	0.0	1.6	1.8	1.8	1.7
Avg. of GDP and GDI	1.5	1.6	2.8	2.6	2.3	-0.7	4.9	0.3	0.0	1.6	1.9	1.8	1.7
Total Consumption	2.6	2.3	2.8	2.5	2.2	-1.4	7.2	1.6	0.5	1.4	1.8	2.0	2.1
Durables	6.0	6.3	8.2	3.7	5.7	16.2	7.0	0.6	0.3	4.0	3.9	3.6	3.7
Nondurables	2.8	2.0	3.7	2.2	2.4	4.6	7.2	-2.3	-1.0	0.6	1.1	1.3	1.5
Services	2.1	1.8	1.7	2.4	1.6	-5.8	7.2	3.1	1.0	1.2	1.7	1.9	2.0
Nonresidential Fixed Investment	-0.1	2.5	5.2	5.7	2.6	-3.5	5.0	2.6	-2.1	0.4	1.4	1.9	2.1
Equipment	1.5	-2.2	7.0	5.1	-3.1	-2.7	4.7	4.9	-3.2	1.0	2.4	3.0	3.2
Information Processing Equipment	6.5	3.3	9.5	4.6	0.4	9.3	6.2	6.9	-2.0	-1.6	2.2	2.4	2.1
Industrial Equipment	1.0	-1.7	6.9	6.6	-2.2	-2.3	13.0	-2.8	-6.7	0.9	2.5	2.9	4.8
Transportation equipment	6.6	-6.4	5.8	2.4	-8.7	-20.8	-2.0	18.8	0.0	2.5	0.0	2.7	1.8
Aircraft	-14.1	17.2	28.0	-14.0	-32.2	51.9	-7.0	16.1	6.0	-2.6	2.1	4.2	4.5
Other Equipment	-10.1	-5.3	5.0	7.8	-2.6	0.1	-0.3	-0.3	-5.0	3.8	5.5	4.6	5.0
Intellectual Property Products	3.3	8.4	5.8	9.3	6.9	3.8	10.8	7.0	-1.4	-0.4	0.2	0.6	1.0
Structures	-7.3	3.6	0.8	1.7	6.6	-16.0	-5.2	-10.4	-1.2	1.1	2.0	2.1	2.0
Commercial & Health Care	8.3	19.9	-2.5	-1.5	8.6	-3.1	-10.5	-16.7	-5.5	-0.2	0.5	2.8	6.0
Manufacturing	9.8	-6.3	-11.1	0.8	3.2	-9.9	2.3	-6.7	-12.0	-15.7	-3.0	-2.7	-6.3
Power & Communication	20.0	12.3	-16.9	-6.3	28.5	-15.5	-12.5	-18.1	-3.3	0.0	2.5	0.8	4.0
Mining & Petroleum	-44.2	-27.0	49.6	19.0	-7.9	-41.4	37.6	6.4	22.0	13.6	3.5	3.0	0.6
Other	4.7	8.9	1.9	-0.8	0.9	-19.0	-15.3	-3.5	-2.1	3.6	5.3	3.6	-0.2
Residential Fixed Investment	9.2	4.0	4.6	-3.8	2.0	16.4	-0.3	-18.3	-6.7	10.9	4.1	1.8	0.3
Exports	-1.5	1.3	6.2	0.2	0.8	-10.0	6.5	5.5	0.4	4.7	4.1	3.5	3.3
Imports	3.3	2.2	5.3	3.3	-2.0	0.4	10.1	2.9	0.4	4.1	2.6	2.3	2.7
Federal Government	1.2	0.1	1.3	3.2	4.0	5.4	0.4	-0.9	1.6	0.5	0.5	0.1	-0.4
State & Local Government	2.8	2.5	0.3	0.6	4.0	-1.6	0.6	0.4	1.6	1.1	0.9	0.7	0.6
Billions of Dollars													
Real GDP	17390.3	17680.3	18076.7	18609.1	19036.1	18509.1	19609.8	19960.3	19928.2	20194.0	20562.0	20950.2	21320.0
Nominal GDP	18206.0	18695.1	19477.3	20533.1	21381.0	21060.5	23315.1	25401.9	26398.3	27373.0	28448.2	29603.3	30799.4
Prices & Wages, Percent Change (Q4/Q4)													
GDP Deflator	0.8	1.5	2.0	2.3	1.6	1.6	6.1	6.6	3.1	2.1	2.1	2.2	2.3
Consumer Prices	0.4	1.8	2.1	2.2	2.0	1.2	6.7	7.7	3.0	2.6	2.1	2.2	2.3
Producer Prices, Finished Goods	-3.4	1.0	3.6	2.3	0.9	-1.2	13.0	10.4	1.0	0.9	1.4	1.5	1.8
Employment Cost Index - Total Comp.	1.8	2.2	2.6	3.0	2.6	2.6	4.4	5.3	4.6	4.3	4.1	3.8	3.6
Other Key Measures													
