US Chartbook

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Open source notes on US economic activity

Notes

Very early stage draft:
Contents not reliable

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* Forthcoming

Overall Economic Activity

This analysis of the United States economy begins with the most popular measure of economic activity, Gross Domestic Product (GDP). GDP estimates the production of goods and services in a given location during a given period of time. According to the Bureau of Economic Analysis, the seasonally-adjusted annualized value of goods and services produced in the US was $21,487 billion in the fourth quarter of 2020, compared to an inflation-adjusted equivalent of $22,025 billion in 2019 Q4 and $9,980 billion in the first quarter of 1989.

The US population is growing by about sixth-tenths of a percent per year. GDP per capita (see —), adjusted for inflation to 2020 Q4 dollars, had increased to $66,910 in 2019 Q4 from $40,871 in 1989 Q1, and is currently $64,951.

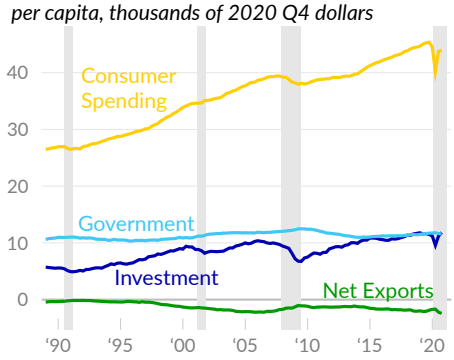
GDP per capita
in 2020 Q4 dollars

Source: Bureau of Economic Analysis

Types of Economic Activity

GDP calculated using the expenditures approach is the sum of major types of domestic spending on finished goods and services: consumer spending, private investment, and government spending and investment. To capture only domestic production, foreign spending on US produced goods and services is added, while imports (spending on non-US-produced goods and services) are subtracted.

Expenditure Types
per capita, thousands of 2020 Q4 dollars



Source: Bureau of Economic Analysis

Much of the increase in real GDP per capita over the past 30 years comes from consumer spending. Domestic consumer spending (see —) is equivalent to $43,957 per person in 2020 Q4, a price-adjusted increase of $17,458 since 1989. Gross private domestic investment (see —) is equivalent to $11,840 per person in 2020 Q4, and government spending and investment (see —) totals $11,584 per person. Net exports equivalent to $2,431 per person are subtracted to reflect only domestic production (see —).

Expenditure Types
per capita, annualized, 2020 Q4 dollars

	2020 Q4	2019 Q4	2000 Q1	1989 Q1
— Gross Domestic Product	$64,950	66,909	52,558	42,245
— Consumer Spending	43,957	45,378	33,883	26,498
— Gross Private Domestic Investment	11,840	11,502	8,900	5,728
— Government Spending and Investment	11,584	11,711	10,862	10,609
— Net Exports	-2,431	-1,874	-1,315	-438
Exports	6,674	7,537	4,611	2,404
Less: Imports	9,105	9,205	5,840	2,739

Source: Bureau of Economic Analysis

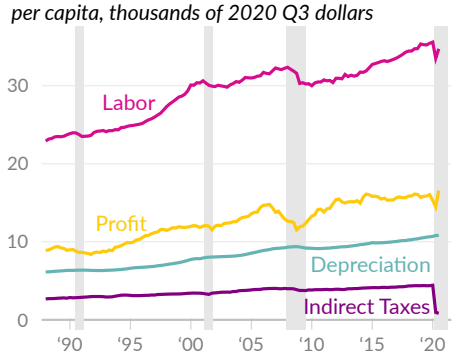
The less-discussed **income approach** calculates the level of overall economic activity from the sum of income payments from production and certain expenses incurred in production. Income from production is the payout to labor and capital. Income for labor is referred to as "compensation of employees, paid" in the national accounts and includes wages and salaries as well supplements to wages and salaries such as employer-paid health insurance premiums and retirement account contributions. Income received as profit is referred to as the "net operating surplus" in national accounts and includes interest payments, rental profits, business proprietor profits, and corporate profits.

Additionally some income does not get paid out to these groups. Taxes on imports and production, such as tariffs, sales tax, property tax, and licensing fees are tracked separately. If the government provides subsidies, which are income payments for production that did not occur, they must be subtracted from income measures of production. Lastly, a growing portion of potential income goes toward replacing and maintaining buildings and equipment used in production. This expense is recorded as "consumption of fixed capital" in the national accounts and referred to as depreciation below.

The Bureau of Economic Analysis report seasonally-adjusted and annualized Gross Domestic Income (GDI) of $20,803 billion in 2020 Q3, compared to an inflation-adjusted equivalent of $21,892 billion in 2019 Q4. Real GDI per capita was $62,969 in 2020 Q3 and $66,504 in 2019 Q4.

Income Types

per capita, thousands of 2020 Q3 dollars



Source: Bureau of Economic Analysis

Gross labor income per capita is equivalent to $34,736 in 2020 Q3 (see —) and $35,447 in 2019 Q4, on an annualized, seasonally-adjusted, and inflation-adjusted basis. Profits per person total $16,585 in 2020 Q3 (see —) and $16,046 in 2019 Q4, following the same adjustments. Indirect taxes less subsidies per capita total $835 in 2020 Q3 (see —) and $4,374 in 2019 Q4. Lastly, depreciation per capita is $10,813 in 2020 Q3 (see —) and $10,638 in 2019 Q4.

Income Types

per capita, annualized, 2020 Q3 dollars

	2020 Q3	2019 Q4	2000 Q1	1989 Q1
Gross Domestic Income	$62,969	66,504	53,228	41,906
— Labor	34,736	35,447	30,098	23,495
Wages and Salaries	28,311	28,888	24,882	19,389
Supplements	6,426	6,559	5,217	4,106
— Profit	16,585	16,046	11,980	9,398
— Indirect Taxes	835	4,374	3,417	2,769
Taxes on Production and Imports	4,508	4,622	3,653	2,983
Less: Subsidies	3,673	248	236	213
— Depreciation	10,813	10,638	7,733	6,243

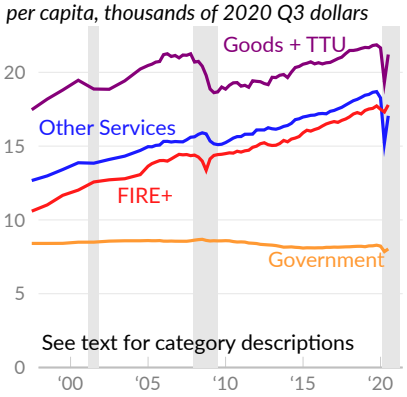
Source: Bureau of Economic Analysis

The **production approach** to GDP identifies how individual industries contribute to domestic production by calculating the value added by each industry during the production process. The value added by an industry or sector group is its sales or gross output minus any intermediate inputs used in production. The Bureau of Economic Analysis report GDP by industry, which is summarized briefly in this subsection by grouping the various private industries into broad categories.

The first category combines private goods producing industries: agriculture, forestry, fishing, and hunting (0.8 percent of GDP in 2020 Q3); mining (0.8 percent of GDP); construction (4.2 percent); and manufacturing (11.0 percent), with trade, transportation, and utilities (TTU, combined 16.2 percent of GDP). The second category is finance, insurance, and real estate (FIRE, 22.2 percent of GDP in 2020 Q3) combined with the information industry (5.6 percent of GDP), labeled as FIRE+.

The remaining private services-providing industries include: professional and business services (12.6 percent of GDP in 2020 Q3); education, health care, and social services (8.7 percent of GDP); arts, entertainment, and recreation (3.2 percent). Separately, public-sector value added in production, at the federal, state, and local levels, is captured by the government category (12.5 percent of GDP).

Production Types
per capita, thousands of 2020 Q3 dollars



Source: Bureau of Economic Analysis

In 2020 Q3, private goods producing industries and trade, transportation, and utilities combined value added per person is $21,206, on an annualized basis, compared to $21,861 in 2019 Q4 (see —). Private finance, insurance, real estate, and information industry services combined value added per person is $17,790 in 2020 Q3 and $17,722 in 2019 Q4 (see —).

All other private services-producing industries combined value added per person is $17,052 in 2020 Q3 and $18,693 in 2019 Q4 (see —). Government value added is $8,032 per person in 2020 Q3 and $8,288 in 2019 Q4 (see —).

Production Types
per capita, annualized, 2020 Q3 dollars

	2020 Q3	2020 Q2	2019 Q4	2005 Q1	1997 (A)
— Goods and TTU	$21,206	19,336	21,861	20,463	17,465
Manufacturing	7,050	6,262	7,149	6,664	5,486
Construction	2,723	2,566	2,774	3,703	3,477
Retail Trade	3,812	3,467	3,885	3,671	2,891
— FIRE+	17,790	17,313	17,722	13,640	10,593
— Other Services	17,052	15,209	18,693	14,962	12,668
Education & Healthcare	5,603	4,946	5,908	4,536	3,900
Professional & Business	8,094	7,659	8,427	6,121	4,971
Information	3,557	3,406	3,499	1,819	1,145
— Government	8,032	7,852	8,288	8,601	8,407

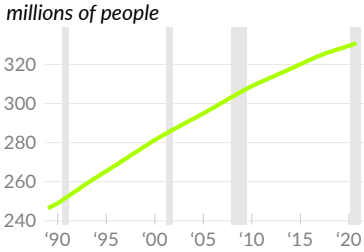
Source: Bureau of Economic Analysis

Household inputs to production

It's useful to consider household inputs when analyzing economic output. For example, is the population growing? Are more people working? Are people working more hours? Is the economy more productive in its use of labor? These questions all add import context to discussion of aggregate ouput.

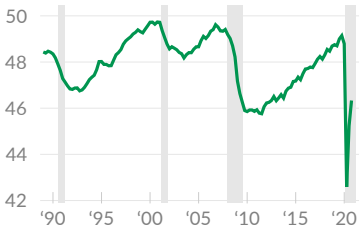
The US population is increasing (see —), though at a slower rate than in the past. Over the past 30 years, the US has added 80 million people. This means the amount of goods and services produced needed to increase by 30 percent over the period to maintain a constant standard of living. Employment of any amount (see —) comes from around half of the population during the peak of an economic expansion as a tighter labor market and higher wages pull people into employment, and falls during a recession as people lose jobs. Hours worked per worker per week (see —) are also influenced by economic conditions. During an economic expansion, more hours of work are available to those who want them. During a recession and when demand for goods and services is relatively low, hours of work are cut.

Population
millions of people



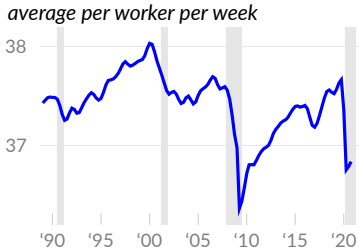
Source: BEA

Employment Rate
share of population



Source: CPS microdata

Hours Worked
average per worker per week

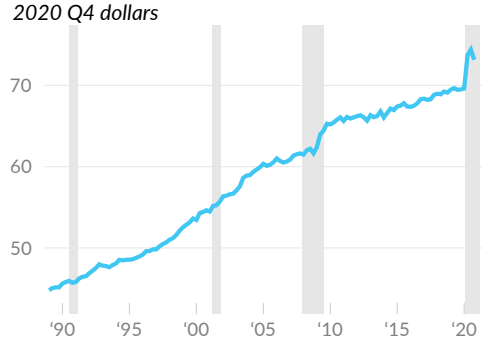


Source: CPS microdata

By multiplying the population, employment rate, and average hours worked, we approximate the aggregate hours worked in the US. We can then divide real GDP by aggregate hours worked to estimate GDP per hour of work, or productivity (see —). During a recession, economic theory suggests that productivity increases as less-productive workers disproportionately lose jobs: less-productive firms close and existing firms lay off less-productive workers.

In 2020 Q4, real GDP was equivalent to roughly $73.15 per hour of work, compared to $74.40 in 2020 Q3, $69.50 in 2019 Q4, $67.39 in 2015 Q4, and $44.81 in the first quarter of 1989. Comparing the latest data to the pre-COVID data covering 2019 Q4, annualized real GDP is $21,480 billion in the latest data and $22,021 billion in 2019 Q4. Aggregate hours worked total 294 billion in the latest quarter and 317 billion in 2019 Q4.

GDP per hour of work
2020 Q4 dollars



Source: Author's calculations

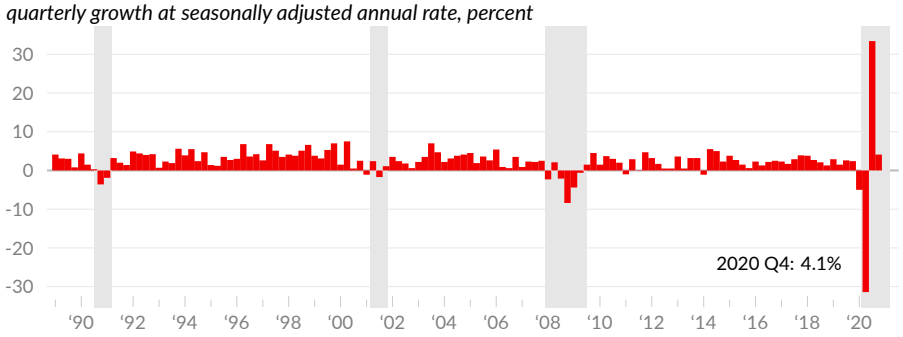
Economic Growth

Economists are concerned with changes in production. Decreased production can result in material hardship for ordinary people. This chartbook subsection covers changes in production measured as the rate of growth of overall economic activity, and also describes how the major categories of activities discussed in the previous sector contribute to overall growth.

GDP (see ■) increased at an annual rate of 4.1 percent during the fourth quarter of 2020, compared to an increase of 33.4 percent in the third quarter of 2020, and a decrease of 31.4 percent in 2020 Q2. This annualized rate of quarterly growth averaged 2.5 percent over the three years from 2017–2019. Over the most recent three years, which include the COVID-19 pandemic, real GDP growth averaged 1.9 percent.

Real Gross Domestic Product Growth

quarterly growth at seasonally adjusted annual rate, percent



Source: Bureau of Economic Analysis

Notes on economic growth

GDP is not a tool for describing how goods and services are distributed in society. GDP is an aggregate measure, the sum of individual activities. As a result, the experiences of individuals can differ drastically from the overall outcome. For example, GDP can increase while the vast majority of people receive no additional goods or services.

Additionally, production (GDP) isn't a measure of inputs, its a measure of outputs. In fact, production can increase without an increase in inputs, a situation economists call productivity growth. This is an important consideration given the aging US population and serious concerns over environmental impacts of increased production.

Also note that real (price-adjusted) GDP incorporates changes in quality. This means that real GDP can increase even if the quantity produced does not change. Distribution, productivity, and prices are discussed in later sections.

A note on annualized rates

US statistical agencies traditionally report annualized data. For example, the level of GDP in a given quarter is reported as the production that would occur over an entire year at the rate of production in the quarter. When this concept is applied to quarterly growth rates, as in the previous chart, it indicates what the quarterly change in production would be if it were sustained for an entire year.

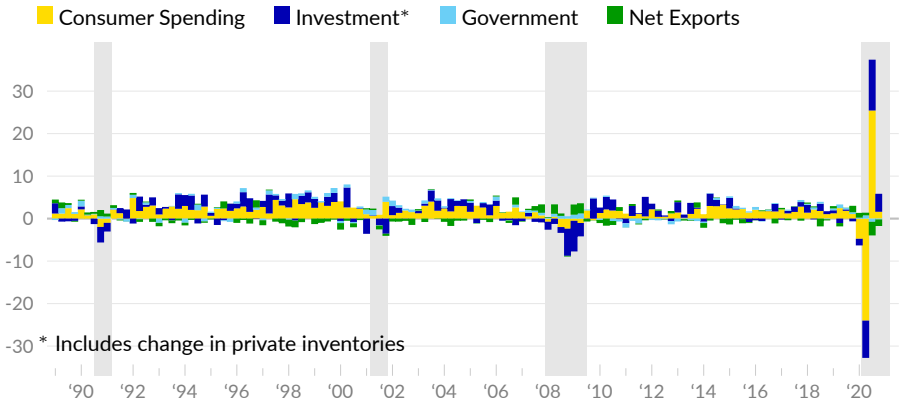
Because annual rates amplify short-term changes in production, some analysis has instead used quarterly rates when discussing changes in production during the COVID-19 pandemic. It's also worth noting that many other countries' statistical agencies report quarterly–not annualized–growth rates. However, to be consistent with reported data, the chartbook will generally use annualized rates.

Components of Growth

The **expenditure approach** also gives insight into the sources of changes in overall economic activity. In the fourth quarter of 2020, consumer spending (see ■) contributed 1.61 percentage points to overall real GDP growth. Private domestic investment (see ■) contributed 4.23 percentage points to real GDP growth, government spending and investment (see ■) subtracted 0.19 percentage point, and net exports (see ■) subtracted 1.55 percentage points.

Real GDP Growth by Expenditure Type

percentage point contribution to GDP growth



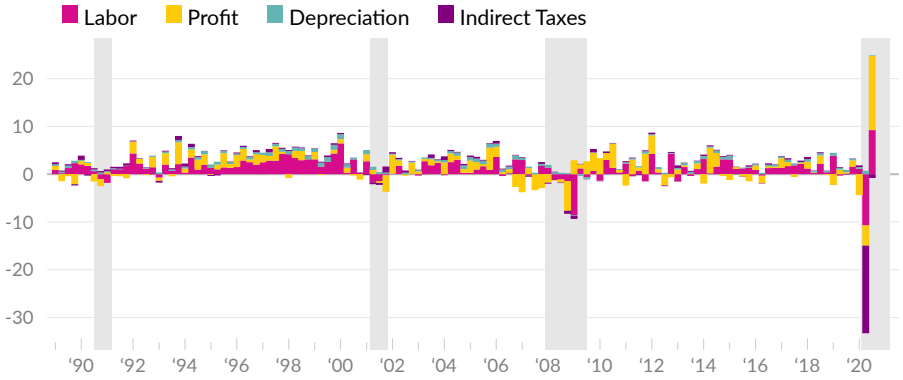
Source: Bureau of Economic Analysis

The **income approach** enables decomposing annualized production growth into gross labor income (see ■), profit (see ■), indirect taxes less subsidies (see ■), and depreciation (see ■).

In the third quarter of 2020, gross domestic income increased at an annual rate of 24.1 percent, following a decrease of 32.6 percent in 2020 Q2 and a decrease of 2.5 percent in 2020 Q1. In the latest quarter, labor income contributed 9.22 percentage points to overall growth, following a subtraction of 10.73 percentage points in 2020 Q2. Profit income contributed 15.53 percentage points in the third quarter of 2020 and subtracted 4.23 percentage points in 2020 Q2. Changes in indirect tax revenue and surpluses subtracted 0.80 percentage point from aggregate income growth in the latest quarter and subtracted 18.33 percentage points in 2020 Q2.

Real Gross Domestic Income Growth

percentage point contribution to GDI growth



Source: Bureau of Economic Analysis

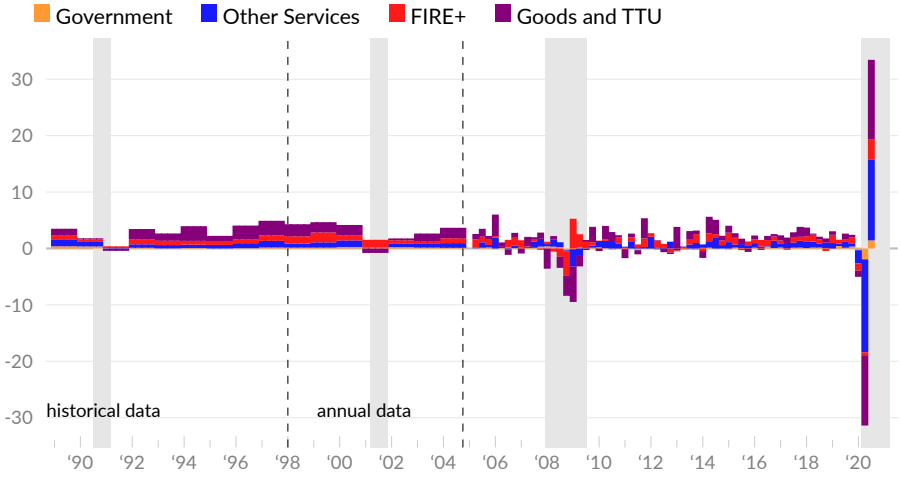
The **production approach** calculates GDP as the sum of value added–gross output minus intermediate inputs–in each sector. The broad groupings discussed above are used to identify contributions from: goods-producing sectors combined with trade, transportation, and utilities (see ■), finance, insurance, and real estate plus information (see ■), other service-providing sectors (see ■), and government (see ■).

In 2020 Q3, the combined contribution to GDP growth from private goods-producing industries and trade, transportation, and utilities is 14.1 percentage points, following a subtraction of 12.4 percentage points in 2020 Q2, and compared to a contribution of 0.5 percentage point in 2019 Q4. The group of private service-providing industries that include finance, insurance, real estate, as well as the information industry contributed 3.6 percentage points in 2020 Q3, subtracted 0.5 percentage point in 2020 Q2, and contributed 1.1 percentage points in 2019 Q4.

Other private services-providing industries, which are wide-ranging and described above, contributed 14.3 percentage points to real GDP growth in 2020 Q2, following a subtraction of 16.5 percentage points in 2020 Q2, and compared to a contribution of 0.5 percentage point in 2019 Q4. Combined federal, state, and local government contributed 1.4 percentage points in 2020 Q3, subtracted 1.9 percentage points the prior quarter, and contributed 0.3 percentage point in 2019 Q4, prior to the pandemic.

Real GDP Growth by Industry Group

percentage point contribution to GDP growth



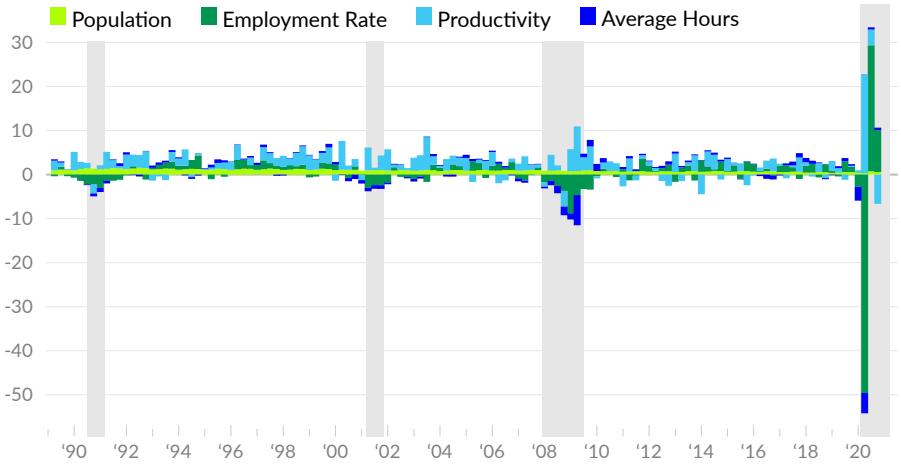
Source: Bureau of Economic Analysis

Changes to GDP can also be assigned to changes in **household inputs**: population (see), employment rates (see), average hours worked (see), and total economy productivity (see).

In 2020 Q4, population growth contributed 0.59 percentage point to annualized GDP growth, and, for comparison, added 0.57 percentage point in 2019 Q4. Changes in the employed share of the population contributed 9.51 percentage points in the latest quarter, and added 1.18 percentage points in the fourth quarter of 2019. Changes in average hours worked added 0.56 percentage point to GDP growth in the latest quarter and added 0.37 percentage point in 2019 Q4. Lastly, productivity subtracted 6.64 percentage points to GDP growth in 2020 Q4, compared to an addition of 0.25 percentage point in 2019 Q4.

Real GDP Growth by Household Inputs

percentage point contribution to GDP growth



Source: Author's Calculations

Components of Economic Growth

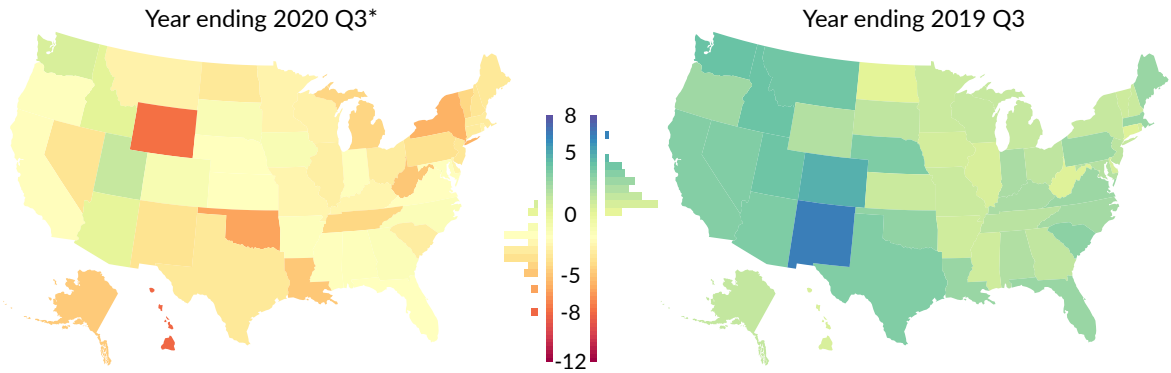
annualized percentage point contribution to real GDP/GDI growth *moving averages*

	2020 Q4	'20 Q3	'20 Q2	'20 Q1	'19 Q4	3-year	10-year	30-year
Gross Domestic Product	4.1	33.4	-31.4	-5.0	2.4	1.9	2.1	2.4
Consumer Spending	1.61	25.44	-24.01	-4.75	1.07	1.08	1.44	1.74
Durable Goods	-0.04	5.20	0.00	-0.93	0.22	0.61	0.49	0.46
Non-durable Goods	-0.15	4.35	-2.05	0.97	-0.10	0.51	0.36	0.35
Services	1.80	15.89	-21.95	-4.78	0.96	-0.03	0.59	0.94
Gross Investment	4.23	11.96	-8.77	-1.56	-0.64	0.80	0.80	0.66
Non-residential	1.76	3.20	-3.67	-0.91	-0.04	0.44	0.56	0.53
Residential	1.37	2.19	-1.60	0.68	0.22	0.20	0.21	0.07
Change in inventories	1.11	6.57	-3.50	-1.34	-0.82	0.15	0.03	0.06
Government	-0.19	-0.75	0.77	0.22	0.42	0.28	0.00	0.21
Federal	-0.06	-0.38	1.17	0.10	0.26	0.24	-0.02	0.07
State and Local	-0.13	-0.37	-0.40	0.12	0.16	0.04	0.02	0.14
Net Exports	-1.55	-3.21	0.62	1.13	1.52	-0.29	-0.18	-0.18
Exports	2.00	4.89	-9.51	-1.12	0.39	-0.15	0.22	0.44
Imports	-3.55	-8.10	10.13	2.25	1.13	-0.14	-0.40	-0.62
Goods and TTU	–	14.13	-12.45	-1.09	0.49	0.64	0.69	0.89
Manufacturing	–	5.98	-4.10	-0.70	0.00	0.27	0.17	0.34
Construction	–	1.21	-1.12	0.02	0.00	0.04	0.07	-0.01
Retail Trade	–	2.58	-1.75	-0.39	0.14	0.14	0.14	0.19
FIRE+	–	3.60	-0.53	-1.27	1.12	0.73	0.67	0.74
Other Services	–	14.27	-16.47	-2.36	0.47	0.33	0.59	0.58
Education & Healthcare	–	4.99	-4.54	-0.59	0.19	0.15	0.17	0.19
Professional & Business	–	3.35	-3.84	-0.24	0.39	0.38	0.41	0.33
Information	–	1.17	-0.29	-0.15	0.38	0.35	0.29	0.25
Government	–	1.44	-1.93	-0.30	0.34	0.07	0.02	0.09
Population	0.59	0.76	0.31	0.40	0.57	0.52	0.65	0.94
Employment Rate	9.51	28.59	-49.59	-2.76	1.18	-0.52	0.32	-0.03
Average Hours	0.56	0.49	-4.62	-3.16	0.37	-0.21	0.07	-0.03
Productivity	-6.64	3.60	22.52	0.57	0.25	2.09	1.04	1.56
Gross Domestic Income	–	24.1	-32.6	-2.5	3.3	0.8	1.9	2.4
Labor	–	9.22	-10.73	1.11	1.59	0.99	1.12	1.23
Profit	–	15.53	-4.23	-4.38	1.30	0.77	0.76	0.74
Depreciation	–	0.13	0.71	0.37	0.34	0.41	0.36	0.41
Indirect Taxes	–	-0.80	-18.33	0.37	0.07	-1.35	-0.33	0.01

Source: Bureau of Economic Analysis and Author's Calculations

Real GDP Growth by State

percentage point change in real GDP



Source: Bureau of Economic Analysis

*For the year ending 2020 Q3, no states had real GDP growth of more than five percent, no states had real GDP growth between two and five percent, three states had less than two percent GDP growth, and 48 states had negative GDP growth.

Real GDP Growth by State

quarterly growth at seasonally adjusted annualized rate *total growth, 2020 Q3*

	2020 Q3	'20 Q2	'20 Q1	'19 Q4	'19 Q3	1-year*	3-year	10-year
United States	33.4	-31.4	-5.0	2.4	2.6	-2.8	3.0	19.5
Pacific	32.2	-30.9	-4.1	5.8	2.3	-1.9	6.0	34.1
Washington	36.6	-25.5	-2.6	2.9	5.4	0.5	14.6	45.4
California	31.2	-31.5	-4.3	6.6	1.6	-2.1	5.0	34.1
Oregon	35.1	-31.9	-4.0	4.9	3.4	-1.9	6.2	31.9
Hawaii	31.3	-42.2	-8.9	2.7	1.5	-8.2	-6.5	7.3
Alaska	32.2	-33.8	-6.0	-0.5	3.6	-4.9	-3.5	-6.5
Mountain	33.3	-29.0	-3.3	3.4	5.5	-1.4	7.7	26.1
Utah	34.4	-22.4	-3.9	4.0	6.7	1.1	12.4	40.6
Colorado	30.1	-28.1	-1.3	2.5	6.0	-1.4	8.8	34.7
Idaho	43.3	-32.4	-1.9	5.6	4.7	0.1	10.4	30.6
Arizona	31.1	-25.3	-3.2	4.9	4.7	-0.1	8.3	26.7
Nevada	52.2	-42.2	-4.9	2.7	4.7	-3.7	4.1	15.8
Montana	30.8	-30.8	-4.8	3.5	6.0	-2.8	2.3	15.8
New Mexico	23.6	-28.3	-4.7	1.7	6.7	-3.7	4.9	11.3
Wyoming	19.4	-32.5	-10.5	-0.2	4.2	-7.9	-4.9	-9.0
West South Central	29.7	-29.4	-6.8	0.6	4.3	-3.7	3.2	24.0
Texas	29.7	-29.0	-6.2	0.7	4.8	-3.4	4.3	32.3
Oklahoma	24.2	-31.1	-7.3	-2.6	1.6	-6.3	-1.4	16.5
Arkansas	31.8	-27.9	-4.0	1.9	1.8	-1.8	0.6	10.1

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	2020 Q3	'20 Q2	'20 Q1	'19 Q4	'19 Q3	1-year*	3-year	10-year
continued from previous page . . .								
Louisiana	33.1	-31.4	-11.9	1.4	4.3	-5.0	0.2	-8.1
South Atlantic	32.2	-28.7	-4.5	2.6	2.9	-2.0	3.8	18.2
Georgia	32.7	-27.7	-4.0	1.6	2.4	-1.7	4.8	26.2
Florida	33.4	-30.1	-4.3	3.4	3.0	-2.0	5.5	23.7
South Carolina	38.5	-32.6	-8.2	2.7	4.7	-3.1	3.4	23.0
North Carolina	35.7	-30.5	-3.5	2.7	2.9	-1.7	3.7	16.8
Maryland	29.2	-27.7	-3.6	2.8	1.8	-1.9	0.8	12.9
District of Columbia	19.2	-20.4	-1.2	2.7	1.7	-0.9	2.9	12.0
Virginia	29.5	-27.0	-5.0	2.7	4.5	-2.0	3.0	10.0
Delaware	27.6	-21.9	-11.4	1.7	-0.4	-2.7	2.5	4.5
West Virginia	30.5	-29.6	-6.7	-4.9	0.1	-5.0	-0.7	1.4
West North Central	35.0	-30.6	-4.5	1.8	2.6	-2.3	1.3	14.3
North Dakota	22.4	-27.6	-1.6	-0.2	-0.8	-3.4	0.8	38.2
South Dakota	32.1	-28.8	-2.4	2.4	4.5	-1.5	1.6	18.4
Nebraska	33.2	-31.0	-3.4	4.1	5.8	-2.0	1.7	18.4
Minnesota	36.3	-31.3	-6.8	2.4	2.7	-2.8	1.5	17.4
Kansas	34.3	-30.3	-3.5	2.4	0.9	-1.9	1.9	17.0
Iowa	36.4	-28.2	-2.0	-1.3	2.4	-1.4	1.6	14.5
Missouri	36.7	-32.1	-5.1	1.8	2.7	-2.7	0.5	4.2
East North Central	38.7	-32.8	-6.6	1.1	2.6	-3.2	0.9	12.3
Ohio	36.9	-33.0	-5.6	1.5	2.8	-3.2	1.0	15.5
Wisconsin	40.3	-32.6	-8.8	2.9	0.2	-2.9	2.2	13.4
Michigan	44.2	-37.6	-7.9	0.9	3.4	-4.4	-0.8	13.2
Indiana	43.3	-33.0	-5.2	1.9	3.3	-1.9	3.3	12.7
Illinois	34.5	-29.7	-6.3	-0.2	2.8	-3.0	0.2	8.7
East South Central	41.4	-35.6	-4.0	1.2	2.7	-3.0	1.3	11.3
Tennessee	46.5	-40.4	-3.9	-0.1	2.5	-4.3	0.8	18.8
Alabama	34.6	-29.6	-3.2	1.3	2.8	-1.8	2.5	8.7
Kentucky	41.2	-34.5	-5.0	2.3	2.7	-2.6	1.4	8.4
Mississippi	39.5	-32.9	-3.7	2.9	3.3	-1.9	0.3	0.7
New England	34.2	-32.3	-4.8	1.0	1.6	-3.3	1.1	10.0
Massachusetts	33.1	-31.6	-4.3	0.4	2.3	-3.3	3.3	19.3
New Hampshire	40.9	-36.9	-2.2	-0.5	0.3	-3.6	1.1	11.3
Maine	37.3	-34.4	-6.5	3.4	4.6	-3.4	2.3	5.8
Vermont	43.0	-38.2	-5.8	0.9	1.5	-4.3	-2.3	1.6
Rhode Island	35.5	-32.4	-5.2	2.3	-2.4	-2.9	-1.3	1.0
Connecticut	32.6	-31.1	-6.0	1.9	0.6	-3.3	-2.4	-2.5
Middle Atlantic	33.0	-35.6	-5.5	1.4	0.9	-4.8	0.0	9.2
Pennsylvania	35.5	-34.0	-5.8	1.4	2.5	-3.9	1.2	13.1
New York	30.3	-36.3	-6.2	1.3	-0.5	-5.8	-0.5	9.3
New Jersey	37.2	-35.6	-3.3	1.5	2.5	-3.5	-0.1	4.5

Source: Bureau of Economic Analysis

Financial Accounts

The Federal Reserve report transactions and levels of financial assets and liabilities in the US **financial accounts**. This includes balances sheets for households, businesses, and governments. Sector-specific data are covered in the section of the chartbook that corresponds to the sector and overall financial activities of the US are discussed in this section.

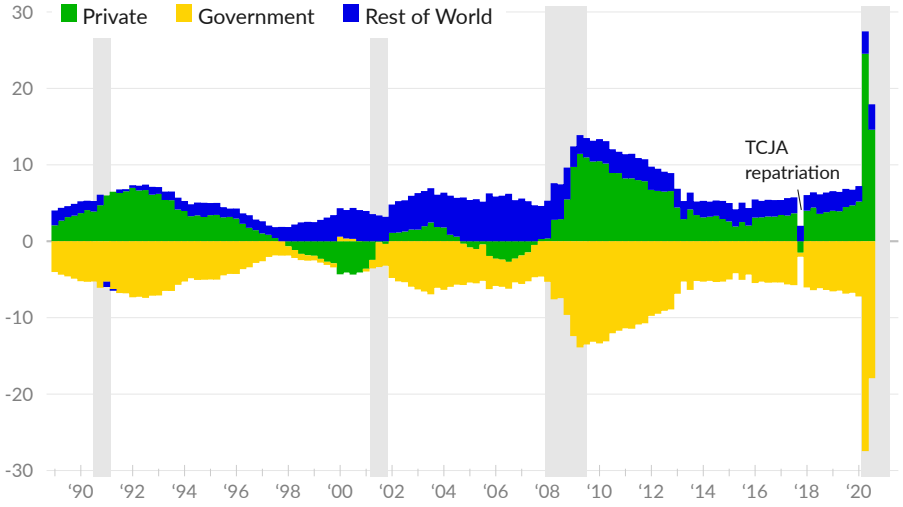
Sectoral Balances

A high-level overview of US financial activities can be provided by dividing the world into three sectors: the US private sector (see), the US government (see), and the rest of the world (see), then examining the net lending and borrowing between the groups, which must sum to zero at an aggregate level. That is, if one sector is running a deficit, another sector must be running a surplus.

A sector runs a surplus in a given accounting period when its aggregate income is higher than its outlays. When this occurs the sector becomes a lender of the savings created by having more income than expenses. Likewise, if a sector spends more than it takes in, it borrows the difference. Therefore, when the government sector runs a deficit and is a net borrower, it is creating a surplus for other sectors because it is taking in fewer payments through taxes than it is making through spending.

Sectoral Financial Balance

net lending (+) or borrowing (-), NIPA basis, by sector, as share of GDP



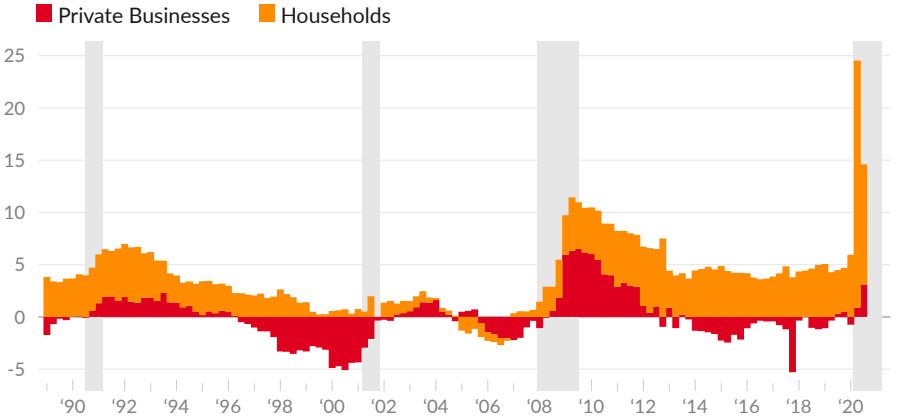
Source: Bureau of Economic Analysis

In 2020 Q3, the US private sector was a net lender (running a surplus) of the equivalent of 14.6 percent of GDP, far above the 2.6 percent surplus in 2015 Q1. The rest of the world was a net lender to the US to the equivalent of 3.3 percent of GDP in 2020 Q3, compared to 2.4 percent in 2015 Q1. Balancing these transactions, the government (federal, state, and local combined) was a net borrower (running a deficit) of the equivalent of 17.9 percent of GDP, compared to 5.0 percent in 2015.

Within the private sector, households were net lenders of the equivalent of 11.5 percent of GDP in 2020 Q3 (see ■), while the net financial balance of private businesses–corporate and noncorporate–was equivalent to 3.1 percent of GDP (see ■).

