December 2022

NATIONAL ECONOMIC OUTLOOK

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Executive Summary

Fed Tightening, But at Slower Pace; Job Market Remains Very Tight

- At its meeting on December 13 and 14, the Federal Open Market Committee (FOMC) raised the federal funds rate by 50 basis points, to a range between 4.25% and 4.50%. This followed rate hikes of 75 basis points at each of the four previous FOMC meetings. The fed funds rate started the year between 0.00% and 0.25%; the Fed has tightened monetary policy very aggressively in response to inflation that is well above the central bank's 2% objective, even as inflation has slowed in recent months. The central bank has also reduced the size of its balance sheet this year, pushing up long-term interest rates. According to projections released along with the monetary policy statement, FOMC participants are indicating further fed funds rate hikes in 2023, with the rate expected to end 2023 above 5%.

- Job growth remains very strong at the end of 2022. The U.S. economy added 263,000 jobs in November according to a survey of employers, with job growth in the three months through November averaging 272,000, well above the pre-pandemic pace. The private sector added 221,000 jobs in November, while government employment rose by 42,000. The unemployment rate was 3.7% in November, unchanged from October and up from 3.5% in September, matching a 50-year low. Employment in a survey of households (different from the survey of employers) fell by 138,000 in November, the second straight drop. The labor force—the number of adults working or looking for work—contracted by 186,000, while the labor force participation rate—the share of adults in the labor force—fell to 62.1%, from 62.2% in October. While the labor force participation rate has improved from 60.2% in April 2020 at the worst of the pandemic, it has been just above 62% throughout 2022, about a full percentage point below its pre-pandemic level. The post-pandemic labor market is structurally tighter than the pre-pandemic one.

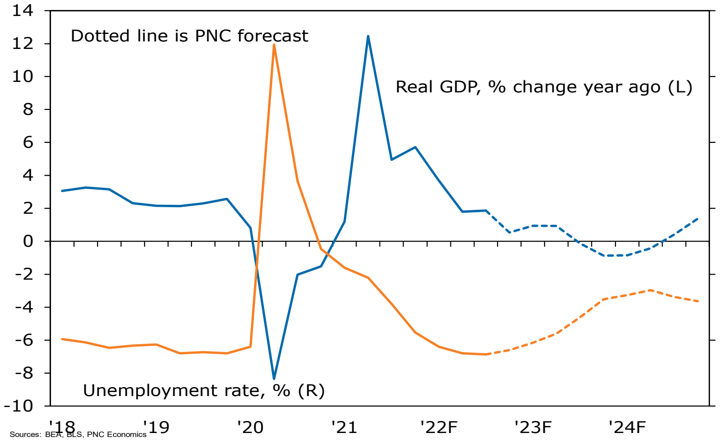
- Real GDP increased 2.9% at an annual rate in the third quarter, according to the second estimate from the Bureau of Economic Analysis. This followed small declines in economic output in the first two quarters of 2022, and real GDP is now slightly above where it was at the end of 2021. Trade was a huge contributor to third quarter growth, adding 2.9 percentage points to annualized growth, as exports rose and imports declined (lower imports add to GDP). Consumer spending, business investment (excluding inventories), and government purchases also added to growth in the third quarter. Housing was a major drag as high mortgage rates weighed on residential construction, and inventories were also a negative.