Brent Crude, Spot Price (\$/bbl)	52.68	44.24	54.83	70.96	64.34	41.77	70.70	102.73	87.48	87.42	89.59	90.53	93.16
Productivity (%ch.)	0.8	1.3	1.4	0.9	2.6	4.7	1.9	-3.1	2.0	0.5	1.3	1.4	1.5
Total Industrial Production (%ch.)	-1.4	-2.2	1.4	3.2	-0.7	-7.0	4.9	4.3	-0.5	0.5	1.6	1.6	1.4
Factory Operating Rate	76.1	75.4	76.2	78.1	76.9	72.4	77.1	79.5	77.9	77.5	77.6	77.6	77.3
Nonfarm Inven. Chg. (Bil. 2012 \$)	136.5	41.2	41.7	73.8	88.3	-46.9	-16.0	120.5	3.7	29.6	47.3	59.6	60.9
Consumer Sentiment Index	92.9	91.8	96.8	98.4	96.0	81.5	77.6	58.8	55.6	76.2	91.3	97.3	96.7
Light Vehicle Sales (Mil. units)	17.41	17.48	17.15	17.22	16.96	14.47	14.95	13.71	14.66	15.84	16.29	16.37	16.21
Housing Starts (Mil. units)	1.107	1.177	1.205	1.247	1.291	1.395	1.605	1.550	1.197	1.295	1.406	1.394	1.380
Exist. House Sales (Total, Mil. units)	5.228	5.437	5.527	5.334	5.325	5.638	6.127	5.105	3.870	4.206	4.627	5.160	5.446
Unemployment Rate (%)	5.3	4.9	4.4	3.9	3.7	8.1	5.4	3.7	4.9	5.3	4.8	4.6	4.4
Payroll Employment (%ch.)	2.0	1.7	1.5	1.5	1.3	-6.0	4.3	3.2	-1.7	0.8	0.5	0.5	0.4
Federal Surplus (Unified, FY, bil. \$)	-475.4	-581.6	-680.9	-873.0	-1022.0	-3348.2	-2580.4	-1254.1	-1236.1	-1519.6	-1685.1	-1767.0	-1878.6
Current Account Balance (Bil. \$)	-408.5	-396.2	-361.0	-439.8	-446.0	-619.7	-846.4	-968.8	-829.6	-843.5	-892.1	-867.4	-841.4
Financial Markets, NSA, Quarter Average													
Federal Funds Rate (%)	0.13	0.40	1.00	1.83	2.16	0.38	0.08	1.68	4.77	4.33	2.97	2.63	2.63
3-Month Treasury Bill Rate (%)	0.05	0.32	0.93	1.94	2.06	0.37	0.04	2.00	4.60	3.99	2.70	2.37	2.37
10-Year Treasury Note Yield (%)	2.14	1.84	2.33	2.91	2.14	0.89	1.44	3.00	3.86	3.33	3.20	3.19	3.19
30-Year Fixed Mortgage Rate (%)	3.85	3.65	3.99	4.54	3.94	3.12	2.95	5.38	6.64	5.63	5.11	4.98	4.94
S&P 500 Stock Index	2061	2092	2448	2745	2912	3219	4267	4077	3803	3970	4111	4237	4410
(Percent change, Q4/Q4)	2.0	6.4	19.2	3.3	14.7	15.2	29.4	-18.3	2.0	5.5	2.7	3.5	4.4
Exchange Rate, Broad Index of Partners	1.180	1.235	1.232	1.223	1.263	1.285	1.235	1.326	1.397	1.339	1.282	1.253	1.235
(% change, Q4/Q4)	12.2	3.9	-4.2	4.3	0.6	-2.1	0.9	11.0	-0.7	-5.2	-3.4	-1.8	-1.2
Incomes													
Personal Income (%ch., Q4/Q4)	3.5	3.0	5.1	5.2	4.5	5.1	6.9	5.3	3.7	4.7	4.5	4.5	4.6
Real Disposable Income (%ch., Q4/Q4)	2.8	1.6	3.0	4.1	2.8	3.7	-0.4	-2.0	3.4	3.0	2.5	2.5	2.6
Saving Rate (%)	7.5	7.0	7.3	7.6	8.8	16.8	11.9	3.6	5.2	7.2	7.9	8.4	8.9
After-Tax Profits (Billions of \$)	1732	1758	1897	1960	2007	2111	2750	2953	2852	2906	2980	3105	3252
(Percent change, Q4/Q4)	-13.0	11.5	-2.4	11.4	4.5	10.6	20.5	6.2	-1.3	0.1	3.5	4.5	4.9