Domestic Private Sector Financial Balance

net lending (+) or borrowing (-), NIPA basis, by sector, as share of GDP



Source: Bureau of Economic Analysis

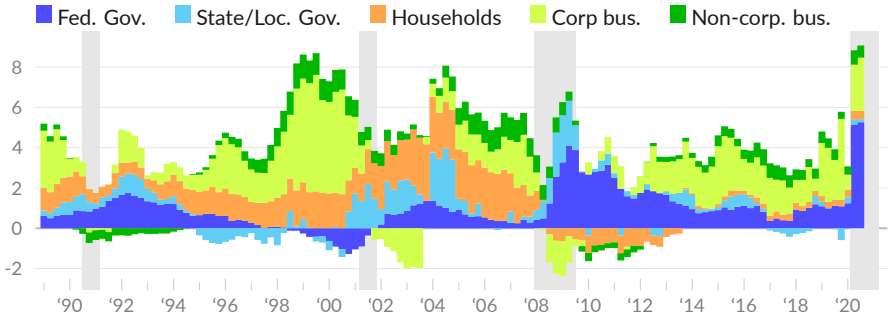
Liabilities

Calculating the contribution of different sectors to the **total change in borrowing** can highlight risks to economic activity. For example, the tech bubble of the late 1990s and early 2000s shows up as a large increase in corporate borrowing. The housing bubble from the 1990s to 2007 shows up as an increase in household borrowing. Government borrowing increased following the collapse of the housing bubble, in an effort to compensate for the massive fall in wage income. Keep in mind, however, that the vast majority of liabilities in the domestic economy are to other domestic parties.

Total domestic liabilities increased 9.1 percent over the year ending 2020 Q3, after adjusting for inflation. Federal government borrowing contributed 5.3 percentage points to the total (see ■), while the state and local government contributed 0.1 percentage point (see ■). Households and nonprofits contributed 0.4 percentage point over this three year period (see ■), corporate businesses contributed 2.6 percentage points (see ■), and non-corporate businesses contributed 0.6 percentage point (see ■).

Real Debt Growth

contribution to one-year percent change in liabilities, adjusted by PCE price deflator



Source: Federal Reserve, Bureau of Economic Analysis

Real Debt Growth

contribution to one-year real growth

	2020 Q3	'20 Q2	'20 Q1	'19 Q4	'19 Q3	3-year *moving averages*	10-year *moving averages*	30-year *moving averages*
Total	9.07	8.84	3.06	5.20	3.87	4.29	3.57	4.00
■ Corporate Business	2.65	2.30	0.75	4.01	1.97	1.90	1.70	1.37
Debt Securities	0.60	0.70	0.29	0.21	0.26	0.26	0.35	0.32
Loans	0.28	0.58	0.59	0.17	0.21	0.36	0.11	0.08
■ Non-corporate Business	0.60	0.71	0.41	0.35	0.53	0.52	0.33	0.41
Commercial Mortgages	0.07	0.12	0.09	0.08	0.08	0.09	0.04	0.06
■ Household & Nonprofit	0.41	0.42	0.38	0.33	0.30	0.33	-0.04	0.85
Home Mortgages	0.29	0.29	0.16	0.15	0.15	0.15	-0.24	0.57
Consumer Credit	-0.04	0.03	0.10	0.15	0.17	0.13	0.17	0.19
■ State & Local Government	0.15	0.26	0.29	-0.58	-0.05	-0.05	0.15	0.39
■ Federal Government	5.26	5.14	1.24	1.09	1.12	1.59	1.44	0.98

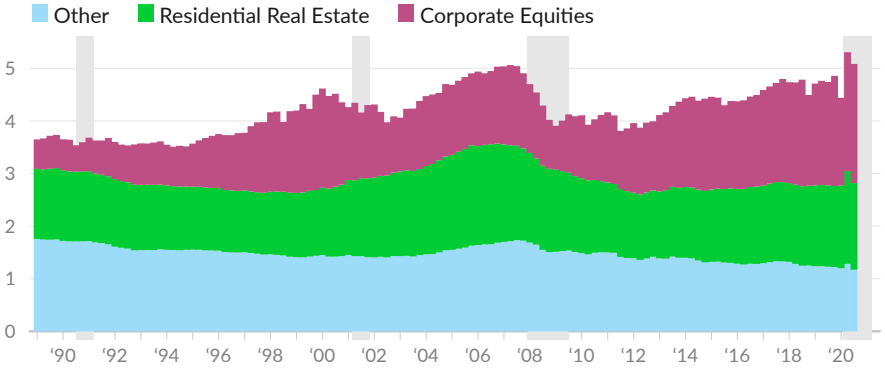
Source: Federal Reserve, Bureau of Economic Analysis

Wealth

Total US wealth is the tangible assets of all non-corporate sectors of the US, plus the market value of domestic corporate equities, less US financial obligations to the rest of the world. The ratio of US total wealth, excluding public lands, to GDP increased to 5.08 in 2020 Q3 from 3.65 in 1989 Q1. The market value of corporate equities (see ■) increased to a 2.27 multiple of GDP in 2020 Q3 from 0.56 in 1989 Q1. The market value of residential real estate (see ■) increased to 1.65 times GDP from 1.33 in 1989. The other category (see ■), which includes tangible assets other than residential real estate less US financial obligations to the rest of the world, decreased to 1.17 from 1.76 in 1989.

Total US Wealth to GDP Ratio

total US wealth divided by GDP



Source: Federal Reserve

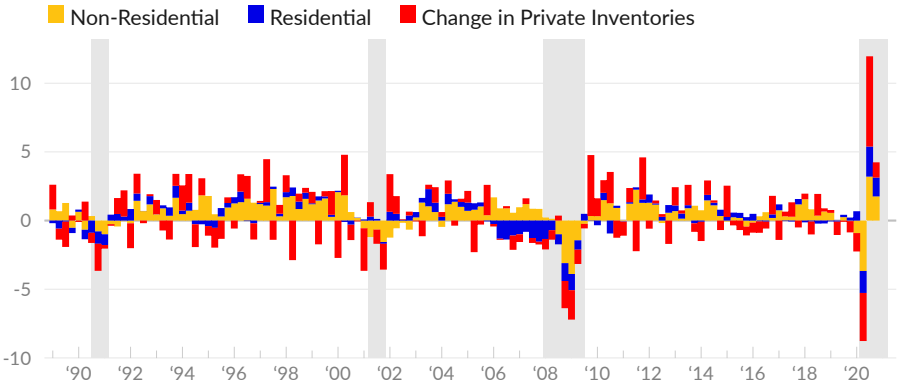
Investment

Gross private fixed investment, as measured in the national accounts, includes residential fixed investment, such as the construction and improvement of houses, apartment buildings, and other residential property (see ■), but does not include spending on durable goods, such as automobiles, appliances, or furniture. Non-residential private fixed investment includes the construction and improvement of offices, warehouses, factories, and other commercial and industrial property (see ■), as well as purchases of equipment, software, and intellectual property products. Additionally, the change in private inventories (see ■) at the end of the accounting period, whether intentional or unintentional, affects GDP growth in the period. Inventory investment is grouped in the national accounts with gross private investment, but is not fixed investment.

In the fourth quarter of 2020, private fixed investment, which does not include inventory investment, totals $3.9 trillion, equivalent to 18.0 percent of GDP. Non-residential (business) fixed investment totals $2.9 trillion, or 13.4 percent of GDP, while residential fixed investment totals $989.7 billion (4.6 percent of GDP). During the quarter, private fixed investment contributed 3.13 percentage points to real GDP growth. Non-residential fixed investment contributed 1.76 percentage points, while residential fixed investment contributed 1.37 percentage points. The change in private inventories contributed 1.11 percentage points.

Private Fixed Investment

percentage point contribution to real GDP growth



Source: Bureau of Economic Analysis

Households

This section covers the household sector of the economy, including demographics, personal income and outlays, residential investment, household balance sheets, home ownership, housing, and poverty.

Demographics and Household Formation

The **total US population** is 329 million. The Census divides the population into those living in households (about 97 percent of the total) and those living in **group quarters**, such as prisons (1.5 million people), jails (750,000 people, of which 480,000 are pre-trial), nursing homes (1.3 million people), barracks (around 300,000), dormitories (around 2.6 million), group homes (300,000), and shelters (200,000). The numbers for group quarters populations are likely low estimates, as they are derived from older sources than the population estimate. The 2020 Census will provide detailed information on the exact share of each population in each category of living arrangement.

Among those living in **households**, roughly 74 million are children under the age of 18, 198 million are age 18 to 64, and 53 million are age 65 or older. These numbers and the group quarters populations do not sum to the total population because of differences in sources as well as some overlap between the two categories, particularly for those in school dormitories.

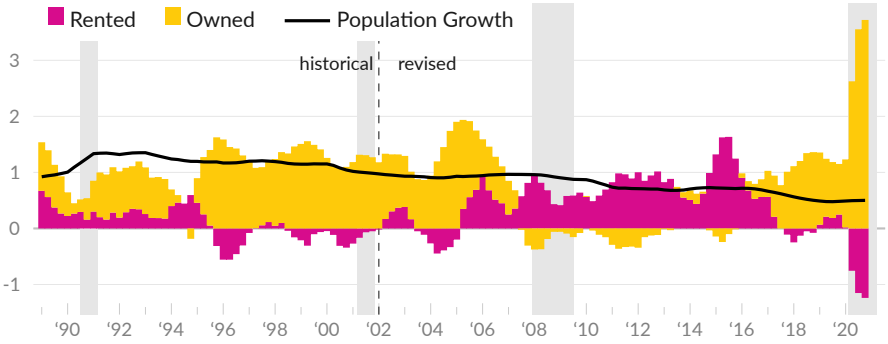
Household Formation

Household formation measures the change in occupied housing units, and should keep pace with population growth, all else equal. During the housing bubble, the home-ownership rate increased and household formation exceeded population growth. Following the collapse of the housing bubble, household formation was often below population growth and home ownership decreased as foreclosures converted homeowners into renters.

As of 2020 Q4, there are 125.8 million total occupied housing units in the US, of which 43.0 million (34.2 percent) are rented, and 82.8 million (65.8 percent) are owner-occupied. There was an average annual net total increase of 3.0 million housing units over the year ending 2020 Q4, the result of 1519,000 net fewer renter households and 4.6 million net new owner-occupied households. Over the year ending 2020 Q4, the total number of occupied housing units increased by 2.5 percent, compared to an increase of 2.4 percent in 2020 Q3. Owner-occupied units contributed 3.7 percent to total household formation on average over the year (see ■), compared to a reduction of 1.2 percent from rented units (see ■).

Household Formation by Type

one-year moving average of annual growth rates, percent



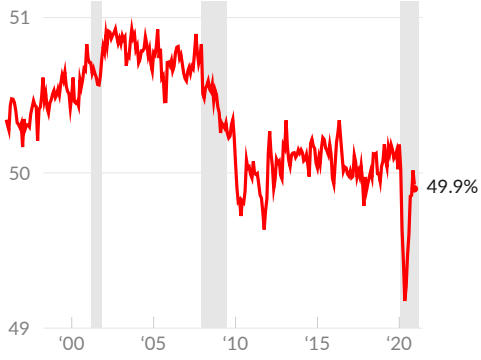
Source: Census Bureau, Housing Vacancies and Homeownership

Headship Rate

Individual decisions about starting a household or living with family are influenced by economic conditions. The ratio of households to people age 16 or older is referred to as the aggregate headship rate. This measure fell substantially following the collapse of the housing bubble and dropped rapidly during the COVID-19 pandemic as people moved in with family. The headship rate reached a low of 49.18 percent during May 2020, and is currently 49.92 percent, as of December 2020. In February 2020, the headship rate was 50.02 percent.

Aggregate Headship Rate

persons age 16 or older
seasonally adjusted



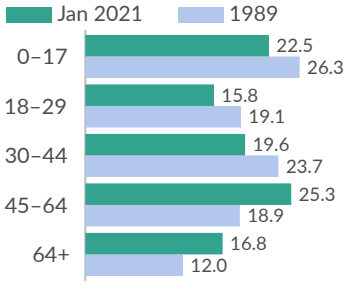
Source: Author's calculations

Age

In discussions on demographics, **aging** is often described as a serious headwind to economic growth in major advanced economies. The increased share of many countries' population that is of retirement age means a smaller share are working and borrowing and a larger share are receiving pension benefits and lending to the financial system. These trends can be overcome by a workforce that is more efficiently able to provide goods and services. In part due to a shorter life-expectancy in the US, this problem is more pronounced in Japan and western Europe, but is still an important issue for the US.

Age

share of population, percent



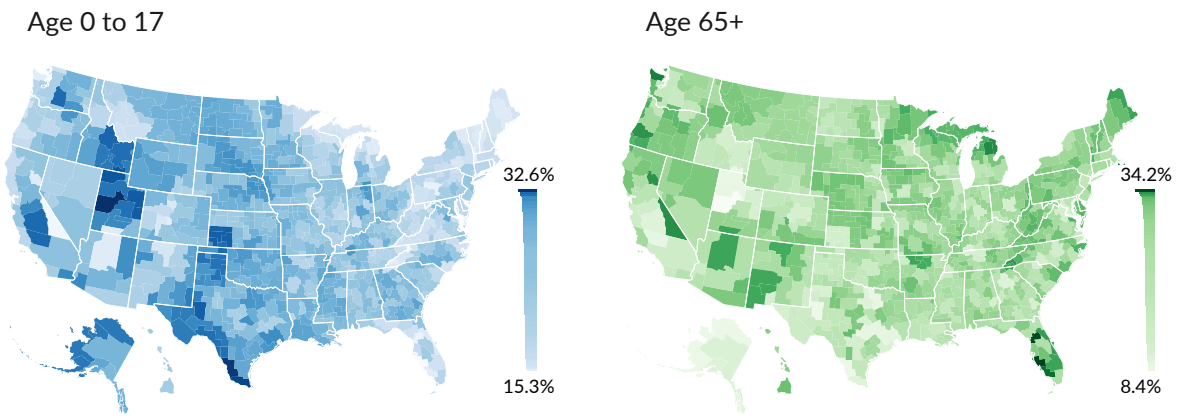
Source: Author's calculations from CPS

The CPS civilian non-institutionalized population is 325 million in the year ending January 2021, with growth of 0.2 percent over the past year, though other Census population growth estimates are around 0.6 percent. By age, 22.5 percent are under the age of 18 and 16.8 percent are age 65 or older. In 1989, the US population was 244 million, with 26.3 percent under 18 and 12.0 percent 65 or older. The pre-retirement age (45–64) share of the population has increased to 25.3 percent in the year ending January 2021 from 18.9 percent in 1989.

Mapping American Community Survey data to commuter zones gives insight on the age of the population in local labor markets. In 2019, among commuter zones with a population of at least 100,000, the commuter zone (listed by largest city) with the highest share of its population under 18 is Provo, UT (32.6 percent), followed by Laredo, TX (31.9 percent), and Brownsville, TX (31.1 percent). The commuter zones with lowest share of the local population under 18 were Sarasota, FL (15.3 percent), Ocala, FL (16.4 percent), and State College, PA (16.7 percent).

The age 65 or older population is disproportionately concentrated in Florida. The commuter zone with the highest share of its population over 64 is Sarasota, FL (34.2 percent), followed by Ocala, FL (33.6 percent), and Cape Coral, FL (30.4 percent). The commuter zones with lowest local over-64 population share were Provo, UT (8.4 percent), Laredo, TX (10.1 percent), and Odessa, TX (10.3 percent).

Age Group Share of Commuter Zone Population, 2019



Source: American Community Survey, Dorn

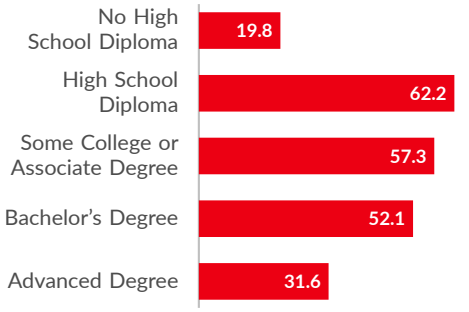
Education

Education is central in many discussions of the future of the US economy. Though very expensive in forgone years of earnings and often also expensive in tuition and other costs, education typically provides individuals with higher earnings. In response to changing job opportunities from globalization and other policy decisions, household spending on education has increased considerably, resulting in a much **more educated population**.

Over the year ending January 2021, 83.7 million people over the age of 25, or 37.5 percent of the total, have at least a bachelor's degree, with 31.6 million of those, or 14.2 percent of the total, holding an advanced degree such as a master's degree, medical or law degree, or PhD. An additional 57.3 million people have some college coursework but no degree or have an associate degree. A total of 62.2 million have a high school diploma but no college, while 19.8 million have no high school diploma.

Highest Level of Education

age 25+ population, in millions, January 2021

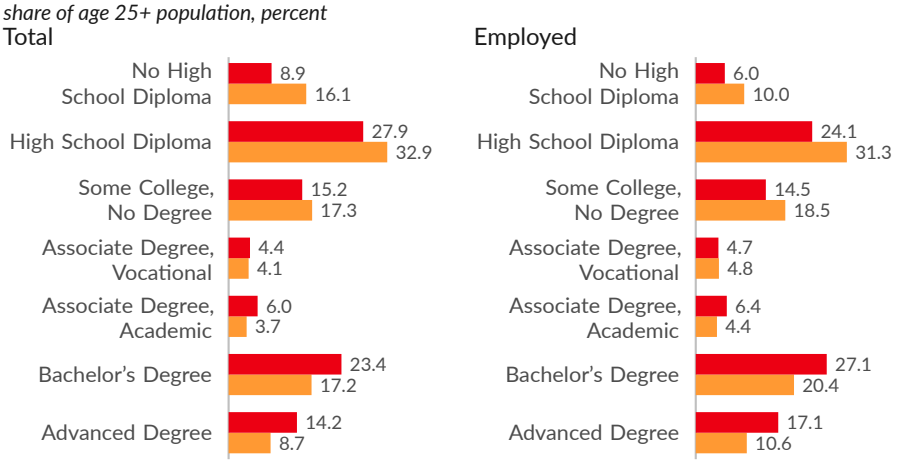


Source: Author's Calculations from CPS

The share of the population with a bachelor's degree or advanced degree increased by 11.7 percentage points since 2000. The increase is even more pronounced among those who are employed; 44.2 percent have a college degree or advanced degree in January 2021, an increase of 13.3 percentage points since 2000. Some argue households compensated for a weak labor market and lack of worker bargaining power by borrowing large sums of money for education. Given the extent of the increase in education, and the typical wage premium of education, labor income should have increased substantially more than it actually did.

Education Distribution ■ January 2021 ■ 2000

share of age 25+ population, percent



Source: Author's Calculations from CPS

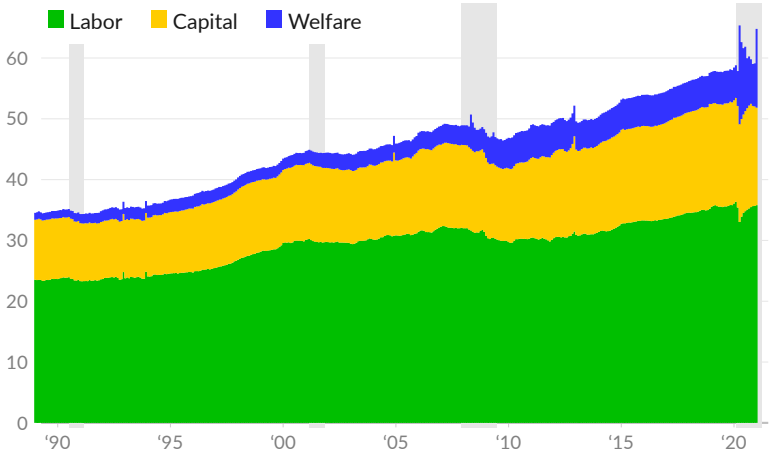
Income to Persons

Personal income includes labor income (see ■), measured as compensation of employees, capital income (see ■), measured as the sum of proprietor income, rental income, and dividend and interest income, and welfare income (see ■), measured primarily as government social benefits less contributions to social insurance.

In January 2021, annualized personal income is $64,789 per capita. Labor income totals $35,801 per person; capital and proprietor income is $16,033 per person; and welfare or transfer income is $12,955 per person.

Personal Income

real per capita income, thousands of US Dollars



Source: Bureau of Economic Analysis; Author

Personal Income by Source

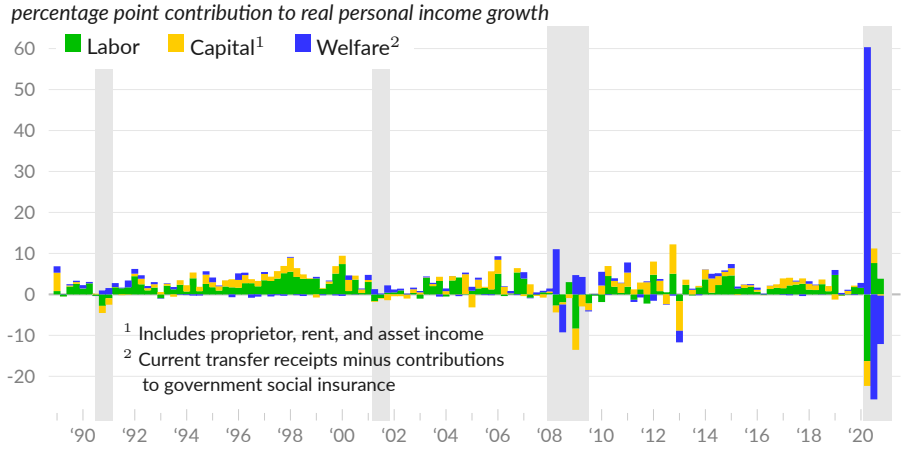
per capita, annualized, January 2021 US Dollars

	Jan '21	Dec '20	Nov '20	Oct '20	Jan '20	Jan '18
Personal income	64,789	59,113	59,016	59,786	58,433	56,195
■ Labor	35,801	35,676	35,638	35,481	36,078	34,578
Wages and salaries	29,194	29,095	29,069	28,943	29,445	28,113
Supplements	6,607	6,582	6,569	6,538	6,633	6,465
■ Capital	16,033	16,360	16,486	17,002	16,970	16,513
Proprietors' income	4,925	4,966	5,228	5,839	5,295	4,975
Rental income	2,449	2,432	2,450	2,460	2,466	2,385
Personal interest income	4,903	4,922	4,938	4,937	5,200	5,187
Personal dividend income	3,756	4,040	3,870	3,766	4,009	3,966
■ Welfare	12,955	7,077	6,892	7,303	5,385	5,105
Social security	3,336	3,301	3,311	3,323	3,280	3,084
Medicare	2,639	2,629	2,619	2,601	2,470	2,291
Medicaid	2,108	2,090	2,081	2,073	1,896	1,860
Unemployment insurance	1,723	933	856	928	86	96
Veterans' benefits	454	452	451	449	423	378
Other	7,057	1,985	1,884	2,228	1,569	1,561
Less welfare contributions	-4,502	-4,454	-4,451	-4,439	-4,482	-4,314

Source: Bureau of Economic Analysis

Personal Income

percentage point contribution to real personal income growth



Source: Bureau of Economic Analysis

Aggregate real personal income decreased at an annualized rate of 8.29 percent in 2020 Q4. Labor income contributed 3.82 percentage points to overall growth, capital income subtracted 0.32 percentage point, and welfare income subtracted 11.80 percentage points.

Personal Income by Source

percentage point contribution to real personal income growth

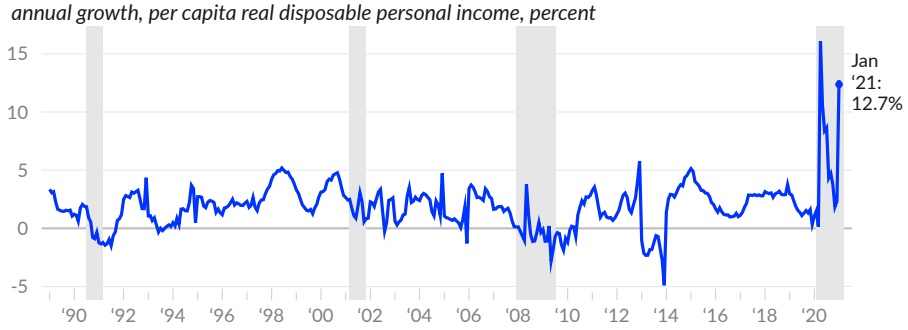
	2020 Q4	'20 Q3	'20 Q2	'20 Q1	'19 Q4	*moving averages* 3-year	10-year	30-year
Personal income	-8.29	-14.42	38.00	2.80	1.99	3.12	2.98	2.81
Labor	3.82	7.65	-16.28	1.56	1.79	0.86	1.32	1.49
Wages and salaries	3.29	6.48	-13.90	1.58	1.63	0.75	1.14	1.20
Supplements	0.53	1.17	-2.38	-0.02	0.16	0.11	0.18	0.29
Capital	-0.32	3.56	-6.06	0.03	0.35	0.25	0.97	0.76
Proprietors' income	-1.02	5.08	-4.49	0.06	0.31	0.19	0.23	0.29
Rental income	-0.05	0.02	-0.07	0.09	0.06	0.07	0.21	0.19
Personal interest income	-0.07	-0.59	-0.86	-0.41	0.11	-0.08	0.13	0.03
Personal dividend income	0.83	-0.95	-0.63	0.29	-0.13	0.07	0.41	0.26
Welfare	-11.80	-25.63	60.34	1.21	-0.16	2.01	0.68	0.56
Social security	0.08	-0.08	0.27	0.47	0.10	0.18	0.16	0.16
Medicare	0.28	0.21	0.54	0.09	0.11	0.21	0.15	0.16
Medicaid	-0.04	0.16	1.13	0.06	-0.11	0.13	0.12	0.14
Unemployment insurance	-9.34	-5.84	25.00	0.33	0.00	0.77	0.17	0.09
Veterans' benefits	0.05	0.04	0.10	0.08	0.04	0.05	0.05	0.03
Less welfare contributions	-0.30	-0.75	1.38	-0.30	-0.18	-0.12	-0.16	-0.19

Source: Bureau of Economic Analysis

The Bureau of Economic Analysis report an inflation-adjusted one-year change in after-tax income per person (see —) of 12.7 percent in January 2021, 2.3 percent in December 2020, and 1.1 percent in January 2020. Over the past year, the measure has averaged 5.9 percent. During the three years before the COVID-19 pandemic, per capita after-tax income grew at an average annual rate of 2.4 percent.

After-Tax Income Growth

annual growth, per capita real disposable personal income, percent



Source: Bureau of Economic Analysis

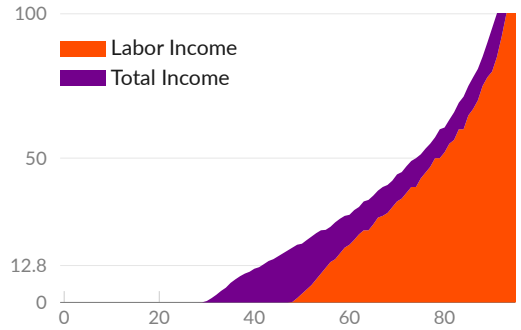
Distribution of Personal Income

Labor income, which includes wages and salaries as well as self-employment income, is the vast majority of personal income. Over calendar year 2019, 52 percent of people have any labor income (see ■). Only 44 percent of people have labor income above the single-person poverty threshold of $12,760.

Total income (see ■) reaches 72 percent of people in 2019. Total income includes after-tax labor income plus welfare and capital income. People who did not receive any income by the total income measure typically live with people who receive income. Values of high-earners are not shown because of space constraints. The top five percent income threshold is around $270,000 in 2019.

Distribution of Personal Income, 2019

thousands of US Dollars, by percentile



Source: CPS ASEC

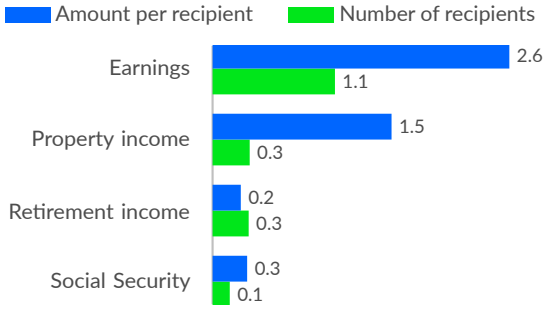
Contributions to Personal Income Growth

Annual data on personal income detail the number of people receiving various categories of income and the average payment. As a result, it is possible to match changes in aggregate personal income from changes in payments and changes in who is receiving payments.

In 2019, aggregate personal income increased by 6.8 percent after adjusting for changes in prices. Compared to 2018, more people were working in 2019, which explains 1.1 percentage points of the overall change. Changes in per person wage and salary income, which reflects wage increases and changes in hours worked, explain 2.6 percentage points. Income payments from owning property increased substantially in 2019 and explains 1.5 percentage points of the total change. More people receiving property income explains 0.3 percentage point. The remaining growth is explained by social security and retirement income.

Sources of Personal Income Growth, 2019

percentage point contribution to aggregate growth



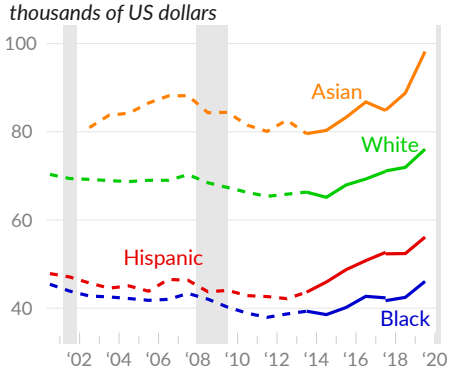
Source: Census Bureau

Household Income

Given massive variance in personal income, with half of the population receiving no market income, many people rely on the income of other members of their household for survival. Next, we discuss household income, which measures the combined income of all people in a given housing unit. Like personal income, household income is distributed very unevenly in the US.

Real Median Household Income

thousands of US dollars



Source: Economic Policy Institute, Census

Black median household income in 2019 was $46,073, compared to an inflation adjusted equivalent of $42,447 in 2018. White, non-Hispanic median household income was $76,057 compared to $71,922 in 2018. Hispanic median household income in 2019 was $56,113 compared to $52,382 in 2018. Asian median household income was $87,194 in 2019 and $88,774 in 2018. Data for 2000–2013, shown with dashed lines, are calculated by EPI, to be more-comparable over time despite changes to the survey design in 2013 and to the processing of survey data in 2017.

Household Spending and Saving

The previous subsection examines money coming into households while this section covers money leaving households. Consumer spending includes household purchases of goods and services, certain spending for households, such as Medicare and Medicaid, and estimates for services furnished without payment. As an example of a special estimate, homeowners are considered to rent their homes to themselves.

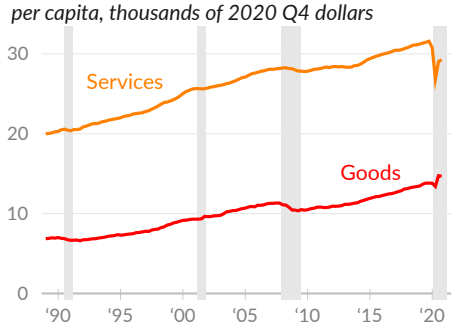
Over the past 30 years, increased consumer spending represents the majority of economic growth. Consumer spending generally increases as households have more income and falls when households have less income. This affect is visible in both the long-run and during the course of a business cycle, with consumer spending generally falling or slowing during a recession. During the COVID-19 pandemic, some categories of spending were lower as a result of business closures and restrictions.

Personal saving occurs when households have income in excess of their expenses. Savings are invested, often providing additional income, and are used for future expenses, such as costs incurred during retirement.

Spending

Consumer spending is comprised of two broad expenditure types: goods and services. Spending on goods includes durable goods (goods with a useful life of at least three years), such as cars, furniture, or recreational goods, and nondurable goods, such as groceries, clothing, and gasoline. Spending on services includes housing, health care, restaurants and bars, transportation services, financial services, and other services.

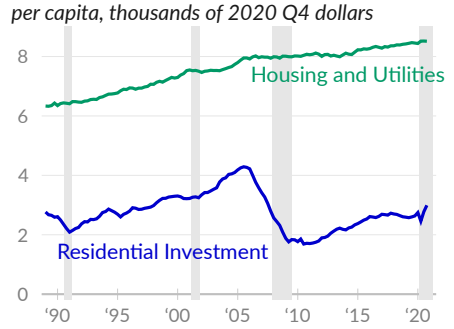
Expenditure Types
per capita, thousands of 2020 Q4 dollars



Source: Bureau of Economic Analysis

Total consumer spending is $14.5 trillion in 2020 Q4, compared to a price-adjusted $14.5 trillion in 2020 Q3 and $14.9 trillion in 2019 Q4. On a per person basis, consumer spending is $43,957 in 2020 Q4, of which $14,687 are spent on goods (see —) and $29,270 on services (see —). In the fourth quarter of 2019, before the pandemic, consumer spending on goods was $13,815 per person, and spending on services was $31,573 per person, after adjusting for inflation.

Shelter Costs
per capita, thousands of 2020 Q4 dollars

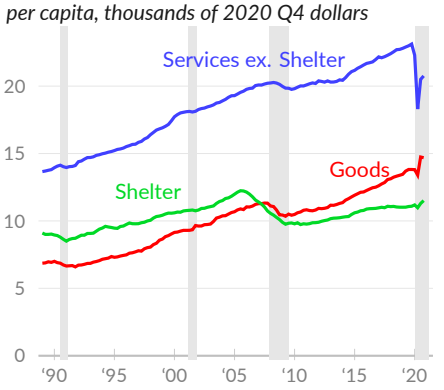


Source: Bureau of Economic Analysis

Within consumer spending on services, housing and utilities spending totals $8,515 on an annualized and per person basis in 2020 Q4 (see —) and $8,454 in 2019 Q4. Construction or improvement of housing is considered residential fixed investment, not consumer spending, but can be combined with spending to analyze patterns in shelter costs. In 2020 Q4, residential investment totals $2,991 per person (see —), compared to $2,634 in the pre-COVID data covering 2019 Q4.

Combining the categories from the previous two charts allows separation of spending on goods, spending on services other than shelter, and spending on housing, utilities, and residential construction. Because of adjustments for changes in prices, these categories will not necessarily sum to the total in past data. It's also worth noting that these are not traditional categories, but are created because they more intuitively represent the costs associated with the household sector of the economy.

Expenditure Types
per capita, thousands of 2020 Q4 dollars



Source: Bureau of Economic Analysis

Consumer spending on services other than housing and utilities totals $20,755 per person, on an annaulized basis, in 2020 Q4 (see —), compared to $20,501 in 2020 Q3, and $23,119 in 2019 Q4. Spending on non-housing services has decreased 10.2 percent since 2019 Q4. Shelter costs, which combine housing, utilities, and residential fixed investment, are $11,506 per person in 2020 Q4 (see —), $11,296 in 2020 Q3, and $11,088 in 2019 Q4. Shelter spending peaked at $12,239 per person in the third quarter of 2005, during the housing bubble.

Expenditure Types
per capita, annualized, 2020 Q4 dollars

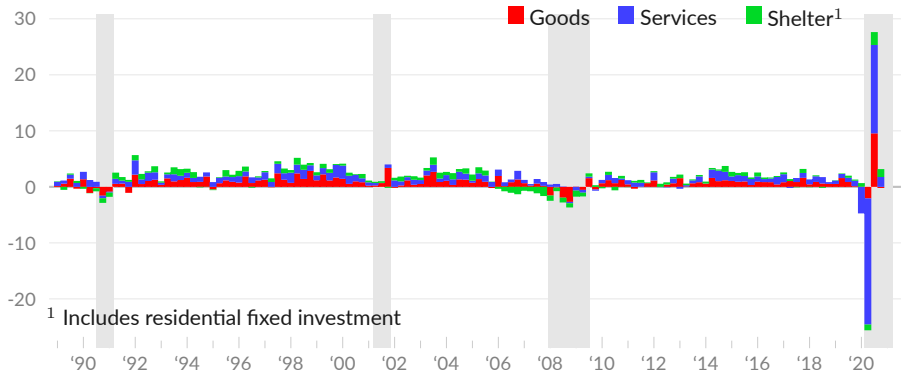
	2020 Q4	2019 Q4	2000 Q1	1989 Q1
Total	$43,957	45,378	33,883	26,498
— Goods	14,687	13,815	9,148	6,864
Motor Vehicles and Parts	1,776	1,678	1,437	1,081
Furniture and HH Equipment	1,222	1,126	546	378
Recreational Durable Goods	1,583	1,305	264	77
Groceries	3,445	3,257	2,781	2,763
Clothes and Shoes	1,151	1,165	850	631
— Services ex. Shelter	20,755	23,119	17,728	13,659
Health Care Services	7,398	7,792	5,144	4,657
Transportation	1,103	1,470	1,322	918
Recreational	1,225	1,837	1,450	1,035
Food and Accommodations	2,468	3,144	2,467	2,265
Financial and Insurance	3,700	3,675	3,578	2,123
— Shelter	11,506	11,088	10,600	9,100
Housing Services and Utilities	8,515	8,454	7,295	6,333
Residential Fixed Investment	2,991	2,634	3,305	2,767

Source: Bureau of Economic Analysis

Next, we examine how changes in consumer spending on goods (see ■), services excluding housing and utilities (see ■), and shelter (see ■, calculated as housing and utilities plus residential fixed investment), affect GDP growth. These categories contributed 1.6 percentage points to GDP growth in 2020 Q4 and contributed 25.4 percentage points in 2020 Q3, compared to an addition of 1.1 percentage points in 2019 Q4, before the pandemic.

Consumer Spending and Residential Investment

percentage point contribution to real GDP growth



Source: Bureau of Economic Analysis

In the the fourth quarter of 2020, household spending on goods subtracted 0.2 percentage point from GDP growth, household spending on services other than housing and utilities added 1.8 percentage points, and shelter spending and investment added 1.4 percentage points.

Consumer Spending and Residential Investment

percentage point contribution to real GDP growth — *moving averages*

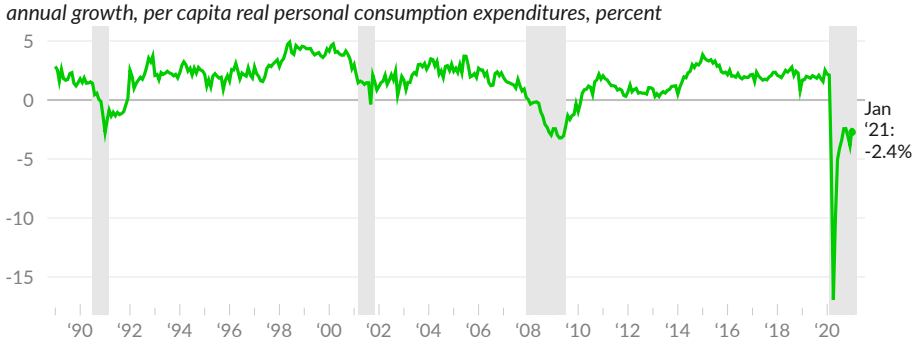
	2020 Q4	'20 Q3	'20 Q2	'20 Q1	'19 Q4	3-year	10-year	30-year
Total	1.61	25.44	-24.01	-4.75	1.07	1.08	1.44	1.74
■ Goods	-0.20	9.55	-2.06	0.03	0.12	1.11	0.86	0.81
Motor Vehicles and Parts	-0.01	1.64	0.05	-0.78	0.08	0.11	0.12	0.09
Furniture and HH Equipment	-0.09	1.05	-0.13	-0.07	0.05	0.11	0.11	0.09
Recreational Durable Goods	-0.01	1.12	0.75	0.10	0.10	0.31	0.21	0.23
Groceries	-0.12	0.33	-0.27	1.33	-0.09	0.16	0.11	0.08
Clothes and Shoes	0.04	1.84	-0.96	-0.75	0.11	0.07	0.05	0.08
■ Services (ex. Shelter)	1.76	15.78	-22.52	-4.74	0.97	-0.19	0.44	0.71
Health Care Services	1.31	7.41	-7.59	-2.00	0.54	0.14	0.24	0.25
Transportation	-0.04	1.66	-2.81	-0.66	0.01	-0.10	0.03	0.04
Recreational	0.21	2.13	-4.41	-1.05	0.09	-0.20	-0.03	0.04
Food and Accommodations	-0.27	4.28	-5.43	-1.67	0.00	-0.17	0.02	0.06
Financial and Insurance	0.11	0.50	0.05	-0.11	0.19	0.09	0.05	0.14
■ Shelter	1.41	2.30	-1.03	0.64	0.21	0.36	0.36	0.30
Housing Services and Utilities	0.04	0.11	0.57	-0.04	-0.01	0.16	0.15	0.22
Residential Fixed Investment	1.37	2.19	-1.60	0.68	0.22	0.20	0.21	0.07

Source: Bureau of Economic Analysis

Consumer spending is also reported on a monthly basis. Inflation- and population-adjusted consumer spending decreased 2.4 percent over the year ending January 2021 (see —), far below the previous year rate (an increase of 2.2 percent over the year ending January 2020).