*Baseline U.S. Economic Outlook, Summary Table**

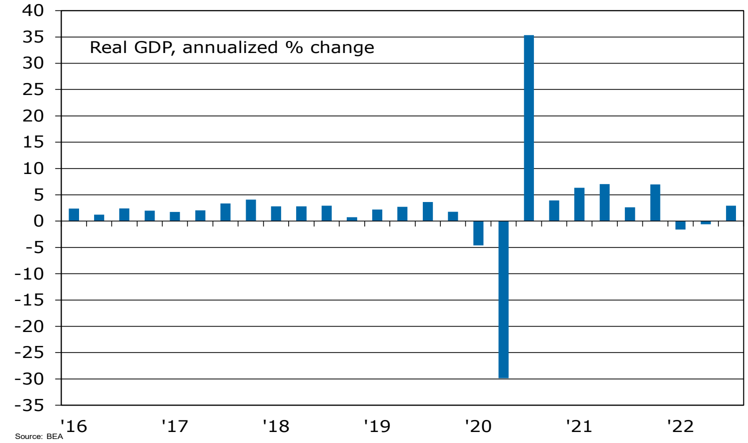
	3Q'22a	4Q'22f	1Q'23f	2Q'23f	3Q'23f	4Q'23f	2021a	2022f	2023f	2024f
Output & Prices										
Real GDP (*Chained 2012 Billions $*)	20039	20113	20113	20081	20015	19938	19610	19993	20037	20062
Percent Change Annualized	**2.9**	**1.5**	**0.0**	**-0.6**	**-1.3**	**-1.5**	**5.9**	**2.0**	**0.2**	**0.1**
CPI (*1982-84 = 100*)	295.9	299.3	302.3	304.6	306.6	308.2	271.0	292.9	305.4	310.6
Percent Change Annualized	**5.7**	**4.7**	**4.1**	**3.1**	**2.6**	**2.1**	**4.7**	**8.1**	**4.3**	**1.7**
Labor Markets										
Payroll Jobs (*Millions*)	152.7	153.5	153.4	153.0	152.3	151.5	146.1	152.0	152.5	151.3
Percent Change Annualized	**3.1**	**1.9**	**-0.3**	**-1.0**	**-1.7**	**-2.2**	**2.8**	**4.1**	**0.3**	**-0.8**
Unemployment Rate (*Percent*)	3.6	3.7	3.9	4.2	4.7	5.2	5.4	3.7	4.5	5.3
Interest Rates (Percent)										
Federal Funds	2.19	3.65	4.56	4.88	4.88	4.83	0.08	1.68	4.78	4.00
10-Year Treasury Note	3.10	3.81	3.65	3.62	3.55	3.50	1.43	2.94	3.58	3.41

a = actual f = forecast p = preliminary **Please see the Expanded Table for more forecast series.*

PNC Now Expects Mild Contraction in 2023, With Increase in Unemployment Rate



Real GDP Bounced Back in the Third Quarter of 2022



PNC Now Forecasting Mild Recession in 2023 as Fed Continues to Hike Rates to Combat Inflation

The economy has made a remarkable recovery from the steep but short recession in 2020 that ensued after the coronavirus pandemic came to the U.S. Thanks to massive stimulus aid to households and businesses from the federal government and aggressive Federal Reserve cuts to short-term and long-term interest rates to support recovery, employment and real GDP are now both above their pre-pandemic levels, while the unemployment rate hit a 50-year low this summer before increasing slightly in the fall. But with a rapid recovery in consumer spending, supply chain disruptions, a surge in commodity prices following the Russian invasion of Ukraine, and a tight labor market boosting wages, inflation accelerated in the first half of 2022 to the fastest pace in 40 years. Inflation has slowed somewhat in recent months but remains far above the Federal Reserve's 2% objective. That high inflation, and now the Federal Reserve's response to it, will likely push the U.S. economy into recession in 2023. But given some underlying strengths in the U.S. economy the upcoming recession will likely be mild, more similar to the recessions of 1990-1991 and 2001, and less like the Great Recession of 2007-2009 or the Viral Recession of 2020.

By law the Federal Reserve has a dual mandate of maximum employment and stable prices, which the central bank defines as long-run inflation of about 2%. With inflation now much higher than that the Fed is using its primary tool of higher interest rates to slow economic growth. The FOMC has raised the federal funds rate, its key short-term policy rate, from close to 0% at the beginning of 2022 to above 4% by the end of the year, an unprecedented tightening. In addition the Fed has pushed up long-term interest rates, such as mortgage rates, by reducing its holdings of long-term securities, including long-term Treasurys and mortgage-backed securities. Higher rates make it more expensive for households and businesses to borrow, weighing on economic activity and cooling off the labor market. This, in turn, will reduce inflationary pressures in the U.S. economy. The Fed's goal is to slow growth but not push the economy into recession, which is an outright contraction in economic activity.

