

# US Chartbook

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*Open source notes on the United States economy*

## Warning

**Early stage draft!**

This early draft contains many errors!

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## About the Chartbook

*I like a place with a lot of items on a menu. Because you know they do them all beautifully.*  
**Will Ferrell**

This chartbook offers a big menu of US economic and social indicators. To keep the data fresh and cover a wide-variety of topics, shortcuts are made on the back end. Most of the text is generated by simple scripts. Likewise, the charts are standardized with each other in ways that reduce how well they represent a topic.

As a result of these shortcuts, it is unlikely that you will be completely satisfied with the content of the chartbook. To sweeten the deal, I've added links to the data and [source code](#). Hopefully the end result can inspire and facilitate further exploration of topics of interest.

**Version 0.1 release planned for Spring 2023**

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## Jobless Claims

Each week, the Department of Labor [present](#) the unemployment insurance (UI) claims reported by state unemployment offices. An initial claim for UI is filed by an unemployed person, after a separation from an employer, to determine eligibility for benefits.

### New Jobless Claims

*initial claims per week, thousands, seasonally adjusted*



Source: Department of Labor

In the week ending April 8, 2023, seasonally-adjusted initial claims for UI total 239,000 (see —), an increase of 11,000 from the previous week. Initial claims average 240,000 per week over the past four weeks, 212,600 per week over the past year, and 217,500 per week during 2019.

Initial claims are considered a leading indicator of labor market conditions. An increase in jobless claims suggests a deterioration in economic conditions.

The Labor Department additionally report continued claims for UI, also referred to as insured unemployment. Insured unemployment is the number of people receiving UI benefits during a given week.

### Insured Unemployed

*continuing claims, thousands, seasonally adjusted*



Source: Department of Labor

During the week ending April 1, 2023, seasonally-adjusted insured unemployment totals 1,810,000 (see —), a decrease of 13,000 from the previous week. These continued claims average 1,813,500 over the past four weeks, 1,499,200 over the past year, and 1,698,500 during 2019.

UI only covers some workers. In March 2023, the Bureau of Labor Statistics classify 5.8 million people as unemployed and identify another 4.6 million who want a job but don't count as unemployed.

## Jobless Claims

*thousands per week*

	period averages						
	Apr 8, 2023	Apr 1, 2023	Mar 25, 2023	Mar 2023	Feb 2023	Apr 2022	Apr 2021
Initial claims (SA)	239	228	246	242	218	216	589
Initial claims (NSA)	235	207	224	224	218	203	621
Continued claims (SA)	–	1,810	1,823	1,804	1,734	1,519	3,788
Continued claims (NSA)	–	1,801	1,844	1,878	1,935	1,443	3,818

Source: Department of Labor

## Jobless Claims

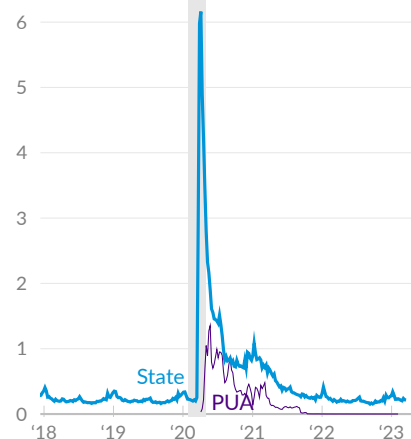
Each week, the Department of Labor [present](#) the unemployment insurance (UI) claims reported by state unemployment offices. Initial claims are filed by an unemployed person, after a separation from an employer, to determine eligibility for benefits. Initial claims are considered a leading indicator of labor market conditions.

The Department of Labor [report](#) 213,425 actual **new claims for unemployment insurance** (UI) under state programs (see [—](#)) during the week ending March 18, 2023, a one-week decrease of 4,700. Over the past four weeks, new claims have averaged 218,100 per week. During the same four-week period last year, there were an average of 200,500 new claims per week.