Consumer Spending Growth

annual growth, per capita real personal consumption expenditures, percent



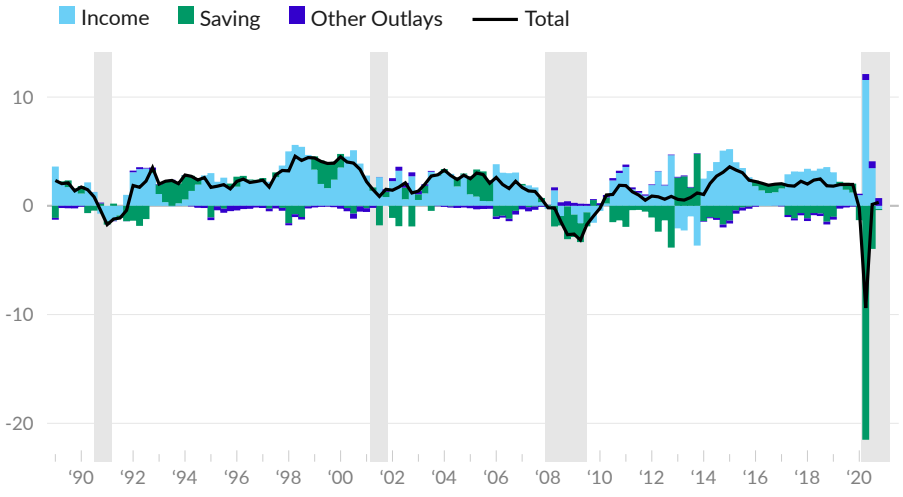
Source: Bureau of Economic Analysis

Changes to consumer spending (see —) are largely the result of changes to income (see ■) and changes to the rate at which income is saved (see ■). Changes to other outlays (see ■) reflect changes in interest payments, fines and fees, and charitable giving.

Real per capita consumer spending increased at an average rate of 0.3 percent over the four quarters ending 2020 Q4. Changes to disposable income subtracted 0.3 percentage points, changes to saving subtracted 0.1 percentage points, and changes to other outlays added 0.7 percentage points. Over the past three years, real per capita consumer spending growth has averaged 1.4 percent, with income growth contribuing an average of 1.5 percentage points and saving subtracting an average of 0.2 percentage points.

Contributions to Consumer Spending

percentage point contribution to real per capita PCE growth, one-year moving average



Source: Bureau of Economic Analysis

Saving

The portion of after-tax income that is not spent by households is considered **personal saving**, from an economic accounting perspective. Personal saving as a share of disposable personal income is the *personal saving rate*. Households use savings for investment and because income can be more volatile than expenses. However, economists also point out that aggregate personal saving is a direct reduction in corporate profits, as it represents income to persons that was at some point a business expense, but that does not get returned to businesses as revenue through consumer spending.

As of January 2021, the Bureau of Economic Analysis report a rate of personal saving of 20.5 percent (see —). Since February 2020, the personal saving rate increased by a total of 12.2 percentage points.

Personal Saving Rate

personal saving as a share of disposable personal income

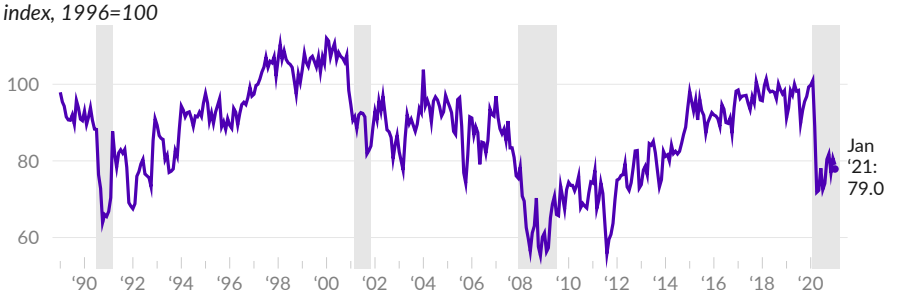
Source: Bureau of Economic Analysis

Consumer Sentiment

The University of Michigan conducts a regular monthly survey to gauge individuals' **consumer sentiment** (see —). The measure is based on questions related to personal finances, business conditions, and buying conditions. An increase in consumer sentiment means individuals feel more confident about economic conditions and are more willing to make large purchases or take on debt. As of January 2021, the latest value of the consumer sentiment index is 79.0, compared to 80.7 in December 2020 and 99.8 in January 2020.

Consumer Sentiment

index, 1996=100



Source: University of Michigan

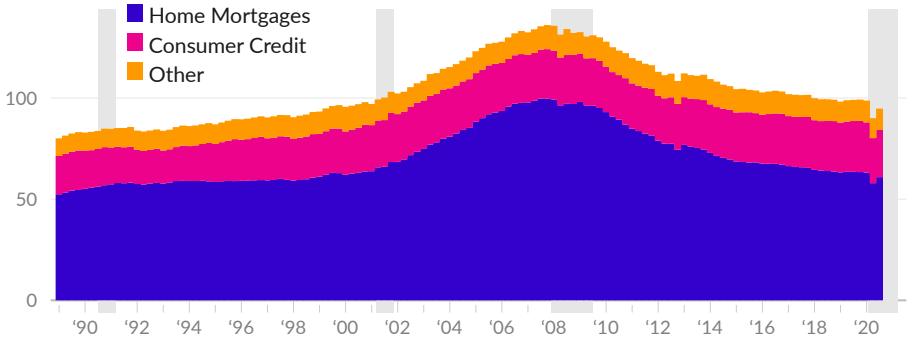
Household Balance Sheets

Liabilities

The Federal Reserve reports total liabilities of households and nonprofits of $16.79 trillion in 2020 Q3. The vast majority–$10.79 trillion or 64.2 percent of the total–are home mortgages (see ■). Consumer credit liabilities (see ■) which include auto loans, credit card debt, student loans, and other personal loans, total $4.14 trillion (24.6% of the total). The remaining liabilities (see ■) are primarily attributable to nonprofits.

The ratio of household and nonprofit debt to disposable personal income has fallen to 94.7 percent in 2020 Q3 from its housing-bubble peak of 136.0 percent in 2007 Q4. Over the past three years, nominal household and nonprofit debt has increased 10.5 percent while nominal disposable personal income has increased 14.4 percent. As a result, the ratio of household and nonprofit debt to disposable personal income has fallen by 6.7 percentage points.

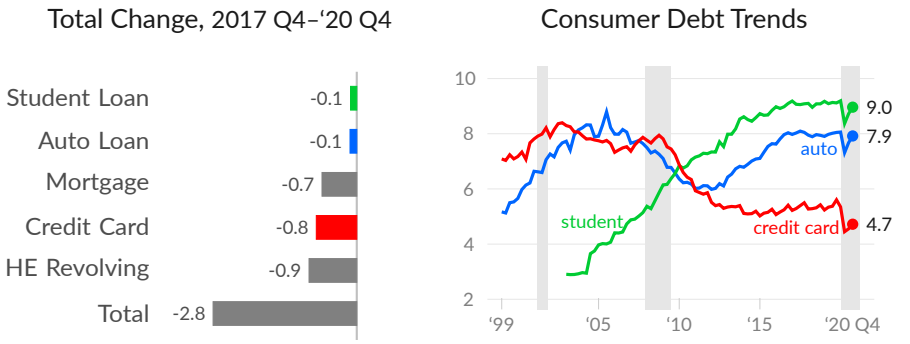
Household and Nonprofit Debt
by type, as share of disposable personal income



Source: Federal Reserve and Bureau of Economic Analysis

Federal Reserve Bank of New York (FRBNY) analysis of Equifax data shows $14.6 trillion in total consumer debt in 2020 Q4, which is equivalent to 83.9 percent of disposable personal income. Over the past three years, total consumer debt has increased by $1.41 trillion compared to an increase of $2.18 trillion in disposable personal income. As a result, the ratio of total consumer debt to disposable personal income has fallen by 2.8 percentage points over this period.

Mortgages and Consumer Credit
share of disposable personal income, percent



Source: Federal Reserve Bank of New York and Bureau of Economic Analysis

Trends in **household debt** over the past three years, measured in both the US Financial Accounts and the New York Fed Consumer Credit Panel, show consumer credit growing in line with income while mortgage debt falls relative to income. Minor discrepancies between the two data sources arise because the Financial Accounts include debt of nonprofit institutions and the Consumer Credit Panel does not include persons without a social security number.

According to the same FRBNY data, mortgage debt, including home equity lines of credit, totalled $10,392 billion in 2020 Q4, equivalent to 59.9 percent of disposable personal income (DPI). Student loans totalled $1,555 billion, or 9.0 percent of DPI; auto loans totalled $1,374 billion (7.9 percent of DPI); and credit card debt totalled $819 billion (4.7 percent of DPI).

Over the past three years, the ratio of total mortgage debt to disposable personal income fell by 1.6 percentage points, compared to a decrease of 0.1 percentage points for student loans, a decrease of 0.1 percentage points for auto loans, and a decrease of 0.8 percentage points for credit card debt

Household Debt Outstanding

trillions of US Dollars — *share of disposable personal income*

	2020 Q4	2020 Q3	'20 Q4	'20 Q3	'17 Q4	'13 Q1	'03 Q1
Financial Accounts Total*	–	$16.79T	–	94.7	101.6	112.1	108.5
Mortgage Debt Total	–	$10.79T	–	60.9	65.5	76.8	74.8
Consumer Credit	–	$4.14T	–	23.3	25.1	23.6	24.0
Other	–	$1.87T	–	10.5	11.0	11.7	9.7
Consumer Credit Panel Total	$14.56T	$14.35T	83.9	81.0	86.7	90.9	87.2
Mortgage Debt Total	$10.39T	$10.22T	59.9	57.7	61.5	68.7	62.5
Mortgage	$10.04T	$9.86T	57.9	55.6	58.6	64.2	59.6
Home Equity Revolving	$0.35T	$0.36T	2.0	2.0	2.9	4.5	2.9
Consumer Credit	$4.17T	$4.13T	24.0	23.3	25.2	22.2	24.7
Auto Loan	$1.37T	$1.36T	7.9	7.7	8.0	6.4	7.7
Credit Card	$0.82T	$0.81T	4.7	4.6	5.5	5.3	8.3
Student Loan	$1.55T	$1.55T	9.0	8.7	9.1	8.0	2.9
Other	$0.42T	$0.42T	2.4	2.4	2.6	2.5	5.8

Source: Federal Reserve, Federal Reserve Bank of New York, Bureau of Economic Analysis

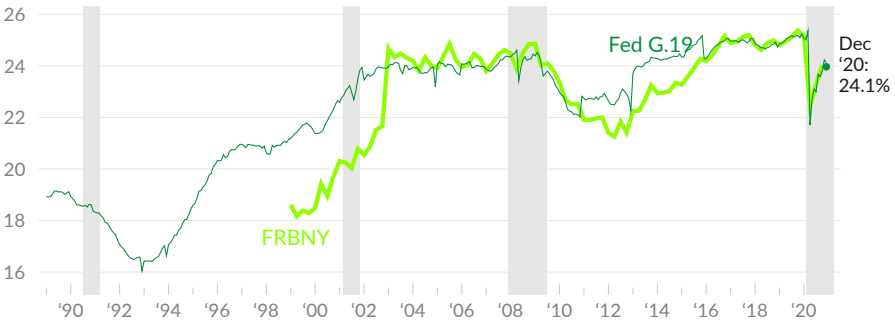
Consumer Credit

The Federal Reserve also report consumer credit credit on a monthly basis. Consumer credit totals $4.18 trillion US dollars on a seasonally-adjusted and annualized basis in December 2020. Over the past year, consumer credit was virtually unchanged, while after-tax income increased by 4.7 percent. As a result, the ratio of consumer credit to disposable income decreased by a total of 1.1 percentage points. In December 2020, total consumer credit is equivalent to 24.1 percent of annualized December 2020 disposable income (see —).

The latest comparable figure from the FRBNY data discussed in the previous section, which covers 2020 Q4, shows consumer credit is equivalent to 24.0 percent of one year of disposable personal income (see —). Over the past year, the ratio decreased by a total of 1.4 percentage points.

Consumer Credit

share of disposable personal income, percent



Source: Federal Reserve; FRBNY

Financial Obligations

Payments to service debt, along with rent, auto lease payments, homeowner's insurance, and property tax are considered financial obligations. The Federal Reserve report financial obligations as a share of disposable personal income. As of 2020 Q3 the financial obligations ratio is 14.3 percent (see —). The measure peaked at 18.1 percent in 2007 Q4, during the housing bubble.

Financial Obligations Ratio

share of disposable personal income, percent

Source: Federal Reserve

Assets

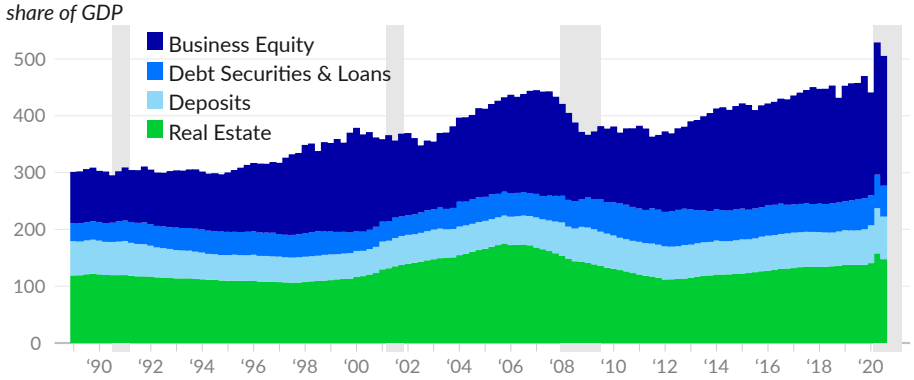
Assets of households and nonprofits were valued at $140.3 trillion in 2020 Q3, equivalent to 663 percent–or 6.63 years–of GDP. Of this, $41.6 trillion, or 29.6 percent of the total, are tangible assets and $98.7 trillion, or 70.4 percent, are financial assets.

Tangible, or non-financial, assets include peoples' homes as well as consumer durable goods, such as cars, furniture, and appliances. The market value of owner-occupied real estate is $31.2 trillion in 2020 Q3, equivalent to 1.48 years of GDP (see ■). Consumer durable goods have a replacement value of $6.1 trillion, or 0.29 years of GDP. Tangible assets are reported for the combined household and nonprofit sector and include real estate and equipment belonging to nonprofits, which totals $4.3 trillion in 2020 Q3.

Financial assets include equity in businesses–corporate and non-coporate–with a market value of $48.3 trillion, or 2.3 years of GDP (see ■), in 2020 Q3. Debt securities and loan assets total $11.5 trillion, or 0.54 years of GDP (see ■). Cash and deposits, including money market accounts, total $15.9 trillion, or 0.75 years of GDP (see ■). All other financial assets total $23.0 trillion.

Selected Household and Nonprofit Assets

share of GDP

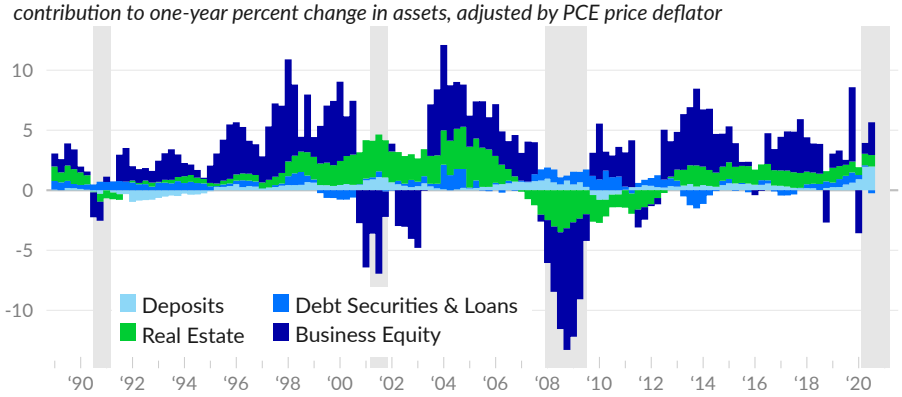


Source: Federal Reserve, Bureau of Economic Analysis

Household and nonprofit assets grew by 5.8 percent over the year ending 2020 Q3. Owner-occupied real estate contributed 0.9 percentage points to total growth, and business equity contributed 2.7 percentage points.

Contributions to Real Growth in Household and Nonprofit Assets

contribution to one-year percent change in assets, adjusted by PCE price deflator



Source: Federal Reserve, Bureau of Economic Analysis

Household and Nonprofit Assets

various measures:	*trillions of USD*	*share of GDP*		*real annual growth rate*		
	2020 Q3	2020 Q3	2019 Q3	One-year	Three-year	20-year
Total Assets	$140.3	662.8	608.2	5.8	4.4	3.2
Non-financial assets	41.6	196.5	184.0	3.7	3.9	2.7
Owner-occupied real estate	31.2	147.5	137.5	4.2	4.1	2.9
Consumer durable goods	6.1	28.6	26.5	4.9	3.2	1.5
Nonprofit assets	4.3	20.3	20.0	-1.3	3.3	3.7
Financial assets	98.7	466.3	424.2	6.8	4.6	3.4
Deposits, incl. money market	15.9	75.1	60.9	19.8	8.0	4.5
Debt securities and loans	11.5	54.4	54.3	-2.8	3.8	4.3
Business equity	48.3	228.3	205.1	8.1	5.5	3.3
Corporate equities	35.6	168.1	148.2	10.1	6.1	3.4
Noncorporate business equity	12.8	60.2	56.9	2.8	4.0	3.1

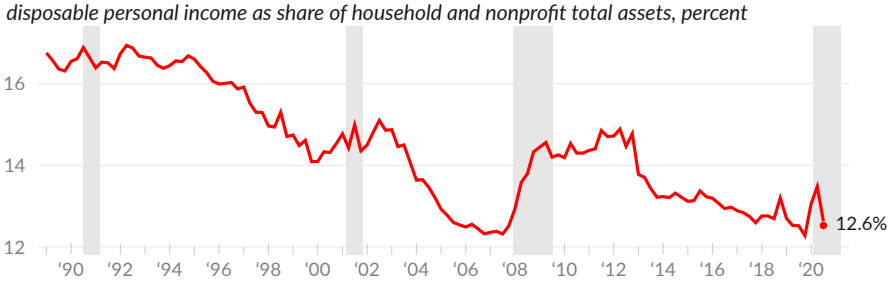
Source: Federal Reserve, Bureau of Economic Analysis

Return on Assets

The increase in assets as a share of GDP also means that the return on total household assets has fallen, as measured by disposable income as a share of household assets. As of 2020 Q3, disposable income was equivalent to 12.6 percent of total assets (see —), compared to an average rate of 16.0 percent during the 1990s.

Return on Household Assets

disposable personal income as share of household and nonprofit total assets, percent



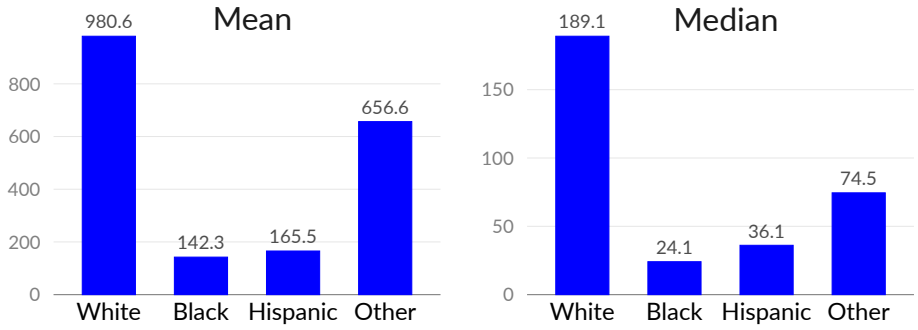
Source: Federal Reserve, Bureau of Economic Analysis

Wealth/Net Worth

Wealth varies substantially by race and ethnicity. Net worth, measured as total assets minus total liabilities, captures the overall financial position–or wealth–of families. In 2019, white non-Hispanic families' average net worth was $980,550, compared to $142,330 for black non-Hispanic families, and $165,540 for Hispanic families of any race. Additionally, the wealth of a typical (median) family is much lower than the average wealth of families, the result of a concentration of wealth among the wealthiest families.

Racial Wealth Gap

net worth by race/ethnicity, thousands of US dollars, 2019



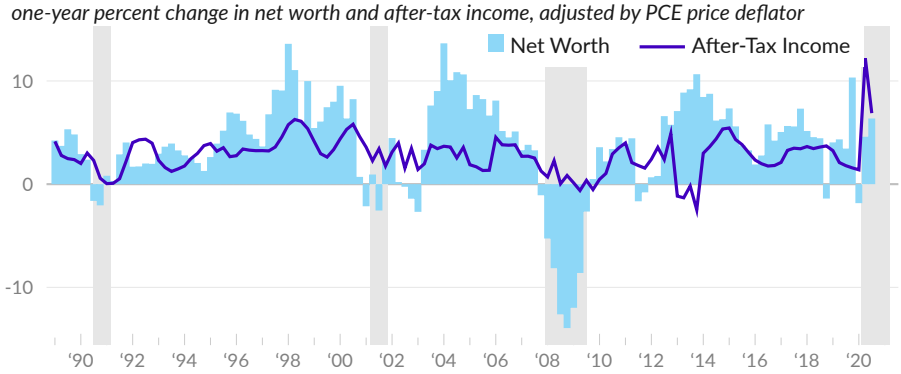
Source: Federal Reserve, Survey of Consumer Finances

The market value of assets of households has risen much faster than their total liabilities, causing a **substantial increase in net worth**. In 2020 Q3, household and nonprofit institution net worth was $123.5 trillion, equivalent to 7.0 years of disposable personal income; the result of total assets of $140.3 trillion and total liabilities of $16.8 trillion.

In 2020 Q3, inflation-adjusted net worth increased by 6.4 percent (see), and inflation adjusted after-tax income increased by 6.9 percent (see —). Over the past three years, real net worth grew at an average rate of 4.4 percent, while real after-tax income grew at an average rate of 3.9 percent

Net Worth and After-Tax Income Growth

one-year percent change in net worth and after-tax income, adjusted by PCE price deflator



Source: Federal Reserve, Bureau of Economic Analysis

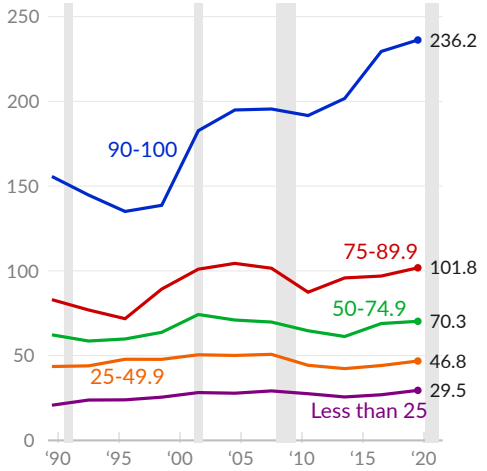
Wealth and Income

Wealth, when measured as assets minus liabilities, can be a source of income, but does not correspond perfectly to income. For example, early-career professionals with student debt may have a negative net worth and a high income. That said, data on family income by wealth percentile show that income tends to increase with wealth.

Additionally, the before-tax income of the wealthiest ten percent of families (see —) has increased substantially more than the income of other groups. The top ten percent of families by wealth, percentiles 90 to 100 with a mean wealth of $5.7 million and a median wealth of $2.6 million in 2019, have a median annual income of $236,203 in 2019 and $155,693 in 1989, after adjusting for prices. Median income for the group increased $80,510, or 51.7 percent, over the 30-year period.

Before-Tax Income by Wealth Percentile

median annual income, thousands of 2019 USD

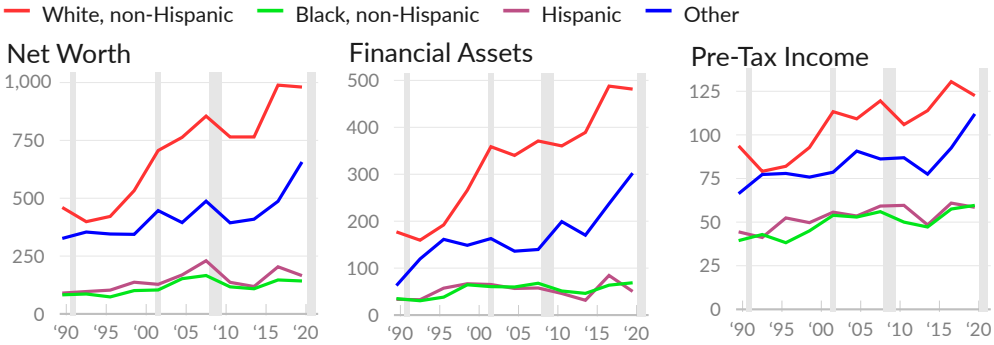


Source: Federal Reserve

In contrast, families in the third quartile of wealth (50th to 74.9th percentiles, mean wealth of $700,000 in 2019, see —) have a median income of $70,250 in 2019 and $62,277 in 1989, an increase of $7,973 (12.8 percent). Median income for families in the second quartile (25th to 49.9th percentiles, mean wealth of $236,000 in 2019, see —) increased $3,239 (7.4 percent) to $46,833 in 2019, from $43,594 in 1989. For the bottom quarter of families by wealth (see —), median income increased $8,766 or 42.2 percent to $29,525, over the 30 years ending 2019. The bottom quarter of families have a negative mean wealth in 2019 and a median wealth of virtually zero.

The US history of slavery and inter-generational white wealth show up in current data from the Survey of Consumer Finances. The racial wealth gap discussed above cannot be explained by borrowing or access to credit. White families have substantially more financial assets including stocks and are much more likely to receive inheritance. Income for black families is also substantially lower–about half of white family income. Persistent structural inequalities are seen in income data, but are also evident from measures of wealth and assets.

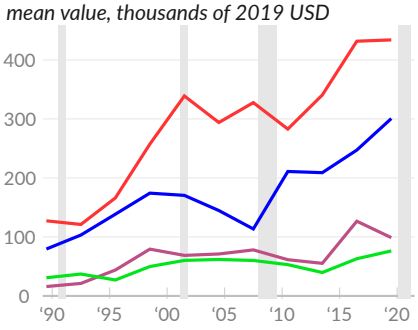
Measures of Wealth and Income by Race or Ethnicity
by family, mean, thousands of 2019 USD



Source: Federal Reserve

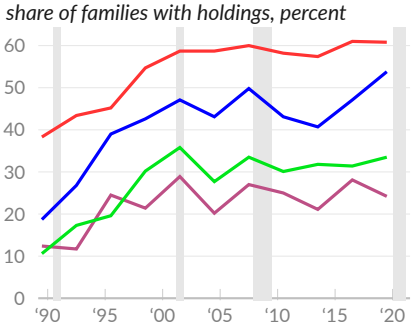
In 2019, among the 60.8 percent of white families who own stocks, the average value of stock holdings is $433,900. The return on these assets is a supplement to labor income and the assets themselves provide cushion against unexpected expenses. Meanwhile, black families have relatively few financial assets; only 33.5 percent of black families own stocks, with median stock holdings of $76,300.

Stock Holdings
mean value, thousands of 2019 USD



Source: Federal Reserve

Stock Holdings
share of families with holdings, percent

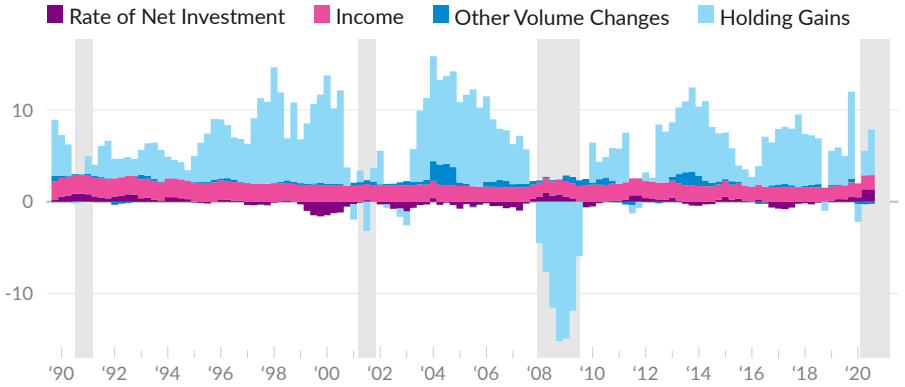


Source: Federal Reserve

Changes in net worth come from the revaluation of assets and from net investment of income. Changes to the value of assets, for example capital gains from an increase in the market value of corporate equities, explain most of the changes in net worth (see ■). Each period households also receive income and decide investment, saving, and borrowing. Net investment equals capital expenditures less depreciation plus net lending/borrowing; positive net investment results in an increase in net worth. Since 1989, household net investment has averaged 10 percent of disposable personal income. Income that goes to net investment at this historical-average rate (see ■) can be separated from periods where the rate of net investment is above or below this historical average (see ■). This distinction can identify how changes in disposable personal income, and changes in decisions about how to use that income, combine to affect net worth. Changes in data sources or from natural disasters are also identified as other volume changes (see ■).

Net Worth Growth

contribution to one-year percent change in net worth, nominal



Source: Federal Reserve, Bureau of Economic Analysis

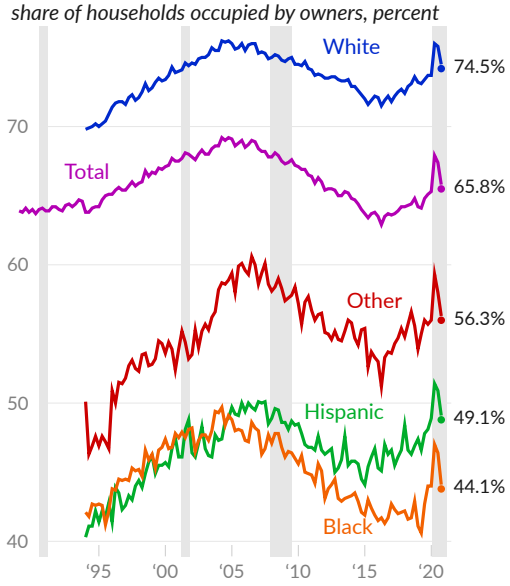
In the the third quarter of 2020, holding gains contributed 5.0 percentage points to the 7.6 percent change in net worth. Income invested at the 1989-onward average rate of 10.2 percent would have contributed 1.5 percentage points; an additional 1.4 percentage points were added as household net investment was 19.2 percent of disposable person income in 2020 Q3. Other volume changes subtracted 0.2 percentage points. Over the past three years, nominal one-year growth of net worth averaged 6.1 percent. Holding gains contributed 4.2 percentage points on average; net investment of income contributed 2.9 percentage points; and other volume changes did not contribute significantly.

Homeownership

The **homeownership rate** measures the percent of occupied housing units that are owner-occupied, as opposed to rented. In 2004, near to the peak of the housing bubble, the overall homeownership rate reached 69.2 percent. As of 2020 Q4, the Census Bureau report a rate of home-ownership of 65.8 percent (see —). Over the past three years, the overall US homeownership rate increased by a total of 1.6 percentage points.

Homeownership Rate

share of households occupied by owners, percent



Source: Census Bureau

Census data also show large differences in homeownership rates by race and ethnicity. Around three-quarters (74.5 percent in 2020 Q4) of non-Hispanic white households own their home (see —), compared to fewer than half of black and Hispanic households.

During the housing bubble, the homeownership rate for black households increased by nearly ten percentage points, peaked at 49.7 percent in the second quarter of 2004, and fell to 40.6 percent in 2019 Q2. The current homeownership rate for black households is 44.1 percent, as of 2020 Q4 (see —). The rate for Hispanic households of any race is 49.1 percent in 2020 Q4, substantially below the 51.4 percent peak rate in the second quarter of 2020 (see —).

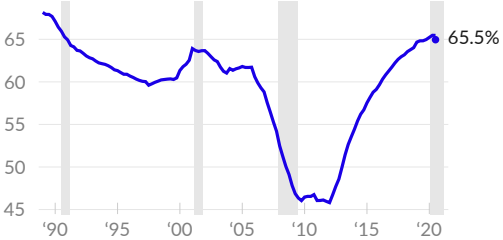
Use caution when interpreting homeownership rates affected by the COVID-19 pandemic. Individuals who are renters or homeowners are captured by the measure, but when an individual moves in with family and stops being a head of household, they are dropped from the measure. Therefore when renters move in with family the homeownership rate increases. Recent increases in homeownership rates reflect renters moving in with family.

As seen during the collapse of the housing bubble, it is possible for someone to be a homeowner but have no equity in their home, for example if the market price of the home falls below the principal remaining on the mortgage. Trends in owner's equity as a share of the market value of real estate show substantial improvement since the lows following the collapse of the housing bubble, when millions of homes were in foreclosure.

As of 2020 Q3, the Federal Reserve report owners' equity is 65.5 percent of residential real estate (see —). Over the past three years, the owners' equity share increased by a total of 2.8 percentage points. Over the past year, the share increased by a total of 0.6 percentage point. The current share is substantially below the 1989 average of 67.9 percent.

Owner's Equity Share of Real Estate

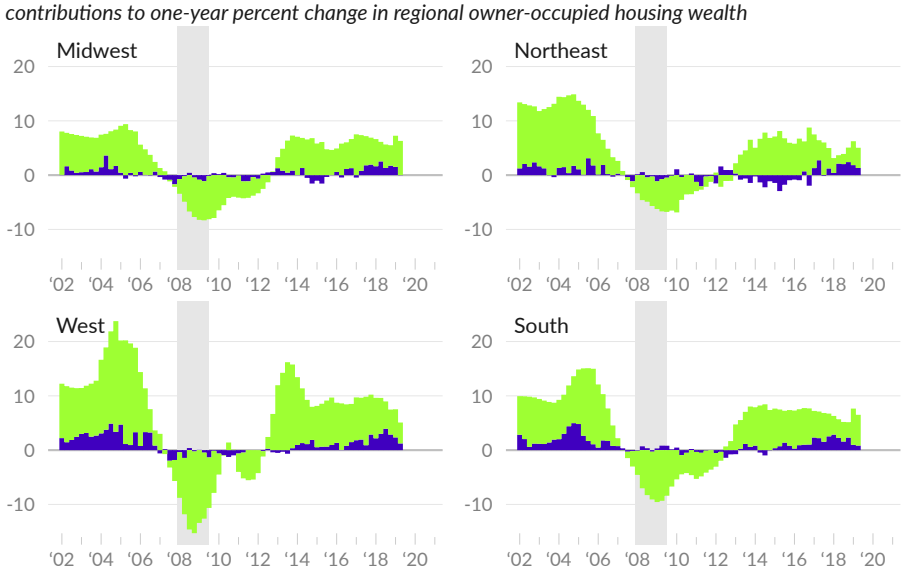
owner's equity as percent of real estate



Source: Federal Reserve

Owner-Occupied Housing Wealth Unit Price Inventory

contributions to one-year percent change in regional owner-occupied housing wealth

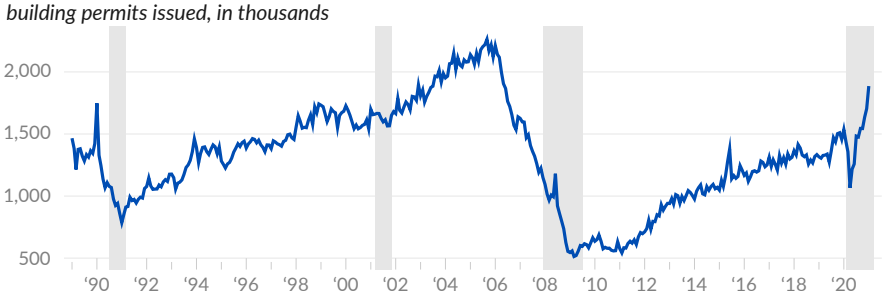


Source: Federal Reserve and Census Bureau

The Census Bureau tracks the issuance of new residential building permits, which offer insight into planned residential construction. In January 2021, a seasonally-adjusted annual rate of 1,886,000 new residential housing units were authorized by building permits, the highest level since May 2006 (see —). Permits issued increased by 182,000 (10.7 percent) over the previous month, increased by 350,000 (22.8 percent) over last January, and increased by 719,000 (61.6 percent) total over the past five years.

Residential Construction

building permits issued, in thousands

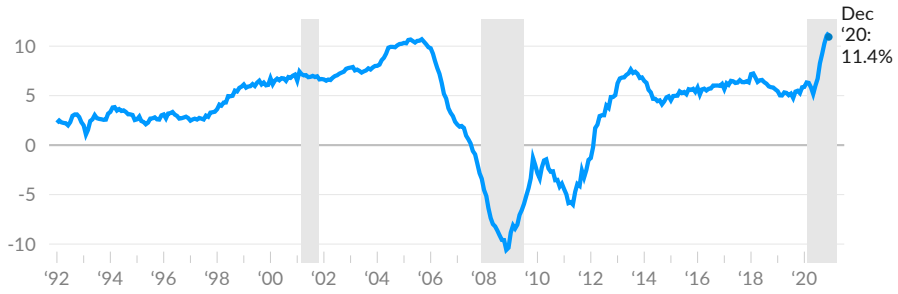


Source: Census Bureau

The Federal Housing Finance Agency (FHFA) housing price index (see —) captures changes in the price of the same home. The index increased by 11.4 percent over the year ending December 2020. Among Census Divisions, the fastest one-year housing price index growth rate in December 2020 was 13.6 percent in the New England Division, which includes Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, and Vermont.

House Price Index

seasonally adjusted index, one-year percent change



Source: Federal Housing Finance Agency

Housing Price Growth

seasonally adjusted, one-year percent change

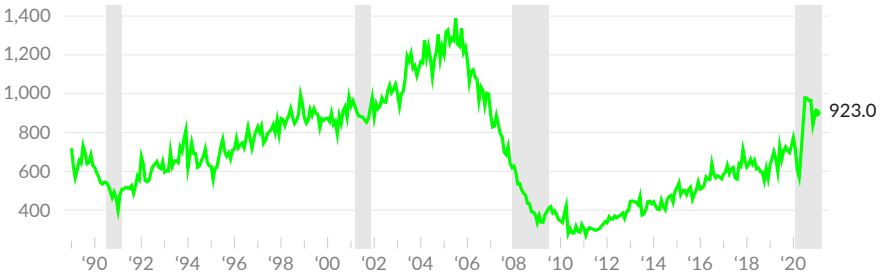
	Dec '20	Nov '20	Oct '20	Sep '20	Dec '19	Dec '18	Dec '17	'03–'05 Average	'09–'12 Average
New England	13.6	13.0	12.2	10.4	4.6	5.0	5.6	10.3	-2.2
Mountain	13.6	13.9	12.5	11.4	8.2	7.5	8.6	11.1	-4.2
Pacific	12.5	11.9	10.6	9.6	5.3	5.3	8.5	18.4	-3.9
East South Central	12.1	11.9	9.9	9.5	6.3	6.0	4.8	5.1	-1.6
East North Central	11.5	10.3	10.4	9.0	5.9	5.4	5.9	4.3	-2.4
United States	11.4	11.1	10.3	9.2	5.8	5.6	6.3	9.2	-2.5
South Atlantic	11.3	11.4	10.0	8.9	6.1	6.4	6.2	11.3	-3.7
Middle Atlantic	11.2	11.0	10.4	9.7	5.0	5.0	5.0	11.3	-2.2
West North Central	9.5	9.8	9.7	9.0	5.7	5.7	5.3	5.4	-1.1
West South Central	8.8	8.6	8.4	7.6	5.4	4.3	6.1	4.3	0.3

Source: Federal Housing Finance Agency

In January 2021, the Census Bureau report seasonally-adjusted single family new homes sales totalling 923,000 (see —). Over the past year, new homes sales increased 0.2 percent.

New Home Sales

new single family homes sold, in thousands



Source: Census Bureau

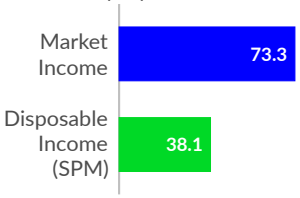
Poverty

In 2019, income from labor and capital ownership, called *market income*, was below the Census Bureau threshold for poverty for 73.3 million people in the US, equivalent to 22.5 percent of the population. An adjusted measure called *disposable income* includes market income plus income from government programs and tax credits, and subtracts taxes paid. According to the Census Bureau Supplemental Poverty Measure (SPM), **38.1 million people are in poverty** based on their disposable income, equivalent to 11.7 percent of the population. Government programs and tax credits moved the income of 35.2 million people above the poverty threshold.