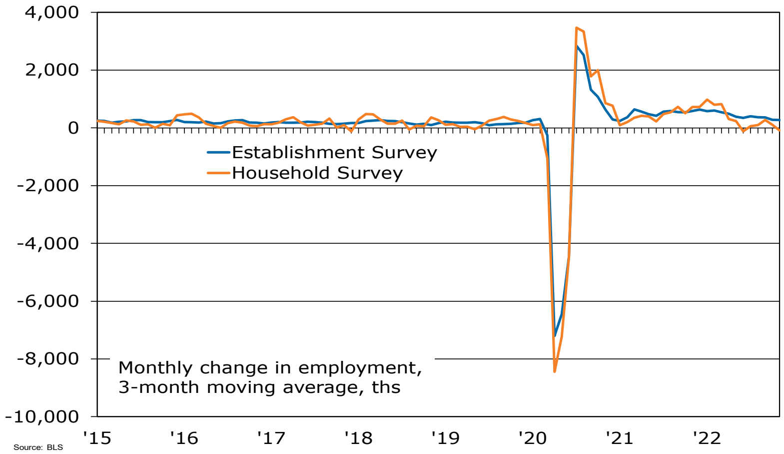
Unfortunately, it appears unlikely that the central bank will be able to pull off this "soft landing." Very aggressive Federal Reserve monetary policy tightening in 2022 has led to huge increases in both short- and long-term interest rates. The housing market is already in steep decline as much higher mortgage rates this year have led to big drops in housing starts, home sales, and house prices. Other sectors where interest rates play an outsized role, such as business investment and consumer spending on durable goods, will contract in 2023, causing a recession.

The clearest indication that a recession is coming is the inverted yield curve, a very reliable indicator of impending recession. Yields on short-term Treasury securities are usually lower than those on long-term Treasurys, as lending for longer periods of time entails greater compensation for more risk. But ahead of recessions the yield curve inverts, or short-term yields move above long-term yields, as the Fed raises short-term interest rates and long-term rates decline given expectations for slower inflation and weaker growth. The yield curve has inverted at the end of 2022, pointing to recession by the middle of next year.

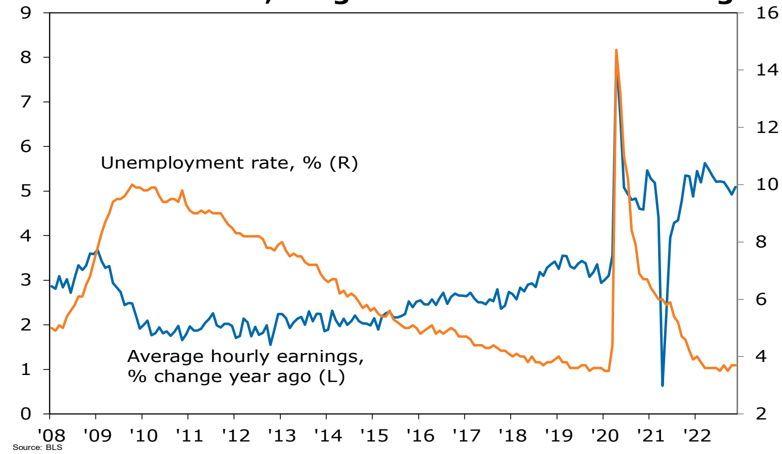
But the upcoming recession should be mild. Many, although not all, households still have a lot of savings left over from stimulus payments and limited opportunities to spend during the pandemic, which will cushion the hit to consumer spending. Given the tight post-pandemic labor market businesses will be reluctant to lay off workers, in turn limiting job losses. Banks have lots of money available to make loans, in part because of regulations put in place after the global financial crisis, and consumer and business credit quality are excellent. And while house prices are falling, homebuilding over the past dozen years has been low relative to demand, meaning there is no oversupply of housing unlike during the Great Recession, which will limit the housing downturn.

There is also still a one-in-three probability that the economy avoids recession. Inflation could slow more quickly than expected, giving the Fed more leeway to keep interest rates lower, limiting the damage to the economy. But the most likely outcome is a recession starting in the spring of 2023, with real GDP contracting a modest 1% before recovery starts in early 2024 as the Fed lowers interest rates in response to a deteriorating labor market and slower inflation. The unemployment rate will increase throughout 2023, peaking at around 5.5% in the first half of 2024. Inflation will slow with the recession and be back to the Fed's 2% objective by early 2024.

