US Chartbook

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Open source notes on US economic activity

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Very early stage draft:
Contents not reliable

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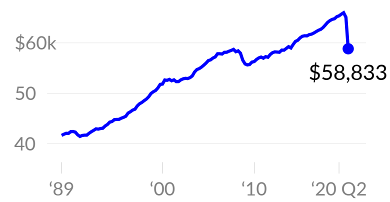
Overall Economic Activity

This analysis of the United States economy begins with the most popular measure of economic activity, Gross Domestic Product (GDP). According to the Bureau of Economic Analysis, GDP–the seasonally-adjusted annualized value of goods and services produced in the US–was $19,408 billion in the second quarter of 2020, compared to an inflation-adjusted equivalent of $9,842 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 Q2 dollars, has increased to $58,833 in 2020 Q2 from $40,302 in 1989 Q1.

GDP per capita
in 2020 Q2 dollars

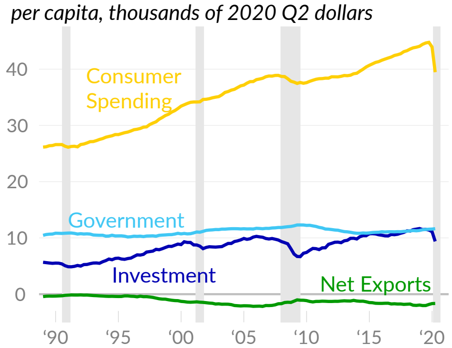


Source: Bureau of Economic Analysis

Types of Economic Activity

GDP is most-often calculated using the expenditures approach, and can be decomposed into major types of domestic spending: 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 Q2 dollars



Source: Bureau of Economic Analysis

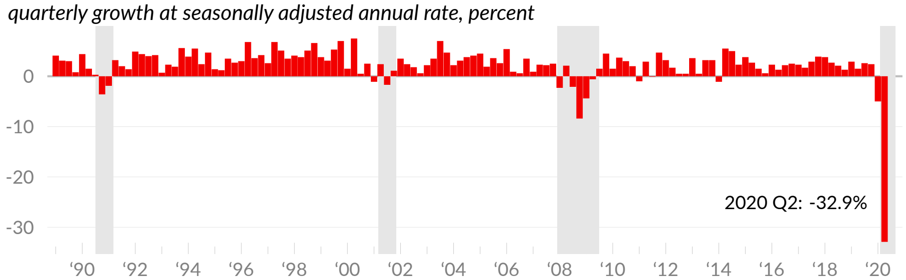
Much of the increase in real GDP per capita over the past 30 years comes from consumer spending. Domestic consumer spending (see —) is equivalent to $39,460 per person in 2020 Q2, a price-adjusted increase of $13,320 since 1989. Gross private domestic investment (see —) is equivalent to $9,386 per person in 2020 Q2, and government spending and investment (see —) totals $11,638 per person. To adjust the above to capture only domestic production, net exports (see —), equivalent to $-1,651 per person in 2020 Q2, are included.

Economic Growth

GDP (see ■) decreased at an annual rate of 32.9 percent during the second quarter of 2020, compared to a decrease of 5.0 percent in the first quarter of 2020. This annualized rate of quarterly growth has averaged -0.8 percent over the past three years, 1.3 percent over the past 10 years, and 2.1 percent over the past 30 years.

Real Gross Domestic Product Growth

quarterly growth at seasonally adjusted annual rate, percent



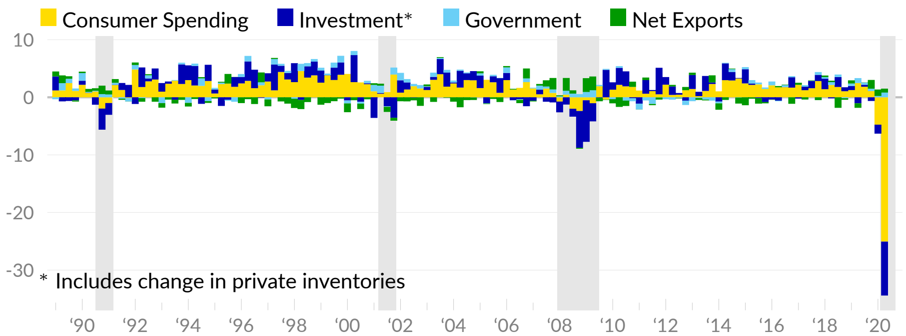
Source: Bureau of Economic Analysis

Components of Growth

The **expenditure approach**, which compiles GDP from the sum of spending on domestic goods and services, gives insight into the sources of changes in overall economic activity. In the second quarter of 2020, consumer spending (see) subtracted 25.05 percentage points from overall real GDP growth. Private domestic investment (see) subtracted 9.36 percentage points from real GDP growth, government spending and investment (see) contributed 0.82 percentage point, and net exports (see) contributed 0.68 percentage point.

Real GDP Growth by Expenditure Type

percentage point contribution to GDP growth

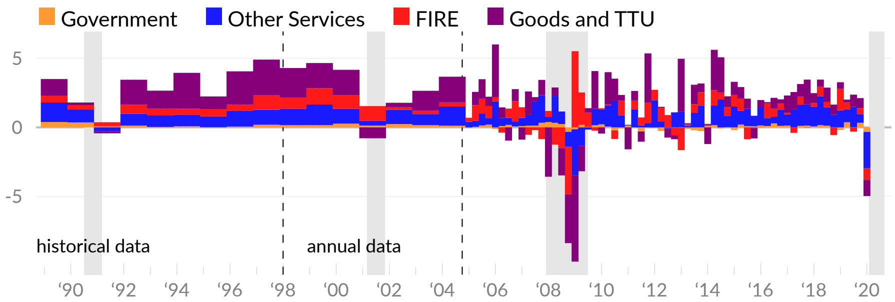


Source: Bureau of Economic Analysis

The **production approach** calculates GDP as the sum of gross value added–output minus inputs–in each sector. This identifies contributions from: goods-producing sectors combined with trade, transportation, and utilities (see ■), finance, insurance, and real estate (see ■), other service-providing sectors (see ■), and government (see ■).