For purposes of program eligibility and economic data, poverty is defined by having income below a certain threshold. The processes for calculating poverty vary, with the Official Poverty Measure (OPM) based on three times a price-adjusted 1963 minimal food budget, and the SPM based on food, shelter, clothing, and utilities costs and additionally capturing program benefits and taxes, along with other adjustments.

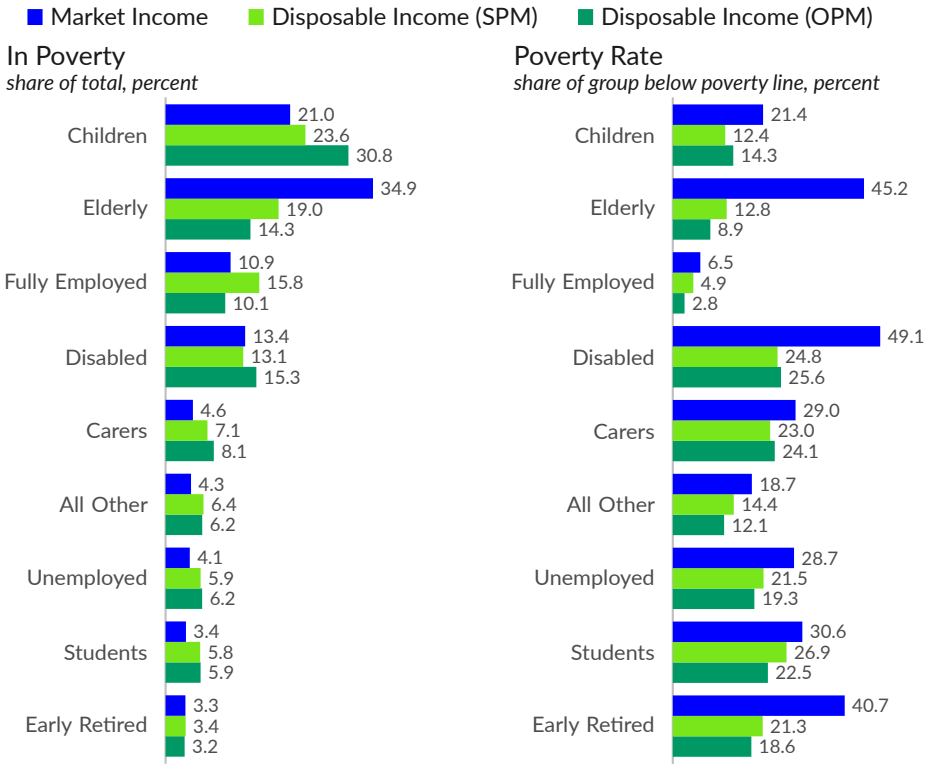
While some fully-employed people are in poverty, **the vast majority of poor people are either children, elderly, disabled, caregivers, or students**. These groups represent 68.6 percent of those in poverty in 2019. If the missing labor income required to keep a person out of poverty is not supplied in the form of capital income or welfare income, the person will be poverty, by definition. As a result, these groups that are disproportionately work-limited in some way have much higher rates of poverty.

In Poverty, 2019
millions of people



Source: CPS ASEC

Poverty Measures, 2019

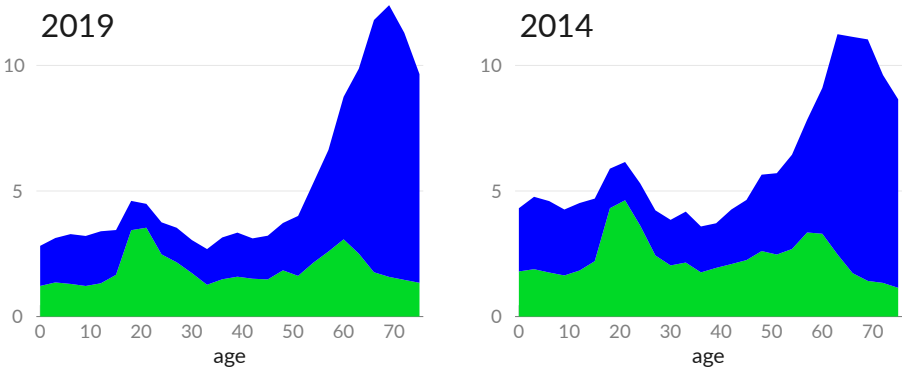


Source: CPS ASEC; Author's Replication of Bruenig, see

The share of a group whose combined labor, capital, and welfare income is below the poverty line is the poverty rate for the group. In 2019, students, caregivers, and the disabled had the highest rates of poverty. Those fully-employed have a low rate of poverty.

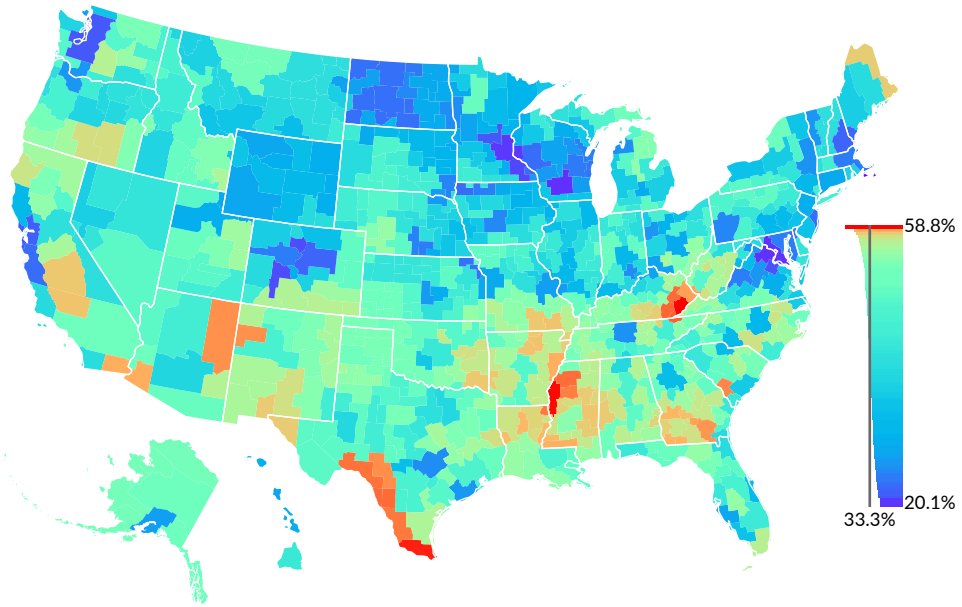
By age, market income (see ■) leaves the elderly particularly vulnerable to poverty as they are not as likely to have labor income. After social benefits and taxes (disposable income [see ■]), the elderly have much lower rates of poverty than other age cohorts. Higher survivorship for the wealthy also has the effect of reducing poverty in very old ages. Disposable income still leaves young adults and those just below social security and medicare age (late 50s and early 60s) vulnerable to poverty, relative to other ages.

Amount of Poverty by Age ■ Market Income ■ Disposable Income (SPM)
in billions of 2019 US Dollars



Source: CPS ASEC, 2014 adjusted for inflation with CPI-U-RS

Share of local population in bottom third of housing-adjusted income, 2019
Share of commuting zone householders with after-housing-expense annual income below $14,622



Source: American Community Survey, Author's Calculations

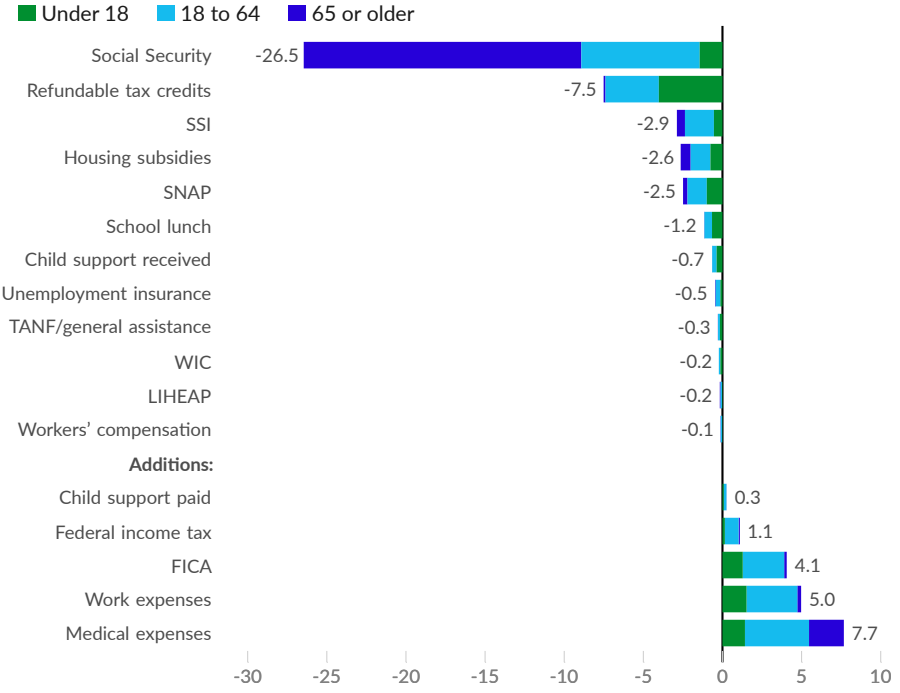
The Census Bureau report the number of people taken out of poverty by various government programs, along with how many people are put in poverty by various expenses. In 2019, Social Security payments lift income above the poverty line for 26.5 million people, by far the most effective program for reducing poverty.

Census estimates that assume 100 percent participation in programs show that refundable tax credits, such as the earned income tax credit and child tax credit, lift 7.5 million people out of poverty in 2019. These tax credits are phased-in (not fully-refundable) and increase as someone's labor income increases. Because of the phase-in, these tax credits do not reach the poorest of poor people. Additionally, the tax credits are not received by many who are eligible and are subject to high private administrative costs in the form of payments for tax preparation services. Overall, phased-in tax credits have more impact on the model of poverty than on poverty.

In terms of elements that add to the number of people in poverty, medical expenses are the most significant, and cause the disposable income of 7.7 million people to fall below the poverty line. Work expenses additionally put five million people in poverty.

Effect of Individual Elements on Poverty Headcount

individual element effect on number of people in poverty, millions, 2019



Source: Census Bureau Supplemental Poverty Measure

Businesses

The factories, offices, and equipment that workers use to produce goods and services are all important to the economy. This section looks at the business sector, with data covering business investment, retail sales, industrial production, corporate profits, and the financial activities of businesses. While the US has some state-owned enterprises, such as the US Postal Service, the Tennessee Valley Authority, and Amtrak, the data contained in this section cover private businesses.

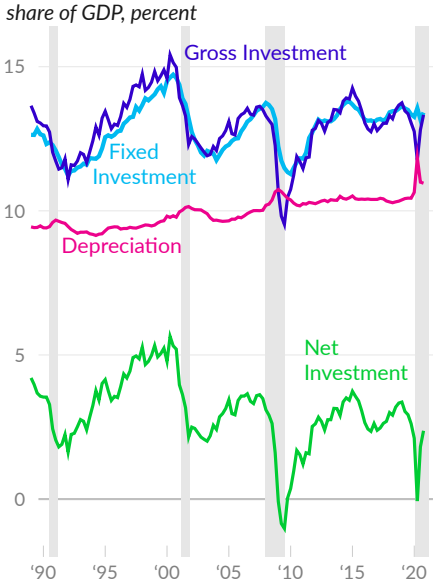
Investment

Production by private businesses requires capital goods, such as buildings, equipment, and software. When businesses purchase such items, defined as having a useful life of more than one year, it is considered fixed investment, or investment in fixed assets. From an accounting perspective, these transactions are considered an exchange of assets (cash in exchange for capital goods) rather than an expense.

Over time, these capital goods wear down, a process called consumption of fixed capital or depreciation. Depreciation is the expense related to capital goods from an accounting perspective. Businesses must decide whether to replace or add to the existing stock of capital goods, and their new purchases of capital goods and inventory investment are considered gross investment. Accordingly, net investment is gross investment minus depreciation, and measures whether the stock of capital goods is expanding.

Net investment is important for many reasons. In the short run, the production and installation of capital goods adds directly to GDP and increases the level of economic activity. In the long run, **investments in fixed assets make workers more productive**, as they allow businesses to produce more goods and services with the same hours of work.

Investment and Depreciation
share of GDP, percent



Source: Bureau of Economic Analysis

In the the fourth quarter of 2020, gross private business investment totals $2,864 billion on a seasonally-adjusted annualized basis, equivalent to 13.3 percent of GDP (see —). Private business investment in fixed assets totals $2,881 billion, or 13.4 percent of GDP (see —). Private business depreciation totals $2,355 billion in the quarter, or 11.0 percent of GDP (see —). As a result, net investment is $509 billion, or 2.4 percent of GDP (see —).

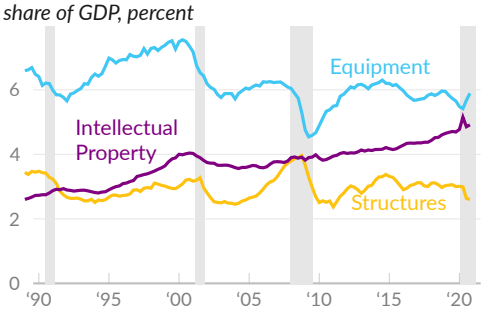
In 2019 Q4, prior to the COVID-19 pandemic, private business gross investment was $2,839 billion. Since 2019 Q4, annualized gross investment increased 0.9 percent. Net investment was $569 billion in 2019 Q4, and decreased 10.4 percent from 2019 Q4 to 2020 Q4, as gross investment recovered from its pandemic lows.

Note that gross investment includes fixed investment and inventory investment, or the change in private inventories. Changes to private inventories capture the difference between sales and production. Reduced production of new inventory explains much of the overall reduction in gross investment during the COVID-19 pandemic.

Business investments in fixed assets are grouped into three categories: structures, equipment, and intellectual property (for example software and R&D). Investment in structures was $559 billion in 2020 Q4, equivalent to 2.6 percent of GDP (see —). Equipment investment was $1,266 billion or 5.9 percent of GDP (see —), and intellectual property investment was $1,056 billion or 4.9 percent of GDP (see —).

Business Fixed Investment by Type

share of GDP, percent



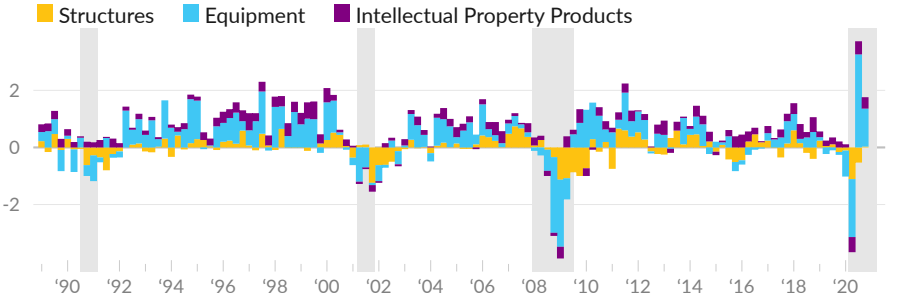
Source: Bureau of Economic Analysis

Contribution to Growth

Business fixed investment contributed 1.76 percentage points to GDP growth in 2020 Q4, substantially above the average contribution of 0.44 percentage point over the three years prior to the pandemic. In 2020 Q4, investment in structures contributed 0.03 percentage point to GDP growth (see), investment in equipment contributed 1.33 percentage points (see), and investment in intellectual property products contributed 0.40 percentage point (see).

Business Fixed Investment

percentage point contribution to real GDP growth



Source: Bureau of Economic Analysis

Business Fixed Investment

percentage point contribution to real GDP growth

	2020 Q4	'20 Q3	'20 Q2	'20 Q1	'19 Q4	moving averages 3-year	10-year	30-year
Total	1.76	3.20	-3.67	-0.91	-0.04	0.44	0.56	0.53
Structures	0.03	-0.53	-1.11	-0.11	-0.16	-0.09	0.04	-0.01
Equipment	1.33	3.26	-2.03	-0.91	-0.10	0.29	0.29	0.33
Information processing	0.27	0.89	0.51	-0.25	-0.02	0.17	0.13	0.22
Computers and peripherals	0.06	0.26	0.38	-0.11	0.08	0.07	0.03	0.12
Industrial equipment	0.26	0.23	-0.28	-0.07	-0.12	0.04	0.05	0.03
Transportation equipment	0.67	1.49	-1.78	-0.50	0.12	0.01	0.07	0.05
Intellectual property products	0.40	0.46	-0.53	0.11	0.21	0.24	0.22	0.21
Software	0.14	0.21	-0.10	0.18	0.15	0.15	0.14	0.12
Research and development	0.23	0.30	-0.31	-0.04	0.06	0.10	0.09	0.07

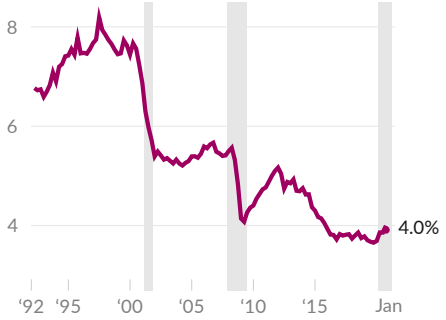
Source: Bureau of Economic Analysis

Productive business investments also show up as **new orders for core capital goods**. The category excludes the more-volatile aircraft orders as well as defense-related orders, and is derived from a Census Bureau survey of shipments, inventories, and orders.

New orders for manufactured core capital goods excluding aircraft totalled $73 billion in January 2021, equivalent to 4.0 percent of GDP (see —). New orders increased by 9.1 percent over the past year.

New Orders for Core Capital Goods

nondefense capital goods ex-aircraft, share of GDP



Source: Census Bureau

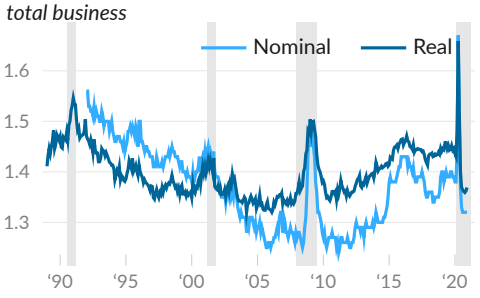
Inventories

Changes in private inventories are often grouped with investment in national accounts. For purposes of flow measures such as GDP, inventory changes capture a situation where goods were produced but not sold and therefore are not included in consumption or investment. This situation can allow a drop in spending that was not predicted to be obscured in GDP growth figures. However, BEA report an inflation-adjusted ratio of inventories to sales in manufacturing and trade businesses (see —).

When thinking about the longer-term trends in these data, it's important to note that sales of businesses include services while inventories include only goods. Over the past 30 years, sales have shifted towards services, which reduces the inventories to sales ratio, all else equal.

Inventories to Sales Ratio

total business



Source: FRED, BEA

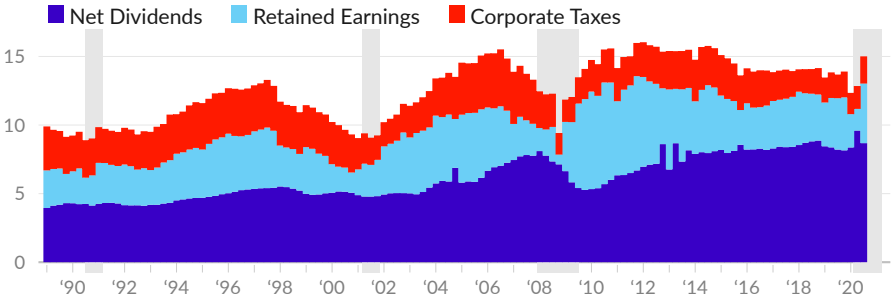
Census report the nominal ratio of inventories to sales for the total business sector (see —). In December 2020, the ratio of inventories to sales was 1.32, compared to 1.32 in November 2020, and 1.39 in December 2019. The inflation adjusted version from BEA shows inventories at 1.37 times sales in December 2020, compared to 1.36 in December 2019. From 2011 to 2014, real monthly inventories were 1.38 times real monthly sales, on average.

Corporate Profits

The national accounts include detailed information on **aggregate corporate profits**, which are an important determinant in the business cycle. In the third quarter of 2020, aggregate corporate profits were $2.33 trillion, or 15.0 percent of net national income. Of this, $1.35 trillion, equivalent to 8.7 percent of net national product, were paid out as dividends (see ■), $673 billion were retained (see ■), and $307 billion went to corporate income tax (see ■).

Destination of Corporate Profits

share of net national income

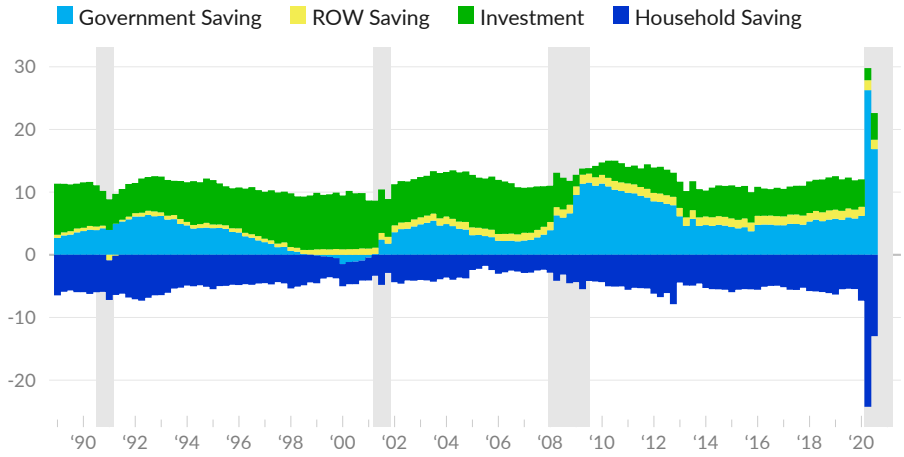


Source: Bureau of Economic Analysis

Aggregate corporate savings (corporate profits less dividends and corporate profit tax) are the result of net investment and non-business saving. Investment (see ■) is a source of aggregate profit because it is revenue for one party but not an expense for the other. Non-business saving, which includes household (see ■), government (see ■), and rest of world saving (see ■), necessarily reduces aggregate corporate profits because it is money that did not return to businesses as revenue.

Sources of Corporate Saving

contribution to corporate saving, as share of gross national income



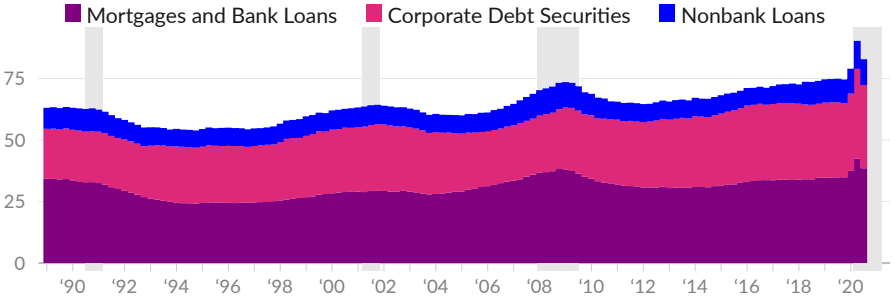
Source: Bureau of Economic Analysis

Business Debt

As of 2020 Q3, nonfinancial business debt–the debt security and loan liabilities of nonfinancial businesses–both corporate and non-corporate–totals $17,539 billion, with $10,903 billion (62.2%) held by corporate businesses. Over the past three years, nonfinancial business debt has increased faster than overall economic activity. As a share of GDP, nonfinancial business debt increased by 10.1 percentage points to 82.8 percent in 2020 Q3 from 72.7 percent in 2017 Q3. The vast majority of the increase, 2.8 percentage points, comes from nonbank loans (see ■).

Nonfinancial Business Debt

by type, as share of GDP



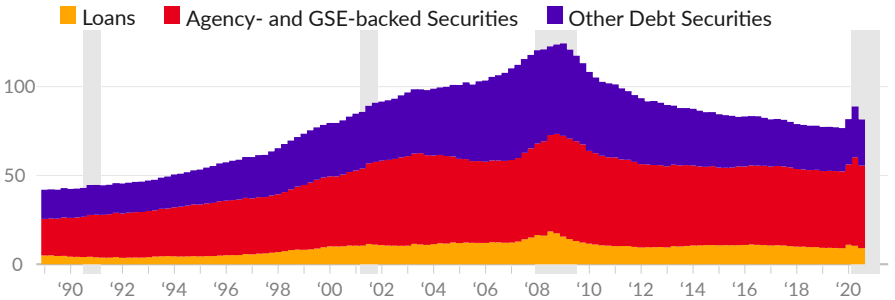
Source: Federal Reserve and Bureau of Economic Analysis

The debt of the domestic financial sector includes agency and government-sponsored enterprise (GSE) backed securities (see ■), corporate and foreign bonds, loans (see ■), and open market paper. The long-term increase in financial sector debt reflects the emergence and growth of various asset-backed securities. In addition to home mortgage-backed securities, the domestic financial sector issues debt securities based on commercial mortgages, auto loans, credit card, student debt, and even restaurant revenue.

Domestic financial sector debt has fallen as a share of GDP to 81.5 percent in 2020 Q3 from a housing-bubble peak of 124.3 percent in 2009 Q1.

Financial Sector Debt

by type, as share of GDP

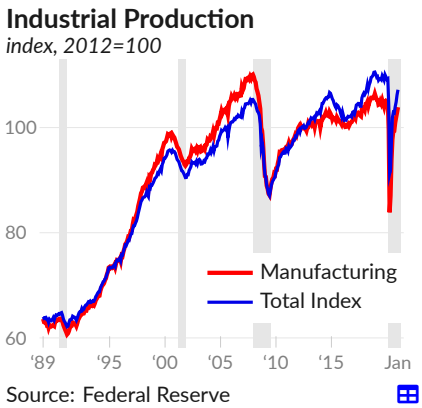


Source: Federal Reserve and Bureau of Economic Analysis

Industrial Production

A monthly index produced by the Federal Reserve shows industrial production decreased by 1.8 percent over the year ending January 2021, following a decrease of 3.2 percent over the year ending December 2020. One-year growth in manufacturing production was -1.0 percent in January 2021, and manufacturing subtracted 0.8 percentage point from the overall change in industrial production. Over the same period, mining subtracted 1.5 percentage points from the overall change, and electric and gas utilities contributed 0.7 percentage point.

By market group, production of consumer goods contributed 0.8 percentage point to one-year industrial production growth in January 2021. Production of business equipment subtracted 0.5 percentage point, production of nonindustrial supplies subtracted 0.6 percentage point, and production of materials subtracted 1.5 percentage points.



Source: Federal Reserve

Industrial Production Growth

One-year growth

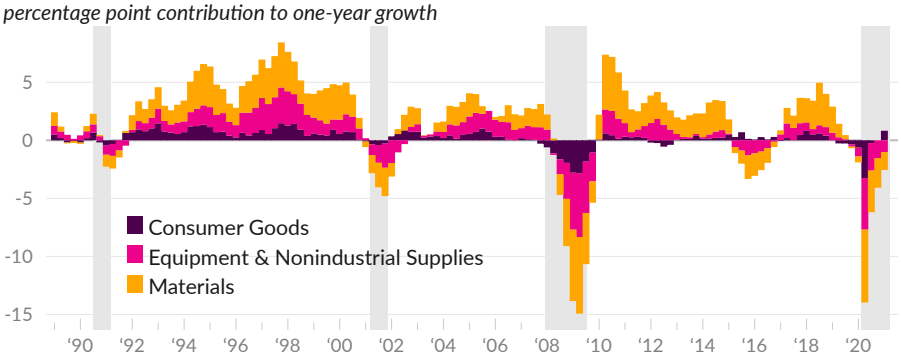
	contribution to total				*rate, percent*			
	Jan '21	Dec '20	Nov '20	Jan '20	Jan '21	Dec '20	Nov '20	Jan '20
Total index	-1.8	-3.2	-4.7	-0.8	-1.8	-3.2	-4.7	-0.8
Manufacturing	-0.8	-1.6	-2.1	-0.6	-1.0	-2.1	-2.8	-0.8
Durable manufacturing	-0.5	-1.1	-1.5	-0.4	-1.4	-2.9	-3.9	-1.0
Motor vehicles & parts	0.1	0.3	-0.0	0.0	1.7	4.7	-0.3	0.2
Nondurable manufacturing	-0.1	-0.4	-0.5	-0.1	-0.2	-1.0	-1.3	-0.3
Mining	-1.5	-1.6	-1.6	0.3	-11.5	-12.6	-12.5	2.4
Utilities	0.7	0.3	-0.8	-0.5	6.6	2.9	-7.5	-5.5
Consumer goods	0.8	0.4	-0.4	-0.2	2.9	1.2	-1.4	-0.8
Consumer durables	0.2	0.3	0.0	0.1	3.3	4.0	0.7	1.3
Automotive products	0.1	0.2	0.1	0.1	4.2	7.0	1.5	3.6
Consumer nondurables	0.6	0.1	-0.4	-0.3	2.8	0.5	-2.0	-1.4
Foods and tobacco	0.4	0.1	0.3	0.1	3.8	1.3	3.0	1.4
Chemical products	0.1	0.1	-0.1	-0.1	2.1	1.4	-1.2	-1.3
Consumer energy products	0.2	-0.1	-0.6	-0.3	4.2	-1.1	-11.2	-6.2
Equipment & nonindustrial supplies	-1.0	-1.3	-1.6	-0.5	-3.9	-5.2	-6.1	-1.8
Equipment	-0.5	-0.8	-1.0	-0.5	-3.9	-7.1	-8.1	-3.8
Industrial equipment	-0.1	-0.2	-0.2	-0.1	-3.7	-5.4	-7.5	-4.8
Nonindustrial supplies	-0.6	-0.5	-0.6	-0.0	-4.0	-3.5	-4.4	-0.0
Construction supplies	-0.2	-0.1	-0.1	0.1	-3.3	-1.6	-1.7	2.2
Business supplies	-0.4	-0.4	-0.5	-0.1	-4.4	-4.8	-6.1	-1.4
Materials	-1.5	-2.1	-2.6	-0.1	-3.4	-4.6	-5.8	-0.3
Consumer parts	0.1	0.1	-0.0	-0.1	3.3	2.4	-0.4	-4.8
Equipment parts	-0.0	-0.2	-0.2	-0.0	-0.7	-3.5	-4.0	-0.7
Chemical materials	0.2	0.1	0.1	-0.0	2.7	1.5	2.3	-0.7
Energy materials	-1.1	-1.3	-1.8	0.1	-6.2	-7.6	-10.7	0.7

Source: Federal Reserve

Market group data show the lack of growth in the production of consumer goods, equipment, and nonindustrial supplies over the past decade.

Industrial Production Growth, Market Group

percentage point contribution to one-year growth

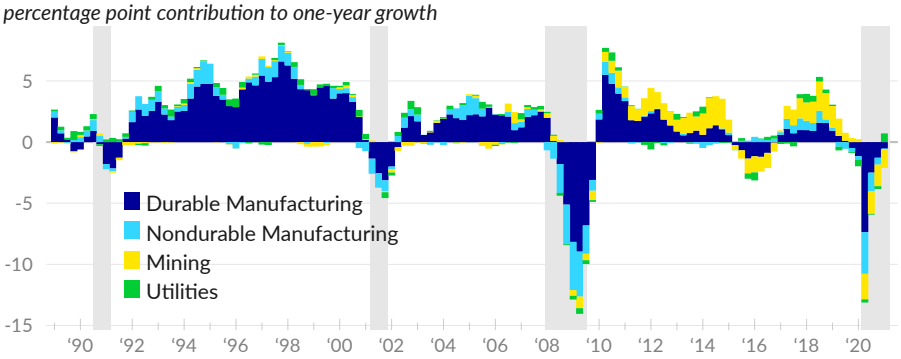


Source: Federal Reserve

Industry group data show a change in the composition of new industrial activity, towards mining and away from manufacturing.

Industrial Production Growth, Industry Group

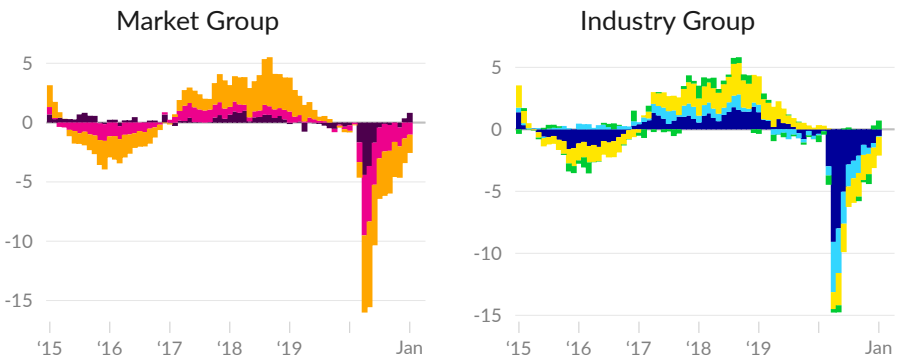
percentage point contribution to one-year growth



Source: Federal Reserve

The recent collapse has been broad-based. The monthly data are shown in detail below.

Recent data in detail



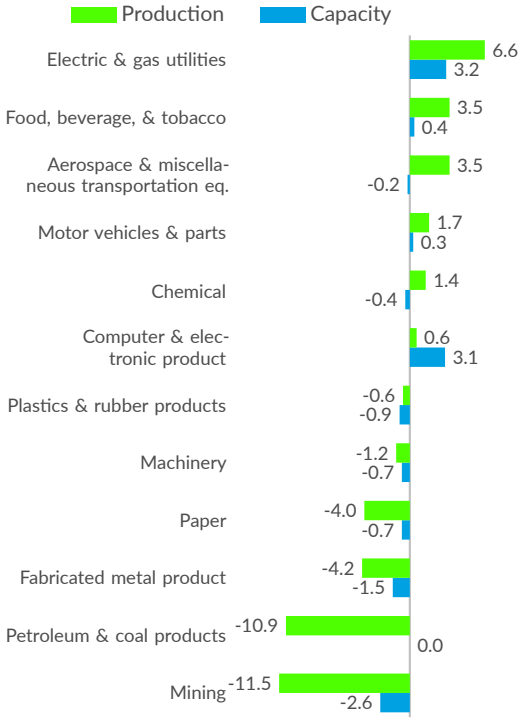
Source: Federal Reserve

Of a subset of 12 industries that contribute the majority of industrial production, six increased **production** over the past year, six decreased production, and none were unchanged (see ■). Over the year ending January 2021, mining production decreased by 11.5 percent, production of petroleum & coal products decreased by 10.9 percent, electric & gas utilities production increased by 6.6 percent, and production of fabricated metal products decreased by 4.2 percent.

Over the year ending January 2021, four of the 12 industries increased **capacity**, seven decreased capacity, and one was unchanged (see ■). Over the one-year period, electric & gas utilities capacity increased by 3.2 percent, production capacity for computer & electronic products increased by 3.1 percent, and mining capacity decreased by 2.6 percent.

Industrial Production and Capacity

One-year growth, percent, January 2021

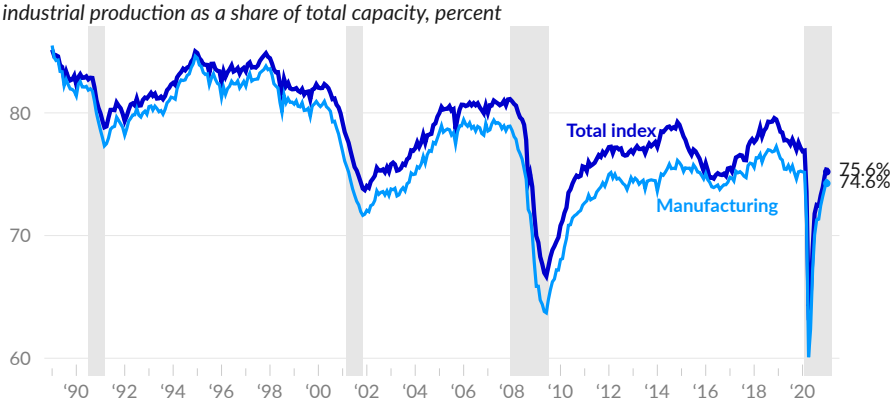


Source: Federal Reserve

The Federal Reserve's monthly industrial production report also measures the economy's total industrial capacity. The extent to which the economy is using its industrial capacity is called **capacity utilization**, and calculated as industrial production as a share of total industrial capacity. Long-term, capacity utilization has fallen as many US factories and industrial production facilities closed. In January 2021, the industrial capacity utilization rate was 75.6 percent (see —), and the manufacturing capacity utilization rate was 74.6 percent (see —). Total capacity utilization has fallen by 9.6 percentage points since January 1989.

Capacity Utilization

industrial production as a share of total capacity, percent



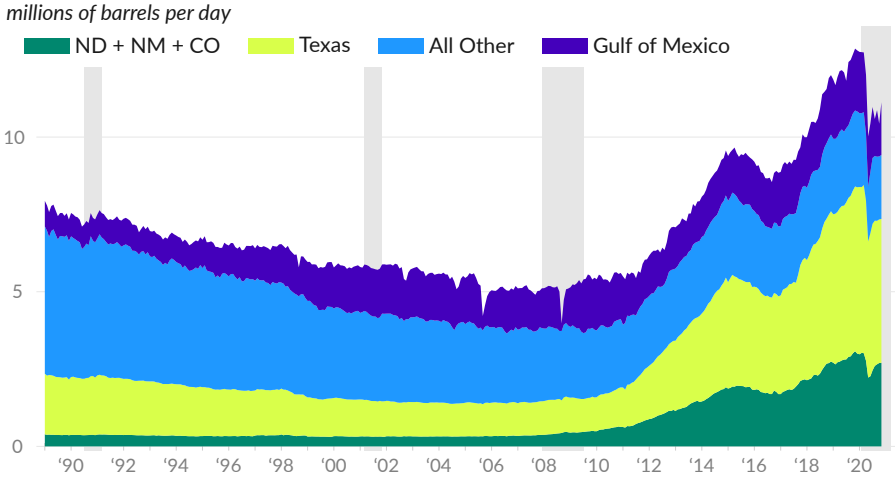
Source: Census Bureau

Energy Production and Use

The Energy Information Administration report that US has seen a massive increase in **crude oil production** over the past six years. The infrastructure for much of this production was put in place when oil prices were higher, and the profitability of the sector depends on oil maintaining a certain price. A large portion of the increase in oil production comes from New Mexico, South Dakota, and Colorado.

Crude Oil Production

millions of barrels per day



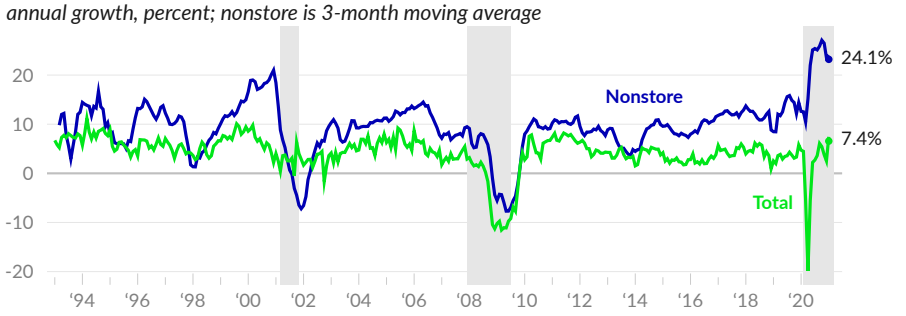
Source: Energy Information Administration

Retail Sales

According to the Census Bureau, retail and food service sales total $568.2 billion in January 2021, equivalent to 31.7 percent of GDP on an annualized basis. Over the past year, retail and food service sales increased by 7.4 percent, without adjusting for prices (see —). Nonstore sales, which include online retailers, have increased by 28.7 percent over the same period (see —), and total $87.9 billion, or 4.9 percent of GDP.