For the week ending March 11, 2023, the Department of Labor [report](#) 1,888,410 **continued claims** for unemployment insurance (insured unemployed) under state programs (see [—](#)), a one-week decrease of 21,600. One year prior, during the week of March 12, 2022, there were an average of 1,722,200 insured unemployed.

### New UI Claims

*initial claims per week, in millions, not seasonally adjusted*

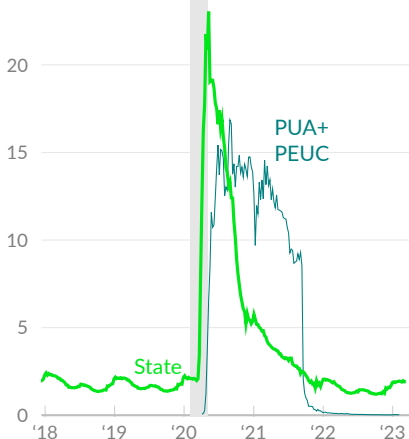


Source: Department of Labor



### Continued UI Claims

*insured unemployed, in millions, not seasonally adjusted*



Source: Department of Labor



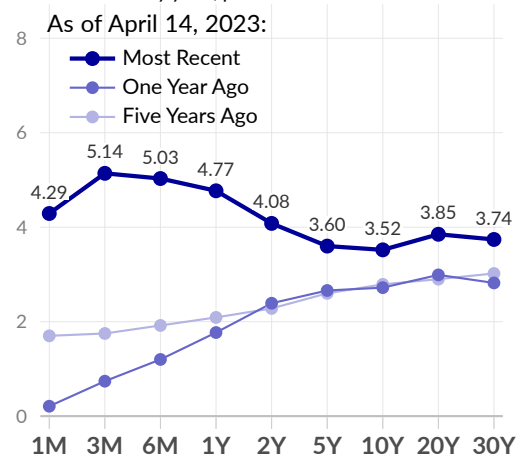
In response to the COVID-19 pandemic, traditional state-run unemployment insurance was temporarily boosted by federal programs that expanded eligibility for benefits and increased the amount of benefit payments. These programs were ended on September 6, 2021.

The **Treasury yield curve** shows the interest rates on different maturities of US Treasury bonds and bills, at a given point in time. The yield curve summarizes the term structure of interest rates, how much it costs to borrow for different periods of time, and has traditionally been considered an indicator of how markets view short-term economic conditions relative to longer-term conditions.

The yield curve is normally upward sloping as investors expect to be compensated for lending for a longer period of time. The shape of the yield curve changes over time and is affected by several factors, including the term premium, the monetary policy of the Federal Reserve, and expectations about future inflation. The curve can become steeper, for example, if interest rates or inflation is expected to be higher in the future.

### Treasury Yield Curve

constant maturity yield, percent



Source: Federal Reserve

The yield curve can also become *inverted* when yields on shorter-term debt are higher than yields on longer-term debt. An inverted yield curve can be a sign of worsening economic conditions. For example, short term rates may exceed longer-term rates if the Federal Reserve is expected to lower interest rates in the future, or if inflation is expected to fall due to weakened economic conditions.

Since 1989, the US has entered into four recessions and the 10-year to 2-year segment of the yield curve has newly inverted six times. The most recent such inversion started on April 1, 2022.

Another measure of the term structure of interest rates is the *spread* between treasuries with different maturities. **Treasury yield spreads** can be used to track changes in the term structure over time.

As of April 14, 2023, the spread between a 10-year treasury bond and a three-month treasury bill is -1.62 percentage point (see —), compared to 1.98 percentage points one year prior. The spread between 10-year and 2-year treasuries (see —) is -0.56 percentage point on April 14, 2023, and 0.33 percentage point one year prior.

### Treasury Yield Spreads

percentage points



Source: Federal Reserve



## Prices

The price of goods and services determine how much can be purchased by a fixed income. Researchers are interested in the prices of specific goods, as well as changes in overall purchasing power, more generally.