Source: IHS Markit

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Alternative Scenarios of the US Economy

	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2021	2022	2023	2024	2025	2026	2027
Pessimistic: Recovery stumbles as Russia Ukraine conflict intensifies, grinds on (30% probability)													
Composition of Real GDP, Percent Change, Annual Rate													
Gross Domestic Product	-0.6	2.6	-2.3	-3.6	-1.2	0.3	5.9	1.7	-1.2	1.0	1.7	2.1	2.0
Total Consumption	2.0	1.4	-0.5	-1.8	1.0	0.8	8.3	2.5	0.1	1.2	1.6	2.1	2.0
Nonresidential Fixed Investment	0.1	3.7	-6.7	-9.5	-5.6	-4.4	6.4	2.8	-5.1	-2.9	-0.6	1.6	3.4
Residential Fixed Investment	-17.8	-26.4	-25.2	-17.4	-17.1	-7.0	10.7	-10.5	-18.0	5.1	8.7	2.4	0.6
Exports	13.8	14.4	-0.4	-5.1	-3.5	-2.1	6.1	7.3	0.2	2.9	4.9	4.3	3.8
Imports	2.2	-6.9	-2.5	-1.1	-3.7	-0.3	14.1	8.3	-2.2	2.3	3.6	2.4	2.0
Federal Government	-3.4	3.7	1.5	5.6	0.3	0.3	2.3	-2.8	2.0	0.4	0.6	0.4	-0.1
State & Local Government	-0.6	1.7	0.7	1.6	1.0	1.0	-0.5	0.3	1.1	1.3	1.1	1.1	0.9
Prices & Wages, Percent Change, Annual Rate													
Consumer Prices	10.5	5.7	6.2	5.8	3.9	3.7	4.7	8.2	5.4	2.9	1.9	1.7	1.7
Producer Prices, Finished Goods	22.3	-0.6	4.5	3.3	0.8	1.6	8.9	13.6	3.4	1.0	0.9	1.0	1.2
Employment Cost Index - Total Comp.	6.3	4.3	4.3	3.9	3.9	4.0	3.6	5.2	4.2	3.6	3.0	2.8	2.5
Other Key Measures													
Brent Crude, Spot Price (\$/bbl)	113.33	100.77	110.64	105.47	100.87	105.11	70.70	106.23	104.90	103.79	105.56	106.21	108.62
Productivity (%ch., saar)	-4.1	0.3	-2.2	-1.3	4.1	4.8	2.4	-1.7	0.7	2.6	0.8	1.0	0.6
Total Industrial Production (%ch., saar)	5.2	2.9	0.1	-4.2	-6.2	-4.2	4.9	4.2	-2.2	-1.9	0.9	2.2	2.2
Nonfarm Inven. Chg. (Bil.2012 \$)	123.6	78.7	57.2	24.7	-18.3	6.7	-16.0	120.8	11.1	41.0	58.3	68.4	59.3
Consumer Sentiment Index	57.9	56.1	55.3	49.9	47.8	51.0	77.6	58.1	50.9	70.0	84.6	91.9	92.7
Light Vehicle Sales (Mil. units, saar)	13.30	13.38	13.54	12.75	12.40	12.43	14.95	13.59	12.48	12.60	12.63	12.94	13.63
Housing Starts (Mil. units, saar)	1.647	1.461	1.363	1.227	1.109	1.056	1.605	1.548	1.109	1.178	1.298	1.287	1.289
Unemployment Rate (%)	3.6	3.5	4.2	4.9	5.9	6.7	5.4	3.8	6.2	7.3	6.5	5.9	5.2
Payroll Employment (%ch., saar)	3.3	3.1	1.2	-2.0	-4.0	-3.7	2.8	4.0	-1.1	-1.5	0.6	0.8	1.1
Federal Surplus (Unified, FY, bil. \$)	153.2	-860.3	-264.9	-388.0	-135.0	-375.7	-2775.6	-1375.4	-1163.6	-1584.8	-1776.1	-1813.8	-1834.4
Financial Markets, NSA, Quarter Average													
Federal Funds Rate (%)	0.77	2.19	3.65	4.52	4.85	4.75	0.08	1.68	4.57	2.62	1.02	0.63	0.62
10-Year Treasury Note Yield (%)	2.93	3.11	3.97	3.89	3.63	3.43	1.44	2.99	3.53	2.69	2.37	2.27	2.24
Incomes													
Personal Income (% ch., saar)	5.9	5.5	5.4	4.9	1.7	2.2	7.4	2.2	4.0	3.4	4.5	4.4	4.3
After-Tax Profits (Four-qr.% change)	7.7	6.2	5.8	-0.3	-7.4	-5.3	30.3	7.3	-3.8	3.0	2.2	2.9	3.7
Optimistic: Faster resolution to the Russia Ukraine conflict and improving supply issues drive faster growth (15% probability)													
Composition of Real GDP, Percent Change, Annual Rate													
Gross Domestic Product	-0.6	2.6	1.1	-0.5	0.4	1.2	5.9	1.9	0.7	1.3	1.8	1.8	1.6
Total Consumption	2.0	1.4	3.3	1.1	1.6	0.9	8.3	2.8	1.7	1.1	1.7	1.8	1.9
Nonresidential Fixed Investment	0.1	3.7	1.7	-1.8	-2.2	-0.3	6.4	3.4	-0.1	0.4	1.8	1.9	1.9
Residential Fixed Investment	-17.8	-26.4	-22.9	-14.0	-11.5	-1.1	10.7	-10.4	-14.9	6.0	7.5	2.8	0.4
Exports	13.8	14.4	0.3	-1.2	2.3	3.9	6.1	7.3	3.4	3.7	3.9	3.5	3.1
Imports	2.2	-6.9	1.4	3.6	-1.3	1.0	14.1	8.6	0.4	2.5	3.5	2.4	2.4
Federal Government	-3.4	3.7	1.6	5.7	0.3	0.4	2.3	-2.8	2.1	0.4	0.5	0.3	-0.3
State & Local Government	-0.6	1.7	2.3	1.8	0.7	1.5	-0.5	0.4	1.5	1.4	0.9	0.8	0.6
Prices & Wages, Percent Change, Annual Rate													
Consumer Prices	10.5	5.7	1.0	4.4	4.5	3.2	4.7	7.8	4.1	3.1	2.4	2.2	2.3
Producer Prices, Finished Goods	22.3	-0.6	-1.3	2.0	2.3	1.4	8.9	13.2	2.2	1.3	1.4	1.5	1.8
Employment Cost Index - Total Comp.	6.3	4.3	4.8	4.3	4.4	4.5	3.6	5.2	4.5	4.5	4.3	4.1	3.8
Other Key Measures													
Brent Crude, Spot Price (\$/bbl)	113.33	100.77	90.00	84.60	82.00	86.67	70.70	101.07	85.82	87.42	89.59	90.53	93.16
Productivity (%ch., saar)	-4.1	0.3	-2.5	0.2	3.0	3.8	2.4	-1.7	0.6	1.4	1.0	1.5	1.5
Total Industrial Production (%ch., saar)	5.2	2.9	2.6	-3.2	-1.5	0.9	4.9	4.4	0.3	1.2	2.0	1.6	0.9
Nonfarm Inven. Chg. (Bil. 2012 \$)	123.6	78.7	58.0	29.9	2.4	2.4	-16.0	121.0	13.5	17.4	42.6	61.2	66.7
Consumer Sentiment Index	57.9	56.1	59.5	58.3	58.7	60.8	77.6	59.2	60.6	81.4	95.2	100.2	99.2
Light Vehicle Sales (Mil. units, saar)	13.30	13.38	13.85	13.88	14.20	14.84	14.95	13.66	14.60	16.08	16.60	16.63	16.49
Housing Starts (Mil. units, saar)	1.647	1.461	1.386	1.280	1.223	1.193	1.605	1.554	1.225	1.326	1.438	1.436	1.429
Unemployment Rate (%)	3.6	3.5	3.5	3.8	4.4	5.0	5.4	3.6	4.6	5.0	4.5	4.3	4.2
Payroll Employment (%ch., saar)	3.3	3.1	2.5	-0.3	-1.9	-2.2	2.8	4.1	0.2	-0.2	0.7	0.4	0.3
Federal Surplus (Unified, FY, bil. \$)	153.2	-860.3	-248.6	-364.3	-101.9	-333.1	-2775.6	-1375.4	-1047.9	-1355.7	-1552.2	-1639.6	-1762.0
Financial Markets, NSA, Quarter Average													
Federal Funds Rate (%)	0.77	2.19	3.65	4.52	4.85	4.85	0.08	1.68	4.83	4.55	3.22	2.74	2.63
10-Year Treasury Note Yield (%)	2.93	3.11	4.09	4.25	4.10	3.98	1.44	3.02	4.04	3.49	3.30	3.25	3.21
Incomes													
Personal Income (% ch., saar)	5.9	5.5	7.9	4.9	4.3	4.5	7.4	2.4	5.3	4.8	4.6	4.4	4.5
After-Tax Profits (Four-qr.% change)	7.7	6.2	7.5	3.3	-5.0	-3.2	30.3	7.7	-1.4	0.8	2.5	3.8	4.4