Real GDP Growth by Industry Group

percentage point contribution to GDP growth

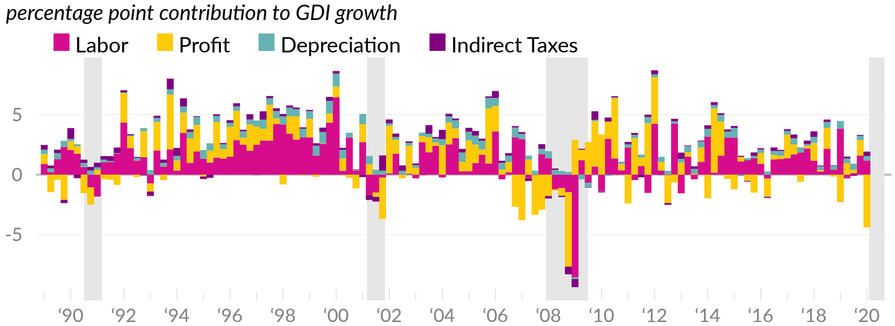


Source: Bureau of Economic Analysis

The **income approach** calculates GDP as the sum of market income to persons (in exchange for labor (see ■) or from returns on capital (see ■)), indirect taxes such as sales taxes or tariffs (see ■), and depreciation (see ■).

Real Gross Domestic Income Growth

percentage point contribution to GDI growth

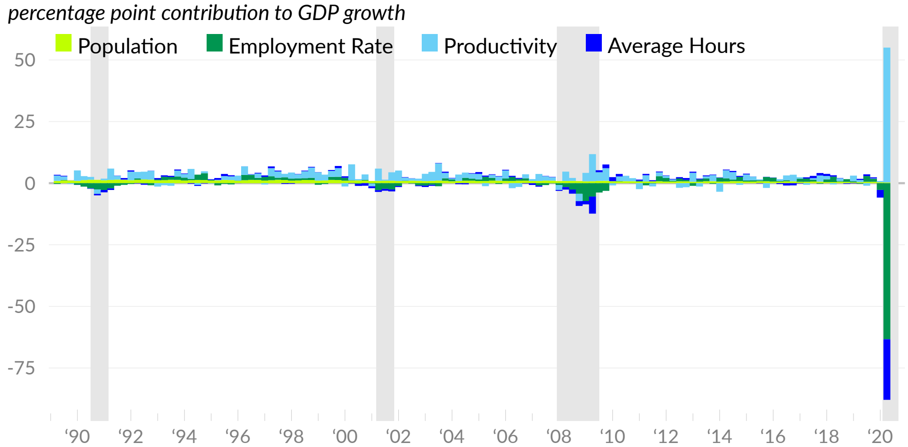


Source: Bureau of Economic Analysis

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

Real GDP Growth by Inputs

percentage point contribution to GDP growth



Source: Author's Calculations

Components of Economic Growth

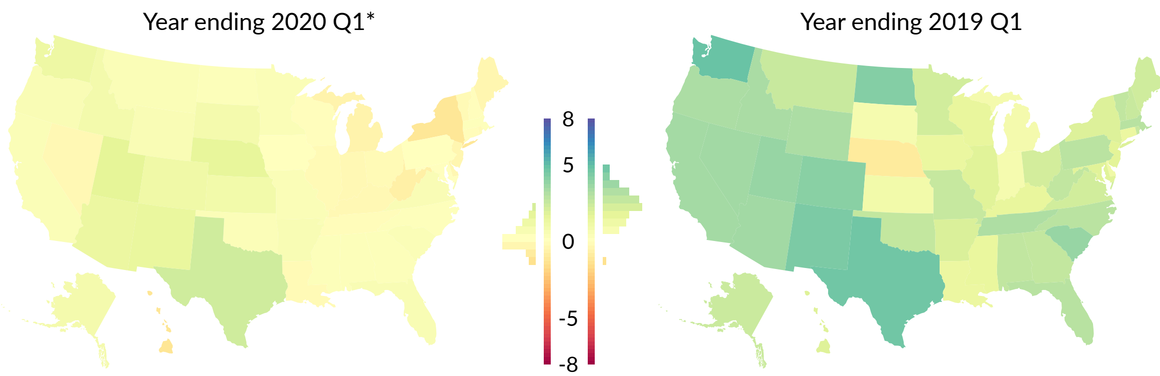
percentage point contribution to real GDP/GDI growth *moving averages*