To understand the overall change in prices paid or charged by a group, such as consumers or manufacturers, researchers create a representative “basket” of the goods and services relevant to the group, and track the changes in the basket, and the price of the basket, over time. The end result of these methods is a price index. Researchers can then use the price index to calculate the rate of inflation.

Inflation is typically calculated as the 12-month percent change in the price index. This annual inflation rate measures how prices in a given month compare to prices during the same month, one year prior.

### Price Growth, Various Measures

one-year growth, percent

	Mar '23	Feb '23	Jan '23	Dec '22	Mar '22	Mar '21	'17-19 Avg.	'00-Avg.
CPI, All Items	5.0	6.0	6.4	6.5	8.5	2.6	2.1	2.5
CPI, ex. Food & Energy	5.6	5.5	5.6	5.7	6.5	1.6	2.1	2.3
PPI, Final Demand	2.7	4.9	5.9	6.6	11.7	4.1	2.3	2.7
Imports Price Index	-4.6	-1.1	0.9	3.2	13.0	7.1	1.6	2.1
Exports Price Index	-4.8	-0.8	2.0	4.6	18.4	9.6	1.6	2.2
PCE, All Items	-	5.0	5.3	5.3	6.8	2.5	1.8	2.1
PCE, ex. Food & Energy	-	4.6	4.7	4.6	5.4	2.0	1.8	2.0
PCE, Trimmed Mean	-	4.6	4.6	4.7	3.9	1.8	1.9	2.1

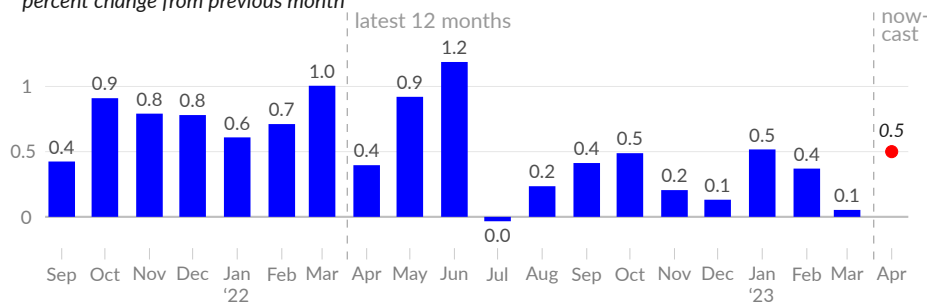
Source: BLS, BEA, Federal Reserve Bank of Dallas

In effect, the 12-month percent change in prices is smoothed, relative to the one-month change, by including information on price changes that happened over the past year. While the chartbook uses less-volatile 12-month inflation rates in most cases, the **one-month rate** can be more useful for examining short-term trends, for example by eliminating the base effects from changes in prices a year ago.

In March 2023, the one-month change in the consumer price index (CPI) was 0.1 percent (see ■), following 0.4 percent in February 2023. The Cleveland Fed [nowcasts](#) current inflation by combining recent inflation data with current oil and gasoline prices. As of April 17, the April 2023 nowcast is 0.5 percent (see ●).

### CPI One-Month Change

percent change from previous month



Source: Bureau of Labor Statistics, Federal Reserve Bank of Cleveland



## Wages

Wages are an important indicator and are closely monitored by economists. Wages are the majority of income in the economy and the main cost for businesses. Wage growth is particularly closely monitored as it affects quality of life and can affect inflation rates.

This subsection covers several wage measures. First, the distribution of usual weekly earnings provides the median, or typical, full-time wage, and insight into wage growth for low-wage workers and other groups. Next, the section discusses average hourly earnings, including by industry, and employee and benefit costs. Finally, we measure the wages of the same individuals, over time.