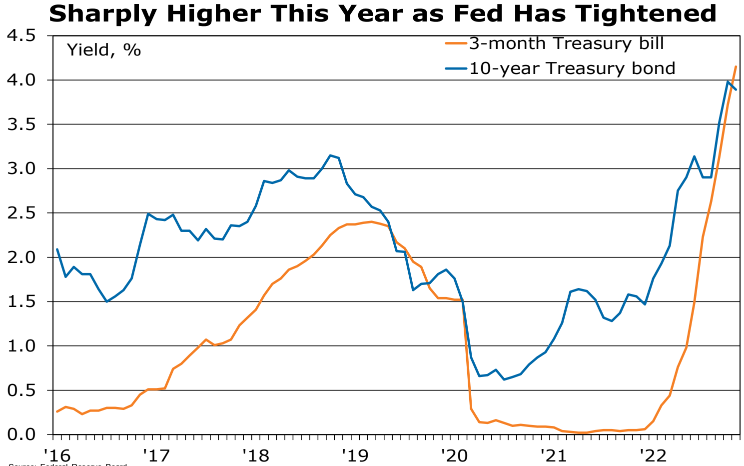
Job Growth Remains Too Hot for the Fed



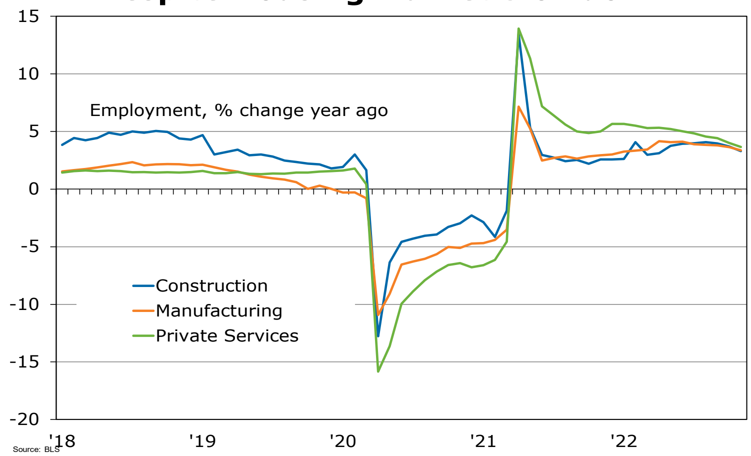
Unemployment Rate Up in the Fall, But Still Near 50-Year Low; Wage Growth Remains Strong



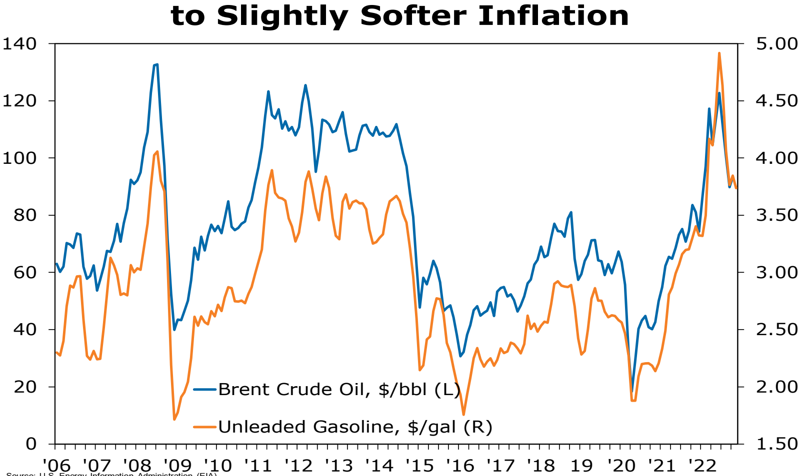
Short- and Long-Term Interest Rates Have Moved Sharply Higher This Year as Fed Has Tightened