	2020 Q2	'20 Q1	'19 Q4	'19 Q3	'19 Q2	3-year	10-year	30-year
Gross Domestic Product	-32.9	-5.0	2.4	2.6	1.5	-0.8	1.3	2.1
Consumer Spending	-25.05	-4.75	1.07	1.83	2.47	-0.86	0.86	1.53
Durable Goods	0.04	-0.93	0.22	0.44	0.85	0.30	0.40	0.41
Non-durable Goods	-2.16	0.97	-0.10	0.43	0.71	0.24	0.27	0.31
Services	-22.93	-4.78	0.96	0.96	0.90	-1.40	0.19	0.81
Gross Investment	-9.36	-1.56	-0.64	0.34	-1.04	-0.35	0.52	0.51
Non-residential	-3.62	-0.91	-0.04	0.25	0.01	0.11	0.51	0.49
Residential	-1.76	0.68	0.22	0.17	-0.08	-0.09	0.11	0.03
Change in inventories	-3.98	-1.34	-0.82	-0.09	-0.97	-0.37	-0.09	-0.01
Government	0.82	0.22	0.42	0.37	0.86	0.38	0.02	0.22
Federal	1.23	0.10	0.26	0.31	0.58	0.29	0.00	0.07
State and Local	-0.40	0.12	0.16	0.06	0.28	0.09	0.02	0.15
Net Exports	0.68	1.13	1.52	0.04	-0.79	0.06	-0.12	-0.13
Exports	-9.38	-1.12	0.39	0.10	-0.54	-0.63	0.12	0.39
Imports	10.06	2.25	1.13	-0.06	-0.25	0.69	-0.24	-0.53
Goods and TTU	–	-1.16	0.73	0.87	0.20	0.72	0.70	0.88
Manufacturing	–	-0.53	-0.10	0.47	0.05	0.23	0.15	0.33
Construction	–	0.03	0.06	-0.09	-0.01	0.05	0.06	-0.01
Retail Trade	–	-0.38	0.39	0.43	0.01	0.17	0.13	0.19
FIRE	–	-0.85	0.43	-0.31	0.51	0.19	0.32	0.47
Other Services	–	-2.64	0.63	1.49	0.93	0.97	0.96	0.85
Education & Healthcare	–	-0.66	0.25	0.28	0.06	0.16	0.17	0.19
Professional & Business	–	-0.14	0.25	0.68	0.78	0.57	0.47	0.34
Information	–	-0.20	0.16	0.29	0.22	0.28	0.25	0.24
Government	–	-0.33	0.33	0.01	0.37	0.07	0.02	0.10
Population	0.30	0.40	0.57	0.57	0.43	0.51	0.65	0.95
Employment Rate	-63.33	-2.74	1.21	2.32	-0.27	-4.30	-0.93	-0.48
Average Hours	-24.77	-3.18	0.43	0.73	0.50	-1.73	-0.42	-0.20
Productivity	54.89	0.57	0.16	-1.06	0.83	4.76	1.99	1.87
Gross Domestic Income	–	-2.5	3.3	0.8	1.2	2.0	2.3	2.5
Labor	–	1.18	1.59	0.13	-0.31	1.35	1.20	1.28
Profit	–	-4.38	1.30	0.28	0.95	0.11	0.60	0.66
Depreciation	–	0.37	0.34	0.51	0.40	0.41	0.34	0.41
Indirect Taxes	–	0.37	0.07	-0.09	0.15	0.15	0.14	0.17

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 Q1, no states had real GDP growth of more than five percent, one state (Texas) had real GDP growth between two and five percent, 30 states had less than two percent GDP growth, and 20 states had negative GDP growth.

Real GDP Growth by State

quarterly growth at seasonally adjusted annualized rate | *total growth, 2020 Q1*

	2020 Q1	'19 Q4	'19 Q3	'19 Q2	'19 Q1	1-year*	3-year	10-year
United States	3.1	2.0	2.1	2.1	-5.0	0.3	6.5	23.6
Pacific	3.0	2.1	2.2	2.3	-4.8	0.4	10.0	36.6
Washington	5.0	3.2	3.1	3.4	-5.0	1.1	13.2	40.9
California	2.8	1.9	2.1	2.2	-4.7	0.3	9.9	37.6
Oregon	2.9	2.0	1.8	2.4	-4.4	0.4	8.9	33.9
Hawaii	0.2	0.5	0.4	2.3	-8.1	-1.3	3.5	18.8
Alaska	1.8	4.1	2.4	0.4	-4.0	0.7	3.8	-0.4
West South Central	4.3	4.1	3.6	2.5	-3.2	1.7	10.3	32.5
Texas	5.3	4.7	4.0	2.9	-2.5	2.2	12.0	40.8
Oklahoma	2.6	2.7	1.9	0.6	-4.0	0.3	6.6	27.9
Arkansas	1.6	1.8	2.9	2.4	-5.0	0.5	3.6	15.4
Louisiana	-0.0	1.7	2.9	1.1	-6.6	-0.3	4.2	-1.4
Mountain	4.0	3.0	2.5	2.7	-4.3	0.9	9.1	26.4
Utah	7.0	3.0	3.2	3.4	-3.1	1.6	10.2	37.3
Colorado	5.5	2.9	2.6	2.6	-4.1	1.0	9.4	34.3
Idaho	2.1	2.4	2.5	2.5	-4.1	0.8	9.6	27.3
Arizona	3.2	2.9	2.4	3.3	-3.6	1.2	10.1	26.0
Nevada	1.0	2.6	2.3	2.5	-8.2	-0.3	8.5	20.7
Montana	-0.5	2.5	2.3	2.2	-5.4	0.4	5.0	19.6
New Mexico	4.1	4.1	2.6	2.0	-3.1	1.4	6.6	11.1