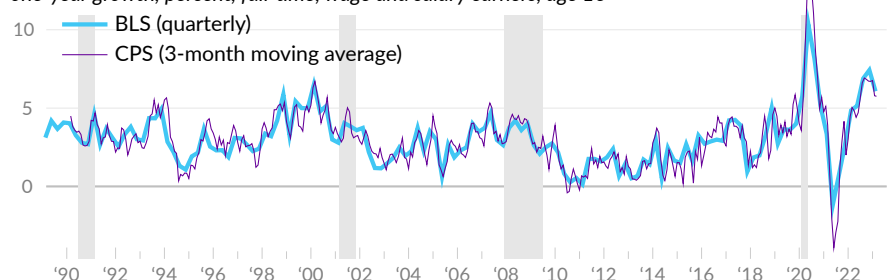
### Usual Weekly Earnings

The Bureau of Labor Statistics (BLS) [report](#) the **usual wages of full-time workers** at various points in the income distribution, including by decile and by quartile. The most commonly used of these measures is the median usual weekly earnings, which represents the middle wage; half of wages are above and half are below.

In the first quarter of 2023, median usual earnings of full-time wage and salary workers are \$1,100 per week, compared to \$1,037 per week in 2022 Q1, a nominal one-year increase of 6.1 percent (see [—](#)). In 2022 Q4, the median full-time worker receives \$1,085 per week, a one-year increase of 7.4 percent.

### Median Usual Weekly Earnings

*one-year growth, percent, full-time, wage and salary earners, age 16+*



Source: Bureau of Labor Statistics, Author's Calculations

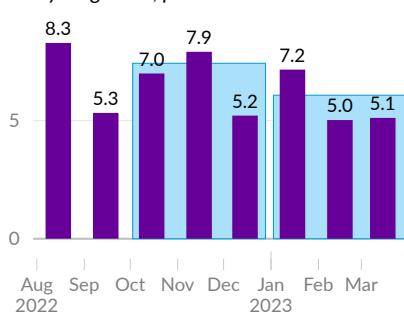
The primary source for BLS quarterly estimates of usual weekly earnings is the [Current Population Survey](#) (CPS). Using the CPS, more-volatile monthly estimates can be calculated before the next BLS quarterly estimate is available.

In March 2023, the median full-time worker receives \$1,098 per week, following \$1,123 per week in February 2023 and \$1,101 per week in January 2023. The average over these three months is \$1,107 per week, an increase of 5.8 percent over the same three months, one year prior (see [—](#)).

Median usual weekly earnings increased 5.1 percent over the year ending March 2023 (see [■](#)), following an increase of five percent in February, and an increase of 7.2 percent in January.

### Median Usual Weekly Earnings

*one-year growth, percent*



Source: BLS, Author

The income distribution also tells us the earnings of low-wage workers, represented here by the first decile. Only ten percent of workers earn less than the first decile wage. BLS [report](#) first decile usual earnings for full-time workers of \$574 per week in 2023 Q1 and \$531 per week in 2022 Q1, a nominal one-year increase of 8.1 percent (see —). Over the year ending 2022 Q4, first decile usual weekly earnings increased 9.8 percent.

The more-volatile CPS-based monthly measure shows first decile usual earnings of \$578 per week in March 2023, \$565 per week in February 2023, and \$581 per week in January 2023. The three-month average is \$575 per week; first decile earnings increased 7.6 percent over the same months, one-year prior (see —). By month, over the year ending March 2023, first decile earnings increased 7.7 percent, following 4.7 percent in February 2023, and 10.5 percent in January 2023.

### First Decile Usual Weekly Earnings

one-year growth, percent, full-time, wage and salary earners, age 16+



The following tables present the BLS published estimates for usual weekly earnings of full-time wage and salary earnings. The first table presents the earnings in levels, and the second table shows the one-year percent change.