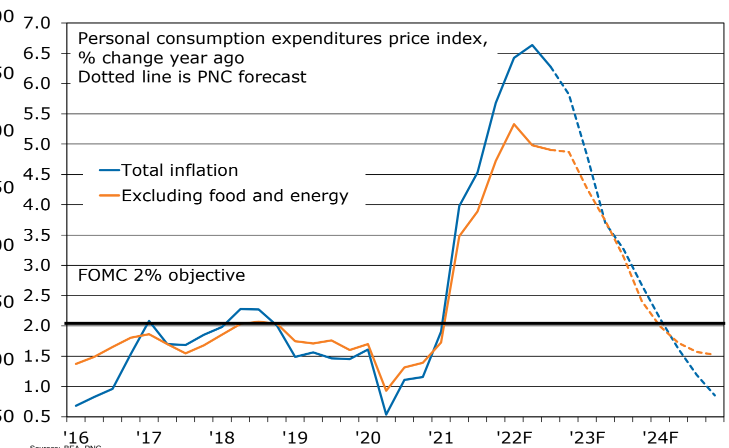
Construction Continues to Add Jobs Despite Housing Market Slowdown



Lower Energy Prices Are Contributing to Slightly Softer Inflation



Recession Will Push Inflation Down in 2023



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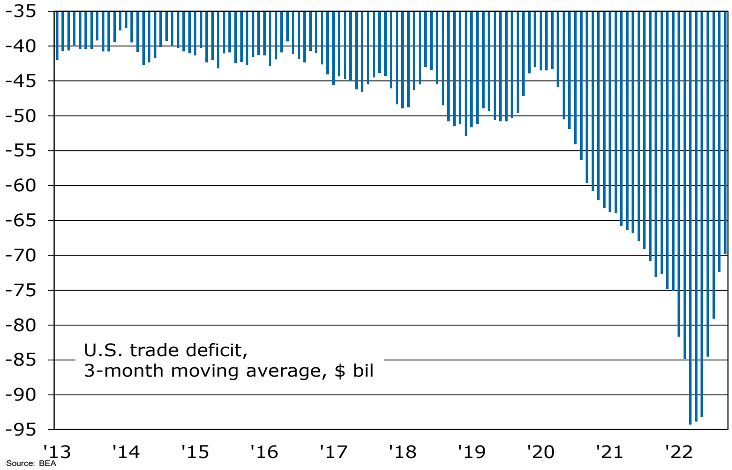
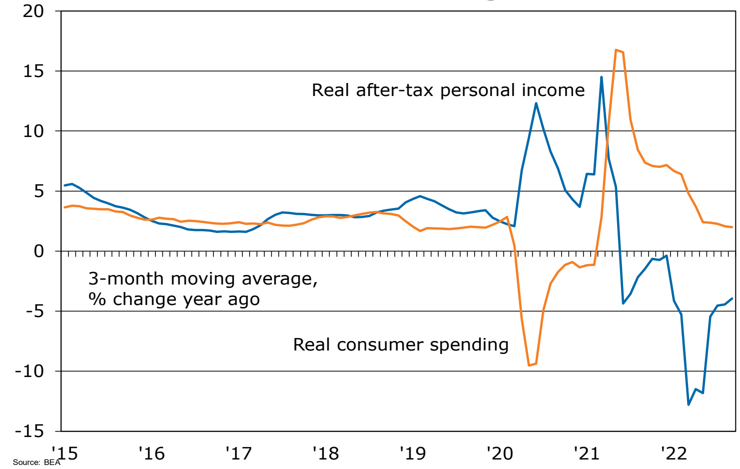
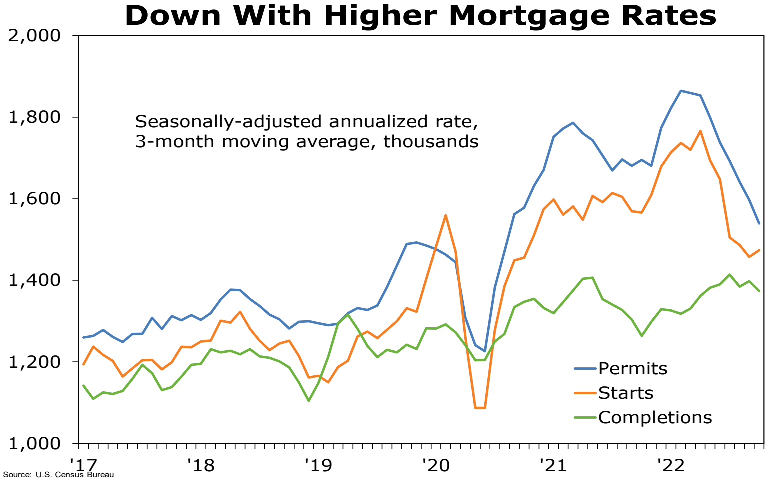
Smaller Trade Deficit Contributing to Growth in Second Half of 2022