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	2020 Q1	'19 Q4	'19 Q3	'19 Q2	'19 Q1	1-year*	3-year	10-year
continued from previous page . . .								
Wyoming	5.6	4.2	1.3	0.0	-3.6	0.4	5.6	0.9
South Atlantic	2.8	1.7	1.9	2.3	-4.7	0.3	5.9	19.5
South Carolina	3.5	1.8	2.0	2.5	-4.8	0.3	7.2	26.2
Georgia	1.5	1.1	2.3	2.4	-4.7	0.2	6.5	25.6
Florida	4.7	2.0	2.4	2.6	-4.9	0.5	7.8	24.4
District of Columbia	1.1	2.1	1.4	2.0	-4.0	0.4	4.5	17.4
Maryland	1.8	1.5	1.0	2.5	-5.0	-0.0	3.3	16.4
North Carolina	3.3	1.6	2.0	2.4	-5.1	0.1	5.3	16.0
Virginia	2.0	1.9	1.6	2.1	-3.8	0.4	4.9	12.4
West Virginia	-2.2	1.7	0.5	-0.1	-5.0	-0.8	4.3	6.3
Delaware	0.5	1.8	-0.0	2.3	-5.6	-0.4	-0.7	5.4
West North Central	0.9	1.9	2.0	1.7	-3.6	0.5	3.8	17.1
North Dakota	2.2	1.8	1.1	0.5	-2.6	0.2	6.7	53.1
Minnesota	-0.4	2.0	2.0	1.6	-4.0	0.3	4.3	20.9
Nebraska	-0.5	2.4	2.3	2.6	-1.3	1.5	2.8	20.5
South Dakota	-1.6	1.7	1.8	1.6	-2.2	0.7	1.3	18.1
Kansas	-1.1	2.2	2.2	2.1	-3.1	0.8	2.9	15.6
Iowa	2.0	1.1	1.3	1.3	-3.5	0.0	2.1	15.5
Missouri	3.3	2.0	2.4	1.8	-4.7	0.3	4.8	8.5
East North Central	1.4	1.1	1.6	1.8	-5.7	-0.3	3.2	16.6
Michigan	0.1	1.1	1.3	2.3	-6.8	-0.6	2.6	21.2
Ohio	2.3	1.3	1.7	1.6	-5.5	-0.3	3.6	19.7
Wisconsin	1.1	1.1	1.5	2.1	-5.0	-0.1	4.3	16.3
Indiana	-0.2	1.0	2.3	1.1	-5.6	-0.3	2.6	15.4
Illinois	2.2	1.1	1.4	1.9	-5.4	-0.3	3.1	12.3
East South Central	2.0	1.5	2.0	2.2	-5.7	-0.1	4.3	15.7
Tennessee	3.3	1.3	2.4	2.0	-6.2	-0.2	5.3	24.0
Alabama	2.2	1.8	1.7	2.4	-4.8	0.2	5.6	13.1
Kentucky	0.1	1.0	1.5	2.3	-5.8	-0.3	2.0	11.8
Mississippi	1.0	2.3	1.9	2.1	-5.2	0.2	2.8	4.9
New England	4.8	1.3	2.1	1.8	-5.2	-0.0	5.1	14.5
Massachusetts	4.4	1.5	2.2	2.1	-5.1	0.1	7.1	25.0
New Hampshire	8.6	1.4	2.2	2.0	-5.7	-0.1	6.1	18.1
Vermont	5.7	1.3	1.8	2.3	-6.1	-0.3	2.9	10.3
Maine	4.8	0.6	2.1	1.9	-6.3	-0.5	4.3	7.9
Rhode Island	4.8	1.5	1.6	2.2	-6.2	-0.3	2.2	7.0
Connecticut	4.3	1.0	2.1	0.9	-4.6	-0.2	2.0	-0.5
Middle Atlantic	4.5	1.5	1.3	1.5	-7.0	-0.8	3.7	13.8
Pennsylvania	3.3	1.7	2.1	2.1	-5.6	0.0	4.5	17.0
New York	6.0	1.7	0.5	1.4	-8.2	-1.2	3.4	14.4
New Jersey	2.1	0.7	2.3	0.7	-5.5	-0.5	3.4	8.4

Source: Bureau of Economic Analysis

Financial Accounts

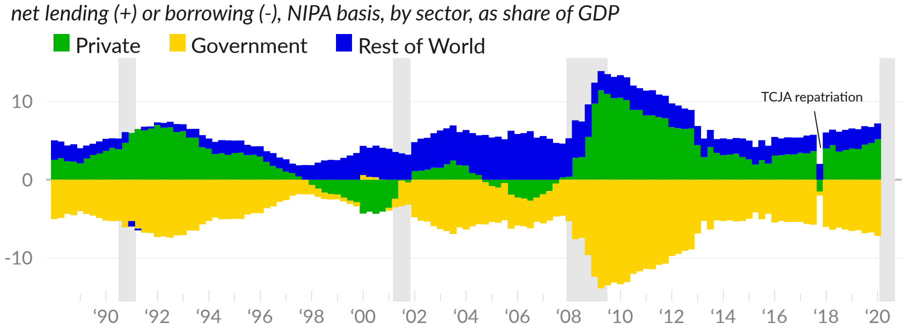
The Federal Reserve reports the balances and transactions in the US **financial accounts**. This includes the flow of funds between sectors in the economy and the various components of balance sheets by sector, such as for households, businesses, and government. The sector-specific data are covered in the section of the chartbook that corresponds to the sector, however, the 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 economy 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.