Retail Sales and Food Services

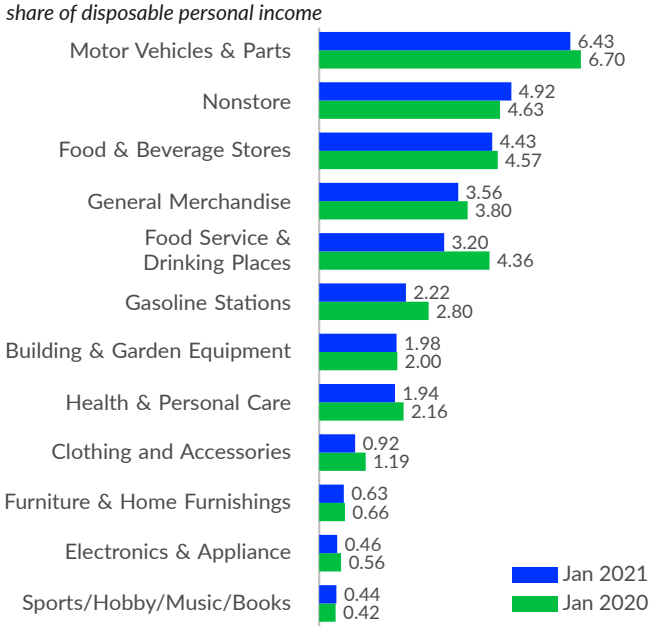
annual growth, percent; nonstore is 3-month moving average



Source: Census Bureau

Retail sales

share of disposable personal income



Source: Census, BEA

Government

Public institutions are collectively referred to as the *public-sector* or the *government*. In the United States, the government has the authority to spend, tax, and create money, as well as to regulate economic and financial activity. The government also enforces and determines the ownership of property. These activities are all extremely important to production and distribution in the economy.

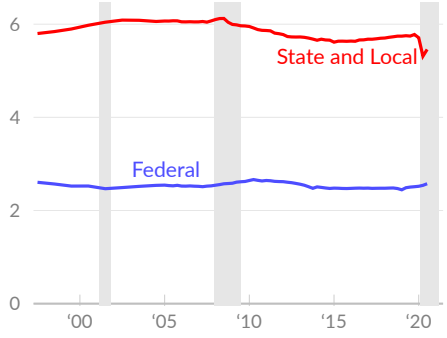
This chartbook section covers various government statistics, including contributions to current economic activity, receipts and expenditures, assets and liabilities, and government jobs.

Current Economic Activity

The government has several roles in society and there are multiple ways to interpret its contribution to current economic activity. The contribution to overall economic activity from the government sector can be measured as: 1) the gross output of the sector minus intermediate inputs used in production (value added); 2) the government income payments to people and on behalf of people and taxes and social insurance contributions; or 3) the sum of government expenditures on final goods and services, including investment.

The value added in production by the government sector is composed primarily of the compensation of government employees. These employees provide all types of services: education, health care, transportation, utilities, sanitation, etc. Government value added also includes a residual term called gross operating surplus, much of which reflects money spent replacing and maintaining government fixed assets.

Value Added in Domestic Production
per capita, thousands of 2020 Q3 dollars



Source: Bureau of Economic Analysis

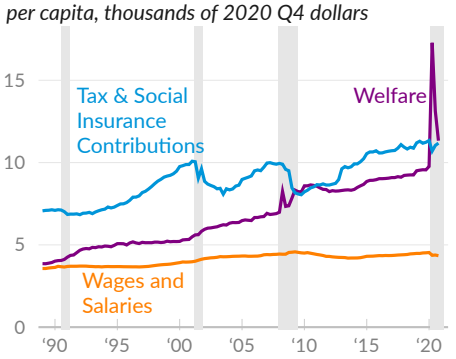
In the third quarter of 2020, the federal government value added in domestic production is $850.5 billion, equivalent to $2,574 per capita (see —). In 2019 Q4, federal government value added in production was equivalent to $2,511 per capita, after adjusting for inflation.

State and local government value added in domestic production is $1,803.2 billion in 2020 Q3 and $1,850.1 billion in 2019 Q4, equivalent to $5,458 and $5,779 per capita, respectively (see —).

Payments from the government to people include both the wages and salaries of government workers and transfer payments, also referred to as government social benefits or welfare. Welfare is critically important to society, yet the word is stigmatized in the US. It's worth noting that a huge portion of US welfare payments are not cash transfers to people but payments to businesses on behalf of people. For example, the US overpays for prescription drugs and medical services on behalf of people. Those over-payments benefit shareholders and doctors. The US also structures certain welfare payments as complex phased-in tax credits, paid the following year, which have very high private administrative costs (around ten percent goes to tax preparation services) and exclude the poorest people.

Over the past thirty years, welfare payments, including those made to businesses, have mostly kept pace with consumer spending, while tax collection lagged behind income growth. Increased welfare payments on a per capita basis reflect price protections for the medical industry, as well as a larger share of the population receiving social security benefits. During the COVID-19 pandemic, consumer spending on services collapsed as businesses were closed, while government transfer payments to people hit record highs. As a result, estimates show seven million people taken out of poverty.

Personal Income and Outlays
per capita, thousands of 2020 Q4 dollars



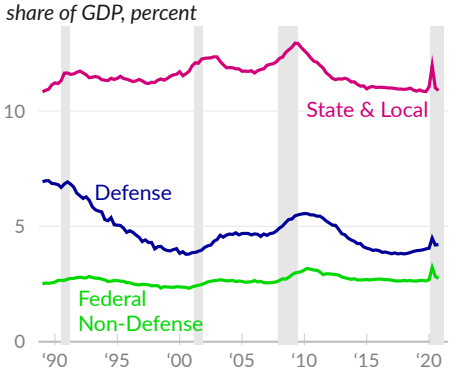
Source: Bureau of Economic Analysis

In 2020 Q4, government worker wages and salaries, not including benefits, were equivalent to $4,344 per capita, following a price-adjusted $4,518 in 2019 Q4 (see —). Welfare payments were equivalent to $11,331 per capita in 2020 Q4, compared to $9,558 per capita in 2019 Q4 (see —). In 1989 Q1, welfare payments were equivalent to $3,858 per person.

Personal current taxes and social insurance contributions total $11,181 per capita in 2020 Q4, $11,235 in 2019 Q4, and $7,067 in 1989 (see —).

Another approach to calculating the government sector effect on current economic activity is to add up spending on final goods and services. Government consumption and investment tends to be more stable than consumer spending or private investment, and thus tends to rise as a share of economic activity during recessions. This category does not include government transfer payments, which mostly become consumer spending.

Consumption and Investment
share of GDP, percent



Source: Bureau of Economic Analysis

In 2020 Q4, federal non-defense spending and investment was $589.0 billion, equivalent to 2.7 percent of GDP, compared to 2.6 percent of GDP in 2019 Q4 (see —). Federal spending on national defense was equivalent to 4.2 percent of GDP in the latest quarter and 4.0 percent in 2019 Q4 (see —). National defense spending was 6.9 percent of GDP in 1989 Q1.

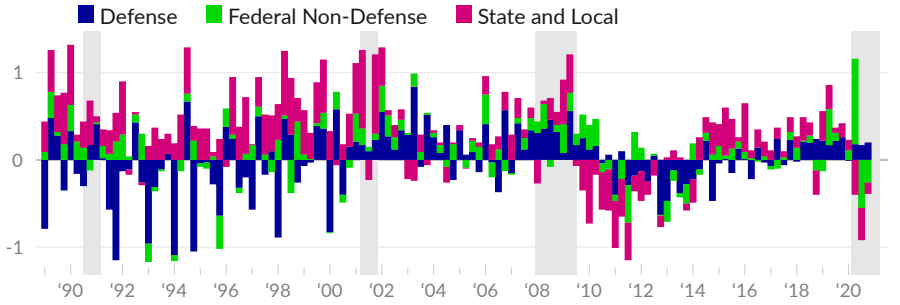
In 2020 Q2, state and local government spending and investment was equivalent to 10.9 percent of GDP, compared to 10.8 percent in 2019 Q4 (see —).

Government Spending and Investment

Government consumption expeditures and gross investment, which provide services and infrastructure, subtracted 0.19 percentage point from real GDP growth in 2020 Q4, slightly below the average contribution of 0.01 percentage point over the past year, and substantially below the average of 0.23 percentage point since 1989. In 2020 Q4, federal defense spending and investment (see ■) contributed 0.20 percentage point, nondefense federal government spending and investment (see ■) subtracted 0.26 percentage point, and state and local government (see ■) subtracted 0.13 percentage point.

Government Consumption and Investment

percentage point contribution to real GDP growth



Source: Bureau of Economic Analysis

Government Consumption and Investment

percentage point contribution to real GDP growth

	2020 Q4	'20 Q3	'20 Q2	'20 Q1	'19 Q4	*moving averages* 3-year	10-year	30-year
Total	-0.19	-0.75	0.77	0.22	0.42	0.28	0.00	0.21
Federal total	-0.06	-0.38	1.17	0.10	0.26	0.24	-0.02	0.07
■ National defense	0.20	0.17	0.18	-0.01	0.26	0.17	-0.03	0.02
Consumption expenditures	0.13	0.16	0.08	0.03	0.13	0.11	-0.03	0.02
Gross investment	0.06	0.01	0.10	-0.04	0.13	0.06	-0.00	0.00
■ Nondefense	-0.26	-0.55	0.98	0.11	0.00	0.07	0.01	0.05
Consumption expenditures	-0.23	-0.76	1.05	0.08	-0.03	0.04	0.00	0.03
Gross investment	-0.02	0.20	-0.07	0.03	0.04	0.03	0.01	0.02
■ State & local total	-0.13	-0.37	-0.40	0.12	0.16	0.04	0.02	0.14
Consumption expenditures	-0.24	-0.28	-0.36	-0.13	0.07	-0.01	0.01	0.11
Gross investment	0.11	-0.09	-0.04	0.25	0.09	0.05	0.01	0.03

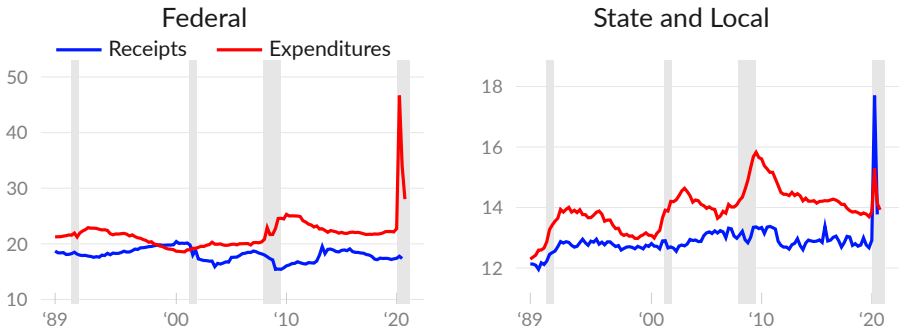
Source: Bureau of Economic Analysis

Government current expenditures include consumption and investment as well as transfers such as government social benefits to persons. Government spending provides services and income to people. Government current receipts come primarily from taxes. When government expenditures exceed receipts, it is referred to as a *government deficit*, and corresponds to a private sector surplus. A large government deficit, relative to GDP, means the government is increasing household income and corporate profits.

Federal government expenditures total $6.0 trillion, or 28.0 percent of GDP, in 2020 Q4. BEA has not yet released receipts data for 2020 Q4, however, in 2020 Q3, federal government receipts total $3.7 trillion, or 17.4 percent of GDP. In 2020 Q3, the federal government deficit was $3,529 billion or 16.7 percent of GDP.

Combined state and local government expenditures total $3.0 trillion, or 13.9 percent of GDP, in 2020 Q4. BEA has not yet released receipts data for 2020 Q4, however, in 2020 Q3, combined state and local government receipts total $2.9 trillion, or 13.8 percent of GDP. In 2020 Q3, the combined state and local government deficit was $77 billion or 0.4 percent of GDP.

Receipts and Expenditures as Share of GDP

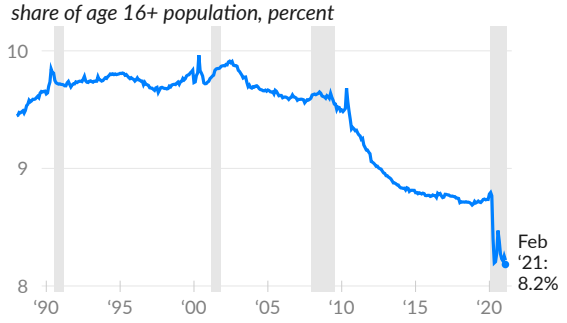


Source: Bureau of Economic Analysis

Government Jobs

Government employment is a major source of household income. Government jobs are also disproportionately likely to provide health insurance and retirement benefits.

Government Employment
share of age 16+ population, percent



Source: Bureau of Labor Statistics

In December 2020, there were 21.4 million government jobs, equivalent to 8.2 for every 100 people in the age 16+ population (see —). The previous year, in December 2019, there were 22.7 million government jobs, equivalent to 8.7 percent of the age 16 or older population. Since February 2020, the US has lost 1.3 million total government jobs.

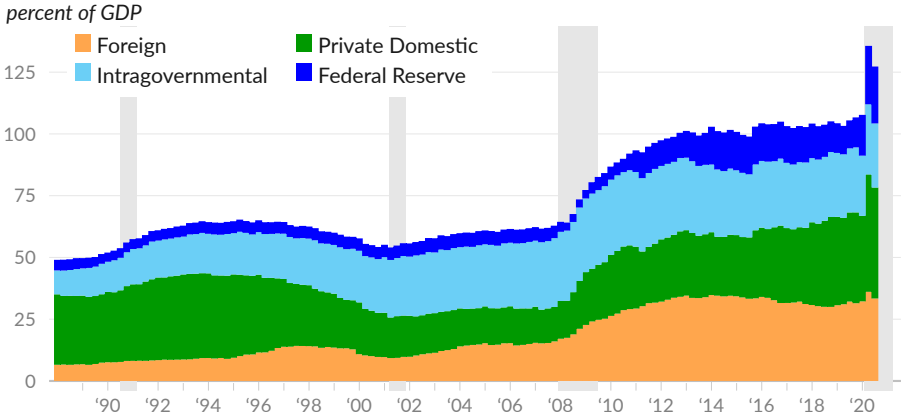
Government Balance Sheets

Liabilities

In the third quarter of 2020, total public debt was $26.9 trllion, equivalent to 127.3 percent of GDP. Of this, $9.5 trillion, or 35.3 percent of the total, is held by private domestic investors (see ■). An additional $7.1 trillion, or 26.2 percent of the total, is held by foreign investors (see ■). The remainder is held by the Federal Reserve (see ■) and various government agencies and trusts (see ■), such as the Social Security Trust Fund.

Total Public Debt By Holder

percent of GDP



Source: Treasury

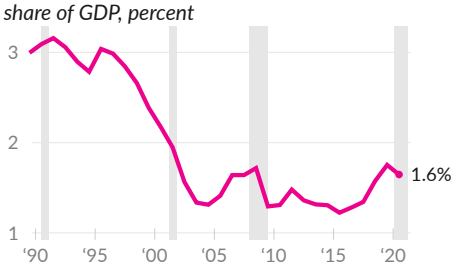
The ratio of public debt to GDP increased during the COVID-19 response, while the typical interest income from holding public debt fell because of lower interest rates. Treasuries and other government debt securities provide a safe asset for the balance sheets domestic households and businesses, and for foreign investors.

Interest Expense

The Office of Management and Budget reports federal interest outlays of $344.7 billion in fiscal year 2020, compared to $375.6 billion in fiscal year 2019. Put into the context of the size of the economy, federal interest outlays in 2020 were equivalent to 1.6 percent of GDP, 1.8 percent of GDP in 2019, and an average of 2.9 percent in the 1990s, when interest rates were substantially higher.

Federal Interest Outlays

share of GDP, percent



Source: FRED; OMB

While debt levels are much lower for the consolidated state and local government sectors, interest rates on municipal bonds are higher, and interest paid to investors is a larger share of government expenses at the state and local level.

Assets

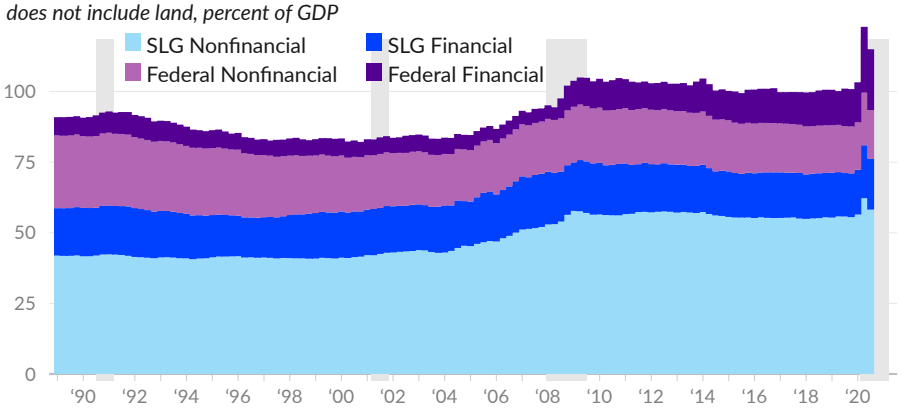
US government assets include financial assets but are mostly comprised of the non-financial assets of state and local governments (SLG), such as buildings and equipment. Land is not included in US measures of government assets.

In the third quarter of 2020, public/government assets excluding land are valued at $24.3 trillion, equivalent to 115.0 percent of GDP. Of this, state and local government nonfinancial assets, such as buildings and equipment, are equivalent to 58.2 percent of GDP (see), and state and local government financial assets, such as insurance trust funds, are equivalent to 17.9 percent of GDP (see).

Federal government nonfinancial assets are equivalent to 17.3 percent of GDP in 2020 Q3 (see). Federal government financial assets have a market value equivalent to 21.5 percent of GDP (see).

Government Assets

does not include land, percent of GDP



Source: Federal Reserve

International Transactions

Transactions between the US and the rest of the world are recorded in the balance of payments as either current account transactions (which measure income) or capital and financial account transactions (which measure change in ownership of assets). This section discusses both types of transactions with a focus on the difference between payments from residents and payments to residents, referred to as the balance of payments. The section also covers trade in more detail and discusses trends in exchanges rates.

Balance of Payments

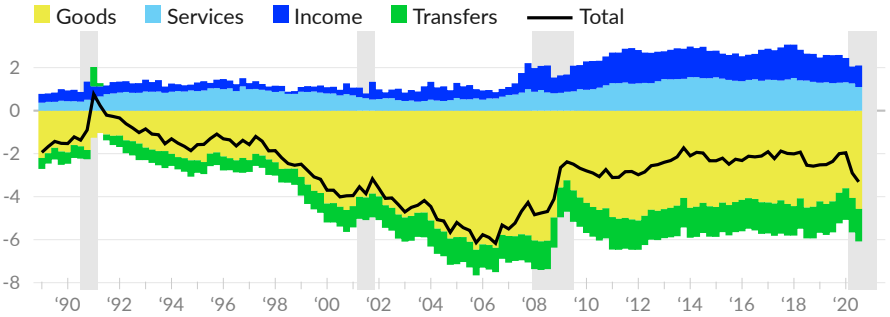
The **current account balance** captures international payments for goods and services as well as international transfers of money and net income received from ownership of foreign assets. It is the result of a set of payments to US residents, called current receipts, which are largely for exports of goods and services and returns on foreign assets, and a set of payments from US residents to the rest of the world, called current payments. Current payments are for goods and services imports, as well as transfers and payments for foreign ownership of US-based assets.

The current account balance can be decomposed into the balance on trade in goods (see), the balance on trade in services (see), the balance on primary income (such as wages or income from assets [see]), and secondary income (such as remittances and taxes [see]).

As of 2020 Q3, the US runs a current account deficit of 3.3 percent of GDP, primarily as the result of a trade deficit on goods of 4.6 percent of GDP. The initial GDP report for 2020 Q4 does not include the data needed to calculate the current account balance, however, the goods trade deficit for 2020 Q4 is equivalent to 4.8 percent of GDP.

Current Account Balance

balance on individual current account component, as percent of GDP



Source: Bureau of Economic Analysis

US current payments exceed current receipts and the US runs a persistent current account deficit. As a result, the extra flow of income (including in the form of goods and services) is balanced by an outflow of assets. Economic theory suggests that investment flows towards countries with lower labor costs and less capital per worker, as they have higher marginal productivity from additional capital. However, in the case of the US the opposite is happening, as net investment is flowing from less-developed countries with lower wages into the US. In other words, the US is borrowing money from less-developed countries to balance out its trade deficit, as shown in the financial accounts.

Components of Current Account

share of GDP, percent *moving averages*

	2020 Q4	'20 Q3	'20 Q2	'20 Q1	'19 Q4	'19 Q3	3-year	10-year
Current receipts	–	15.07	14.31	16.87	17.59	17.83	–	–
Exports	10.28	9.79	9.16	11.31	11.57	11.63	11.46	12.48
Goods	7.12	6.65	5.82	7.42	7.49	7.55	7.54	8.37
Durable	4.16	3.95	3.26	4.35	4.45	4.51	4.50	5.14
Nondurable	2.96	2.70	2.56	3.07	3.04	3.04	3.03	3.22
Services	3.16	3.14	3.35	3.89	4.08	4.08	3.92	4.11
Income receipts	–	4.60	4.44	4.89	5.36	5.48	–	–
Transfer receipts	0.66	0.69	0.71	0.67	0.66	0.72	0.70	0.75
Current payments	–	18.37	17.21	18.84	19.59	20.19	–	–
Imports	14.02	13.26	11.95	13.60	14.10	14.56	14.41	15.53
Goods	11.88	11.22	9.88	11.03	11.31	11.77	11.80	12.79
Durable	8.02	7.44	6.15	7.05	7.31	7.62	7.66	7.93
Nondurable	3.86	3.78	3.73	3.98	4.01	4.15	4.14	4.86
Services	2.14	2.04	2.08	2.57	2.78	2.80	2.61	2.74
Income payments	–	3.60	3.66	3.76	4.07	4.18	–	–
Transfer payments	1.45	1.51	1.60	1.47	1.42	1.44	1.46	1.43
Current account balance	–	-3.31	-2.90	-1.96	-2.00	-2.36	–	–

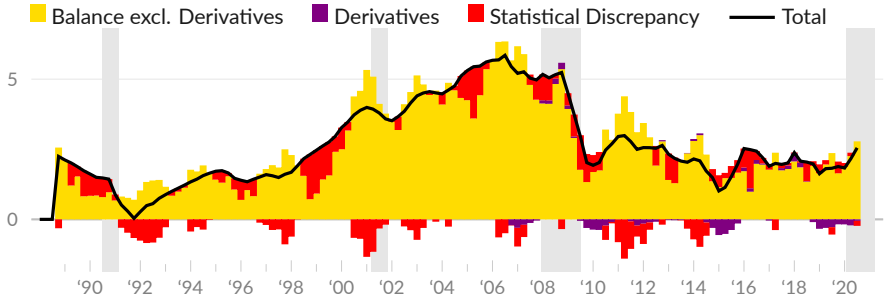
Source: Bureau of Economic Analysis

Financial account transactions include the net domestic acquisition of foreign assets and the net domestic incurrence of foreign liabilities. The US **financial account balance** (see ■) is the net lending or borrowing of the combined domestic sectors with the rest of the world. The timing of payments lead to a statistical discrepancy (see ■), but the financial and capital account balance and current account balance otherwise sum to zero.

Over the year ending 2020 Q3, net domestic acquisitions of foreign assets were equivalent to 2.6 percent of GDP, while net domestic incurrence of foreign liabilities total 5.4 percent of GDP. Domestic net borrowing totals 2.6 percent of GDP.

Financial Account Balance

percent of GDP



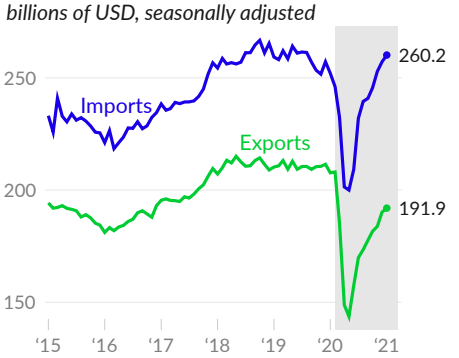
Source: Bureau of Economic Analysis

Trade

Transactions for goods and services between the US and foreign countries are reported monthly by the Census Bureau. Purchases of foreign goods and services by the US are imports (see —) and purchases of US goods and services by foreign countries are exports (see —). Trade in goods includes consumer goods, industrial equipment, and agricultural products. Trade in services is a bit more complicated and includes travel and tourism, business services, and charges for the use of intellectual property, among other services.

US Imports and Exports, Monthly

billions of USD, seasonally adjusted



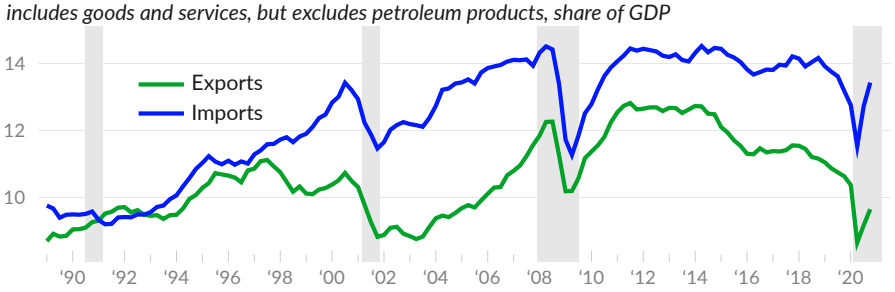
Source: Census Bureau

US imports of goods and services total $260.2 billion in January 2021, compared to $200.0 billion in May 2020, and in line with the year ago value, $252.0 billion. Exports of goods and services are $191.9 billion in January 2021, $143.7 billion in May 2020, and $207.7 billion in January 2020. The trade balance, exports minus imports, shows a trade deficit of $68.2 billion in January 2021, $56.3 billion in May 2020, and $44.4 billion in January 2020. These values are seasonally adjusted but not adjusted for changes in prices or population.

Nonpetroleum goods and services imports (see —) were equivalent to 13.4 percent of GDP in the fourth quarter of 2020, while exports of nonpetroleum goods and services (see —) were equivalent to 9.6 percent of GDP.

Imports and Exports, Nonpetroleum

includes goods and services, but excludes petroleum products, share of GDP



Source: Bureau of Economic Analysis

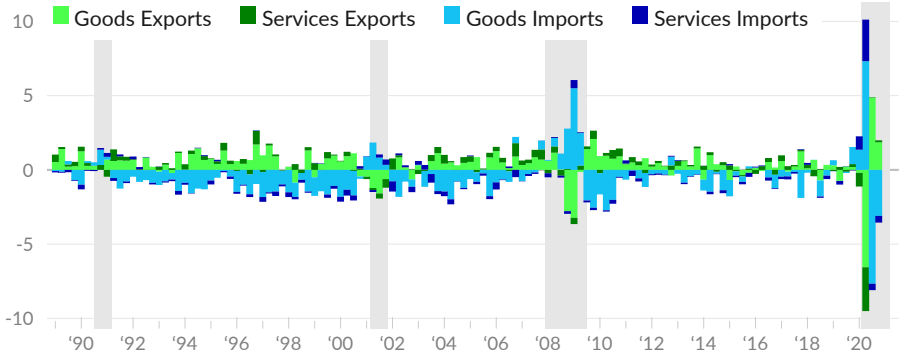
Contribution to Overall Growth

The **trade balance** (exports of goods and services minus imports of goods and services) acts as an adjustment to consumption and investment when calculating domestic production using the expenditure approach. A country with a positive trade balance, or trade surplus, produces more exports than its residents purchase in imports, therefore its trade balance is added to domestic purchases to calculate domestic production. The US runs a persistent trade deficit, which is subtracted from spending data to estimate domestic production.

Goods exports contributed 1.86 percentage points to GDP growth in the fourth quarter of 2020 while services exports contributed 0.13 percentage point. Good imports subtracted 3.10 percentage points from GDP growth and services imports subtracted 0.45 percentage point.

International Trade

percentage point contribution to real GDP growth



Source: Bureau of Economic Analysis

Changes to the trade balance can come from many sources, such as changes in domestic or foreign preferences and income, changes in exchange rates, and changes in trade policy. The following table shows major categories of trade as a share of gross domestic product at various points over the past 30 years.

Exports and Imports by Type

percentage point share of GDP — *period averages*

	2020 Q4	'20 Q3	'19 Q4	2016	2012 –13	2005 –06	1998 –99	1989 –93
Exports of goods and services	10.28	9.79	11.57	11.88	13.54	10.33	10.41	9.42
Exports of goods	7.12	6.65	7.49	7.70	9.34	7.32	7.52	6.84
Foods, feeds, and beverages	0.74	0.65	0.59	0.70	0.82	0.46	0.50	0.60
Industrial supplies & materials	2.24	2.04	2.44	2.07	2.96	1.92	1.55	1.65
Petroleum and products	0.63	0.62	0.94	0.53	0.90	0.28	0.11	0.12
Capital goods, except automotive	2.20	2.11	2.49	2.77	3.22	2.84	3.27	2.61
Automotive vehicles, & parts	0.72	0.70	0.73	0.80	0.91	0.77	0.79	0.67
Consumer goods, ex. food & auto	0.91	0.85	0.92	1.03	1.12	0.91	0.86	0.74
Durable goods	0.46	0.41	0.48	0.56	0.61	0.50	0.44	0.39
Nondurable goods	0.46	0.44	0.44	0.47	0.51	0.41	0.42	0.35
Exports of services	3.16	3.14	4.08	4.18	4.19	3.02	2.90	2.58
Transport	0.22	0.20	0.42	0.44	0.52	0.41	0.48	0.59
Travel	0.25	0.22	0.89	1.03	1.03	0.77	0.95	0.90
Intellectual property charges	0.57	0.57	0.55	0.60	0.77	0.59	0.44	0.29
Other business services	1.94	1.96	2.02	1.92	1.67	1.04	0.85	0.60
Imports of goods and services	14.02	13.26	14.10	14.61	16.76	15.89	12.63	10.38
Imports of goods	11.88	11.22	11.31	11.85	13.95	13.44	10.59	8.45
Foods, feeds, and beverages	0.74	0.76	0.69	0.70	0.69	0.54	0.46	0.43
Industrial supplies & materials	2.11	1.92	2.30	2.33	4.26	4.24	2.22	2.16
Petroleum and products	0.59	0.53	0.92	0.85	2.50	2.15	0.65	0.87
Capital goods, except automotive	3.25	3.12	3.09	3.17	3.37	3.00	3.03	2.04
Automotive vehicles, & parts	1.80	1.62	1.65	1.87	1.84	1.84	1.74	1.46
Consumer goods, ex. food & auto	3.31	3.17	2.89	3.12	3.19	3.20	2.47	1.83
Durable goods	1.74	1.58	1.42	1.63	1.71	1.75	1.29	0.97
Nondurable goods	1.57	1.59	1.47	1.49	1.48	1.46	1.18	0.86
Imports of services	2.14	2.04	2.78	2.77	2.81	2.45	2.04	1.93
Transport	0.33	0.28	0.49	0.49	0.53	0.57	0.54	0.55
Travel	0.14	0.08	0.62	0.58	0.60	0.61	0.63	0.61
Intellectual property charges	0.22	0.21	0.19	0.22	0.24	0.19	0.13	0.06
Other business services	1.29	1.30	1.28	1.28	1.24	0.83	0.54	0.38

Source: Bureau of Economic Analysis

Import Penetration

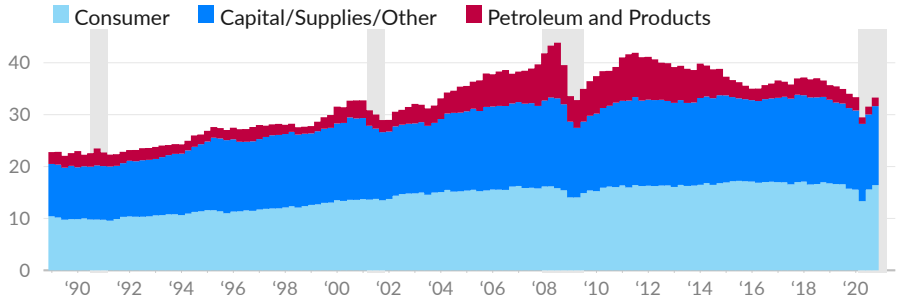
Goods can be produced domestically or imported or some combination of the two. The import share of the total US demand for goods, measured as US produced goods and imported goods less exported goods, is also referred to as *import penetration*. This measure has risen considerably over the past thirty years. The majority of the long-term increase has been concentrated in consumer goods, while the decrease since 2011 has come primarily from petroleum and products.

As of 2020 Q4, imports of consumer goods excluding petroleum and petroleum products are equivalent to 16.4 percent of domestic consumption of goods (see ■). Petroleum-related imports claim 1.7 percent (see ■) and imports of all other goods, primarily capital goods, industrial supplies, and materials are equivalent to 15.2 percent (see ■).

From 1989 to 2011, imports of consumer goods excluding petroleum increased by the equivalent of 5.7 percent of domestic consumption of goods; petroleum and products imports increased by the equivalent of 6.3 percent; and all other goods increased by the equivalent of 6.4 percent. Since 2011, imports of consumer goods was virtually unchanged of domestic goods demand; imports of petroleum and products decreased by the equivalent of 6.7 percent; and other imports decreased by the equivalent of 1.1 percent.

Import Share of Goods

import share of domestic-produced and imported goods less exports, by category



Source: Bureau of Economic Analysis

The US Census Bureau report monthly data on US trade in goods, including by partner country. In January 2021, trade with the top 25 trading partners (see table) comprises 85.7 percent of total US trade in goods.

US Trade in Goods *census basis, millions of USD, not seasonally adjusted*	January 2021			January 2020		
	Imports	Exports	Total	Imports	Exports	Total
Total, All Countries	204,812	127,638	332,450	196,394	129,121	325,515
China	39,111	12,860	51,972	33,280	7,215	40,495
Mexico	29,040	19,483	48,523	28,331	20,833	49,165
Canada	24,542	21,217	45,759	25,381	22,545	47,926
Japan	10,354	6,017	16,372	10,438	5,454	15,892
Germany	10,844	4,516	15,361	9,782	4,718	14,500
South Korea	6,551	5,181	11,732	6,349	5,117	11,467
United Kingdom	3,932	4,670	8,602	4,559	5,832	10,392
Vietnam	7,660	882	8,542	6,114	875	6,989
Taiwan	5,397	3,093	8,491	4,839	2,720	7,560
India	5,216	2,833	8,049	5,004	2,894	7,898
Switzerland	5,028	1,369	6,398	3,254	1,381	4,635
Italy	4,390	1,815	6,205	4,262	1,742	6,005
Ireland	5,095	813	5,909	6,021	858	6,879
France	3,774	1,953	5,727	3,680	3,100	6,780
Netherlands	1,787	3,729	5,516	2,308	4,271	6,579
Brazil	1,782	3,124	4,906	2,083	3,480	5,563
Malaysia	3,777	1,122	4,900	3,538	1,250	4,788
Singapore	2,331	2,347	4,679	2,536	2,452	4,989
Thailand	3,308	1,086	4,395	2,982	1,140	4,123
Belgium	1,706	2,452	4,158	1,554	2,594	4,148
Australia	945	1,730	2,676	931	1,722	2,653
Hong Kong	269	2,323	2,592	317	1,969	2,287
Indonesia	1,766	746	2,513	1,858	573	2,431
Spain	1,211	1,278	2,489	1,238	1,524	2,762
Russia	1,965	390	2,355	1,823	338	2,162

Source: Census Bureau

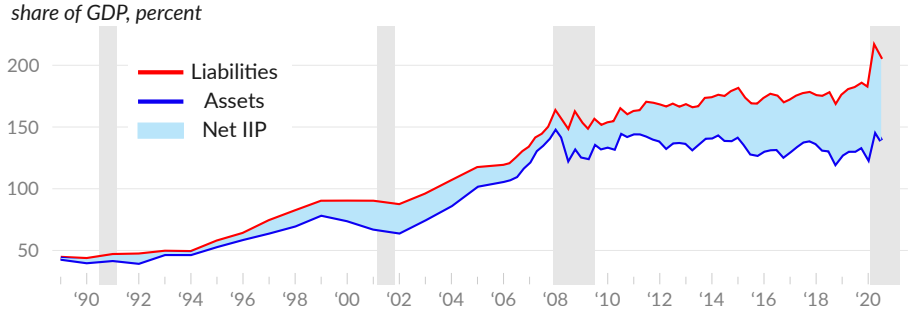
International Investment Position

The US net international investment position (IIP) measures the difference between residents' foreign assets and liabilities. The Bureau of Economic Analysis report the US IIP data on a quarterly basis beginning in 2006, while prior data are annual.

In 2020 Q3, domestic holdings of foreign assets are equivalent to 138.9 percent of GDP (see —), compared to 106.3 percent in 2006 Q1. Domestic liabilities to the foreign sector total 204.8 percent of GDP in 2020 Q3 (see —), and 118.5 percent in 2006 Q1. As a result, net IIP, holdings of foreign assets minus liabilities, identifies the US as a net debtor to the result of the world, to the equivalent of 65.9 percent of GDP in 2020 Q3 (see) and 12.2 percent of GDP in 2006 Q1.

International Investment

share of GDP, percent



Source: Bureau of Economic Analysis

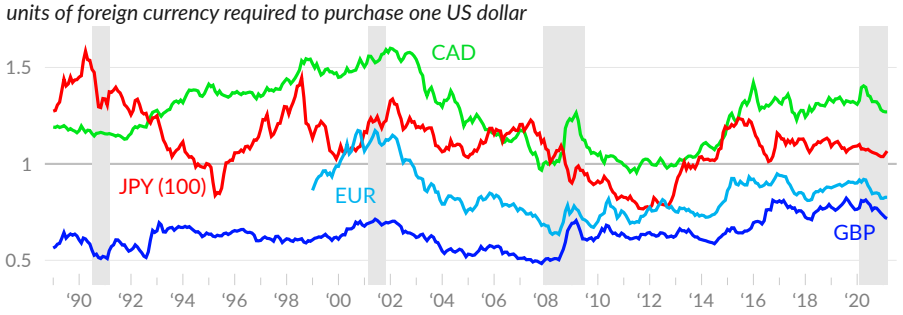
Exchange Rates

Changes in the strength or weakness of the US Dollar (USD) can affect trade and financial flows. The dollar is said to be relatively strong when more units of foreign currency, for example Japanese Yen (JPY), British Pounds (GBP), Euros (EUR), or Canadian Dollars (CAD), are required to buy one USD.

As of February 26, 2021, one US dollar buys approximately: 1.27 Canadian dollars (see —), 107 Japanese Yen (see —), 0.83 Euros (see —), and 0.72 British Pounds (see —). Over the past three years, the nominal exchange rate between the US dollar and the Canadian dollar decreased by 4.7 percent, the USD-JPY rate decreased by 3.4 percent, the USD-EUR rate decreased by 10.0 percent, and the USD-GBP rate decreased by 7.4 percent.

Selected Exchange Rates

units of foreign currency required to purchase one US dollar



Source: Federal Reserve

Broad Dollar Index

trade-weighted foreign exchange rate index
January 2006=100

Source: Federal Reserve

Fed trade-weighted dollar indices show weighted-average foreign exchange rates with US trading partners, which simplify thinking about the overall role of foreign exchange rates on the US external sector. The Broad Dollar Index (see —), which starts in 2006, summarizes foreign exchange rates between the US and trading partners, weighting rates by the amount of trade in both goods and services.

The latest index value, as of February 26, 2021, is 113.1, an increase of 13.1 percent since inception in 2006. Over the past three years, the index value has averaged 115.2, compared to an average of 111.5 over the previous three-year period.