### Usual Weekly Earnings

full-time, wage and salary earners, age 16+, nominal USD

	2023 Q1	2022 Q4	2022 Q3	2022 Q2	2022 Q1	2021 Q1	2020 Q1	2019 Q1	2018 Q1
First decile	574	571	560	547	531	486	468	442	423
First quartile	739	736	724	710	701	657	630	605	589
Median	1,100	1,085	1,070	1,041	1,037	989	957	905	881
Third quartile	1,751	1,709	1,696	1,655	1,635	1,563	1,513	1,451	1,399
Ninth decile	2,718	2,584	2,583	2,561	2,512	2,424	2,320	2,265	2,155

Source: Bureau of Labor Statistics

### Weekly Earnings Growth

full-time, wage and salary earners, age 16+, one-year growth, percent

	2023 Q1	2022 Q4	2022 Q3	2022 Q2	2022 Q1	2021 Q1	2020 Q1	2019 Q1	2018 Q1
First decile	8.1	9.8	9.8	9.0	9.3	3.8	5.9	4.5	3.9
First quartile	5.4	5.6	6.0	6.8	6.7	4.3	4.1	2.7	2.4
Median	6.1	7.4	6.9	5.2	4.9	3.3	5.7	2.7	1.8
Third quartile	7.1	8.3	7.5	6.3	4.6	3.3	4.3	3.7	2.3
Ninth decile	8.2	5.7	7.1	6.5	3.6	4.5	2.4	5.1	3.6

Source: Bureau of Labor Statistics



The core CPI, which excludes food and energy, increased 0.4 percent in March 2023, or 4.7 percent annualized, substantially below the one-year core CPI inflation rate of 5.6 percent. The core CPI increased 0.5 percent in February 2023, and increased 0.4 percent in January 2023.

In March, housing prices increased 0.3 percent, (3.6 percent annualized). Over the past three months, housing prices increased at an average annualized rate of 6.7 percent, substantially above the 12-month rate of 5.6 percent. Food prices were virtually unchanged in March, or 0.2 percent, annualized, compared to a three-month average of 3.7 percent.

Transportation prices decreased at an annualized rate of 6.4 percent in March, and increased at an average annualized rate of 0.2 percent over the past three months. Energy prices decreased at an annualized rate of 35.0 percent in March, and decreased at an average annualized rate of five percent over the past three months.

### Selected CPI Categories, Monthly Rate

*one-month growth, seasonally adjusted, percent*

	Mar '23	Feb '23	Jan '23	Dec '22	Nov '22	Oct '22	Apr '22	Mar '22
All items	0.1	0.4	0.5	0.1	0.2	0.5	0.4	1.0
All items less food and energy	0.4	0.5	0.4	0.4	0.3	0.3	0.5	0.3
Housing	0.3	0.5	0.8	0.7	0.5	0.6	0.6	0.7
Owners' equivalent rent	0.5	0.7	0.7	0.8	0.7	0.6	0.5	0.5
Rent of primary residence	0.5	0.8	0.7	0.8	0.8	0.7	0.6	0.4
Lodging away from home	2.7	2.3	1.2	1.1	-0.5	3.5	0.7	2.2
Household furnishings & ops.	0.4	0.8	0.3	0.3	0.1	0.2	0.5	0.9
Household energy	-2.3	-2.0	1.8	1.0	-0.5	-0.0	1.6	2.2
Transportation	-0.5	0.2	0.4	-1.6	-0.7	0.7	-0.1	2.8
New vehicles	0.4	0.2	0.2	0.6	0.5	0.6	0.4	0.1
Used cars and trucks	-0.9	-2.8	-1.9	-2.0	-2.0	-1.7	-0.7	-3.6
Gasoline (all types)	-4.6	1.0	2.4	-7.0	-2.3	3.4	-3.1	13.2
Public transportation	3.2	3.2	-1.8	-0.5	0.2	-0.4	6.5	8.4
Medical care	-0.3	-0.5	-0.4	0.3	-0.4	-0.3	0.4	0.5
Professional services	0.0	-0.3	-0.1	0.1	0.1	0.2	0.1	0.3
Hospital and related services	-0.2	0.1	0.7	1.1	-0.5	0.0	0.3	0.5
Health insurance*	-4.2	-4.1	-3.6	-3.4	-4.3	-4.0	2.0	2.2
Food	0.0	0.4	0.5	0.4	0.6	0.7	0.8	0.9
Food at home	-0.3	0.3	0.4	0.5	0.6	0.5	0.9	1.3
Food away from home	0.6	0.6	0.6	0.4	0.5	0.9	0.6	0.3
Full-service	0.7	0.6	0.5	0.1	0.4	1.1	0.9	0.7
Limited-service*	0.5	0.7	0.7	0.5	0.6	0.8	0.3	-0.2
Recreation	0.1	0.9	0.5	0.2	0.5	0.8	0.4	0.2
Communication	-0.0	0.0	0.4	-0.0	0.9	-0.2	-0.4	-0.5
Wireless telephone services*	-0.4	-0.3	-0.0	0.2	2.4	-0.3	0.0	-0.7
Internet services	0.9	0.9	1.0	0.1	0.9	0.5	0.2	-0.0
Education	0.5	0.1	0.3	0.3	0.3	0.2	0.2	0.3
College tuition and fees	0.2	0.1	0.3	0.3	0.2	0.1	0.2	0.2
Day care and preschool	1.4	0.0	0.7	0.4	0.5	0.1	0.5	0.3
Apparel	0.3	0.8	0.8	0.2	0.1	-0.2	-0.1	0.3
Personal care	0.4	0.9	0.6	-0.1	0.7	0.5	0.4	0.5