Sectoral Financial Balance

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



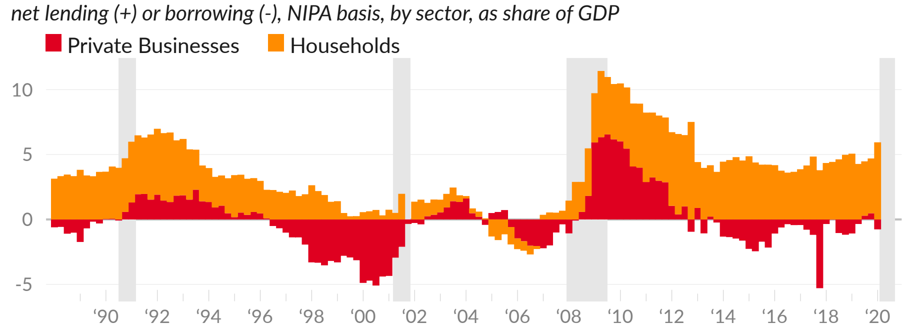
Source: Bureau of Economic Analysis

In 2020 Q1, the US private sector was a net lender (running a surplus) of the equivalent of 5.2 percent of GDP, substantially 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 2.0 percent of GDP in 2020 Q1 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 7.2 percent of GDP, compared to 5.0 percent in 2015.

Within the private sector, households were net lenders of the equivalent of 5.9 percent of GDP in 2020 Q1 (see), while the net financial balance of private businesses–corporate and noncorporate–was equivalent to -0.8 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

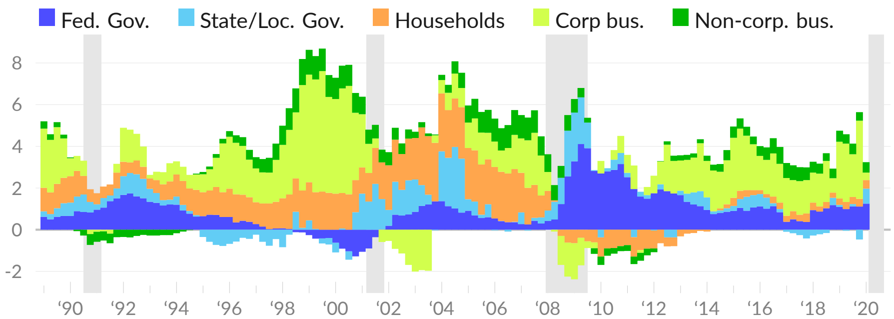
Liabilities

The contribution of different sectors to the **total change in borrowing** can identify potential risks in the domestic economy. 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.

Domestic liabilities increased by 3.2 percent over the year ending 2020 Q1, after adjusting for inflation. Over the past three years, total domestic liabilities increased at an average annual rate of 3.5 percent. The federal government contributed 0.9 percentage point per year on average (see ■), while the state and local government subtracted 0.1 percentage point per year on average (see ■). Households and nonprofits contributed an annual average of 0.3 percentage point over this three year period (see ■), corporate businesses contributed 1.8 percentage points per year on average (see ■), and non-corporate businesses contributed 0.5 percentage point per year on average (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 Q1	'19 Q4	'19 Q3	'19 Q2	'19 Q1	*moving averages* 3-year	10-year	30-year
Total	3.24	5.18	4.13	4.54	4.75	3.50	3.28	3.93
■ Corporate Business	0.36	3.75	2.05	2.80	2.72	1.84	1.61	1.35
Debt Securities	0.29	0.21	0.26	0.21	0.13	0.19	0.33	0.32
Loans	0.58	0.18	0.22	0.24	0.64	0.28	0.01	0.07
■ Non-corporate Business	0.50	0.41	0.51	0.45	0.53	0.53	0.28	0.40
Commercial Mortgages	0.10	0.09	0.08	0.04	0.07	0.12	0.06	0.07
■ Household & Nonprofit	0.41	0.37	0.34	0.34	0.31	0.33	-0.08	0.87
Home Mortgages	0.17	0.17	0.16	0.16	0.16	0.13	-0.29	0.59
Consumer Credit	0.11	0.16	0.17	0.19	0.18	0.16	0.16	0.19
■ State & Local Government	0.72	-0.47	0.11	-0.05	0.10	-0.07	0.14	0.40
■ Federal Government	1.25	1.11	1.12	0.99	1.09	0.86	1.32	0.91

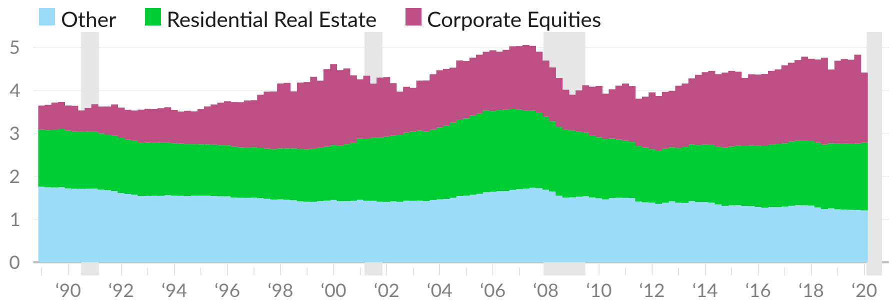
Source: Federal Reserve, Bureau of Economic Analysis

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 4.42 in 2020 Q1 from 3.65 in 1989 Q1. The market value of corporate equities (see) increased to a 1.63 multiple of GDP in 2020 Q1 from 0.56 in 1989 Q1. The market value of residential real estate (see) increased to 1.58 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 1.21 from 1.76 in 1989.