Selected Exchange Rates

units of foreign currency required to buy one US Dollar

	Feb 26, 2021	1-month moving average	1-year moving average	1-month percent change	1-year percent change	5-year percent change
EUR	0.827	0.827	0.868	0.4	-9.2	-11.9
GBP	0.717	0.722	0.774	-1.6	-7.3	8.0
JPY	106.6	105.2	106.2	2.8	-3.0	-12.9
CAD	1.270	1.271	1.335	-0.1	-4.5	-4.6
MXN	20.93	20.32	21.61	4.3	12.1	27.2
CNY	6.47	6.46	6.84	0.1	-7.1	1.3
CHF	0.909	0.897	0.929	2.4	-6.7	-10.5
HKD	7.76	7.75	7.75	0.1	-0.1	0.1
INR	73.92	72.82	74.25	1.4	3.8	11.5
AUD	1.295	1.292	1.431	0.2	-12.7	-6.2
NZD	1.380	1.382	1.523	-0.3	-10.9	-9.8
BRL	5.57	5.41	5.29	3.8	30.5	50.3
KRW	1123.4	1111.8	1170.9	1.8	-4.8	-2.3
MYR	4.05	4.04	4.19	0.0	-1.8	-4.6
DKK	6.15	6.15	6.47	0.4	-9.7	-12.2
NOK	8.65	8.52	9.34	1.2	-6.3	0.1
SEK	8.42	8.34	9.06	1.4	-12.5	-3.2
ZAR	15.16	14.83	16.47	0.3	1.7	8.4
SGD	1.332	1.328	1.375	0.5	-3.8	-5.6
TWD	27.87	27.95	29.19	-0.5	-7.2	-14.3

Source: Federal Reserve

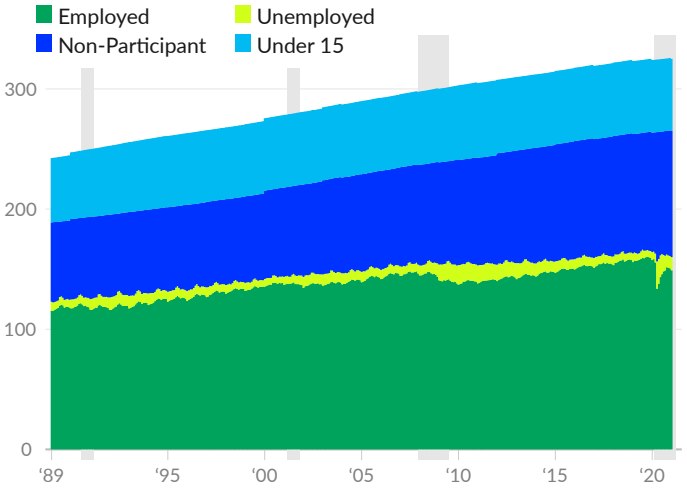
Labor Markets

Labor is the primary source of income for US households and is essential to the production of goods and services. The portion of labor that is provided by a household member to others outside of the household or to other households is considered *employment*. As of January 2021, 149.1 million people are employed (including self-employment).

Labor provided within a household is not captured by GDP compilation methods (expenditures, output, or income), though household surveys offer some insight into this important category of labor. The number of people who are considered employed divided by the total population is the employment rate or employment-to-population ratio, which is 45.9 percent as of January 2021.

Labor Force Status of Population

millions of people



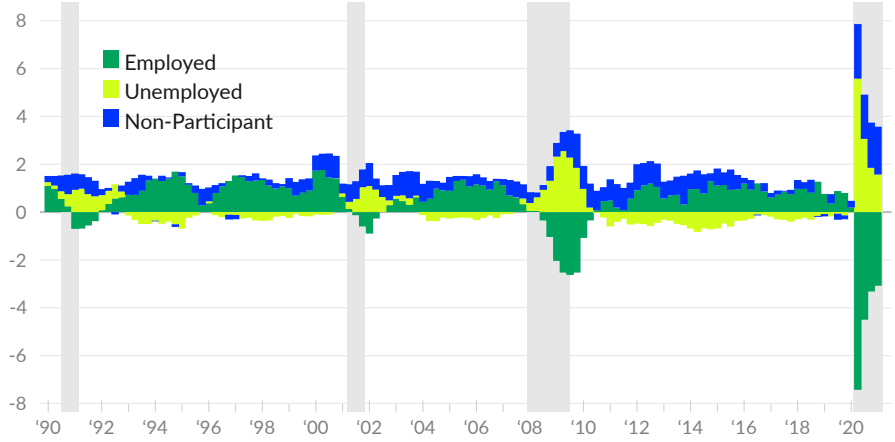
Source: Author's Calculations from CPS

When a member of a household is not employed but looked for a job during the past four weeks or is on temporary layoff, they are considered **unemployed**. As of January 2021, there are 11.0 million unemployed people. The combined group of employed and unemployed people is the labor force. The number of unemployed people divided by the number of people in the labor force is the unemployment rate, currently 6.9 percent. The number of people in the labor force divided by the total population is the labor force participation rate, currently 49.2 percent.

People who are not employed and not unemployed are considered to be outside of the labor force. Non-participants usually comprise about half of the population, and total 165.0 million in January 2021. The category includes children (60.0 million), students (18.5 million), unpaid caregivers (13.1 million), those unable to work due to disability or illness (14.2 million), those who want a job but have given up looking (7.3 million), and retirees and the elderly (49.7 million).

Labor Force Status Changes

percentage point contribution to one-year growth of age 15+ population



Source: Author's Calculations from CPS

The labor force status of the US population varies by age, sex, and over time. Because very few people receive capital income, the share of the population with labor income is particularly important to overall levels of economic activity.

Labor Force Status

January 2021, thousands of people, not seasonally adjusted

	Total, 15+	Men, 15–29	Men, 30–59	Men, 60+	Women, 15–29	Women, 30–59	Women, 60+
Population	265,072	32,058	61,327	34,941	31,819	63,544	41,383
Employed	149,054	17,572	49,737	11,422	16,664	43,928	9,731
Multiple jobs	6,555	561	2,079	433	884	2,208	391
Full-time	112,048	12,365	42,332	8,129	10,263	33,060	5,899
Part-time	37,006	5,207	7,405	3,293	6,401	10,868	3,833
Economic reasons	6,436	963	1,928	448	1,004	1,673	419
Unemployed	10,995	2,205	3,259	660	1,809	2,559	503
Not in Labor Force	105,023	12,282	8,330	22,859	13,346	17,058	31,148
Discouraged	7,288	1,422	1,382	672	1,235	1,754	823
Disabled/Ill	14,217	1,025	3,713	2,355	666	3,856	2,602
Family/Care	13,081	451	789	109	2,226	8,394	1,112
School	18,458	8,791	392	40	8,701	510	25
Retirement	49,741	87	1,502	19,538	154	2,030	26,429

Source: Author's Calculations from CPS

Additionally, changes over time in labor force status are particularly important to understanding both secular and cyclical trends in the economy.

Labor Force Changes

Change from January 2020 to January 2021, thousands of people

	Total, 15+	Men, 15–29	Men, 30–59	Men, 60+	Women, 15–29	Women, 30–59	Women, 60+
Population	1,426	-293	125	856	-226	65	897
Employed	-8,544	-1,159	-2,392	-595	-1,466	-2,284	-648
Multiple jobs	-1,562	-198	-548	-133	-134	-458	-91
Full-time	-6,296	-517	-3,054	-349	-481	-1,682	-213
Part-time	-2,247	-642	663	-246	-986	-601	-435
Economic reasons	1,686	147	640	203	136	380	179
Unemployed	4,339	582	1,532	285	548	1,160	232
Not in Labor Force	5,630	284	984	1,166	692	1,189	1,314
Discouraged	2,059	282	482	93	269	685	248
Disabled/Ill	-178	73	89	-76	75	-229	-111
Family/Care	1,129	139	219	45	74	528	125
School	-259	-306	-32	21	136	-46	-33
Retirement	2,282	-7	101	1,017	43	59	1,069

Source: Author's Calculations from CPS

Gross Labor Force Status Changes

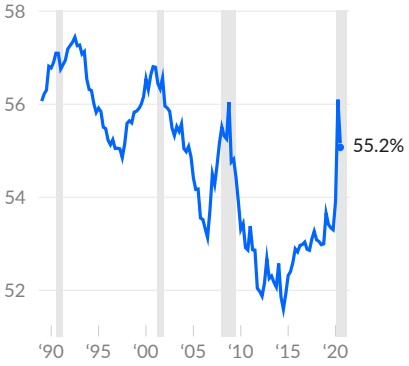
The changes in labor force status described above are net changes, rather than gross changes. That is, the one-year change in unemployment is the result of some people staying unemployed, some becoming unemployed, and some no longer being unemployed, as well as other flows like deaths and people becoming working age. This section looks at six categories of gross changes, specifically the share of people with a given labor force status who move to a different status in the following month.

Gross Flows
share of initial labor force status, percent

Source: Bureau of Labor Statistics

Labor Share of Income

compensation of employees as share of gross domestic income, percent



Source: Bureau of Economic Analysis

The labor share of income measures how much labor is paid relative to the total income in the economy in a year. While the laborer share of the population has fallen, and an increasing share of income goes to depreciation of capital including housing, cyclical patterns suggest worker bargaining power also affects the labor share of income. As of the third quarter of 2020, labor receives 55.2 percent of gross domestic income, and the labor share increased by a total of 1.8 percentage points over the past year. The labor share is 3.6 percentage points above its 30-year low of 51.6 percent in 2014 Q3, but 2.3 percentage points below the 30-year high of 57.4 percent in 1992 Q3.

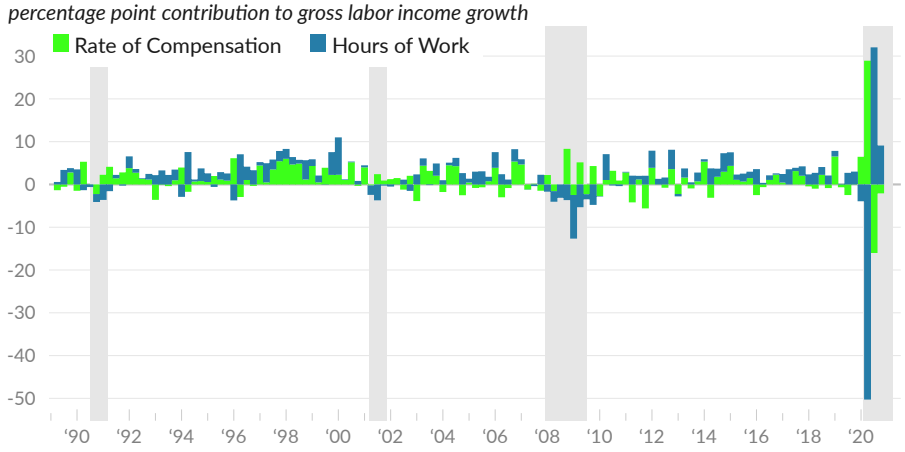
Gross Labor Income

In labor markets, unlike other markets, wages (the price of labor) tend not to be cut in response to a short-term decrease in demand; businesses instead employ fewer workers and/or cut hours. As a result, wage data give only a partial picture of the labor income received by households.

Gross labor income (compensation of employees in the national accounts), which captures both the amount of employment (see ■) and the rate of compensation (see ■), increased at an annualized and inflation-adjusted rate of 7.01 percent in 2020 Q4. Changes in wages subtracted 2.08 percentage points, and changes in total hours worked contributed 9.09 percentage points.

Gross Labor Income Growth

percentage point contribution to gross labor income growth



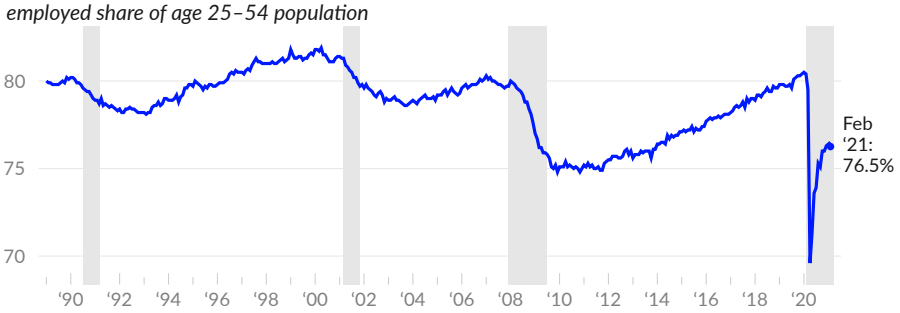
Source: Author's Calculations

Employment

In February 2021, 76.5 percent of 25-54 years olds were employed, compared to 76.4 percent in January 2021. Over the past year, the age 25-54 employment rate has fallen by 3.9 percentage points. The current age 25-54 employment rate is 4.8 percentage points (equivalent to 6.0 million workers) below the average during 1998–99, a period with a particularly tight labor market.

Employment Rate

employed share of age 25–54 population



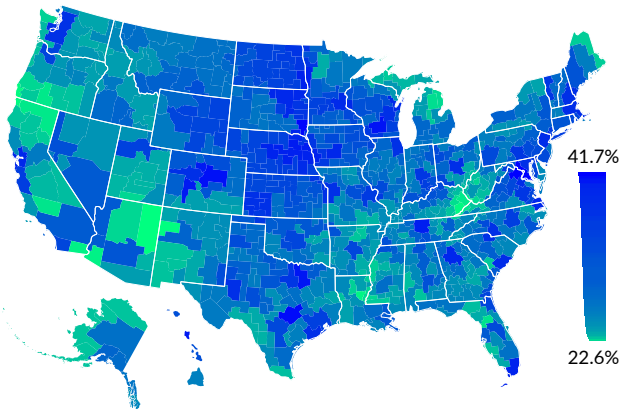
Source: Bureau of Labor Statistics

The employment rate shown above is based on a monthly survey that asks about employment during a specific week of the previous month. However, additional data is available on what share of a population works year-round rather than just during a specific week. This can be combined with data on hours worked to identify the *fully-employed*, or *full-time, full-year workers*, who are defined below as the those who usually work 35 hours per week or more for 50 weeks per year or more. The Census Bureau report 119 million fully-employed people in 2019, equivalent to 36 percent of the overall US population.

In 2019, fewer than half (47.5 percent) of commuter zones have at least a third of their population working full-time and full-year. A total of 10 commuter zones (out of 741), covering 2.7 million people, have a quarter of the population or less fully employed. Of commuter zones with 100,000 people or more, the top and bottom ten by fully-employed share of population are listed below.

Commuter Zone Fully-Employed Rate

full-time, full-year worker share of population, 2019



Top 10:

41.7%	Washington, DC
41.4%	Sioux Falls, SD
41.0%	Austin, TX
40.5%	Denver, CO
40.3%	Madison, WI
40.1%	Dallas, TX
39.8%	Honolulu, HI
39.4%	Nashville-Davidson, TN
39.2%	Fargo, ND
39.1%	Omaha, NE

Bottom 10:

22.6%	Gallup, NM
23.0%	Hazard, KY
23.7%	Yuma, AZ
24.2%	Pikeville, KY
24.3%	Altamont, OR
24.6%	Bakersfield, CA
24.7%	Ocala, FL
25.7%	Roseburg, OR
25.7%	Flagstaff, AZ
26.0%	Port Angeles, WA

Source: American Community Survey

Employment Rates of Largest Commuter Zones, 2019

	all ages		*age 25–54*	
	full-time & full-year	employed	full-time & full-year	employed
Los Angeles, CA	34.9	57.6	60.7	87.9
New York, NY	37.1	59.0	64.3	89.0
Chicago, IL	38.0	60.3	66.6	90.3
Houston, TX	36.9	57.7	63.8	87.7
Newark, NJ	38.5	60.1	66.5	89.6
Philadelphia, PA	36.2	60.5	64.0	89.9
Washington, DC	41.7	63.9	70.4	92.6
Boston, MA	38.4	64.9	66.3	92.5
Atlanta, GA	38.8	60.0	67.5	90.7
San Francisco, CA	38.7	62.6	65.6	91.2
Detroit, MI	33.9	58.6	61.1	89.0
Dallas, TX	40.1	60.5	67.9	89.8
Phoenix, AZ	35.4	58.2	63.4	88.6
Seattle, WA	38.0	63.5	63.9	92.2
Miami, FL	39.1	58.4	67.1	89.1

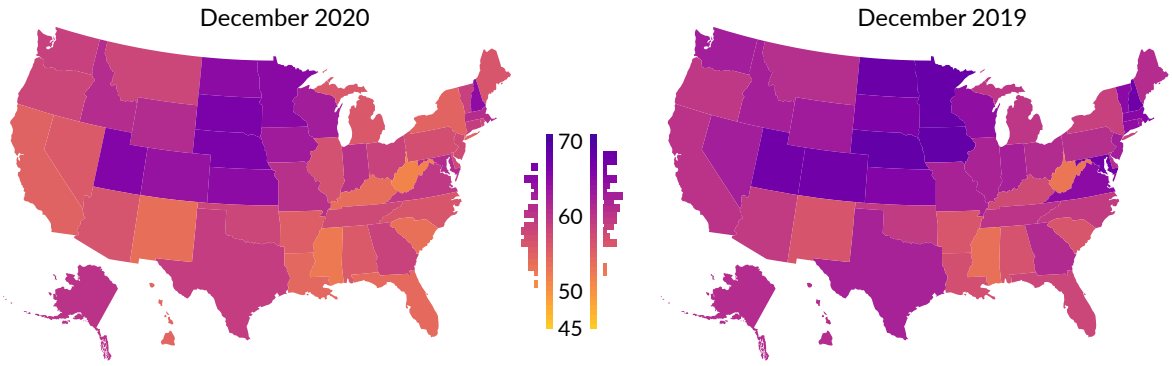
Source: American Community Survey

The share of the age 16 and older population that is employed in any amount at a point in time varies by state and over time. In December 2020, 33 states had an employment rate above below 60 percent, compared to 44 in April 2020. In December 2019, 17 states had an employment rate below 60 percent and 11 states had an unemployment rate above 65 percent. In December 2020, three states have an employment rate above 65 percent.

The states with the highest employment rates in December 2020 are South Dakota (66.1%), Nebraska (66.1%), and Utah (65.3%). The states with the lowest employment rates are West Virginia (51.1%), Mississippi (52.3%), and South Carolina (53.1%).

Employment Rate by State

employed share of population, percent



Source: Bureau of Labor Statistics

Changes in Payroll Employment

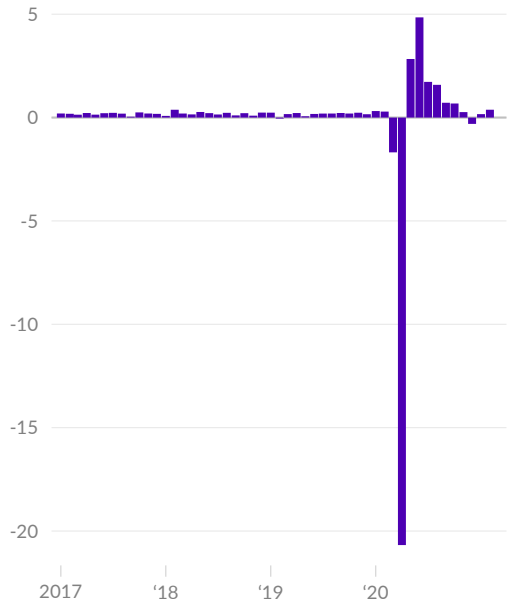
The establishment survey from the monthly jobs report identifies how many nonfarm payroll jobs were added or lost in a given month (see ■).

The US added 379,000 jobs in February 2021, compared to 166,000 added in January 2021, and an average of 80,000 added over the past three months. US payrolls shed a combined 22.4 million jobs in March and April 2020 and have since recovered 12.9 million jobs (57.6 percent).

To maintain a steady employment rate with population growth, the US needs to add around 140,000 jobs per month. During the 12 months prior to the COVID-related job losses the US was adding an average of 202,000 jobs per month.

Nonfarm Payroll Growth

one-month change in total employment, in millions



Source: Bureau of Labor Statistics

Nonfarm Payrolls by Industry Group

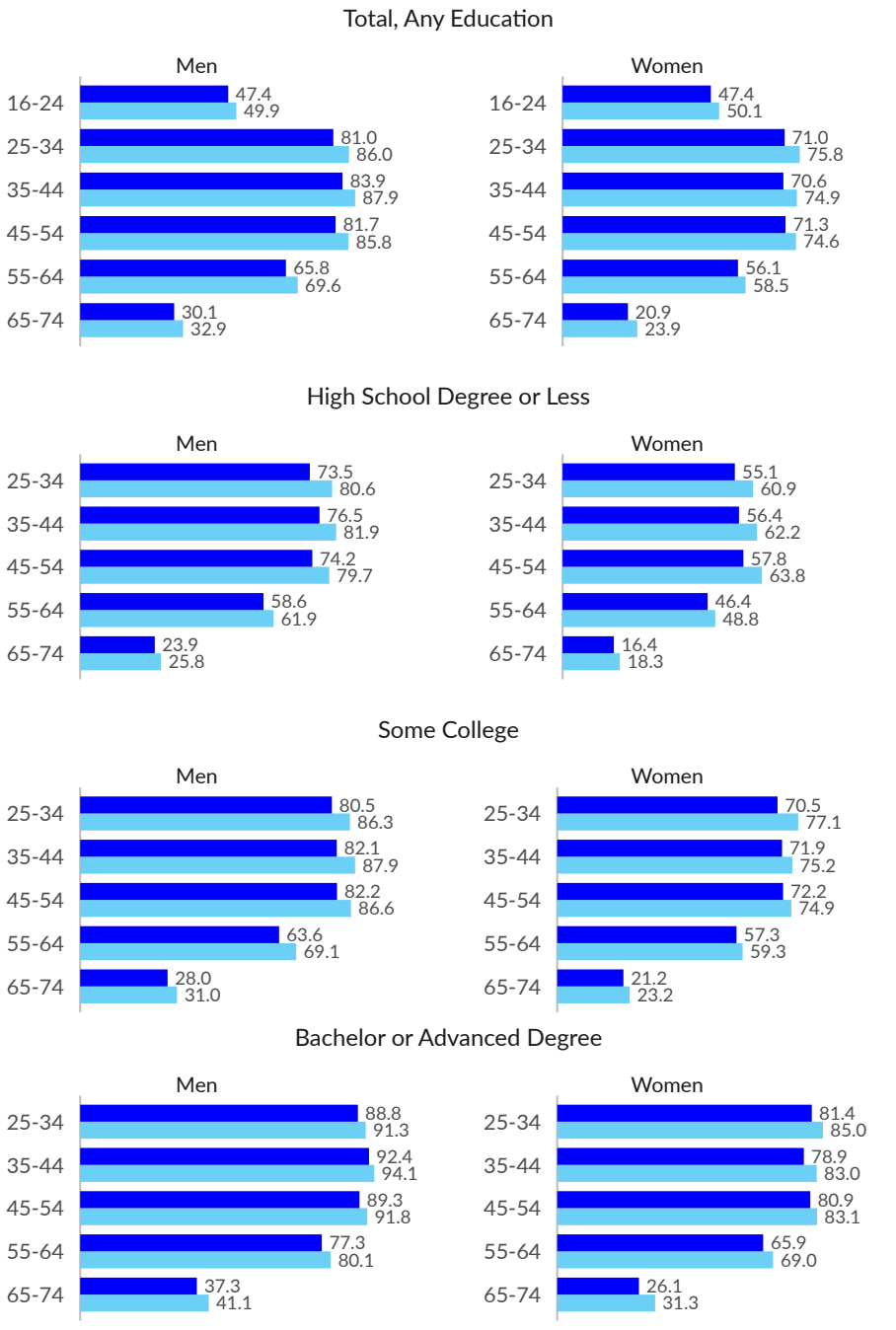
seasonally adjusted, thousands

	levels		*monthly change*				*combined*	
	Feb 2021	Feb 2020	Feb 2021	Jan 2021	Dec 2020	Mar '19 to Feb '20 avg	Since May 2020	Mar and Apr '20
Total	143,048	152,523	379	166	-306	202	12,887	-22,362
Education & Health Services	23,267	24,565	44	-26	-29	54	1,545	-2,843
Government	21,446	22,835	-86	76	-32	28	-380	-1,009
Professional & Business Serv.	20,698	21,469	63	85	159	25	1,616	-2,387
Retail Trade	15,247	15,609	41	46	30	-4	2,011	-2,374
Leisure & Hospitality	13,464	16,915	355	-25	-498	37	4,773	-8,224
Manufacturing	12,238	12,799	21	-14	35	-2	824	-1,385
Financial Activities	8,770	8,875	-5	1	18	15	174	-279
Construction	7,340	7,648	-61	1	47	19	805	-1,113
Transportation & Warehousing	5,658	5,823	4	-14	-43	19	409	-574
Wholesale Trade	5,634	5,895	3	13	14	0	148	-409
Information	2,666	2,914	-3	10	9	6	33	-281
Mining & Logging	589	690	-8	0	0	-4	-33	-68
Utilities	538	547	0	0	-1	0	-4	-3

Source: Bureau of Labor Statistics

Employment rates vary over time, but also by age, gender, and education. Over the three months ending January 2021, the employment rate for most education groups is lower than it was during the same three months one year prior.

Employment Rates ■ January 2021 ■ January 2020
employed share of age group population, percent



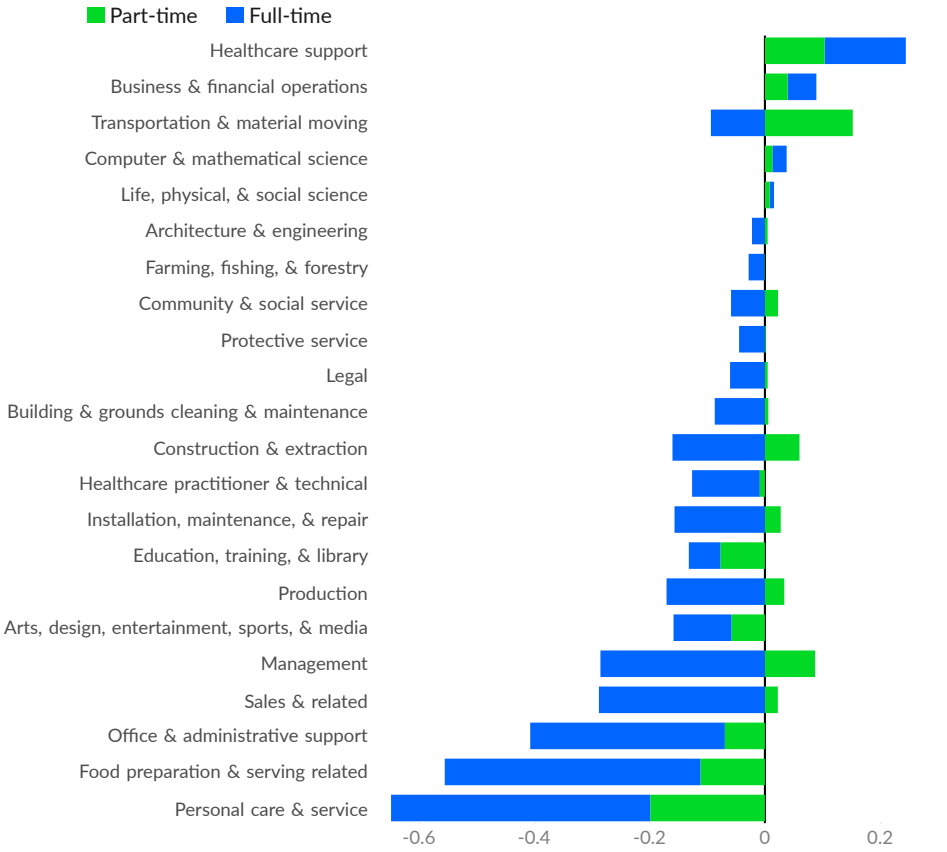
Source: Author's Calculations from CPS

Changes in Employment by Occupation

The COVID-19 pandemic changed the occupational composition of the US workforce. Business closures reduced the share of the US population that is employed in personal care and related services, administrative support, and sales. Many workers trained in these occupations lost or changed jobs and, additionally, some full-time workers became part-time. While employment increased in some occupations, such as healthcare support, the share of people employed full-time decreased in most occupational groups during the past three months, which end January 2021, compared to the same three months one year prior.

Change in Occupational Employment, January 2021

change in share of population employed, latest three months vs year ago, percentage points



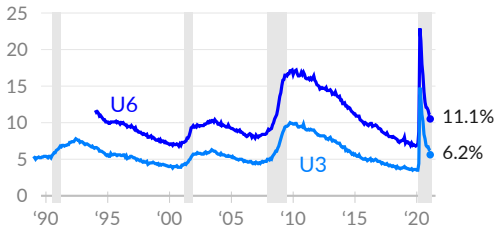
Source: Author's Calculation from CPS

Unemployment

The headline unemployment rate, also known as the U3 unemployment rate, measures people who do not have a job but are looking for one or are on temporary layoff, as a share of the labor force (those employed and unemployed). BLS reports 10.0 million unemployed persons in February 2021, and an unemployment rate of 6.2 percent (see —), in line with the January 2021 rate of 6.3 percent, but substantially above the February 2020 rate of 3.5 percent.

BLS also report a broader measure of unemployment, known as U6 or labor under-utilization. Labor under-utilization includes unemployed people counted in U3 as well as people who have given up looking for work and people who are part-time but would like to work full-time. In February 2021, the labor under-utilization rate is 11.1 percent (see —).

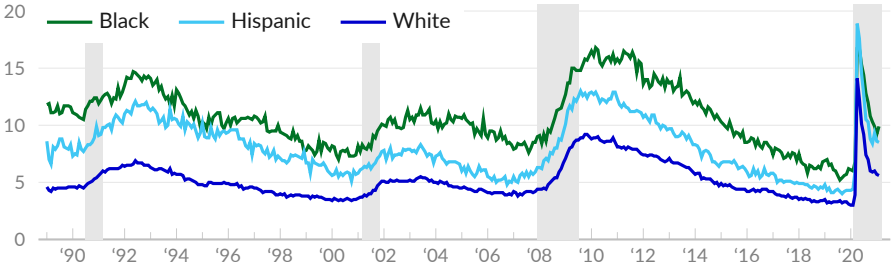
Unemployment Measures
share of labor force, percent



Source: BLS

Unemployment is much more common for disadvantaged groups, with the black or African American unemployment rate typically double the white unemployment rate. A very tight labor market may have the effect of reducing racial discrimination in hiring. However, disadvantaged groups are more likely to lose jobs in a downturn. As a result, the full-employment portion of the business cycle is quite short for many people. Since February 2020, the black unemployment rate has increased by 3.9 percentage points to 9.9 percent (see —).

Unemployment Rate
unemployed share of labor force



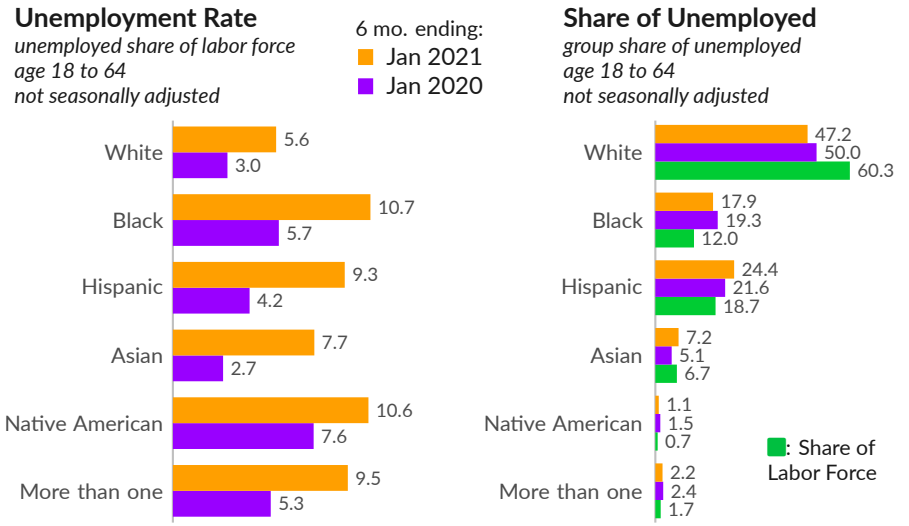
Source: Bureau of Labor Statistics

Unemployment Measures
seasonally adjusted, percent

	Feb '21	Jan '21	Dec '20	Nov '20	Oct '20	Sep '20	GFC peak	Date
Under-utilization Rate (U6)	11.1	11.1	11.7	12.0	12.1	12.8	17.2	Dec '09
Unemployment Rate (U3)	6.2	6.3	6.7	6.7	6.9	7.8	10.0	Oct '09
by race/ethnicity:								
White	5.6	5.7	6.0	5.9	6.0	7.0	9.2	Oct '09
Black	9.9	9.2	9.9	10.3	10.8	12.0	16.8	Mar '10
Hispanic	8.5	8.6	9.3	8.4	8.8	10.3	13.0	Aug '09
Asian	5.1	6.6	5.9	6.7	7.6	8.8	8.4	Dec '09

Source: Bureau of Labor Statistics

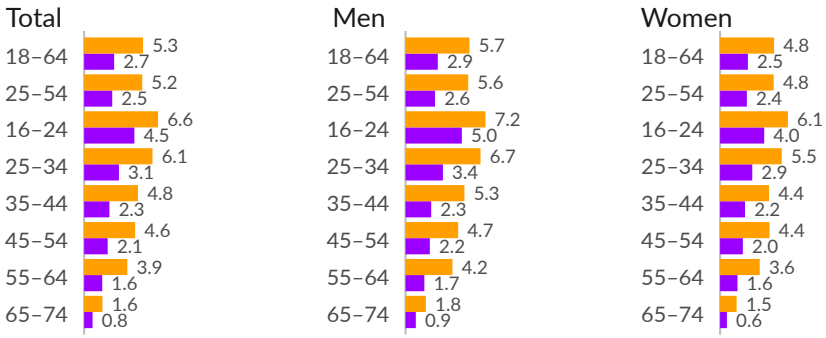
Current Population Survey microdata are used to calculate unemployment by race and ethnicity over the latest six months, on average, and for the same six months before the COVID-19 pandemic. The groups used to produce these estimates separate those with a non-Hispanic ethnicity by race: white alone, black alone, Asian or Hawaiian/Pacific Islander alone, Native American/American Indian or Alaskan Native alone, or more than one race, from those with a Hispanic ethnicity and any race.



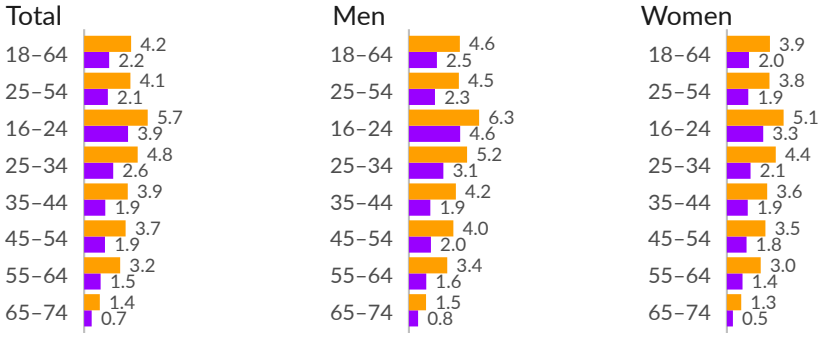
Source: Author's calculations from CPS

Unemployment Rate

Total, any race or ethnicity

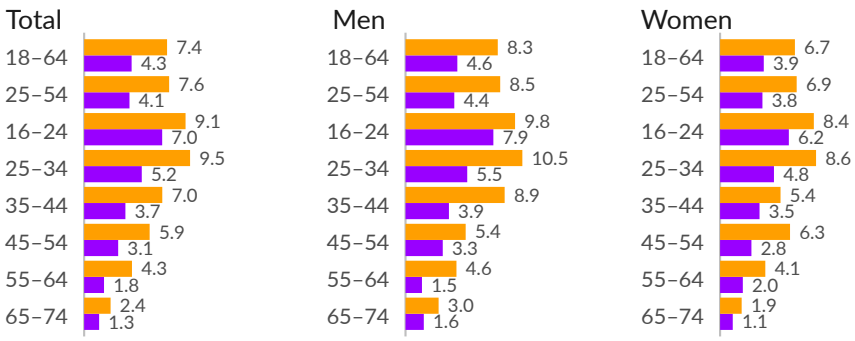


White, non-Hispanic, alone

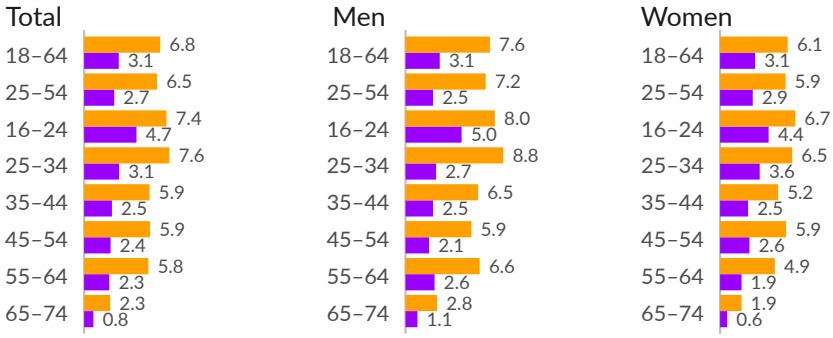


Unemployment Rate, Continued

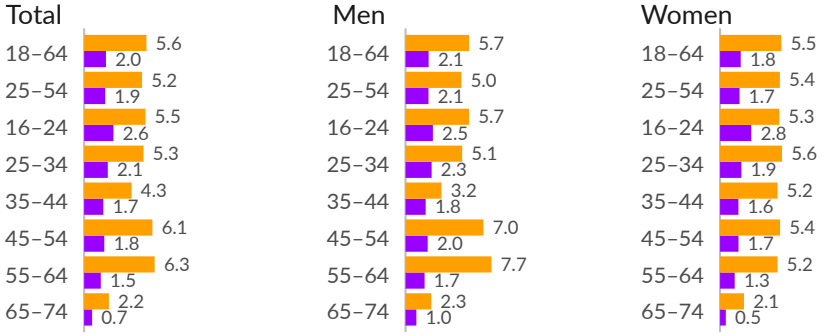
Black, non-Hispanic, alone



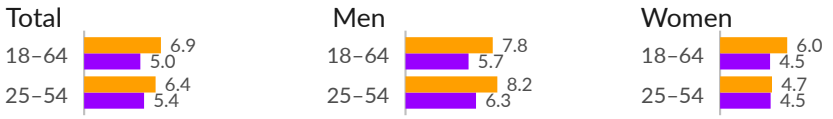
Hispanic, any race



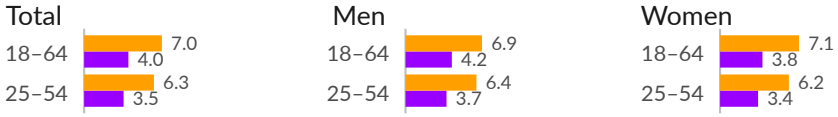
Asian or Hawaiian/Pacific Islander, non-Hispanic, alone



Native American/American Indian or Alaskan Native, non-Hispanic, alone



More than one race, non-Hispanic



Source: Author's calculations from CPS

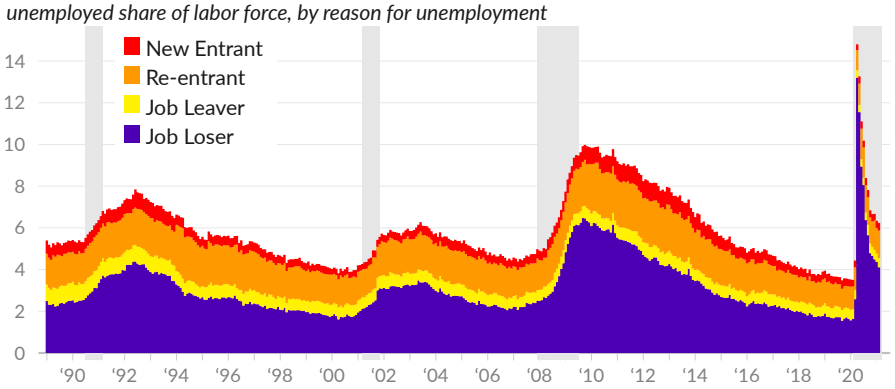
Reasons for unemployment

There are multiple reasons for unemployment, some of which do not qualify for unemployment insurance. During the trough of a business cycle, most unemployed are those who lost a job, for example from layoffs, or had a temporary job end (see ■). In contrast during the peak of the business cycle, a much larger share of the unemployed are re-entrants to the labor market, meaning they had previously left the labor force but are looking for a job again (see ■). Some unemployed are new-entrants who are looking for their first job (see ■). New entrants are not traditionally covered by unemployment insurance. Lastly, the unemployed include those who left a job voluntarily and are looking for a new one (see ■). This group is also traditionally ineligible for unemployment insurance claims.

In February 2021, 4.1 percent of the labor force were unemployed because of losing a job or having a temporary job end. Of these, 1.4 percent of the labor force are unemployed due to temporary layoff, equivalent to 22.4 percent of the unemployed. Additionally, 0.4 percent of the labor force were re-entrants, 1.3 percent were new entrants, and 0.4 percent were job leavers.