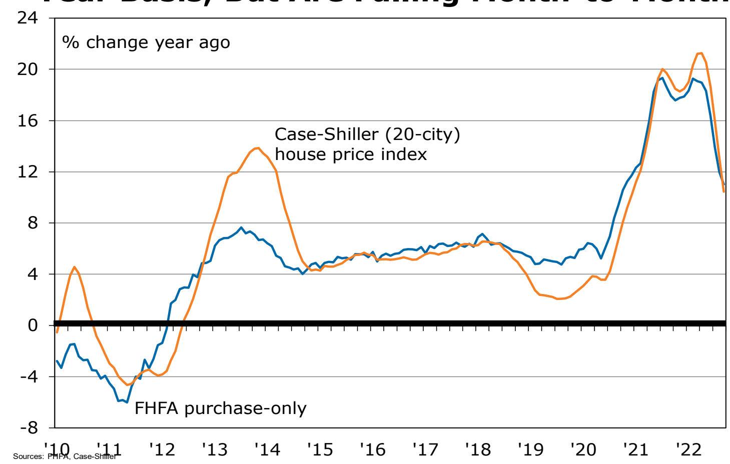
Real Household Income Is Falling With End to Stimulus Aid, High Inflation



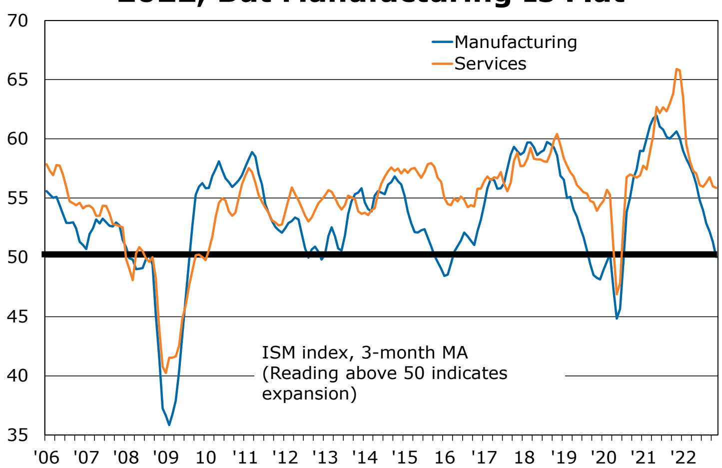
Housing Starts and Permits Are Down With Higher Mortgage Rates



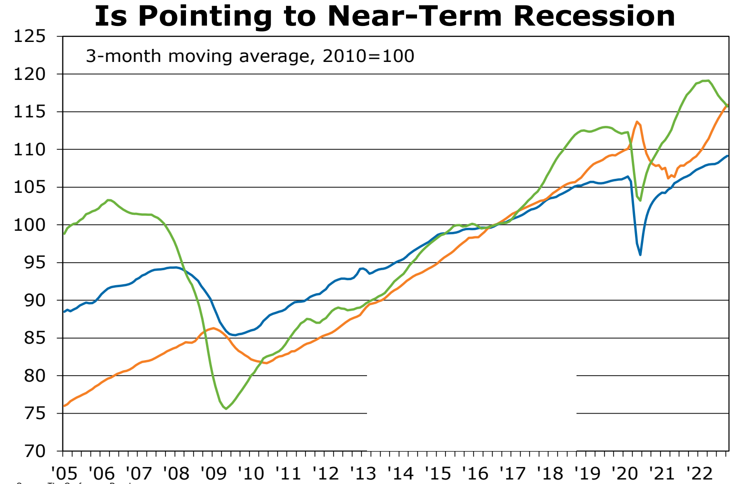
House Prices Are Still Up on a Year-Over-Year Basis, But Are Falling Month-to-Month