Total US Wealth to GDP Ratio

total US wealth divided by GDP



Source: Federal Reserve

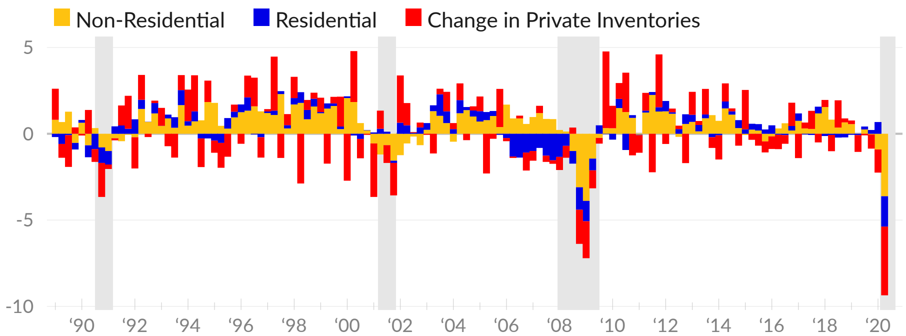
Investment

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 second quarter of 2020, private fixed investment, which does not include inventory investment, totals $3.4 trillion, equivalent to 17.6 percent of GDP. Non-residential (business) fixed investment totals $2.6 trillion, or 13.6 percent of GDP, while residential fixed investment totals $770.5 billion (4.0 percent of GDP). During the quarter, private fixed investment subtracted 5.38 percentage points from real GDP growth. Non-residential fixed investment subtracted 3.62 percentage points, while residential fixed investment subtracted 1.76 percentage points. The change in private inventories subtracted 3.98 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 loosely defined, and touches on demographics, personal income and outlays, residential fixed investment, household balance sheets, home ownership, housing prices, and housing construction and permitting.

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.

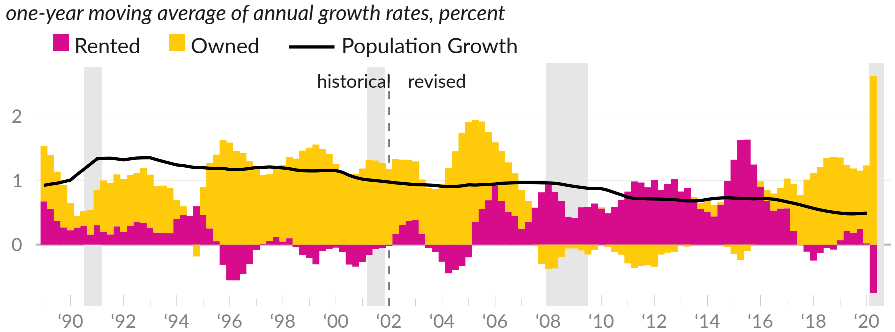
Household Formation

Household formation, measured here as the one-year change in total occupied housing units, can result from a net increase in renters or a net increase in homeowners. Household formation 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, housing formation was often below population growth. Additionally, home ownership decreased as foreclosures converted homeowners into renters.

As of 2020 Q2, there are 126.8 million total occupied housing units in the US, of which 40.8 million (32.1 percent) are rented, and 86.0 million (67.9 percent) are owner-occupied. There was an average annual net total increase of 2.3 million housing units over the year ending 2020 Q2, the result of 924 thousand net fewer renter households and 3.2 million net new owner-occupied households. Over the year ending 2020 Q2, the total number of occupied housing units increased by 1.9 percent, compared to an increase of 1.2 percent in 2020 Q1. Owner-occupied units contributed 2.6 percent to total household formation on average over the year (see ■), compared to a contribution of 0.0 percent from rented units (see ■).

Household Formation by Type

one-year moving average of annual growth rates, percent



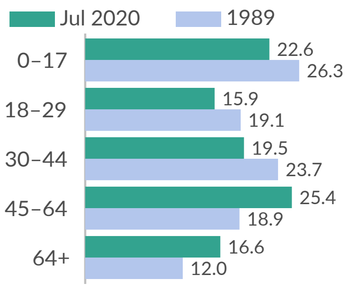
Source: Census Bureau, Housing Vacancies and Homeownership

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



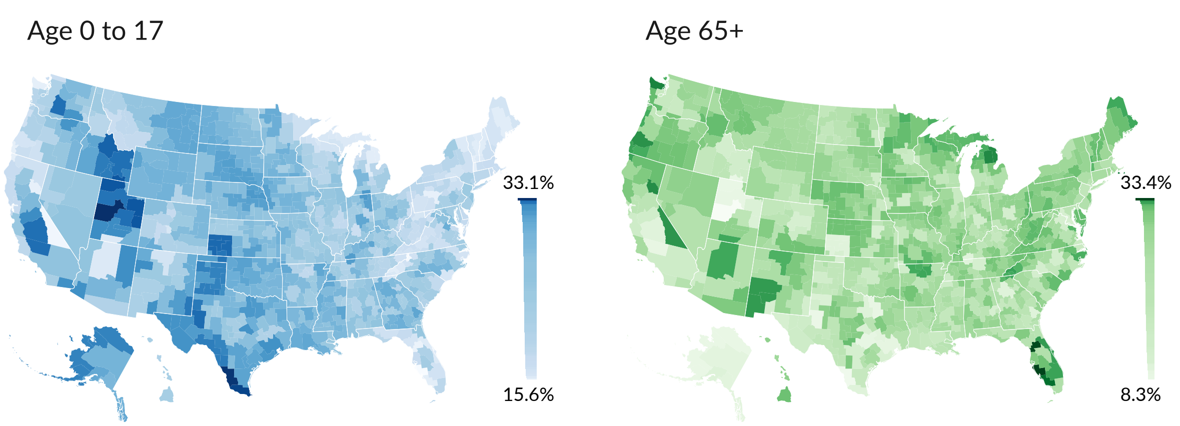
Source: Author's calculations from CPS

The CPS civilian non-institutionalized population is 325 million in the year ending July 2020, with growth of 0.3 percent over the past year, though other Census population growth estimates are around 0.6 percent. By age, 22.6 percent are under the age of 18 and 16.6 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 25.4 percent in the year ending July 2020 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 2018, 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 (33.1 percent), followed by Laredo, TX (32.6 percent), and Brownsville, TX (31.6 percent). The commuter zones with lowest share of the local population under 18 were Sarasota, FL (15.6 percent), Ocala, FL (16.7 percent), and State College, PA (17.1 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 (33.4 percent), followed by Ocala, FL (32.8 percent), and Cape Coral, FL (29.9 percent). The commuter zones with lowest local over-64 population share were Provo, UT (8.3 percent), Laredo, TX (9.7 percent), and Odessa, TX (10.4 percent).