Source: IHS Markit

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Alternative Scenarios of the US Economy

	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2021	2022	2023	2024	2025	2026	2027
Pessimistic: Recovery stumbles as Russia Ukraine conflict intensifies, grinds on (30% probability)													
Composition of Real GDP, Percent Change, Annual Rate													
(Q4/Q4 for Annual Values)													
Gross Domestic Product	-0.6	2.6	-2.3	-3.6	-1.2	0.3	5.7	-0.5	-0.9	1.4	1.8	2.1	1.9
Total Consumption	2.0	1.4	-0.5	-1.8	1.0	0.8	7.2	1.1	0.3	1.4	1.8	2.2	1.9
Nonresidential Fixed Investment	0.1	3.7	-6.7	-9.5	-5.6	-4.4	5.0	1.1	-6.1	-1.5	-0.1	2.7	3.5
Residential Fixed Investment	-17.8	-26.4	-25.2	-17.4	-17.1	-7.0	-0.3	-18.6	-10.2	12.3	4.6	1.6	0.6
Exports	13.8	14.4	-0.4	-5.1	-3.5	-2.1	6.5	5.5	-2.3	5.2	4.6	4.0	3.7
Imports	2.2	-6.9	-2.5	-1.1	-3.7	-0.3	10.1	2.4	-1.2	4.3	2.7	2.4	1.9
Federal Government	-3.4	3.7	1.5	5.6	0.3	0.3	0.4	-0.9	1.5	0.5	0.6	0.2	-0.3
State & Local Government	-0.6	1.7	0.7	1.6	1.0	1.0	0.6	0.4	1.3	1.2	1.2	0.9	0.9
Prices & Wages, Percent Change, Annual Rate													
(Q4/Q4 for Annual Values)													
Consumer Prices	10.5	5.7	6.2	5.8	3.9	3.7	6.7	7.9	4.3	2.3	1.7	1.6	1.7
Producer Prices, Finished Goods	22.3	-0.6	4.5	3.3	0.8	1.6	13.0	10.7	2.0	0.6	0.9	1.0	1.2
Employment Cost Index - Total Comp.	6.3	4.3	4.3	3.9	3.9	4.0	4.4	5.2	3.9	3.4	2.9	2.7	2.5
Other Key Measures													
Brent Crude, Spot Price (\$/bbl)	113.33	100.77	110.64	105.47	100.87	105.11	70.70	106.23	104.90	103.79	105.56	106.21	108.62
Productivity (%ch., saar)	-4.1	0.3	-2.2	-1.3	4.1	4.8	1.9	-3.0	3.1	1.1	0.9	0.9	0.5
Total Industrial Production (%ch., saar)	5.2	2.9	0.1	-4.2	-6.2	-4.2	4.5	3.2	-4.2	-0.6	1.7	2.2	2.1
Nonfarm Inven. Chg. (Bil.2012 \$)	123.6	78.7	57.2	24.7	-18.3	6.7	-16.0	120.8	11.1	41.0	58.3	68.4	59.3
Consumer Sentiment Index	57.9	56.1	55.3	49.9	47.8	51.0	77.6	58.1	50.9	70.0	84.6	91.9	92.7
Light Vehicle Sales (Mil. units, saar)	13.30	13.38	13.54	12.75	12.40	12.43	14.95	13.59	12.48	12.60	12.63	12.94	13.63
Housing Starts (Mil. units, saar)	1.647	1.461	1.363	1.227	1.109	1.056	1.605	1.548	1.109	1.178	1.298	1.287	1.289
Unemployment Rate (%)	3.6	3.5	4.2	4.9	5.9	6.7	5.4	3.8	6.2	7.3	6.5	5.9	5.2
Payroll Employment (%ch., saar)	3.3	3.1	1.2	-2.0	-4.0	-3.7	4.3	3.1	-3.2	0.0	0.7	1.0	1.1
Federal Surplus (Unified, FY, bil. \$)	153.2	-860.3	-264.9	-388.0	-135.0	-375.7	-2775.6	-1375.4	-1163.6	-1584.8	-1776.1	-1813.8	-1834.4
Financial Markets, NSA, Quarter Average													
Federal Funds Rate (%)	0.77	2.19	3.65	4.52	4.85	4.75	0.08	1.68	4.57	2.62	1.02	0.63	0.62
10-Year Treasury Note Yield (%)	2.93	3.11	3.97	3.89	3.63	3.43	1.44	2.99	3.53	2.69	2.37	2.27	2.24
Incomes													
Personal Income (% ch., saar)	5.9	5.5	5.4	4.9	1.7	2.2	6.9	4.9	2.6	4.3	4.5	4.4	4.2
After-Tax Profits (Four-qr.% change)	7.7	6.2	5.8	-0.3	-7.4	-5.3	20.5	5.8	-1.6	2.0	1.9	3.3	4.1
Optimistic: Faster resolution to the Russia Ukraine conflict and improving supply issues drive faster growth (15% probability)													
Composition of Real GDP, Percent Change, Annual Rate													
(Q4/Q4 for Annual Values)													
Gross Domestic Product	-0.6	2.6	1.1	-0.5	0.4	1.2	5.7	0.4	0.7	1.5	1.9	1.7	1.6
Total Consumption	2.0	1.4	3.3	1.1	1.6	0.9	7.2	2.0	1.1	1.3	1.8	1.8	2.0
Nonresidential Fixed Investment	0.1	3.7	1.7	-1.8	-2.2	-0.3	5.0	3.3	-1.0	1.0	2.1	1.8	2.0
Residential Fixed Investment	-17.8	-26.4	-22.9	-14.0	-11.5	-1.1	-0.3	-18.0	-6.0	10.8	4.1	2.3	0.0
Exports	13.8	14.4	0.3	-1.2	2.3	3.9	6.5	5.7	2.3	3.8	4.0	3.2	3.1
Imports	2.2	-6.9	1.4	3.6	-1.3	1.0	10.1	3.4	1.3	3.6	3.0	2.2	2.7
Federal Government	-3.4	3.7	1.6	5.7	0.3	0.4	0.4	-0.9	1.6	0.5	0.5	0.0	-0.5
State & Local Government	-0.6	1.7	2.3	1.8	0.7	1.5	0.6	0.7	1.5	1.1	0.9	0.7	0.6
Prices & Wages, Percent Change, Annual Rate													
(Q4/Q4 for Annual Values)													
Consumer Prices	10.5	5.7	1.0	4.4	4.5	3.2	6.7	6.5	3.9	2.8	2.2	2.3	2.3
Producer Prices, Finished Goods	22.3	-0.6	-1.3	2.0	2.3	1.4	13.0	9.2	1.9	1.2	1.4	1.6	1.9
Employment Cost Index - Total Comp.	6.3	4.3	4.8	4.3	4.4	4.5	4.4	5.3	4.4	4.5	4.2	3.9	3.7
Other Key Measures													
Brent Crude, Spot Price (\$/bbl)	113.33	100.77	90.00	84.60	82.00	86.67	70.70	101.07	85.82	87.42	89.59	90.53	93.16
Productivity (%ch., saar)	-4.1	0.3	-2.5	0.2	3.0	3.8	1.9	-3.1	2.6	0.3	1.5	1.4	1.6
Total Industrial Production (%ch., saar)	5.2	2.9	2.6	-3.2	-1.5	0.9	4.5	3.9	-0.6	1.6	2.2	1.2	0.8
Nonfarm Inven. Chg. (Bil. 2012 \$)	123.6	78.7	58.0	29.9	2.4	2.4	-16.0	121.0	13.5	17.4	42.6	61.2	66.7
Consumer Sentiment Index	57.9	56.1	59.5	58.3	58.7	60.8	77.6	59.2	60.6	81.4	95.2	100.2	99.2
Light Vehicle Sales (Mil. units, saar)	13.30	13.38	13.85	13.88	14.20	14.84	14.95	13.66	14.60	16.08	16.60	16.63	16.49
Housing Starts (Mil. units, saar)	1.647	1.461	1.386	1.280	1.223	1.193	1.605	1.554	1.225	1.326	1.438	1.436	1.429
Unemployment Rate (%)	3.6	3.5	3.5	3.8	4.4	5.0	5.4	3.6	4.6	5.0	4.5	4.3	4.2
Payroll Employment (%ch., saar)	3.3	3.1	2.5	-0.3	-1.9	-2.2	4.3	3.4	-1.5	0.9	0.5	0.4	0.3
Federal Surplus (Unified, FY, bil. \$)	153.2	-860.3	-248.6	-364.3	-101.9	-333.1	-2775.6	-1375.4	-1047.9	-1355.7	-1552.2	-1639.6	-1762.0
Financial Markets, NSA, Quarter Average													
Federal Funds Rate (%)	0.77	2.19	3.65	4.52	4.85	4.85	0.08	1.68	4.83	4.55	3.22	2.74	2.63
10-Year Treasury Note Yield (%)	2.93	3.11	4.09	4.25	4.10	3.98	1.44	3.02	4.04	3.49	3.30	3.25	3.21
Incomes													
Personal Income (% ch., saar)	5.9	5.5	7.9	4.9	4.3	4.5	6.9	5.5	4.4	5.0	4.4	4.4	4.5
After-Tax Profits (Four-qr.% change)	7.7	6.2	7.5	3.3	-5.0	-3.2	20.5	7.5	-0.3	-1.1	3.6	4.1	4.9