Unemployment by Reason

unemployed share of labor force, by reason for unemployment



Source: Bureau of Labor Statistics

Unemployment Reasons and Employed Not at Work

share of labor force, percent

	Feb '21	Jan '21	Dec '20	Nov '20	Oct '20	Feb '20	Jan '20	Dec '19	Nov '19	Oct '19
Unemployed, Any Reason	6.2	6.3	6.7	6.7	6.9	3.5	3.5	3.6	3.6	3.6
Job Loser	4.1	4.4	4.5	4.7	4.8	1.6	1.6	1.6	1.7	1.7
Temporary Layoff	1.4	1.7	1.9	1.7	2.0	0.5	0.4	0.5	0.5	0.5
Permanent Separation	2.2	2.2	2.1	2.3	2.3	0.8	0.8	0.8	0.9	0.8
Re-entrant	1.3	1.2	1.4	1.2	1.3	1.1	1.1	1.1	1.0	1.0
New entrant	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4
Job Leaver	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5
See also:										
Employed, Not at Work		3.5	3.5	3.1	3.0	2.5	2.7	2.6	2.3	2.5

Source: Bureau of Labor Statistics; Author

Duration of unemployment

US unemployment benefits are available for a relatively short duration, compared with other advanced countries. Therefore, those with an extended period of unemployment risk running out of unemployment benefits, causing a sharp reduction in income. Additionally, long periods of unemployment can make re-entering the labor market more challenging.

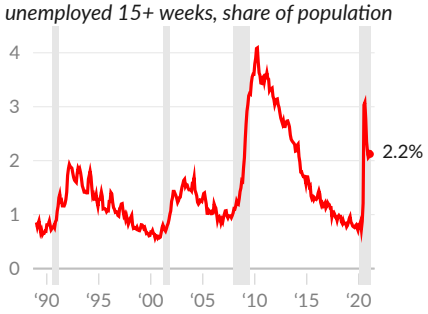
As of February 2021, BLS reports that 1.62 percent of the age 16+ population have been unemployed for 27 weeks or longer, compared to 0.46 percent in February 2020 (see —). This measure of long-term unemployment peaked at 2.96 percent of the population in April 2010, but had fallen to 0.36 percent in April 2020.

In February 2021, 2.20 percent of the age 16+ population are unemployed for at least 15 weeks, following 2.08 percent in January 2021, and 2.06 percent in December 2020.

Long-term Unemployed
unemployed 27+ weeks, share of population

Source: BLS

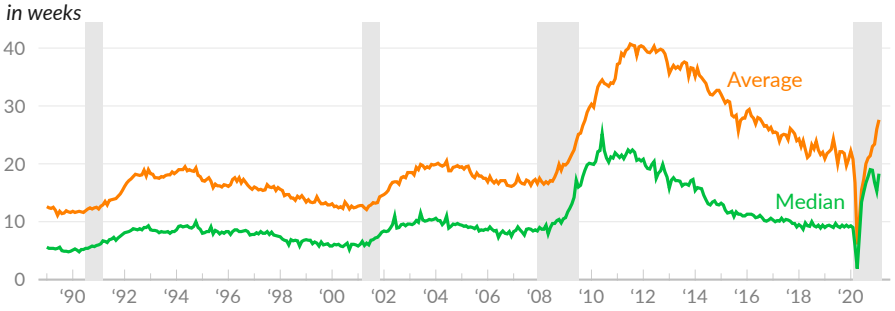
Long-term Unemployed
unemployed 15+ weeks, share of population



Source: BLS

Among those who are unemployed, the average (mean) duration of unemployment is 27.6 weeks, and the typical (median) duration of unemployment is 18.3 weeks, as of February 2021.

Duration of Unemployment
in weeks

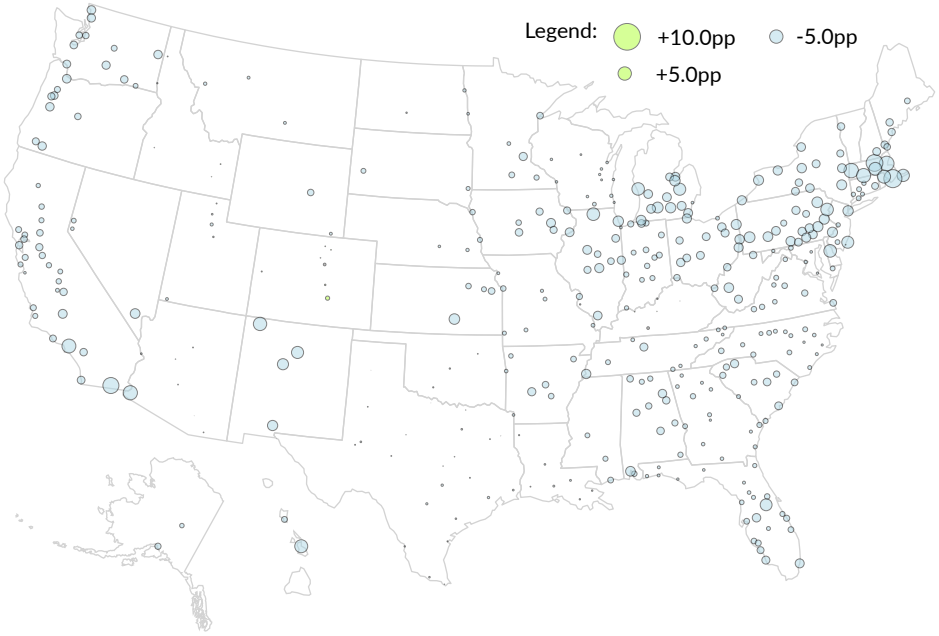


Source: BLS

Unemployment by metro area

The Bureau of Labor Statistics produce local area estimates of unemployment, including the **unemployment rate for metro areas**. BLS report the share of the local area labor force that is unemployed in the largest 300 or so metropolitan areas. The following map captures recent changes by displaying the difference between the average unemployment rate over the past three months and the previous three months. A positive change indicates that the unemployment rate increased.

Change in Unemployment Rate by Metro Area
most recent three months change from previous three months
in percentage points, latest three months end December 2020



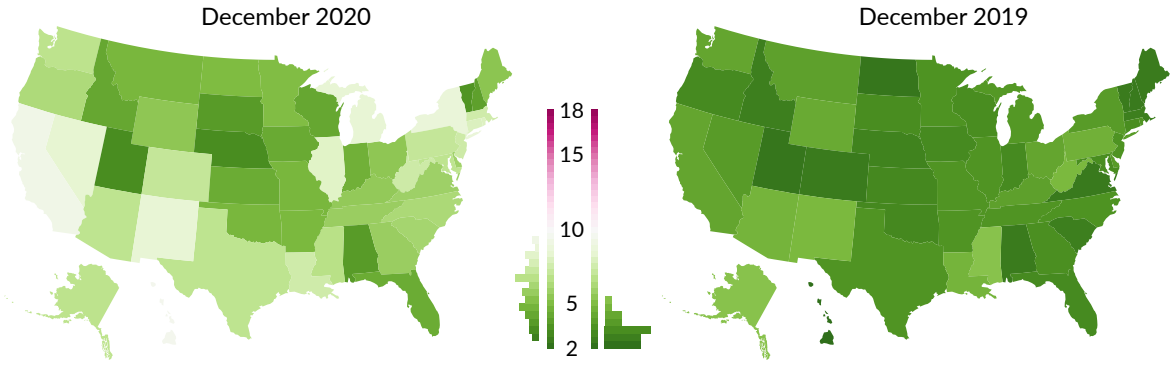
Source: Bureau of Labor Statistics

Unemployment by state

The Bureau of Labor Statistics report the state unemployment rate–unemployed people as a share of the state labor force–each month, around two weeks after reporting the national unemployment rate. In December 2020, no states had an unemployment rate above ten percent, compared to 41 states in April 2020. In December 2019, no states had an unemployment rate above ten percent and only two states had an unemployment rate above five percent. In December 2020, 33 states have an unemployment rate above five percent.

The states with the highest unemployment rates in December 2020 are Hawaii (9.3%), California (9.1%), and District of Columbia (8.8%). The states with the lowest unemployment rates are Utah (3.0%), Nebraska (3.0%), and Vermont (3.3%).

Unemployment Rate by State
unemployed share of labor force, percent



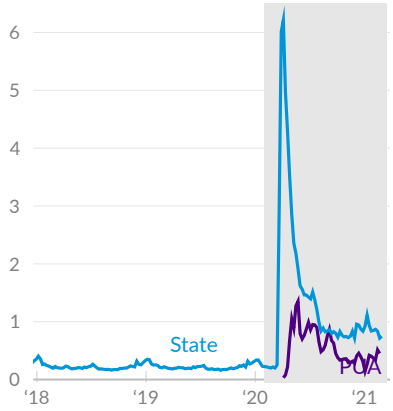
Source: Bureau of Labor Statistics

Jobless Claims

The Department of Labor report 748,078 actual new claims for unemployment insurance (UI) under state programs (see —) during the week ending February 27, 2021, a one-week increase of 31,500. Over the past four weeks, new claims have averaged 791,900 per week. During the same four-week period last year, there were an average of 211,300 new claims per week.

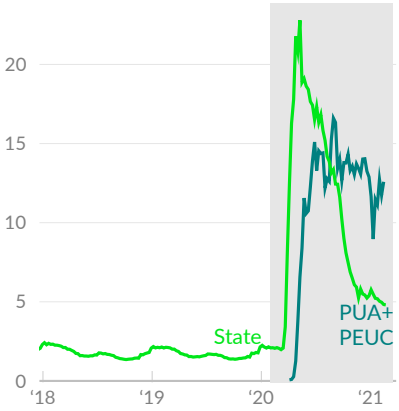
For the week ending February 20, 2021, the Department of Labor reports 4,806,269 continued claims for unemployment insurance (insured unemployed) under state programs (see —), a one-week decrease of 22,400. One year prior, during the week of February 22, 2020, there were an average of 2,105,500 insured 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 boosted by federal programs that expanded eligibility for benefits and increased the amount of benefit payments. Over the past few months, many of the new and continuing claims for unemployment insurance have been through the federal programs.

Over the week ending February 20, 2021, there were 451,400 initial UI claims under the Pandemic Unemployment Assistance (PUA) program (see —), compared to 512,900 during the prior week, and an average of 418,800 initial claims per week over the past four weeks.

Federal program continuing claims total 12,584,841 in February 13, 2021 (see —). These include both claims under the PUA program and claims under the Pandemic Emergency Unemployment Compensation (PEUC) program. Combining federal program claims with state program claims indicates there are a total of 17.4 million insured unemployed persons during the week ending February 13, 2021, compared to 16.2 million one month prior, during the week ending January 23, 2021.

Labor Force Participation

Those who are either employed or unemployed are considered to be in the labor force. Over the long term, the share of the US population that is in the labor force, called the labor force participation rate, has been falling because of the aging of the population (because labor force participation rates are lower among the elderly and an increasing share of the overall population are elderly). However, participation in the labor force is also cyclical and affected by economic conditions. For example, during a downturn people become discouraged by their labor force prospects and stop looking for work, removing them from the labor force.

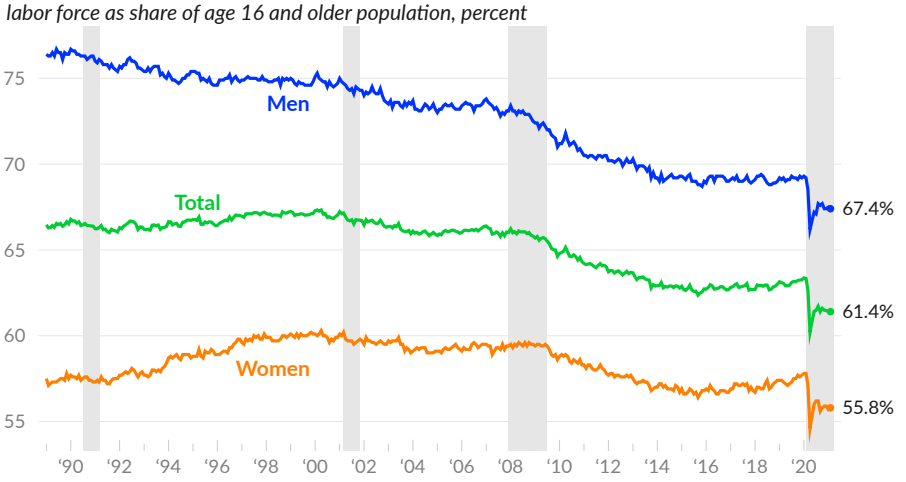
Age is not the only demographic factor affecting labor force participation. The US population has become much more educated over the past 30 years, putting upward pressure on labor force participation, as participation rates tend to increase with education. Additionally, women were participating in the labor force at increasing rate in the US until the 2000s while men were not.

In the latest data, covering February 2021, 61.4 percent of people age 16 and older are in the labor force (see —), compared to 61.4 percent in January and 61.5 percent in December 2020. In February 2020, when US confirmed cases of COVID-19 were still low, this labor force participation rate was 63.3 percent.

In February 2021, 67.4 percent of men age 16+ are in the labor force (see —), compared to 55.8 percent of women (see —). Since February 2020, labor force participation has decreased 1.9 percentage points among men, and decreased two percentage points among women.

Labor Force Participation Rate

labor force as share of age 16 and older population, percent

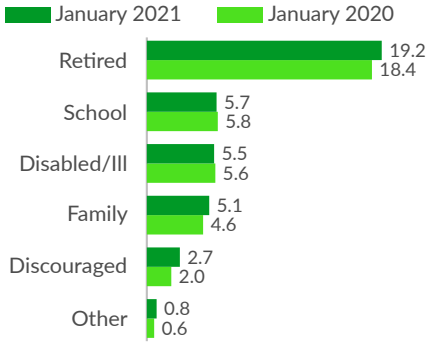


Source: Bureau of Labor Statistics

Reasons for labor force non-participation

The Current Population Survey (CPS) asks those who are not employed or looking for work about their major activities and reasons for not participating in the labor market. Answers vary by age in intuitive ways, and are influenced by labor market conditions.

Labor Force Non-Participation
share of age 15+ population, percent



Source: Author's calculations from CPS

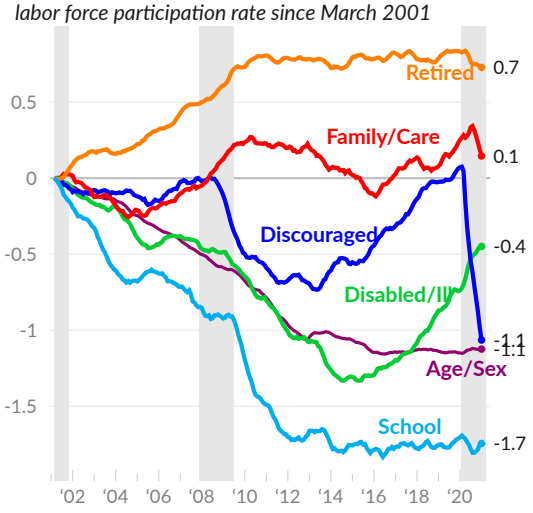
These labor force non-participants, which do not include those under the age of 15, total 101.6 million in January 2021, or 39.0 percent of the age 15 or older population, compared to 37.0 percent in January 2020. Slightly less than half of non-participants, and 19.2 percent of population, are retirees in January 2021 (see ■). A total of 14.2 million people, or 5.5 percent of the age 15 or older population, are out of the labor force due to disability or illness; 5.7 percent were out of the labor force for school, and 5.1 percent for family or caregiving reasons.

While the recession of 2001 appears mild in measures of expenditure, it was followed by a substantial reduction in the share of the population receiving labor income. The economy was losing jobs at an alarming rate long after the 2001 recession had officially ended, though labor market weakness was partially masked by a major housing bubble. Seven years after the recession of 2001, the burst of the housing bubble caused the great recession, which pushed many more people out of the labor force.

From March 2001 to the latest available twelve months of data, ending January 2021, an additional 3.8 percent of the age 18–64 population left the labor force. Changes in the demographic composition of the population affect the rate of participation. For example, the larger-than-normal population cohort born after World War II is reaching retirement age in this period. Changes in the age and sex distribution explain 1.1 percentage points of the cumulative decrease since March 2001 (see —).

Additionally, young people are staying in school longer, on average, reducing the age 18–64 labor force by 1.7 percent (see —). Disability and illness reduce the labor force by another 0.4 percent (see —). Less retirement among those age 18–64 increases the labor force by 0.7 percent, over the period (see —).

Contribution to Labor Force Participation
cumulative percentage point contribution to age 18-64 labor force participation rate since March 2001



Source: Author's Calculations from CPS

Series in the chart are adjusted so that the distribution of the age 18–64 population by age and sex is constant and equal to its March 2001 value. The total effect of this adjustment on labor force participation is included separately in the chart, as **Age/Sex**.

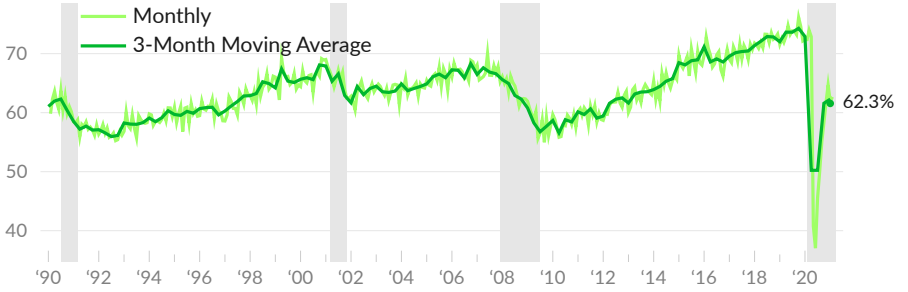
Labor Force Flows

The current population survey interviews households up to eight times over 16 months, allowing insight into the labor force status of the same individual over time, and in particular, into **flows between different employment, unemployment, and other categories**. The Bureau of Labor Statistics publish many monthly indicators based on labor force flows, and others can be calculated directly from the public use data.

Among newly-employed workers, some were looking for work or otherwise considered unemployed the prior month, while others were not in the labor force. In February 2021, 6.7 million people were newly employed (on a gross basis). Of these, 62.7 percent were not looking for work in the prior month (see —). Over the past three months, an average of 62.3 percent of the newly employed were not looking for work the month prior (see —). With low unemployment, new employees are being pulled from outside of the labor force and bypassing unemployment. Three years ago, in February 2018, 71.4 percent of the newly employed were not looking for work month prior.

Newly Employed, Not Previously Looking For Work

share of newly employed that were not looking for work in the prior month

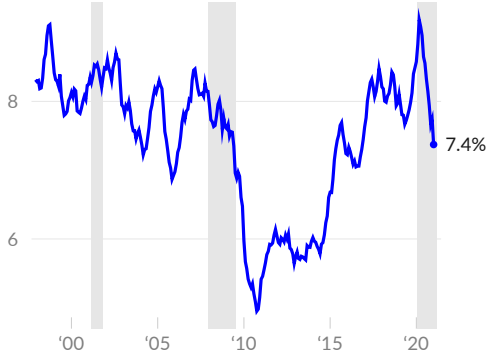


Source: Bureau of Labor Statistics

The great recession worsened job-finding prospects for those not in the labor force (NILF) due to disability or illness. As a result, the flow into employment for people age 25 to 54 who are out of the labor force due to a disability or illness slowed considerably. Only over the past few years have these prospects recovered. Over the year ending January 2021, 7.4 percent of persons age 25–54 who were out of the labor force due to disability or illness in the prior year are now employed (see —). This one-year rate of job-finding has increased substantially from its 2010–2013 average of 5.8 percent

Flow, Disability to Work

NILF disability/illness, age 25 to 54, share employed one year later



Source: Author's Calculations from CPS

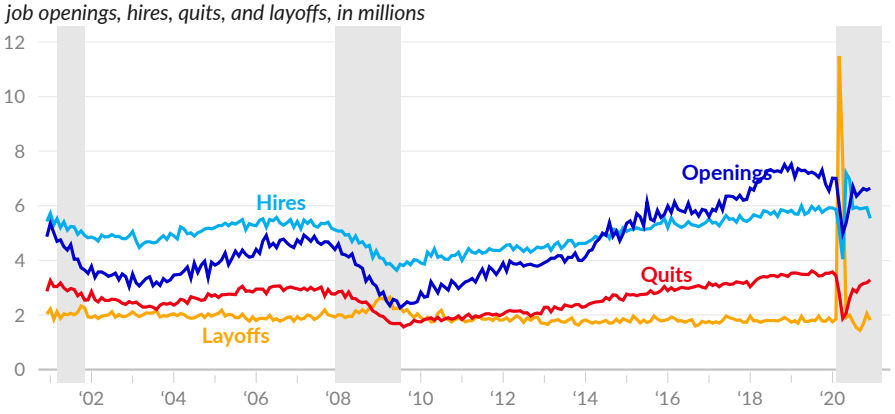
Job Openings and Labor Turnover Survey

Some types of **turnover** in the labor market are healthy and mean people are better able find a new job if they do not like the one they have. Additionally, the job prospects outside of a firm affect the bargaining power of the workers inside of the firm. The Bureau of Labor Statistics report the number of job openings, hires, and separations in several industry groups on a monthly basis. Within separations, these data distinguish voluntarily leaving a job as *quits*.

In December 2020, there were 6.6 million total nonfarm job openings (see —) and 5.5 million hires completed (see —). In the same month there were 5.5 million nonfarm separations, of which 1.8 million were layoffs (see —) and 3.3 million were voluntary (see —). One year prior, in January 2020, there were 1.7 million layoffs, and 7.0 million job openings.

Job Turnover

job openings, hires, quits, and layoffs, in millions

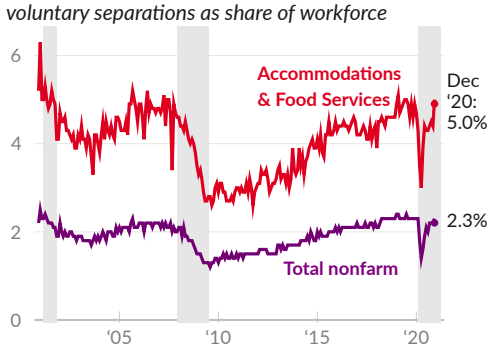


Source: Bureau of Labor Statistics

The number of people who voluntarily separate (quit) a job in a given month, divided by the total number employed is the *quits rate*. The rate typically increases when workers are confident enough to leave one job for another one, and a high quits rate, particularly in low-paying industries, can be a sign of a tight labor market.

Quits Rate

voluntary separations as share of workforce



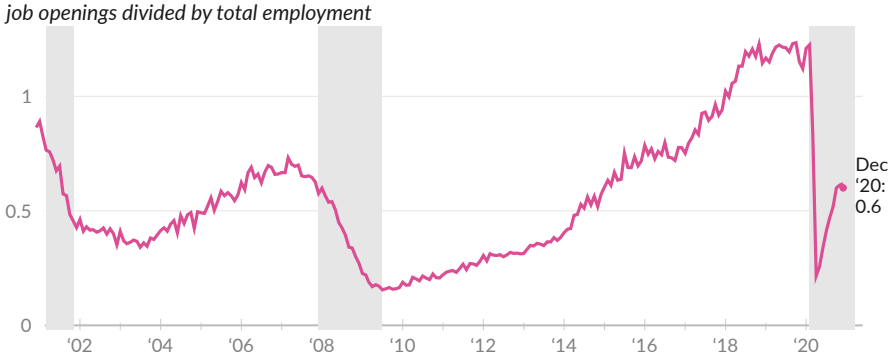
Source: Bureau of Labor Statistics

The quits rate within the accommodations and food services industries (which includes restaurants), is highly cyclical, and tends to rise when a tight labor market pulls people out of restaurant jobs and into higher paying jobs in other industries. In December 2020, the total quits rate in all industries was 2.3 percent (see —). The accommodations and food services quits rate was 5.0 percent (see —); the series high for the industry group was 6.3 percent in January 2001.

For additional context, there are 10.7 million unemployed persons in December 2020. The ratio of job openings to unemployed persons was 0.6 in December 2020 (see —), compared to 1.2 in the same month one year prior, and 1.0 in January 2018.

Job Openings Per Unemployed Person

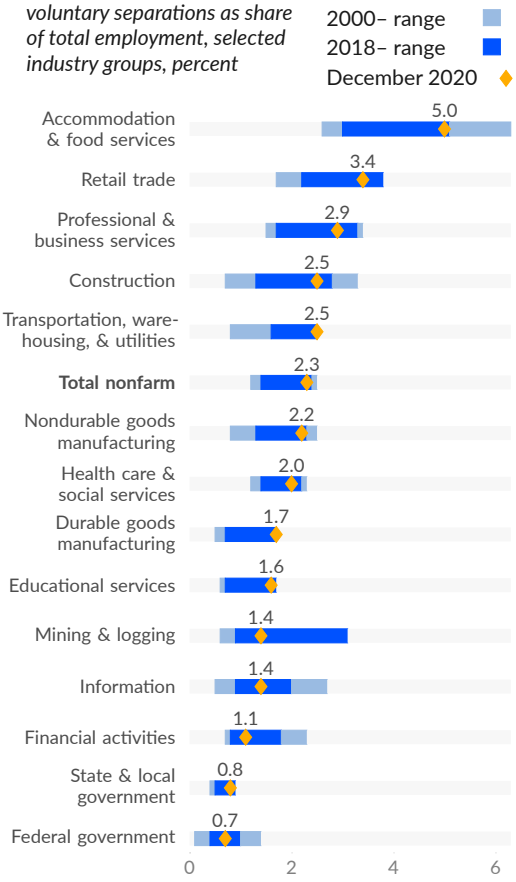
job openings divided by total employment



Source: Bureau of Labor Statistics

Quits Rate by Industry

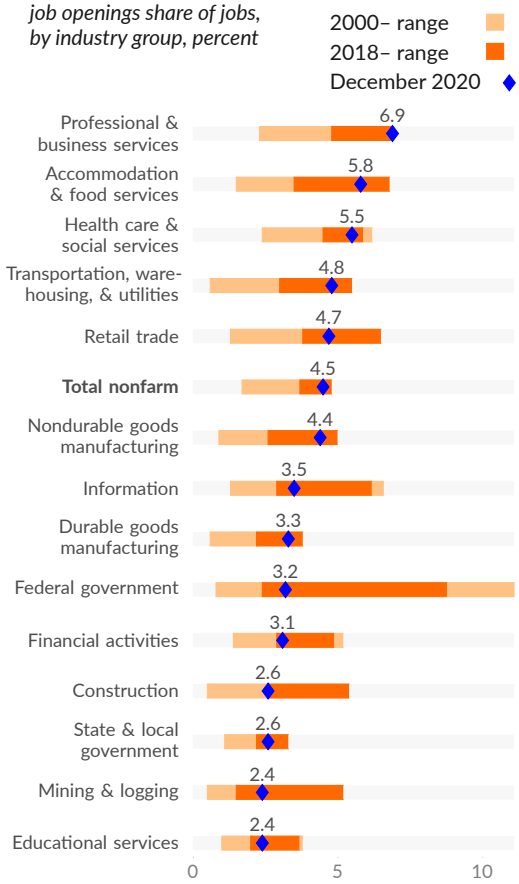
voluntary separations as share of total employment, selected industry groups, percent



Source: Bureau of Labor Statistics

Job Openings Rate

job openings share of jobs, by industry group, percent



Source: Bureau of Labor Statistics

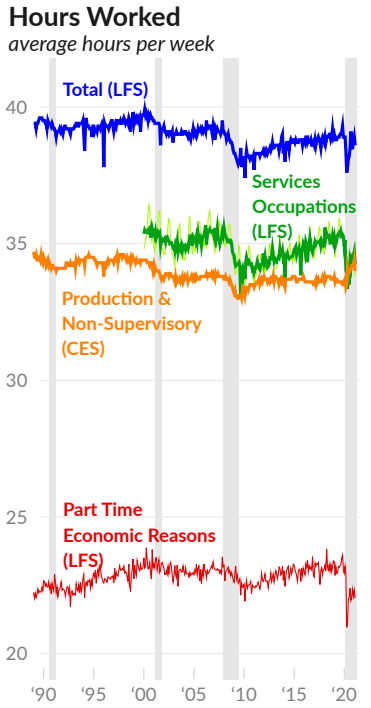
Hours Worked

The Bureau of Labor Statistics (BLS) report hours worked per week in both Current Employment Statistics (CES) and Labor Force Statistics (LFS).

Weekly hours for the total group of people at work in all industries average 38.6 in February 2021 (see —) slightly below the 38.9 average weekly hours in February 2020. Weekly hours for this group average 39.6 from 1998 through 2000, and fell to a great recession low of 37.4 in February 2010.

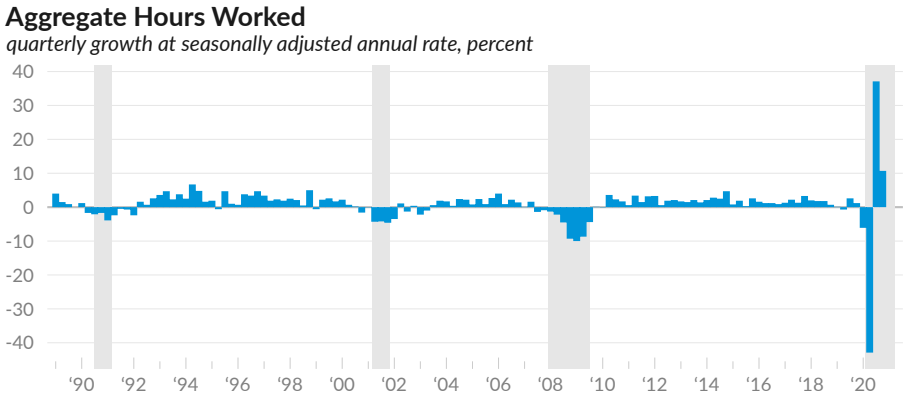
Those in service occupations (see —) work fewer hours on average, with 34.2 average weekly hours in February 2021, substantially below the 35.1 average in February 2020. Those part-time for economic reasons (see —) work an average of 22.0 hours per week in February 2021.

In February 2021, production and non-supervisory workers (see —), about four of every five employees, worked 34.0 hours per week on average, slightly above the 33.7 average weekly hours in February 2020 and slightly below the 1998–2000 average of 34.4 hours.



Source: BLS

BLS also report a quarterly index tracking aggregate hours worked in nonfarm businesses (see ■). Total hours worked in nonfarm businesses increased at an annual rate of 10.7 percent in 2020 Q4, following an increase of 37.1 percent in 2020 Q3.



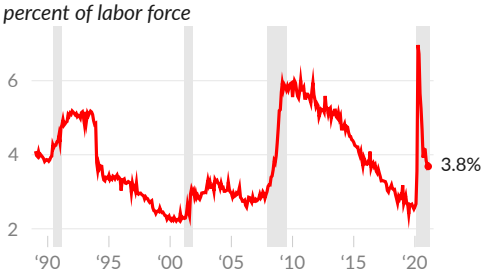
Source: Bureau of Labor Statistics

Part-time Work

Part-time workers who would prefer full-time work are referred to as involuntary part time or part time for economic reasons in the labor force statistics produced by the Bureau of Labor Statistics. This group is comprised of people who don't have enough hours because of slack business conditions or who are unable to find full-time work.

Part Time, Economic Reasons

percent of labor force



Source: Bureau of Labor Statistics

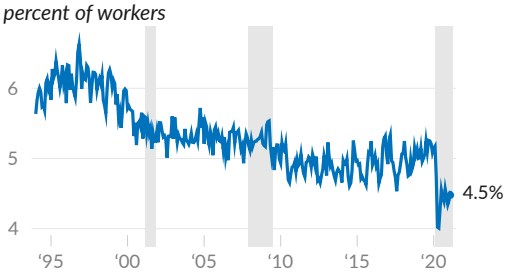
As of February 2021, 6,088,000 people are working part time because of economic reasons, equivalent to 3.8 percent of the labor force (see —), the highest level since December 2020 and substantially above the February 2020 rate of 2.7 percent. During the great recession, the involuntary part-time share of the labor force peaked at 6.0 percent in September 2010.

More Than One Job

Multiple jobholding rates have been fairly stable from 2000 to 2019. The household survey used to identify people with more than one job asks about a specific reference week. As a result, the multiple jobholding rate is not intending to capture people who rely on a patchwork of multiple jobs over time, but work at one job in the survey reference week.

Multiple Jobholders

percent of workers



Source: Bureau of Labor Statistics

In February 2021, 6,787,000 people are working more than one job, equivalent to 4.5 percent of workers (see —), the highest level since October 2020 and substantially below the February 2020 rate of 5.2 percent. The multiple jobholder share of workers peaked at 6.6 percent in November 1996.

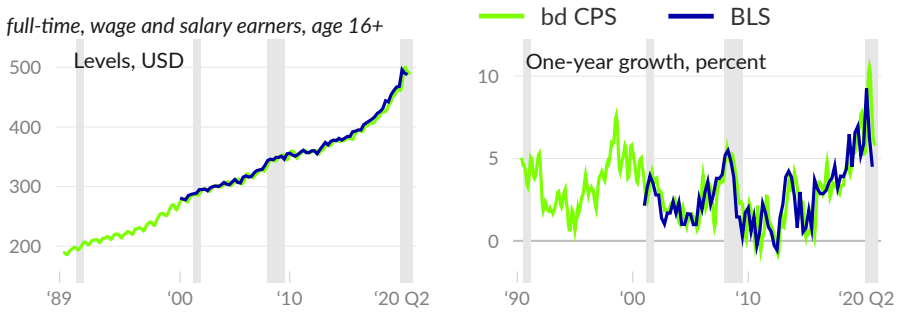
Wage Growth

The **usual wages of full-time workers** can be measured at various points in the income distribution using the Current Population Survey. BLS report these data by decile and quartile, with the most commonly used measure being the median usual weekly earnings.

BLS calculations (see —) for 2020 Q4 show nominal first decile usual weekly earnings of $488.00, compared to $467.00 in 2019 Q4, resulting in one-year growth of 4.5 percent. In the previous quarter, 2020 Q3, first decile usual weekly earnings grew by 6.3 percent over the year. Author's calculations from the CPS (see —) show three-month moving average first decile usual weekly earnings of $488.00 in January 2021, $491.00 in December 2020, and $461.00 in January 2020. One-year growth was 6.0 percent for the three months ending January 2021, 6.0 percent for the three months ending December 2020, and 6.0 percent for the three months ending November 2020.

Weekly Earnings, First Decile

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



Source: Bureau of Labor Statistics and Author's Calculations

Usual Weekly Earnings

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

	2020 Q4	2020 Q3	2020 Q2	2020 Q1	2019 Q4	2018 Q4	2017 Q4	2016 Q4	2015 Q4
First decile	488	490	496	468	467	444	417	404	392
First quartile	654	667	670	630	623	601	580	558	539
Median	984	994	1002	957	936	900	857	849	825
Third quartile	1539	1575	1551	1513	1488	1437	1372	1351	1330
Ninth decile	2321	2383	2383	2320	2280	2213	2097	2067	1994

Source: Bureau of Labor Statistics

Weekly Earnings Growth

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

	2020 Q4	2020 Q3	2020 Q2	2020 Q1	2019 Q4	2018 Q4	2017 Q4	2016 Q4	2015 Q4
First decile	4.5	6.3	9.3	5.9	5.2	6.5	3.2	3.1	3.7
First quartile	5.0	9.2	9.7	4.1	3.7	3.6	3.9	3.5	3.9
Median	5.1	8.2	10.4	5.7	4.0	5.0	0.9	2.9	3.3
Third quartile	3.4	7.7	8.3	4.3	3.5	4.7	1.6	1.6	5.6
Ninth decile	1.8	4.7	5.0	2.4	3.0	5.5	1.5	3.7	4.6

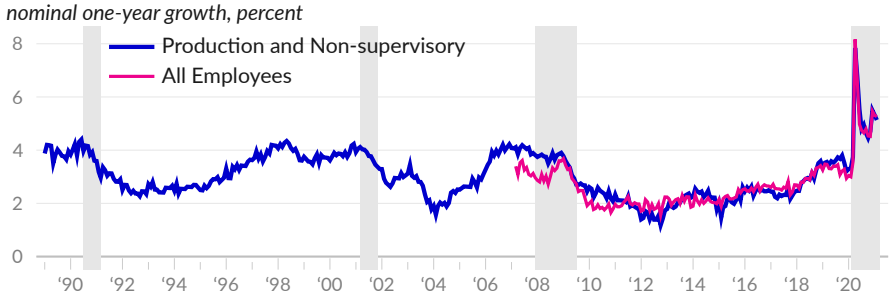
Source: Bureau of Labor Statistics

Nominal Hourly Wages

Over the year ending February 2021, nominal wages increased by 5.3 percent for all employees (see —) and increased by 5.1 percent for production and non-supervisory workers (see —), according to the Bureau of Labor Statistics. Comparing the latest three months to the previous three months, nominal wages increased at an annual rate of 5.7 percent for all employees and increased at an annual rate of 5.1 percent for production and non-supervisory employees.

Average Hourly Earnings

nominal one-year growth, percent

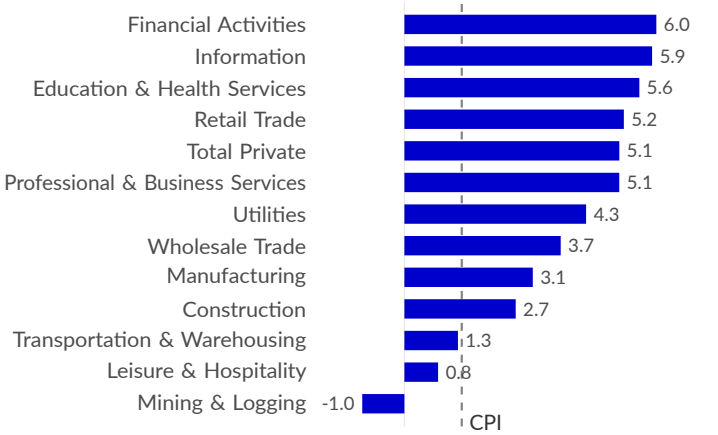


Source: Bureau of Labor Statistics

By industry, 9 of 12 groups experienced real wage growth (wage growth above the increase in prices indicated by the consumer price index). The financial activities industry had the fastest nominal growth rate, at 6.0 percent, followed by 5.9 percent in information and 5.6 percent in education & health services.

Average Hourly Earnings Growth by Industry

one-year growth, production and non-supervisory, February 2021



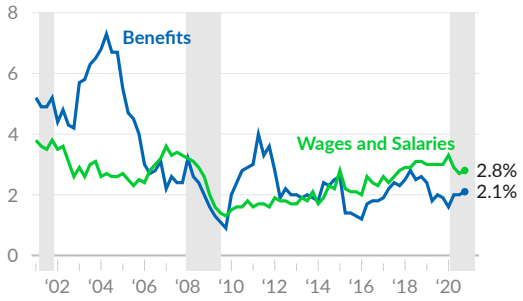
Source: Bureau of Labor Statistics

Employment Cost Index

The Bureau of Labor Statistics publish the employment cost index as a measure of changes in the cost of employing a fixed set of labor inputs. The index is less influenced by short-term changes in the industry and occupation composition of the US workforce. The publication separates total compensation, wages and salaries, and benefits.

Employment Cost Growth

private industry wage and salary workers, 12-month percent change



Source: Bureau of Labor Statistics

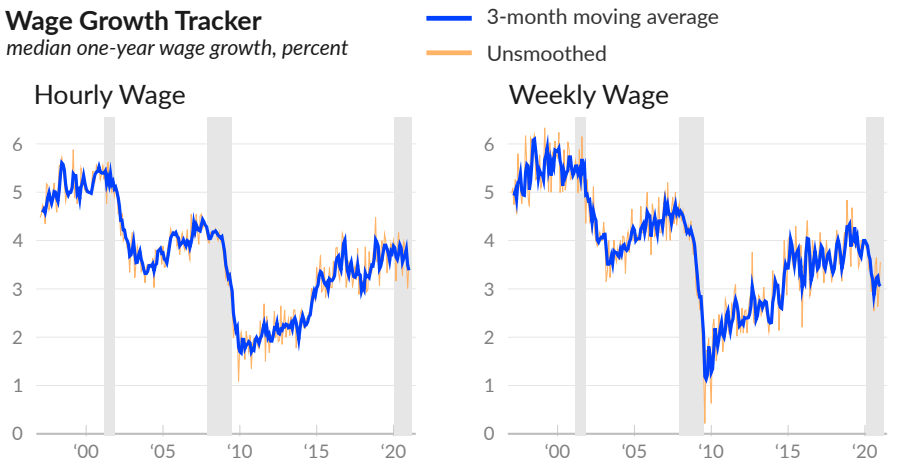
In the fourth quarter of 2020, private industry wage and salary costs (see —) increased by 2.8 percent (12-month percent changes shown), following an increase of 2.7 percent in 2020 Q3, and an increase of 2.9 percent in 2020 Q2. Private sector benefit costs increased by 2.1 percent (see —) over the 12-months ending 2020 Q4, following an increase of 2.0 percent in 2020 Q3.