Age Group Share of Commuter Zone Population, 2018



Source: American Community Survey, Dorn

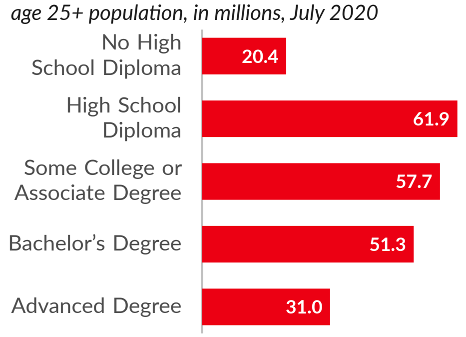
Education

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 textbooks costs, education typically results in 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 July 2020, 82.3 million people over the age of 25, or 37.0 percent of the total, have at least a bachelor's degree, with 31.0 million of those, or 14.0 percent of the total, holding an advanced degree such as a master's degree, medical or law degree, or PhD. An additional 57.7 million people have some college coursework but no degree or have an associate degree. A total of 61.9 million have a high school diploma but no college, while 20.4 million have no high school diploma.

Highest Level of Education

age 25+ population, in millions, July 2020

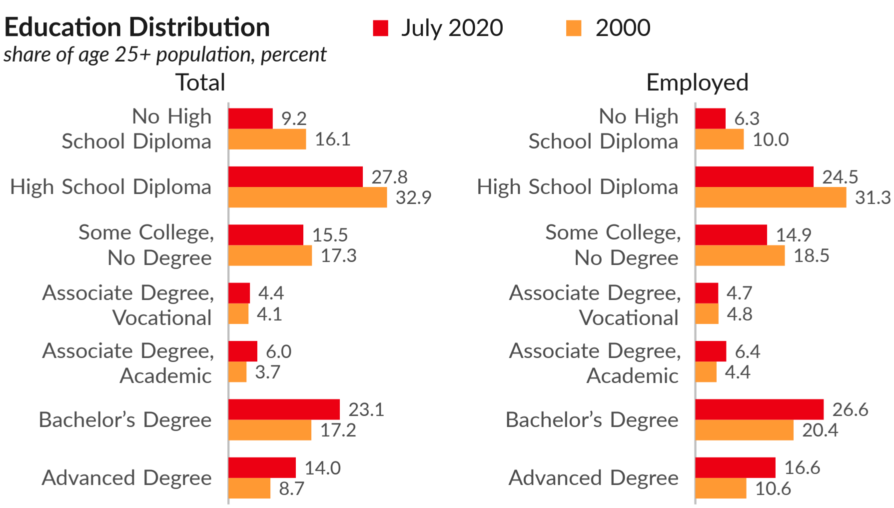


Source: Author's Calculations from CPS

The share of the population with a bachelor's degree or advanced degree increased by 11.2 percentage points since 2000. The increase is even more pronounced among those who are employed; 43.2 percent have a college degree or advanced degree in July 2020, an increase of 12.3 percentage points since 2000. One argument is that households were compensating for a weak labor market and lack of bargaining power by borrowing large sums of money for education. However, given the extent of the increase in education, and the typical wage premium of education, labor income should have increased much more than it actually did.

Education Distribution

share of age 25+ population, percent



Source: Author's Calculations from CPS

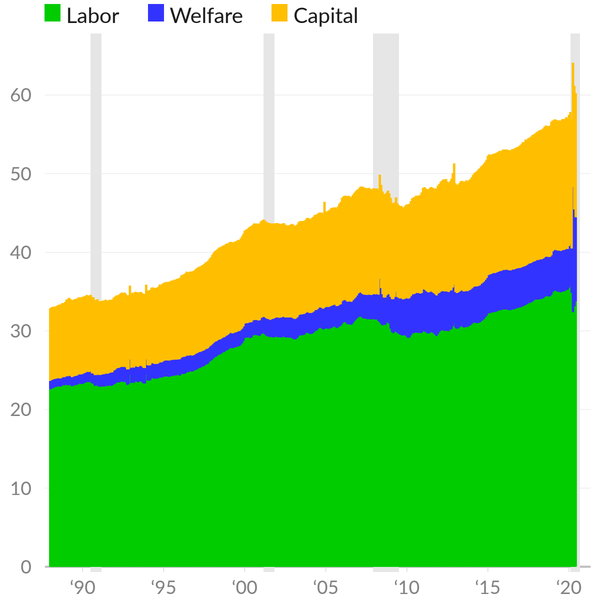
Income to Persons

Inflation-adjusted income is divided into labor income (see ■), which is 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 ■), which is measured as transfers to persons, primarily government social benefits, less contributions to social insurance.

In June 2020, annualized personal income is equivalent to $60,236 per person. Labor income totals $33,737 per person; capital and proprietor income is $15,775 per person; and welfare or transfer income is $10,725 per person.