Source: IHS Markit

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Summary of the US Economy

	Annual rates					Annual averages					Q4/Q4				
	2022:3	2022:4	2023:1	2023:2	2023:3	2021	2022	2023	2024	2025	2021	2022	2023	2024	2025
Composition of Real GDP, Percent Change															
Gross Domestic Product	2.6	-0.4	-2.0	-0.4	1.0	5.9	1.8	-0.2	1.3	1.8	5.7	0.0	0.0	1.6	1.9
Final Sales of Domestic Product	3.3	0.0	-1.5	0.1	0.5	5.7	1.1	0.3	1.2	1.8	4.8	0.7	0.1	1.5	1.8
Gross Domestic Income	2.4	-0.5	-2.0	-0.5	0.9	5.5	2.5	-0.2	1.3	1.8	4.1	0.7	0.0	1.6	1.8
Avg. of GDP and GDI	2.5	-0.4	-2.0	-0.4	0.9	5.7	2.1	-0.2	1.3	1.8	4.9	0.3	0.0	1.6	1.9
Total Consumption	1.4	1.5	-0.4	0.8	0.7	8.3	2.7	0.8	1.1	1.7	7.2	1.6	0.5	1.4	1.8
Durables	-0.8	-1.3	-5.9	1.2	2.5	18.5	-0.4	-1.3	3.4	4.0	7.0	0.6	0.3	4.0	3.9
Nondurables	-1.4	-0.9	-4.7	0.6	0.0	8.8	-0.8	-1.6	0.4	0.9	7.2	-2.3	-1.0	0.6	1.1
Services	2.8	2.9	2.0	0.8	0.6	6.3	4.4	1.9	0.9	1.6	7.2	3.1	1.0	1.2	1.7
Nonresidential Fixed Investment	3.7	-0.9	-4.1	-3.0	-1.2	6.4	3.2	-1.5	-0.2	1.1	5.0	2.6	-2.1	0.4	1.4
Equipment	10.8	0.3	-5.4	-5.1	-2.1	10.3	4.5	-1.5	-0.3	2.1	4.7	4.9	-3.2	1.0	2.4
Information Processing Equipment	10.0	8.2	2.0	-4.3	-3.5	9.8	7.7	1.4	-2.4	0.8	6.2	6.9	-2.0	-1.6	2.2
Industrial Equipment	-12.7	-3.2	-7.8	-10.0	-7.2	11.9	4.7	-7.5	-1.5	2.1	13.0	-2.8	-6.7	0.9	2.5
Transportation equipment	92.1	-3.7	-13.6	3.0	8.9	15.7	2.8	6.1	3.2	1.5	-2.0	18.8	0.0	2.5	0.0
Aircraft	312.5	-55.8	-9.9	14.6	18.9	29.0	4.1	4.8	1.6	-0.2	-7.0	16.1	6.0	-2.6	2.1
Other Equipment	-8.6	-4.5	-6.6	-8.8	-5.0	5.5	1.0	-5.8	1.0	5.0	-0.3	-0.3	-5.0	3.8	5.5
Intellectual Property Products	6.9	1.6	-2.8	-1.7	-0.8	9.7	8.5	0.5	-0.5	0.0	10.8	7.0	-1.4	-0.4	0.2
Structures	-15.3	-8.7	-4.0	-1.4	-0.2	-6.4	-9.4	-5.8	0.7	1.6	-5.2	-10.4	-1.2	1.1	2.0
Commercial & Health Care	-20.1	-20.4	-11.3	-15.0	2.3	-7.6	-15.0	-12.7	0.0	-0.5	-10.5	-16.7	-5.5	-0.2	0.5
Manufacturing	-24.9	5.9	-5.3	-18.0	-10.5	-0.7	-2.3	-10.1	-14.9	-9.1	2.3	-6.7	-12.0	-15.7	-3.0
Power & Communication	-12.4	-12.3	-3.7	7.6	-7.7	-8.4	-19.5	-7.3	-2.8	2.5	-12.5	-18.1	-3.3	0.0	2.5
Mining & Petroleum	-8.8	2.9	6.2	40.2	17.9	14.0	13.8	11.8	19.9	5.6	37.6	6.4	22.0	13.6	3.5
Other	-4.7	-0.4	2.7	-1.6	-4.3	-17.8	-7.0	-1.5	-0.8	6.7	-15.3	-3.5	-2.1	3.6	5.3
Residential Fixed Investment	-26.4	-24.1	-15.5	-12.0	-1.7	10.7	-10.4	-15.7	6.0	7.5	-0.3	-18.3	-6.7	10.9	4.1
Exports	14.4	-0.2	-3.0	0.0	1.5	6.1	7.3	2.1	3.6	4.3	6.5	5.5	0.4	4.7	4.1
Imports	-6.9	-0.4	1.2	-2.2	0.5	14.1	8.5	-0.8	2.7	3.4	10.1	2.9	0.4	4.1	2.6
Federal Government	3.7	1.5	5.7	0.5	0.3	2.3	-2.8	2.1	0.4	0.5	0.4	-0.9	1.6	0.5	0.5
State & Local Government	1.7	0.8	2.0	1.4	1.3	-0.5	0.3	1.4	1.4	0.9	0.6	0.4	1.6	1.1	0.9
Prices & Wages, Percent Change															
GDP Deflator	4.1	5.1	4.1	3.0	2.8	4.5	7.0	4.1	2.3	2.1	6.1	6.6	3.1	2.1	2.1
Consumer Prices	5.7	5.4	3.7	2.2	3.1	4.7	8.1	4.3	2.7	2.3	6.7	7.7	3.0	2.6	2.1
Producer Prices, Finished Goods	-0.6	3.3	1.6	-0.4	1.0	8.9	13.5	2.3	0.9	1.4	13.0	10.4	1.0	0.9	1.4
Employment Cost Index - Total Comp.	4.3	4.8	4.7	4.6	4.6	3.6	5.2	4.7	4.4	4.2	4.4	5.3	4.6	4.3	4.1