Wage Growth Tracker

The Federal Reserve Bank of Atlanta publish a wage growth tracker that captures the distribution of changes in nominal hourly wages of the same people over one year. This approach avoids some of the compositional changes that affect aggregate wage growth measures, though the sample used to calculate the data is affected by changes to respondents' employment status, and by survey response rates.

Replication of the wage growth tracker using the bd CPS shows matched-observation hourly wage growth of 3.5 percent in January 2021 (see —), and average wage growth of 3.4 percent over the three months ending January 2021 (see —). One year prior, in January 2020, three-month moving average wage growth was 3.9 percent.

Wage Growth Tracker
median one-year wage growth, percent



Source: Author's Calculations

By observing the same person's wage at two points, one year apart, we see how many people do not receive a wage increase. The Atlanta Fed measures this as the share of individuals who have one-year hourly wage growth of between -0.5 and 0.5 percent. The Atlanta Fed approach is replicated using the bd CPS, and smoothed with a 3-month moving average. In January 2021, 14.4 percent of individuals had no hourly wage growth, compared to 14.5 in December 2020 (see —). One year prior, in January 2020, 13.9 percent of individuals had no wage growth.

Zero Wage Change
share of individuals with one-year wage growth between -0.5 and 0.5 percent

Source: Author's Calculations

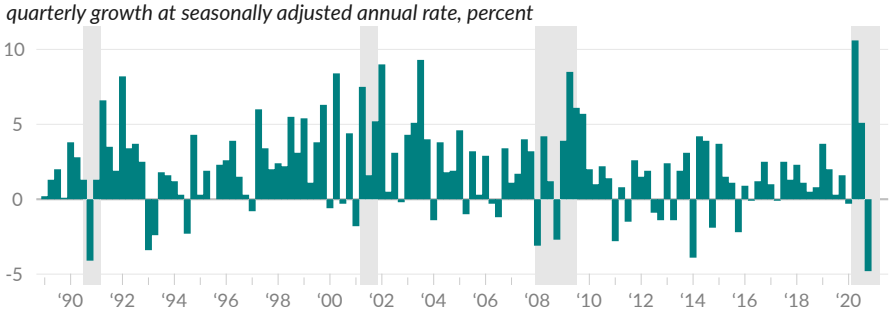
Labor Productivity

Labor productivity is reported by the Bureau of Labor Statistics and measured as **real output per hour of work** in the nonfarm business sector. Economic theory suggests that labor productivity is particularly important for long-term real economic growth. The measure captures the rate at which people, with all of the resources and equipment and infrastructure available to them, are able to produce goods and services with their work. An increase in labor productivity means real wages can increase without putting upward pressure on inflation. Alternatively, an increase in productivity means a society can meet its material needs with less work.

In 2020 Q4, labor productivity decreased at an annual rate of 4.8 percent (see ■), as the result of an increase of 5.3 percent in real ouput and an increase of 10.7 percent in hours worked. In the prior quarter, 2020 Q3, labor productivity increased at an annual rate of 5.1 percent, as real output increased at an annual rate of 44.1 percent and hours of work increased at an annual rate of 37.1 percent. Over the past five years, labor productivity growth has averaged 1.6 percent, slightly below the 1989-onward average of 2.0 percent.

Labor Productivity Growth

quarterly growth at seasonally adjusted annual rate, percent



Source: Bureau of Labor Statistics

There are two areas to investigate in understanding trends in productivity growth rates. The first is the theory that the level of business net investment in equipment and other capital goods, particularly relative to the size of the workforce, determines productivity growth. Such investment allows more goods and services to be produced by the same hours of work. The second theory, sometimes called the *Kaldor-Verdoorn Law*, is that overall economic growth and capacity utilization determine productivity growth. In this scenario, an economy facing real resource constraints is more likely to find ways to produce goods and services more efficiently.

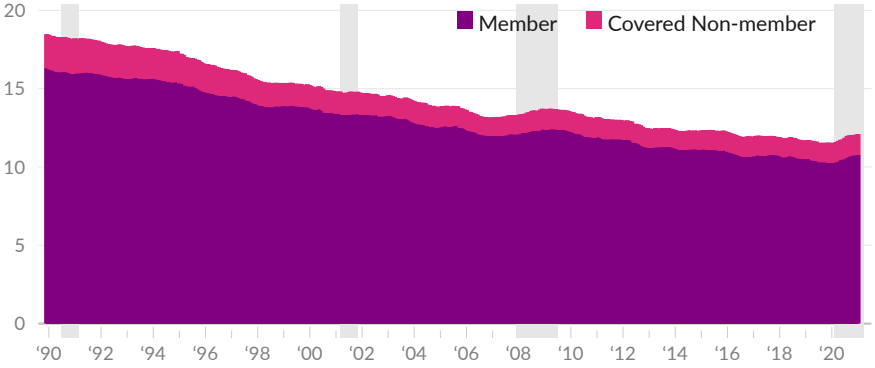
Union Membership

Membership in **unions and employee associations** has diminished in the United States over the past fifty years. Unionized jobs typically offer higher wages and better benefits and union membership tends to increase wages and benefits even in nonunion jobs. Therefore, some research argues, less union membership increases income inequality.

Over the 12 months ending January 2021, the share of jobs held by union and employee association members averaged 10.8 percent. In levels, there were 14.2 million union jobs, and 117.3 million nonunion jobs, on average over the period. This union membership rate averaged 10.3 percent during the 12 months ending January 2020, and 10.5 percent during the 12 months ending January 2019. Union jobs decreased by 358,000 from January 2020 to January 2021, while nonunion jobs decreased by 10,031,000.

Union Membership and Coverage

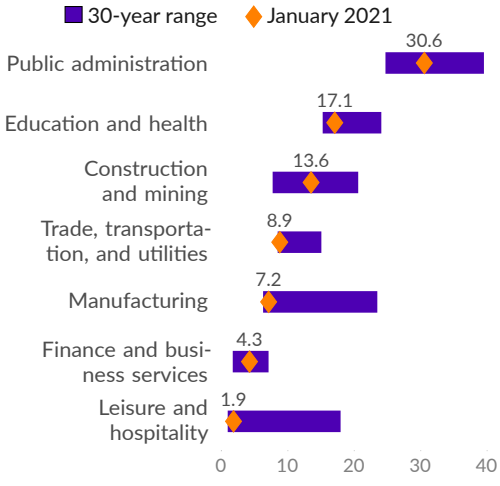
union or employee association share of jobs, percent



Source: Author's Calculations from Current Population Survey

Union Membership Rate by Industry

union or employee association member, percent



Source: Author's Calculations from CPS

Union membership rates vary substantially by industry. Public administration has the highest union membership rate, at 30.6 percent as of January 2021, followed by education and health with 17.1 percent, and construction and mining with 13.6 percent. The manufacturing industry experienced the largest overall percentage point decrease in union membership rates over the past 30 years, and is currently 16.4 percentage points below its February 1989 rate of 23.5 percent. The lowest union membership rate is in leisure and hospitality (1.9 percent). The union membership rate of the industry was 18.0 percent at its 30-year peak in January 1989.

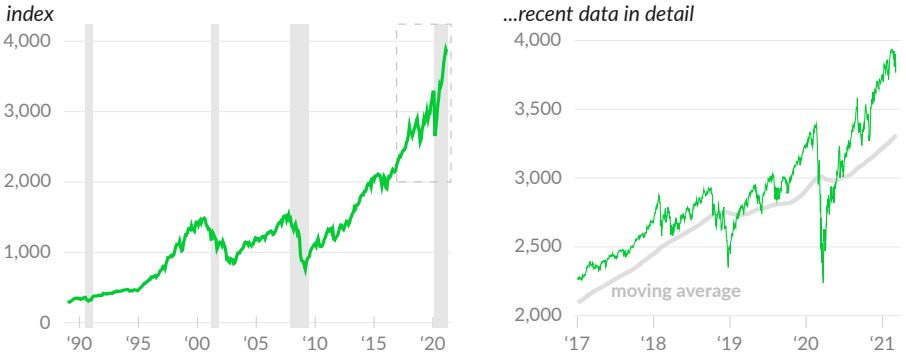
Financial Markets

The US equity markets and capital markets provide businesses and governments with funding for activities and fixed investments.

Equity Markets

The S&P 500 (see —) is a market-cap-weighted stock market index based on 500 large companies listed on US exchanges. The index is a broad measure of price levels in US equity markets. The S&P 500 closed at 3842 on March 5, 2021. The index is currently 2.7 percent below its one-year high of 3950 on February 16, 2021, and 75.3 percent above its one-year low of 2192 on March 23, 2020. The average over the past year is 3316; the index is 15.9 percent above its one-year moving average (see —).

S&P 500

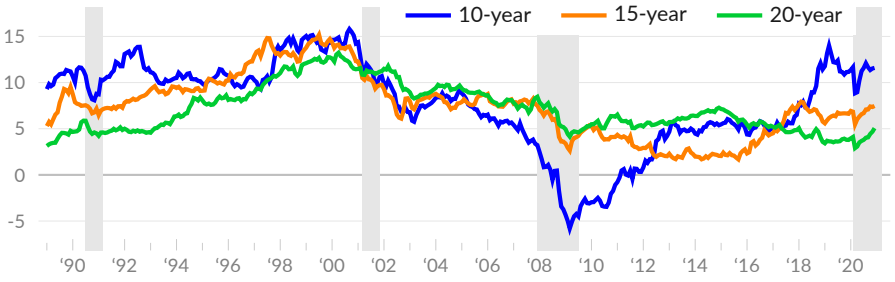


Source: Yahoo! Finance

According to historical stock market data from Robert Shiller, the inflation-adjusted trailing twenty year annual rate of return of the S&P 500 was 5.1 percent as of December 2020. Real returns are currently low relative to the average trailing twenty year real annual return of 10.1 percent during 1995–2005.

S&P 500 Real Return

trailing period annualized real return

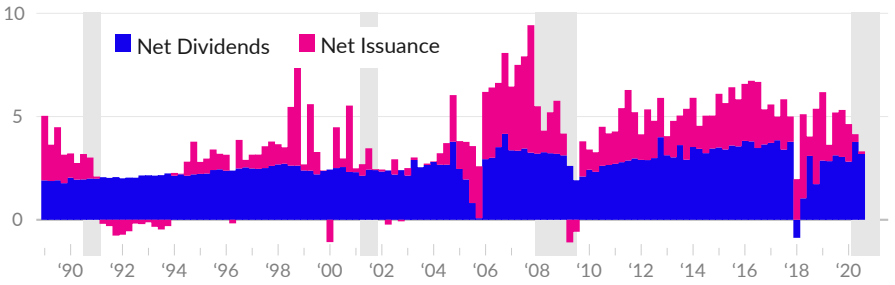


Source: Shiller, Author's Calculations

The total return on corporate equities includes both dividends and stock buybacks. US nonfinancial corporations have used stock buybacks to return money to investors, often at the expense of domestic fixed investment. To the extent that markets respond rationally, however, buybacks are no different from dividends.

Corporate Equity Payout

nonfinancial corporation net dividends paid and net issuance of equities, percent of GDP



Source: Federal Reserve, Bureau of Economic Analysis

Valuation

The cyclically-adjusted price to earnings ratio (CAPE) compares the current price of the S&P 500 to the previous ten-years of total S&P 500 returns, including dividends and buybacks (treated as dividends). Typically, earnings data cover the latest year of analyst forecasts for future earnings. Robert Shiller's CAPE intends to capture the full business cycle so that earnings are not biased by the idiosyncrasies of one point in a business cycle.

Price to Earnings Ratio

10-year total return PE ratio

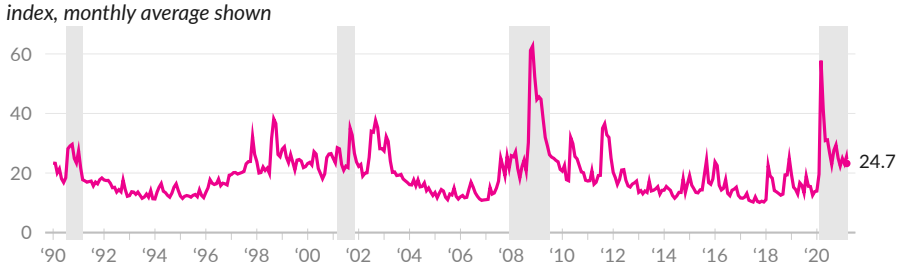
Source: Shiller

Volatility

The Chicago Board Options Exchange uses S&P 500 options data to identify expectations of future volatility. This volatility measure, the VIX index (see —), was 24.7 on March 5, 2021, slightly above the average index value of 21.1 over the past three years.

S&P 500 Volatility Index

index, monthly average shown



Source: Chicago Board Options Exchange

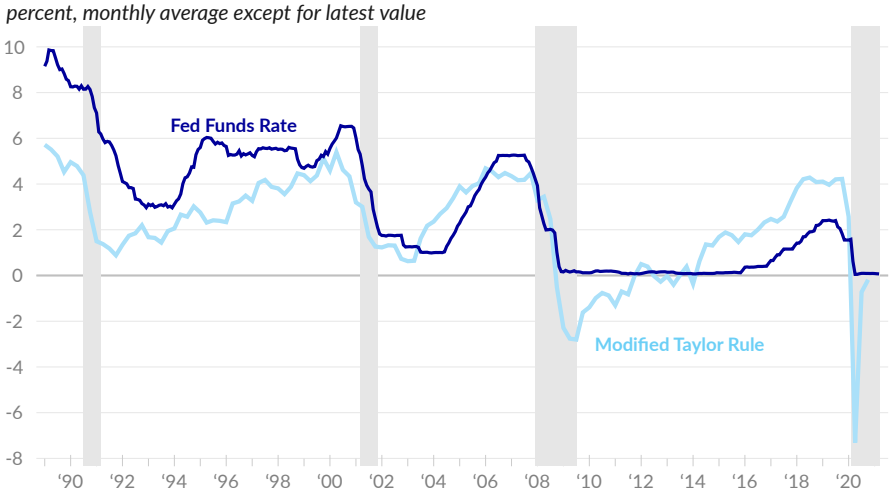
Interest Rates

The US Federal Reserve System (Fed) has a congressional mandate to promote price stability and maximum employment. In practice, a Fed committee (the FOMC) determines the federal funds rate, which aims to influence interest rates in the broader economy. There are several channels through which interest rates affect broader economic activity, for example, lower interest rates stimulate investment in capital goods and the production of these capital goods employs people, who in turn spend their wages on other goods and services. In other words, the Fed's monetary policy can aim to be neutral or to stimulate or slow the economy.

The effective fed funds rate (see —) is 0.07 percent, as of March 4, 2021. The FOMC cut interest rates three times in 2019, for a total reduction of 75 basis points. Responding to the economic shock of the coronavirus, the FOMC cut rates twice in March 2020, by 150 basis points, bringing the lower bound of the federal funds rate range to zero. With rates near zero, the Fed has adopted several additional measures to increase liquidity in the global financial system.

Effective Fed Funds Rate

percent, monthly average except for latest value



Source: Federal Reserve, Author's Calculations

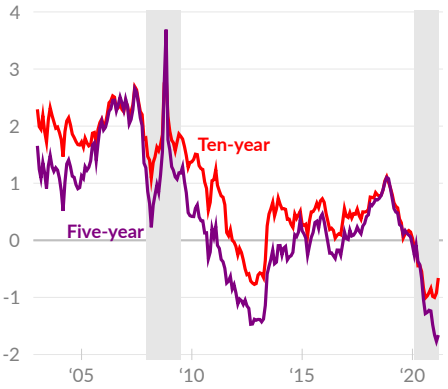
Despite its full employment mandate, the Fed has traditionally responded to inflation and output. Economist John Taylor described a rule for determining the Fed Funds rate based on inflation and output. Versions of this Taylor Rule track the actual Fed Funds rate fairly closely during the 1990s and 2000s. Former Fed Chair Ben Bernanke described a modified Taylor rule based on core PCE inflation and a stronger response to the output gap (see —), which currently suggests a strongly negative policy rate.

Real Interest Rates

Since the goods and services that can be purchased by a dollar change over time, inflation is important to money markets. A lender expecting the future purchasing power of the principal to be below its current purchasing power will charge a higher interest rate to make up for the difference. Interest rates that have been adjusted for expected inflation are referred to as real interest rates, and can offer insight into economic and financial conditions. Low real interest rates encourage borrowing and consumption and increased economic activity while high real interest rates discourage borrowing and encourage saving.

Real Interest Rates

yield, inflation-index treasury, percent



Source: Federal Reserve

US Treasury inflation-indexed securities are used to measure real interest rates. Treasury yields in general are a good proxy for low-risk rates, and the treasury offers specific securities that have interest payments indexed to the consumer price index (CPI) rate of inflation.

The real yield for such treasuries with ten years to maturity is -0.66 percent, as of March 4, 2021 (see —), compared to -1.03 percent on February 2, 2021. For a five-year maturity, the real yield is -1.66 percent in the latest data (see —), compared to -1.78 percent a month prior.

Government Bonds

As of March 4, 2021, the constant maturity yield for a ten-year US Treasury bond (see —) is 1.54 percent, compared to 1.02 percent one year prior. The yield for a two-year Treasury (see —) is 0.14 percent, compared to 0.71 percent a year prior.

Treasury Constant Maturity Yields

percent, monthly average shown except for latest value

Source: Federal Reserve

Selected US Treasury Rates

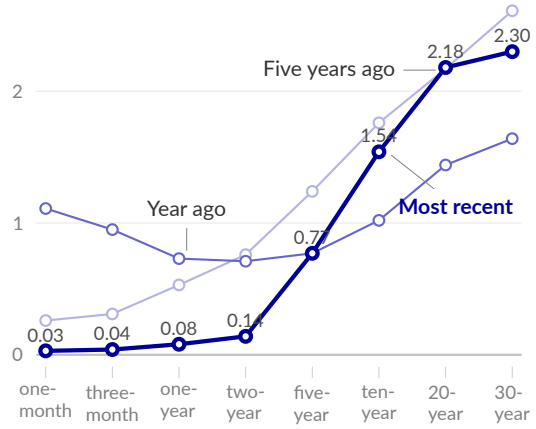
constant maturity yield, percent

	Mar 4, 2021	Mar 3, 2021	Feb 26, 2021	Feb 2, 2021	Dec 1, 2020	Aug 28, 2020	Mar 3, 2020	Mar 3, 2016
Three-month	0.04	0.05	0.04	0.07	0.09	0.10	0.95	0.28
Two-year	0.14	0.14	0.14	0.11	0.17	0.14	0.71	0.85
Five-year	0.77	0.73	0.75	0.45	0.42	0.28	0.77	1.33
Ten-year	1.54	1.47	1.44	1.12	0.92	0.74	1.02	1.83
Thirty-year	2.30	2.25	2.17	1.87	1.66	1.52	1.64	2.65

Source: Federal Reserve

Treasury Yield Curve

constant maturity yield, percent



Source: Federal Reserve

The **Treasury yield curve** shows the yield on different maturities of Treasury bonds and bills, usually from short-term, such as three-month, to long-term such as 30-year. This measure is at times described as *inverted*, which means the short-term-debt end of the curve is higher than the long-term-debt end. For example, if the yield on two-year treasuries is higher than the yield on ten-year treasuries.

As of March 4, 2021, the spread between a 10-year treasury bond and a three-month treasury bill is 1.50 percentage points (see —), compared to 0.07 percentage point one year prior. The spread between 10-year and 2-year treasuries (see —) was 1.40 percentage points on March 4, 2021, and 0.31 percentage point one year prior.

10-Year – 3-Month Spread

percentage point treasury yield spread

Source: Federal Reserve

10-Year – 2-Year Spread

percentage point treasury yield spread

Source: Federal Reserve

Corporate Bonds

The US Treasury publish a yield curve for corporate bonds based on an market-weighted average of bonds rated AAA, AA, and A. This monthly measure shows a spot rate of 2.2 percent in January 2021 for high-quality corporate bonds with a maturity of 10 years, following a rate of 2.1 percent in December 2020. In January 2020, the spot rate was 2.8 percent.

10-Year, High Quality

spot rate, percent, monthly average

Source: Treasury

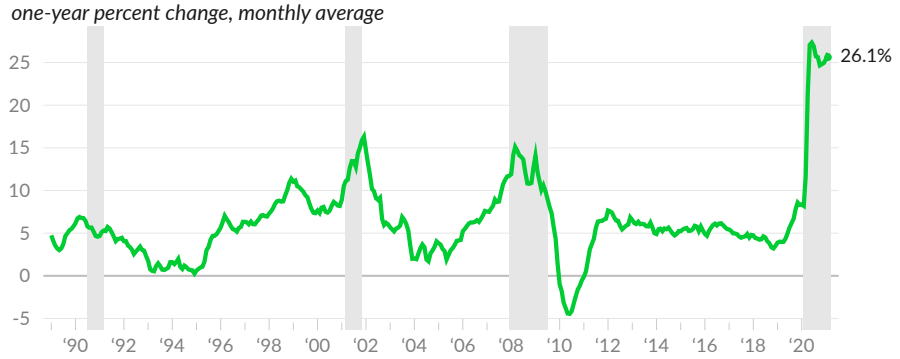
Money and Monetary Policy

The Federal Reserve report the weekly average **money stock**, broadly, as M2, which includes cash and deposits such as savings accounts and checking accounts. In the week of February 1, 2021, the M2 measure of money averaged $19.4 trillion, equivalent to 90.4 percent of GDP. Institution money market accounts, which are not included in M2, can be combined with M2 to create a slightly-broader-than-M2 measure of the money stock. These funds averaged $2.9 trillion in the same week, equivalent to 13.3 percent of GDP.

A large increase in the amount of money held by individuals and institutions can be the result of a higher rate of saving, a larger government sector financial deficit, an increase in the money supply, a change in preferences for liquidity, or something else. In the first week of February 2021, the M2 plus institutional money funds measure increased over the equivalent previous year value by 26.1 percent.

M2 and Institutional Money Funds

one-year percent change, monthly average



Source: Federal Reserve

Fed Asset Purchases

During periods where the Fed funds rate is at or near zero the Fed has engaged in large scale asset purchases in an effort to further improve financial market conditions. These asset purchases show up on the Fed balance sheet, which is reported weekly.

In response to the collapse of the housing bubble, the Fed purchased U.S. Treasury bonds and mortgage-backed securities. Total assets held by the Federal Reserve (see —) increased from $0.9 trillion in August 2008 to $2.2 trillion in November 2008. Additional rounds of asset purchases, referred to as quantitative easing, increased the balance sheet to $4.5 trillion by January 2014. As bonds mature they were replaced until October 2017, when the Fed allowed the size of its balance sheet to normalize. Total assets fell below $3.8 trillion in August 2019.

Federal Reserve Balance Sheet
total assets, trillion of USD

Source: Federal Reserve

Balance sheet normalization ended in September 2019 when the Fed increased operations in overnight and term repurchase agreement (repo) markets, following a sharp increase in rates in these markets. The Fed balance sheet increased to $4.1 trillion by December 2019. More recently, in response to worsening financial conditions, the Fed began to purchase commercial bonds and to offer currency swaps with major US trading partners. The Fed balance sheet increased from $4.2 trillion in February 2020 to $7.6 trillion, as of the latest data, covering March 3, 2021. The total value of Fed assets decreased by $33 billion from the value one week prior.

Federal Reserve Assets
billions of US Dollars

	Mar 3, 2021	Feb 24, 2021	Feb 3, 2021	Dec 2, 2020	Mar 4, 2020
Total (see —)	7,557.5	7,590.1	7,410.6	7,222.4	4,241.5
U.S. Treasury securities	4,867.3	4,844.6	4,772.1	4,614.4	2,502.6
Mortgage-backed securities	2,133.4	2,180.7	2,069.8	2,003.6	1,371.8
Central bank liquidity swaps	4.9	6.8	8.7	8.4	0.0
Repurchase agreements	0.5	0.5	1.0	1.0	195.0
Loans	56.1	56.3	50.9	61.6	0.0
Payroll Protection Program	53.4	52.3	46.9	54.9	0.0
Net unamortized premium	341.9	343.9	339.3	335.1	111.0
Other	100.1	105.0	122.0	143.3	61.0

Source: Federal Reserve

Prices

Changes in prices affect the amount of goods and services that can purchased by a fixed amount of income. When measuring changes in prices, researchers consider both the quantity that can be purchased by a unit of currency, and also changes in item quality. To understand the overall change in prices faced by a certain group, such as consumers, researchers create a representative "consumption basket" of the goods and services purchased by the group, and track the changes in the basket, and the price of the basket, over time.

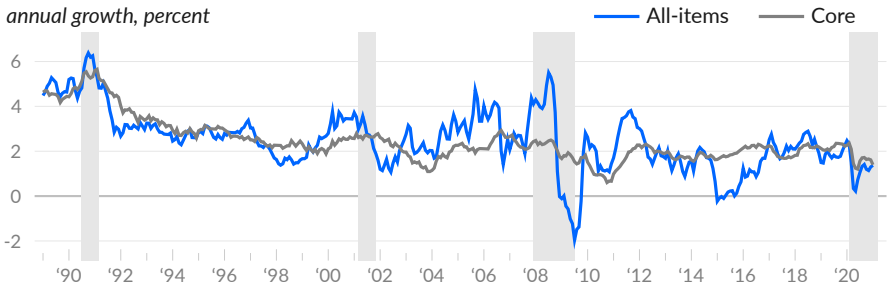
This section covers various measures of prices. Inflation–a general increase in the price level–is measured in the section by the one-year percent change of a price index. Additionally, there is some discussion of inflation expectations and a brief look at commodity prices.

Consumer Price Index

Consumer prices increased by 1.4 percent over the year ending January 2021, according to the CPI for all urban consumers. Core inflation, which does not include the more volatile food and energy prices, was 1.4 percent.

Consumer Price Index

annual growth, percent



Source: Bureau of Labor Statistics

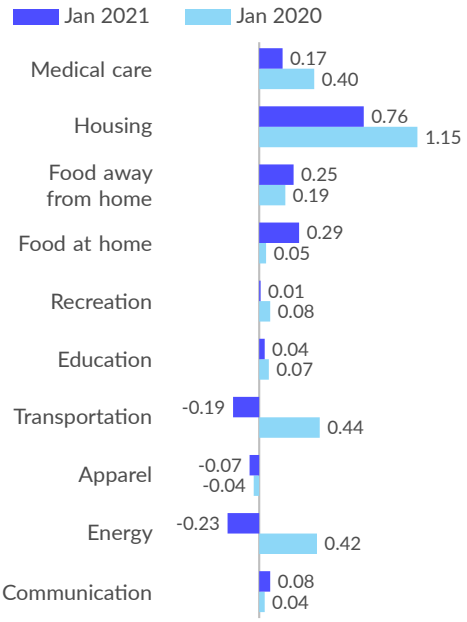
The prices of individual goods and services are obvious not all increasing at the same rate. Likewise, a large change in the price of one category of goods or services is not likely to cause a large change in the overall price level, particularly if the category is a small portion of the consumption basket or if consumers are able to substitute or reduce consumption of the category. The contribution of a category to overall inflation is an important consideration, and reflects both changes in price within a category and the relative importance of the category to the overall index (its share of the consumption basket).

In January 2021, medical care added 0.17 percentage point to overall CPI inflation, slightly below the category's January 2020 contribution of 0.40 percentage point. Housing contributed 0.76 percentage point to inflation in January 2021 substantially below added 1.15 percentage points in January 2020. Food away from home contributed 0.25 percentage point to inflation, and added 0.19 percentage point one year prior.

Communication contributed 0.08 percentage point to inflation in January 2021, in line with the contribution of 0.04 percentage point during the same month one year prior. Energy subtracted 0.23 percentage point in January 2021, substantially below the addition of 0.42 percentage point in January 2020.

Consumer Price Index

contribution to annual growth, percentage points



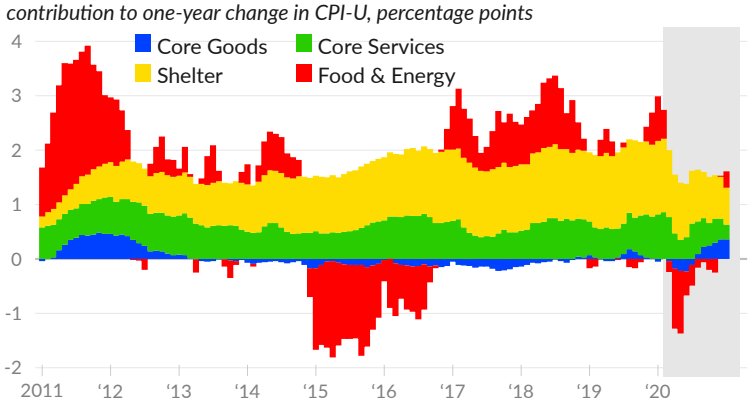
Source: Bureau of Labor Statistics

As mentioned above, CPI inflation comes from changes in the prices of individual goods and services but is also affected by an occasional re-weighting of the components used in the index, based on changes in consumption habits. By considering both sources of changes, we can decompose medium- or long-term trends based on the contribution to overall inflation from different categories of spending.

As of January 2021, core goods contributed 0.36 percentage point to the overall non-seasonally-adjusted CPI inflation rate of 1.67 percent, while core services excluding shelter contributed 0.27 percentage point. Shelter contributed 0.68 percentage point, and food and energy contributed 0.30 percentage point. One year prior, in January 2020, the corresponding CPI inflation rate was 2.90 percent; core goods subtracted 0.05 percentage point, core services excluding shelter contributed 0.82 percentage point, shelter contributed 1.35 percentage points, and food and energy contributed 0.82 percentage point.

CPI Decomposition

contribution to one-year change in CPI-U, percentage points



Source: Author's calculations from BLS data

Why isn't the CPI revised?

The consumer price index (CPI-U) is used in contracts that include cost adjustments. As a result, historical CPI-U data are not revised if there is a change to the way the CPI is calculated. For research purposes, however, it is ideal to have the most accurate measure of overall changes in prices faced by consumers. BLS also publish a research series, the CPI-U-RS, which adjusts the historical data of the CPI-U to be consistent with the current methods of producing it.

Relative Prices

While the previous section decomposes the overall change in prices to identify the contributions from categories of consumer spending, the next table instead shows the one-year percent change in prices for each category. Additionally, the weight that a category has in the overall index–the category share of the basket of goods and services–is included as the last column in the table.

Selected CPI Categories
one-year percent change

	Jan '21	Dec '20	Nov '20	Oct '20	Feb '20	Jan '20	Jan '19	Weight, Jan '21
All items	1.4	1.4	1.2	1.2	2.3	2.5	1.6	100.0
Housing	1.8	2.0	2.0	1.9	2.7	2.7	2.9	42.137
Owners' equivalent rent	2.0	2.2	2.3	2.5	3.3	3.3	3.2	22.844
Rent of primary residence	2.1	2.3	2.4	2.7	3.8	3.8	3.4	7.786
Household furnishings & ops.	2.9	3.2	2.7	2.1	0.7	0.7	2.1	4.608
Transportation	-1.3	-2.4	-3.3	-3.5	1.7	2.8	-1.3	15.662
New vehicles	1.4	2.0	1.6	1.5	0.4	0.1	0.0	3.746
Used cars and trucks	10.0	10.0	10.9	11.5	-1.3	-2.0	1.6	2.504
Medical care	1.9	1.8	2.4	2.9	4.6	4.5	1.9	8.841
Professional services	2.9	1.9	2.0	2.1	1.2	1.2	1.2	3.629
Hospital and related services	2.9	3.1	3.0	3.0	4.1	3.7	2.4	2.396
Health insurance	2.9	4.8	7.5	10.2	20.7	20.5	6.5	1.186
Food at home	3.7	3.9	3.6	4.0	0.8	0.7	0.6	7.592
Food away from home	3.9	3.9	3.8	3.9	3.0	3.1	2.8	6.190
Energy	-3.6	-7.0	-9.4	-9.2	2.8	6.2	-4.8	6.682
Recreation	0.1	0.9	1.3	1.3	1.5	1.4	1.4	5.820
Communication	2.1	2.4	2.4	2.8	1.0	0.9	-1.7	3.736
Education	1.3	1.4	1.3	1.3	2.2	2.2	2.7	3.022
Apparel	-2.5	-3.9	-5.2	-5.5	-0.9	-1.3	0.1	2.840

Source: Bureau of Labor Statistics

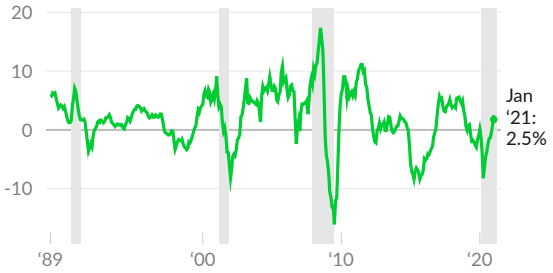
Housing prices increased 1.8 percent over the year ending January 2021, slightly below the pre-COVID rate of 2.7 percent (covering the year ending February 2020). Medical care prices increased 1.9 percent, these prices grew 4.6 percent over the year ending February 2020. In contrast, prices of food consumed at home (groceries) increased 3.7 percent in the year ending January 2021 compared to 0.8 percent over the year ending February 2020.

Transportation prices decreased 1.3 percent over the year ending January 2021, far below the pre-COVID 1.7 percent increase. Energy prices decreased 3.6 percent in the latest month, compared to a 2.8 percent increase in February 2020. Energy prices are historically more volatile than other categories.

Producer Prices

Producer Price Index

all commodities, annual growth, percent



Source: Bureau of Labor Statistics

The Bureau of Labor Statistics report prices producers receive for the various goods and services they produce. The producer price index for all commodities (see —) increased by 2.5 percent over the year ending January 2021, slightly above the 12-month growth rate of 0.1 percent in January 2020.

Inflation Expectations

Researchers gain insight on expected changes in prices through regular **surveys of consumers** and through **market data**. One market-based measure is known as the inflation breakeven and is calculated as the difference between the yield on a nominal treasury bond and the yield on a treasury inflation-protected bond of the same maturity. This difference represents the amount of inflation markets have priced in, on average, for the maturity of the bond.

5-year Expected Average Inflation

expected average annual rate, percent

Source: FRED; U. of Michigan

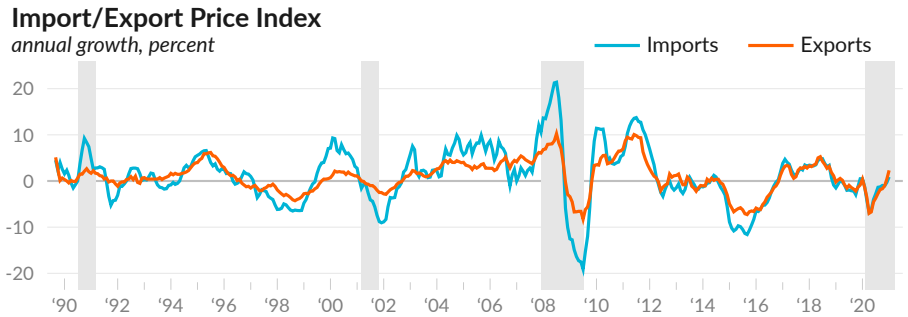
As of February 2021, consumers expect an average inflation rate of 2.7 percent over the next five years, (see —), compared to an expected rate of 2.3 percent in February 2020. Consumers had expected inflation to average 2.5 percent over the past five years, while actual inflation over the period was 1.8 percent.

As of March 5, 2021, markets expect an average inflation rate of 2.43 percent over the next five years (see —), compared to an expected rate of 1.28 percent on March 5, 2020. Markets had expected inflation to average 1.23 percent over the past five years, five years ago.

Import/Export Price Index

The Bureau of Labor Statistics report changes in the prices of imports and exports. Over the year ending January 2021, US import prices grew 0.9 percent (see —), following a decrease of 0.3 percent in December 2020 and 1.0 percent in November. Excluding fuels, US import prices increased 2.5 percent in January 2021 and grew 1.9 percent in December 2020. Over the three years ending February 2020, prior to the US COVID-19 pandemic, US import prices increased at an average rate of 1.3 percent. Excluding fuels, import prices increased at an average rate of 0.3 percent during the same three-year pre-COVID period.

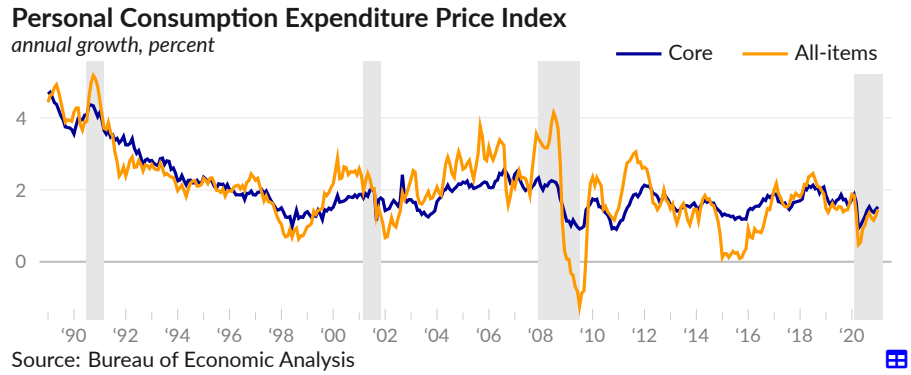
Prices of US exports (see —) grew 2.3 percent over the year ending January 2021, compared to 0.4 percent in December 2020, a decrease of one percent in November, and an increase of 1.5 percent on average during the three years ending February 2020.



Source: Bureau of Labor Statistics

PCE Price Index

The Personal Consumption Expenditure (PCE) Price Index from the Bureau of Economic Analysis captures both changes in the price of goods and services as well as monthly changes in consumer behavior. The index is additionally updated over time to the latest methodology. As of January 2021, PCE inflation, measured as the one-year percent change in the overall index, is 1.5 percent, compared to 1.3 percent in December 2020, and 1.9 percent in January 2020. Core PCE inflation, which excludes food and energy, was 1.5 percent in January 2021, 1.4 percent in December 2020, and 1.8 percent in January 2020.



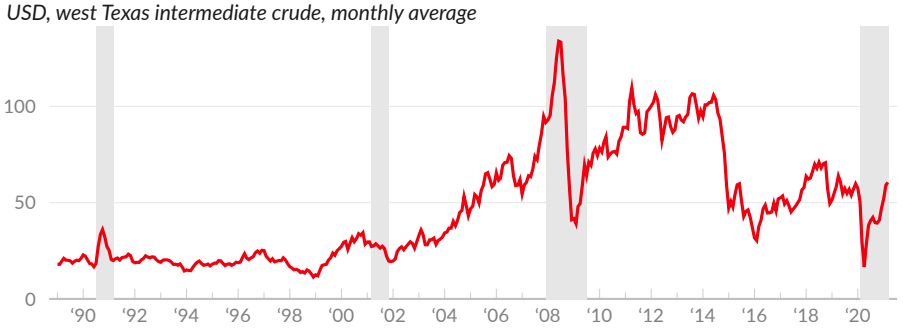
Source: Bureau of Economic Analysis

Commodity Prices

As of March 1, 2021, a barrel of west Texas intermediate (WTI) **crude oil** sells for $60.54 (see —). Over the past year, this measure of oil prices grew 107.3 percent. Over the past three years, the price decreased 3.5 percent. Currently, the WTI price is $73.34 per barrel below its peak price in June 2008.

Oil Price

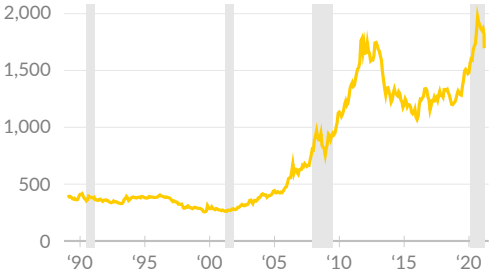
USD, west Texas intermediate crude, monthly average



Source: FRED

Gold Price

USD, monthly average and latest value



Source: FRED

London Bullion Market data on gold prices is available through FRED. As of March 5, 2021, one troy ounce of gold sells for $1,696.05 (see —), compared to an average of $1,593.76 per ounce during March 2020. Following the great recession, the monthly average price of gold reached $1,780.65 per ounce, in September 2011.

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