Services Remain Strong in Late 2022, But Manufacturing Is Flat



Conference Board Leading Indicator Is Pointing to Near-Term Recession



PNC Economics Group
December 2022

Baseline U.S. Economic Outlook, Expanded Table

	3Q'22a	4Q'22f	1Q'23f	2Q'23f	3Q'23f	4Q'23f	2021a	2022f	2023f	2024f
Output										
Nominal GDP (*Billions $*)	25663	26100	26326	26473	26558	26589	23315	25438	26486	26964
Percent Change Annualized	**6.7**	**7.0**	**3.5**	**2.3**	**1.3**	**0.5**	**10.7**	**9.1**	**4.1**	**1.8**
Real GDP (*Chained 2012 Billions $*)	20039	20113	20113	20081	20015	19938	19610	19993	20037	20062
Percent Change Annualized	**2.9**	**1.5**	**0.0**	**-0.6**	**-1.3**	**-1.5**	**5.9**	**2.0**	**0.2**	**0.1**
Pers. Consumption Expenditures	14160	14243	14256	14239	14210	14168	13754	14133	14218	14189
Percent Change Annualized	**1.7**	**2.4**	**0.4**	**-0.5**	**-0.8**	**-1.2**	**8.3**	**2.8**	**0.6**	**-0.2**
Nonresidential Fixed Investment	2952	2973	2964	2925	2874	2839	2835	2939	2901	2870
Percent Change Annualized	**5.1**	**2.9**	**-1.2**	**-5.2**	**-6.9**	**-4.7**	**6.4**	**3.7**	**-1.3**	**-1.1**
Residential Investment	621	574	533	504	481	466	719	643	496	469
Percent Change Annualized	**-26.8**	**-26.8**	**-25.8**	**-20.0**	**-17.0**	**-12.0**	**10.7**	**-10.7**	**-22.8**	**-5.4**
Change in Private Inventories	50	49	26	15	0	-50	-19	106	-2	-10
Net Exports	-1265	-1237	-1168	-1096	-1027	-962	-1233	-1355	-1064	-944
Government Expenditures	3405	3394	3386	3377	3360	3360	3426	3393	3371	3370
Percent Change Annualized	**3.0**	**-1.3**	**-1.0**	**-1.0**	**-2.0**	**0.0**	**0.6**	**-1.0**	**-0.7**	**0.0**
Industrial Prod. Index (*2012 = 100*)	104.9	105.1	105.1	103.2	99.5	97.5	100.0	104.3	101.3	99.6
Percent Change Annualized	**2.9**	**0.6**	**0.0**	**-6.9**	**-13.7**	**-7.7**	**4.9**	**4.3**	**-2.8**	**-1.7**
Capacity Utilization (*Percent*)	80.3	80.2	80.0	78.5	75.5	73.9	77.4	78.1	77.0	75.2
Prices										
CPI (*1982-84 = 100*)	295.9	299.3	302.3	304.6	306.6	308.2	271.0	292.9	305.4	310.6
Percent Change Annualized	**5.7**	**4.7**	**4.1**	**3.1**	**2.6**	**2.1**	**4.7**	**8.1**	**4.3**	**1.7**
Core CPI Index (1982-84 = 100)	297.0	300.7	303.9	306.4	308.4	309.9	277.3	294.4	307.2	312.9
Percent Change Annualized	**6.4**	**5.1**	**4.4**	**3.3**	**2.6**	**2.0**	**3.6**	**6.2**	**4.3**	**1.9**
PCE Price Index (*2012 = 100*)	123.7	125.0	126.1	127.0	127.8	128.4	115.6	122.9	127.3	129.1
Percent Change Annualized	**4.2**	**4.4**	**3.4**	**2.8**	**2.5**	**2.0**	**4.0**	**6.3**	**3.6**	**1.4**