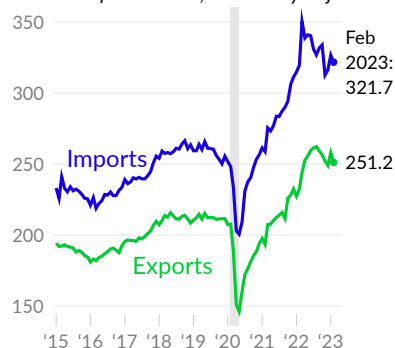
Source: Bureau of Labor Statistics; \*not seasonally adjusted

## International Trade

Each month, the Census Bureau [reports](#) goods and services trade between the US and the rest of the world. US purchases of foreign goods and services are classified as imports and foreign purchases of US goods and services are exports. The trade of goods includes consumer goods, industrial equipment, and agricultural products. Services trade includes travel and tourism, business services, and charges for the use of intellectual property, among other services.

### US Imports and Exports

*billions of US dollars, seasonally adjusted*



US goods and services imports total \$321.7 billion in February 2023, following \$326.7 billion in January (see —). Imports average \$321.5 billion over the latest three months of data, and \$315.2 billion during the same months, one year prior. In 2019, monthly US imports average \$258.8 billion. For additional context, imports are equivalent to \$961 per capita, in the latest month.

The US exported \$251.2 billion of goods and services in February 2023, following \$258.0 billion in January (see —). The three-month average was \$252.7 billion in February, and \$230.7 billion one year prior. Exports were \$212.2 billion per month, on average, in 2019. In the latest month, exports are equivalent to \$751 per capita or \$1,567 per worker.

### Trade Balance



Source: Census Bureau

Spending on imports exceeds payments received for exports, resulting in a trade deficit. In February, the trade deficit was \$70.5 billion, following \$68.7 billion in January (see —). Over the past three months, the average trade deficit is \$68.8 billion, compared to \$84.5 billion one year prior. In 2019, the average monthly trade deficit is \$46.6 billion.

### International Trade

*millions of US dollars, seasonally adjusted*

	Feb 2023	Jan 2023	Dec 2022	Feb 2022	2022 Q4	2022 Q3
Total Balance	-70,535	-68,661	-67,210	-87,251	-68,339	-68,988
Goods Balance	-92,976	-90,266	-90,712	-106,385	-90,783	-89,765
Services Balance	22,440	21,605	23,503	19,134	22,445	20,777
Total Exports	251,150	258,009	249,004	232,322	252,565	260,896
Goods Exports	169,177	177,702	167,688	160,108	171,621	181,981
Services Exports	81,974	80,307	81,316	72,214	80,945	78,915
Total Imports	321,686	326,670	316,214	319,573	320,905	329,884
Goods Imports	262,152	267,968	258,400	266,494	262,404	271,746
Services Imports	59,533	58,702	57,814	53,079	58,500	58,138

Source: Census Bureau

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