Other Key Measures, Percent Change															
Total Industrial Production	2.9	0.3	-2.8	-2.9	-0.4	4.9	4.3	-0.5	0.5	1.6	4.5	3.3	-1.3	1.0	1.9
Payroll Employment	3.1	1.8	-0.3	-2.3	-2.3	2.8	4.1	0.0	-0.3	0.7	4.3	3.2	-1.7	0.8	0.5
Financial Markets, NSA, Quarter Average															
S&P 500 Stock Index (four-quarter % change)															
(Average of period)	-12.6	-20.1	1.9	1.6	2.9	32.6	-4.4	-6.7	4.4	3.6	29.4	-18.3	2.0	5.5	2.7
(End of period)	-16.8	-20.8	-16.7	0.5	6.8	35.5	-9.6	-2.8	4.9	3.2	26.9	-20.8	1.5	5.8	2.7
Exchange Rate, Broad Index (%change, annual rate)	16.2	13.6	2.4	0.6	-1.3	-3.9	7.4	5.4	-4.2	-4.2	0.9	11.0	-0.7	-5.2	-3.4
Incomes, Percent Change															
Personal Income	5.5	6.9	4.2	3.0	3.8	7.4	2.3	4.6	4.4	4.5	6.9	5.3	3.7	4.7	4.5
Real Disposable Income	1.7	3.1	4.6	2.6	3.4	1.9	-6.2	2.9	3.3	2.5	-0.4	-2.0	3.4	3.0	2.5
			Levels					Annual averages					Q4 values		
Billions of Dollars															
Real GDP	20022	20000	19901	19880	19927	19610	19960	19928	20194	20562	20006	20000	20005	20326	20709
Nominal GDP	25663	25956	26087	26250	26495	23315	25402	26398	27373	28448	24349	25956	26762	27764	28875
Other Key Measures															
Brent Crude, Spot Price (\$/bbl)	100.77	96.64	89.60	83.67	86.67	70.70	102.73	87.48	87.42	89.59	79.67	96.64	90.00	89.83	89.59
Factory Operating Rate	79.7	79.6	78.8	77.9	77.5	77.1	79.5	77.9	77.5	77.6	78.6	79.6	77.5	77.5	77.6
Nonfarm Inven. Chg. (Bil. 2012 \$)	78.7	56.2	20.0	-18.0	-5.3	-16.0	120.5	3.7	29.6	47.3	202.2	56.2	18.3	35.3	53.1
Light Vehicle Sales (Mil. units, saar)	13.38	14.03	14.05	14.28	14.88	14.95	13.71	14.66	15.84	16.29	13.01	14.03	15.44	16.01	16.38
Housing Starts (Mil. units, saar)	1.461	1.372	1.256	1.193	1.169	1.605	1.550	1.197	1.295	1.406	1.679	1.372	1.169	1.381	1.406
Exist. House Sales (Total, Mil. saar)	4.770	4.220	4.062	3.712	3.866	6.127	5.105	3.870	4.206	4.627	6.203	4.220	3.841	4.489	4.686
Unemployment Rate (%)	3.5	3.7	4.0	4.7	5.3	5.4	3.7	4.9	5.3	4.8	4.2	3.7	5.7	5.0	4.7
Federal Surplus (Unified, nsa, bil. \$)	-860.3	-256.4	-377.3	-120.2	-354.1	-2580.4	-1254.1	-1236.1	-1519.6	-1685.1	-377.7	-256.4	-384.5	-455.2	-482.0
Current Account Balance (Bil. \$)	-879.7	-860.9	-875.7	-817.8	-807.1	-846.4	-968.8	-829.6	-843.5	-892.1	-899.3	-860.9	-817.9	-877.1	-885.2
Financial Markets, NSA, Quarter Average															
Federal Funds Rate (%)	2.19	3.65	4.52	4.85	4.85	0.08	1.68	4.77	4.33	2.97	0.08	3.65	4.86	3.65	2.63
3-Month Treasury Bill Rate (%)	2.66	3.97	4.50	4.70	4.62	0.04	2.00	4.60	3.99	2.70	0.05	3.97	4.56	3.34	2.38
10-Year Treasury Note Yield (%)	3.11	4.03	4.10	3.93	3.77	1.44	3.00	3.86	3.33	3.20	1.54	4.03	3.62	3.23	3.20
30-Year Fixed Mortgage Rate (%)	5.60	6.95	7.00	6.76	6.52	2.95	5.38	6.64	5.63	5.11	3.07	6.95	6.27	5.34	5.03
S&P 500 Stock Index (average of period)	3974	3757	3775	3790	3817	4267	4077	3803	3970	4111	4601	3757	3830	4042	4151
S&P 500 Stock Index (end of period)	3586	3775	3774	3806	3828	4336	3919	3810	3998	4125	4766	3775	3833	4056	4166
Incomes															
After-Tax Profits (Billions of \$)	-5.3	-9.0	-8.9	-7.1	3.5	30.3	7.4	-3.4	1.9	2.5	20.5	6.2	-1.3	0.1	3.5