Core PCE Price Index (*2012 = 100*)	123.9	125.4	126.4	127.2	127.8	128.4	117.4	123.3	127.4	129.6
Percent Change Annualized	**4.5**	**4.7**	**3.2**	**2.5**	**2.1**	**1.8**	**3.5**	**5.0**	**3.4**	**1.7**
GDP Price Index (*2012 = 100*)	128.2	129.8	130.9	131.8	132.7	133.4	118.9	127.3	132.2	134.4
Percent Change Annualized	**4.1**	**5.1**	**3.5**	**2.9**	**2.6**	**2.0**	**4.5**	**7.1**	**3.9**	**1.7**
Crude Oil, WTI (*$/Barrel*)	91.4	87.7	90.0	83.0	75.0	71.0	68.0	95.7	79.7	76.7
Labor Markets										
Payroll Jobs (*Millions*)	152.7	153.5	153.4	153.0	152.3	151.5	146.1	152.0	152.5	151.3
Percent Change Annualized	**3.1**	**1.9**	**-0.3**	**-1.0**	**-1.7**	**-2.2**	**2.8**	**4.1**	**0.3**	**-0.8**
Unemployment Rate (*Percent*)	3.6	3.7	3.9	4.2	4.7	5.2	5.4	3.7	4.5	5.3
Average Weekly Hours, Prod. Works.	34.0	33.9	33.8	33.7	33.6	33.6	34.3	34.0	33.7	33.6
Personal Income										
Average Hourly Earnings (*$*)	27.7	28.0	28.4	28.7	29.0	29.3	25.9	27.5	28.8	29.8
Percent Change Annualized	**5.3**	**5.4**	**5.0**	**4.7**	**4.1**	**3.5**	**4.9**	**6.2**	**4.9**	**3.3**
Real Disp. Income (*2012 Billions $*)	15116	15231	15322	15363	15370	15349	16130	15127	15351	15525
Percent Change Annualized	**1.7**	**3.1**	**2.4**	**-1.1**	**1.7**	**2.0**	**1.9**	**-6.2**	**1.5**	**1.1**
Housing										
Housing Starts (*Ths., Ann. Rate*)	1461	1278	1120	1039	987	956	1605	1526	1026	958
Ext. Home Sales (*Ths., Ann Rate*)	4770	4400	4189	3981	3853	3736	6127	5150	3940	4047
New SF Home Sales (*Ths., Ann Rate*)	608	582	506	484	448	424	769	644	466	432
Case/Shiller HPI (*Jan. 2000 = 100*)	301.7	298.7	292.1	282.6	271.9	263.4	276.7	298.7	263.4	263.3
Percent Change Year Ago	**13.0**	**7.9**	**0.5**	**-7.1**	**-9.9**	**-11.8**	**18.9**	**7.9**	**-11.8**	**-0.1**
Consumer										
Auto Sales (*Millions*)	13.4	13.5	13.7	13.5	13.2	12.6	14.9	13.6	13.3	12.3
Consumer Credit (*Billions $*)	4713	4776	4818	4849	4875	4894	4431	4776	4894	5010
Percent Change Year Ago	**8.2**	**7.8**	**6.5**	**4.9**	**3.4**	**2.5**	**5.9**	**7.8**	**2.5**	**2.4**
Interest Rates (Percent)										
Prime Rate	5.35	6.82	7.69	8.00	8.00	7.95	**3.25**	**4.85**	**7.91**	**7.12**
Federal Funds	2.19	3.65	4.56	4.88	4.88	4.83	**0.08**	**1.68**	**4.78**	**4.00**
3-Month Treasury Bill	2.63	4.05	4.27	4.22	4.16	4.09	**0.03**	**2.00**	**4.18**	**3.54**
10-Year Treasury Note	3.10	3.81	3.65	3.62	3.55	3.50	**1.43**	**2.94**	**3.58**	**3.41**
30-Year Fixed Mortgage	5.58	6.67	6.43	6.49	6.36	6.15	**2.96**	**5.32**	**6.36**	**5.65**

a = actual f = forecast p = preliminary

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