Source: IHS Markit

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Alternative Scenarios of the US Economy

	Annual rates					Annual averages					Q4/Q4				
	2022:3	2022:4	2023:1	2023:2	2023:3	2021	2022	2023	2024	2025	2021	2022	2023	2024	2025
Pessimistic: Recovery stumbles as Russia Ukraine conflict intensifies, grinds on (30% probability)															
Composition of Real GDP, Percent Change															
Gross Domestic Product	2.6	-2.3	-3.6	-1.2	0.3	5.9	1.7	-1.2	1.0	1.7	5.7	-0.5	-0.9	1.4	1.8
Total Consumption	1.4	-0.5	-1.8	1.0	0.8	8.3	2.5	0.1	1.2	1.6	7.2	1.1	0.3	1.4	1.8
Nonresidential Fixed Investment	3.7	-6.7	-9.5	-5.6	-4.4	6.4	2.8	-5.1	-2.9	-0.6	5.0	1.1	-6.1	-1.5	-0.1
Residential Fixed Investment	-26.4	-25.2	-17.4	-17.1	-7.0	10.7	-10.5	-18.0	5.1	8.7	-0.3	-18.6	-10.2	12.3	4.6
Exports	14.4	-0.4	-5.1	-3.5	-2.1	6.1	7.3	0.2	2.9	4.9	6.5	5.5	-2.3	5.2	4.6
Imports	-6.9	-2.5	-1.1	-3.7	-0.3	14.1	8.3	-2.2	2.3	3.6	10.1	2.4	-1.2	4.3	2.7
Federal Government	3.7	1.5	5.6	0.3	0.3	2.3	-2.8	2.0	0.4	0.6	0.4	-0.9	1.5	0.5	0.6
State & Local Government	1.7	0.7	1.6	1.0	1.0	-0.5	0.3	1.1	1.3	1.1	0.6	0.4	1.3	1.2	1.2
Prices & Wages, Percent Change															
Consumer Prices	5.7	6.2	5.8	3.9	3.7	4.7	8.2	5.4	2.9	1.9	6.7	7.9	4.3	2.3	1.7
Producer Prices, Finished Goods	-0.6	4.5	3.3	0.8	1.6	8.9	13.6	3.4	1.0	0.9	13.0	10.7	2.0	0.6	0.9
Employment Cost Index - Total Comp.	4.3	4.3	3.9	3.9	4.0	3.6	5.2	4.2	3.6	3.0	4.4	5.2	3.9	3.4	2.9
Other Key Measures, Percent Change															
Productivity	0.3	-2.2	-1.3	4.1	4.8	2.4	-1.7	0.7	2.6	0.8	1.9	-3.0	3.1	1.1	0.9
Total Industrial Production	2.9	0.1	-4.2	-6.2	-4.2	4.9	4.2	-2.2	-1.9	0.9	4.5	3.2	-4.2	-0.6	1.7
Payroll Employment	3.1	1.2	-2.0	-4.0	-3.7	2.8	4.0	-1.1	-1.5	0.6	4.3	3.1	-3.2	0.0	0.7
Incomes, Percent Change															
Personal Income	5.5	5.4	4.9	1.7	2.2	7.4	2.2	4.0	3.4	4.5	6.9	4.9	2.6	4.3	4.5
After-Tax Profits (Four-qr.% change)	6.2	5.8	-0.3	-7.4	-5.3	30.3	7.3	-3.8	3.0	2.2	20.5	5.8	-1.6	2.0	1.9
	Levels					Annual averages					Q4 values				
Other Key Measures															
Brent Crude, Spot Price (\$/bbl)	100.77	110.64	105.47	100.87	105.11	70.70	106.23	104.90	103.79	105.56	79.67	110.64	108.15	106.30	105.33
Nonfarm Inven. Chg. (Bil.2012 \$)	78.7	57.2	24.7	-18.3	6.7	-16.0	120.8	11.1	41.0	58.3	202.2	57.2	31.2	47.9	61.5
Consumer Sentiment Index	56.1	55.3	49.9	47.8	51.0	77.6	58.1	50.9	70.0	84.6	69.9	55.3	55.1	78.7	88.1
Light Vehicle Sales (Mil. units, saar)	13.38	13.54	12.75	12.40	12.43	14.95	13.59	12.48	12.60	12.63	13.01	13.54	12.35	12.68	12.62
Housing Starts (Mil. units, saar)	1.461	1.363	1.227	1.109	1.056	1.605	1.548	1.109	1.178	1.298	1.679	1.363	1.045	1.271	1.297
Unemployment Rate (%)	3.5	4.2	4.9	5.9	6.7	5.4	3.8	6.2	7.3	6.5	4.2	4.2	7.3	7.0	6.3
Federal Surplus (Unified, FY, bil. \$)	-860.3	-264.9	-388.0	-135.0	-375.7	-2775.6	-1375.4	-1163.6	-1584.8	-1776.1	-377.7	-264.9	-413.1	-487.8	-507.4
Financial Markets, NSA, Quarter Average															
Federal Funds Rate (%)	2.19	3.65	4.52	4.85	4.75	0.08	1.68	4.57	2.62	1.02	0.08	3.65	4.15	1.64	0.63
10-Year Treasury Note Yield (%)	3.11	3.97	3.89	3.63	3.43	1.44	2.99	3.53	2.69	2.37	1.54	3.97	3.16	2.50	2.32
	Annual rates					Annual averages					Q4/Q4				
Optimistic: Faster resolution to the Russia Ukraine conflict and improving supply issues drive faster growth (15% probability)															
Composition of Real GDP, Percent Change															
Gross Domestic Product	2.6	1.1	-0.5	0.4	1.2	5.9	1.9	0.7	1.3	1.8	5.7	0.4	0.7	1.5	1.9
Total Consumption	1.4	3.3	1.1	1.6	0.9	8.3	2.8	1.7	1.1	1.7	7.2	2.0	1.1	1.3	1.8
Nonresidential Fixed Investment	3.7	1.7	-1.8	-2.2	-0.3	6.4	3.4	-0.1	0.4	1.8	5.0	3.3	-1.0	1.0	2.1
Residential Fixed Investment	-26.4	-22.9	-14.0	-11.5	-1.1	10.7	-10.4	-14.9	6.0	7.5	-0.3	-18.0	-6.0	10.8	4.1
Exports	14.4	0.3	-1.2	2.3	3.9	6.1	7.3	3.4	3.7	3.9	6.5	5.7	2.3	3.8	4.0
Imports	-6.9	1.4	3.6	-1.3	1.0	14.1	8.6	0.4	2.5	3.5	10.1	3.4	1.3	3.6	3.0
Federal Government	3.7	1.6	5.7	0.3	0.4	2.3	-2.8	2.1	0.4	0.5	0.4	-0.9	1.6	0.5	0.5
State & Local Government	1.7	2.3	1.8	0.7	1.5	-0.5	0.4	1.5	1.4	0.9	0.6	0.7	1.5	1.1	0.9
Prices & Wages, Percent Change															
Consumer Prices	5.7	1.0	4.4	4.5	3.2	4.7	7.8	4.1	3.1	2.4	6.7	6.5	3.9	2.8	2.2
Producer Prices, Finished Goods	-0.6	-1.3	2.0	2.3	1.4	8.9	13.2	2.2	1.3	1.4	13.0	9.2	1.9	1.2	1.4
Employment Cost Index - Total Comp.	4.3	4.8	4.3	4.4	4.5	3.6	5.2	4.5	4.5	4.3	4.4	5.3	4.4	4.5	4.2
Other Key Measures, Percent Change															
Productivity	0.3	-2.5	0.2	3.0	3.8	2.4	-1.7	0.6	1.4	1.0	1.9	-3.1	2.6	0.3	1.5
Total Industrial Production	2.9	2.6	-3.2	-1.5	0.9	4.9	4.4	0.3	1.2	2.0	4.5	3.9	-0.6	1.6	2.2
Payroll Employment	3.1	2.5	-0.3	-1.9	-2.2	2.8	4.1	0.2	-0.2	0.7	4.3	3.4	-1.5	0.9	0.5
Incomes, Percent Change															
Personal Income	5.5	7.9	4.9	4.3	4.5	7.4	2.4	5.3	4.8	4.6	6.9	5.5	4.4	5.0	4.4
After-Tax Profits (Four-qr.% change)	6.2	7.5	3.3	-5.0	-3.2	30.3	7.7	-1.4	0.8	2.5	20.5	7.5	-0.3	-1.1	3.6
	Levels					Annual averages					Q4 values				
Other Key Measures															
Brent Crude, Spot Price (\$/bbl)	100.77	90.00	84.60	82.00	86.67	70.70	101.07	85.82	87.42	89.59	79.67	90.00	90.00	89.83	89.59
Nonfarm Inven. Chg. (Bil. 2012 \$)	78.7	58.0	29.9	2.4	2.4	-16.0	121.0	13.5	17.4	42.6	202.2	58.0	19.2	18.8	52.9
Consumer Sentiment Index	56.1	59.5	58.3	58.7	60.8	77.6	59.2	60.6	81.4	95.2	69.9	59.5	64.6	90.5	98.4
Light Vehicle Sales (Mil. units, saar)	13.38	13.85	13.88	14.20	14.84	14.95	13.66	14.60	16.08	16.60	13.01	13.85	15.49	16.42	16.60
Housing Starts (Mil. units, saar)	1.461	1.386	1.280	1.223	1.193	1.605	1.554	1.225	1.326	1.438	1.679	1.386	1.202	1.413	1.438
Unemployment Rate (%)	3.5	3.5	3.8	4.4	5.0	5.4	3.6	4.6	5.0	4.5	4.2	3.5	5.4	4.7	4.4
Federal Surplus (Unified, FY, bil. \$)	-860.3	-248.6	-364.3	-101.9	-333.1	-2775.6	-1375.4	-1047.9	-1355.7	-1552.2	-377.7	-248.6	-364.4	-426.9	-455.9
Financial Markets, NSA, Quarter Average															
Federal Funds Rate (%)	2.19	3.65	4.52	4.85	4.85	0.08	1.68	4.83	4.55	3.22	0.08	3.65	5.09	3.87	2.87
10-Year Treasury Note Yield (%)	3.11	4.09	4.25	4.10	3.98	1.44	3.02	4.04	3.49	3.30	1.54	4.09	3.83	3.37	3.28

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IHS Markit Customer Care

CustomerCare@ihsmarkit.com

Americas: +1 800 IHS CARE (+1 800 447 2273)

Europe, Middle East, and Africa: +44 (0) 1344 328 300

Asia and the Pacific Rim: +604 291 3600

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