Personal Income

real per capita income, thousands of US Dollars



Source: Bureau of Economic Analysis; Author

Personal Income by Source

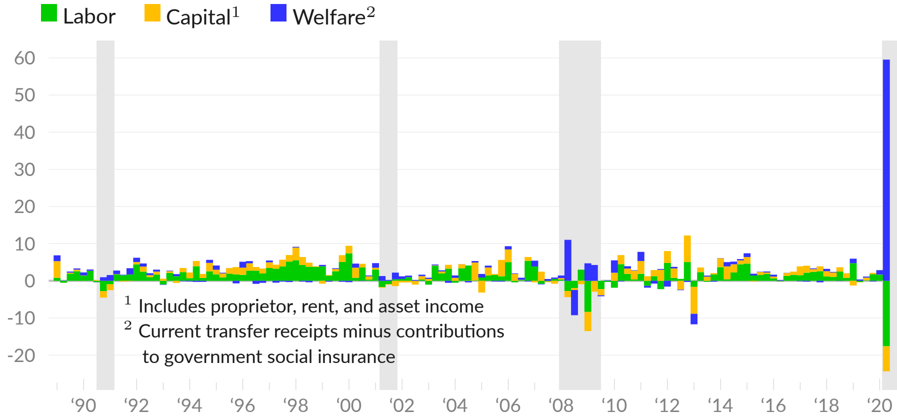
per capita, annualized, June 2020 US Dollars

	Jun '20	May '20	Apr '20	Mar '20	Jun '19	Jun '17
Personal income	60,236	61,164	64,111	56,911	56,785	54,355
■ Labor	33,737	33,130	32,381	34,838	34,980	33,414
Wages and salaries	27,443	26,956	26,307	28,391	28,477	27,157
Supplements	6,293	6,174	6,074	6,447	6,503	6,257
■ Capital	15,775	15,718	15,779	16,433	16,546	15,945
Proprietors' income	4,681	4,457	4,373	4,963	5,012	4,845
Rental income	2,414	2,434	2,443	2,438	2,423	2,301
Personal interest income	4,874	4,958	5,029	5,067	5,177	5,076
Personal dividend income	3,806	3,869	3,934	3,966	3,934	3,723
■ Welfare	10,725	12,315	15,951	5,640	5,258	4,996
Social security	3,268	3,275	3,277	3,255	3,159	2,978
Medicare	2,524	2,521	2,470	2,448	2,403	2,222
Medicaid	2,079	2,062	2,014	1,928	1,901	1,836
Unemployment insurance	4,294	3,974	1,442	226	85	97
Veterans' benefits	434	433	429	424	402	360
Other	2,253	4,121	10,297	1,562	1,506	1,512
Less welfare contributions	-4,265	-4,210	-4,117	-4,341	-4,343	-4,166

Source: Bureau of Economic Analysis

Personal Income

percentage point contribution to real personal income growth



Source: Bureau of Economic Analysis

Aggregate real personal income increased at an annualized rate of 35.17 percent in 2020 Q2. Labor income subtracted 17.62 percentage points from overall growth, capital income subtracted 6.75 percentage points, and welfare income contributed 59.54 percentage points.

Personal Income by Source

percentage point contribution to real personal income growth

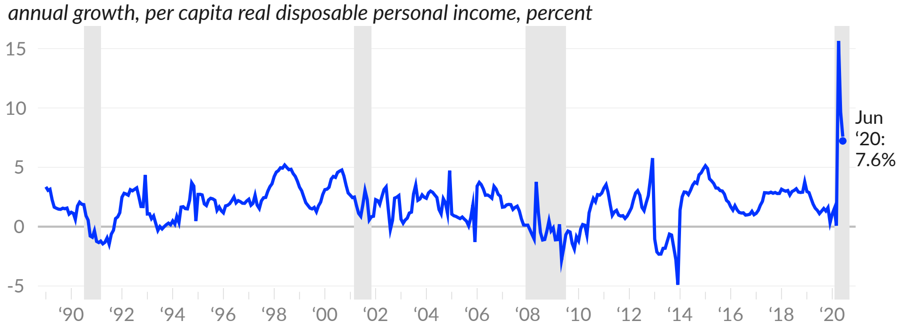
	2020 Q2	'20 Q1	'19 Q4	'19 Q3	'19 Q2	*moving averages* 3-year	10-year	30-year
Personal income	35.17	2.87	1.99	1.13	-0.02	5.21	3.73	3.00
Labor	-17.62	1.64	1.79	0.14	-0.32	0.23	1.16	1.40
Wages and salaries	-15.11	1.65	1.63	0.09	-0.25	0.19	1.01	1.13
Supplements	-2.51	-0.01	0.16	0.05	-0.07	0.04	0.16	0.27
Capital	-6.75	0.03	0.35	0.71	-0.07	0.15	0.97	0.73
Proprietors' income	-5.15	0.06	0.31	0.93	-0.20	-0.17	0.17	0.25
Rental income	0.02	0.09	0.06	0.01	0.11	0.10	0.23	0.20
Personal interest income	-1.01	-0.41	0.11	-0.14	0.44	0.01	0.12	0.02
Personal dividend income	-0.61	0.29	-0.13	-0.08	-0.42	0.21	0.45	0.26
Welfare	59.54	1.20	-0.16	0.29	0.36	4.83	1.59	0.87
Social security	0.32	0.47	0.10	0.09	0.03	0.20	0.17	0.16
Medicare	0.55	0.09	0.11	0.16	0.16	0.20	0.14	0.16
Medicaid	1.28	0.06	-0.11	0.11	0.26	0.14	0.14	0.15
Unemployment insurance	24.36	0.33	0.00	-0.00	-0.02	1.89	0.50	0.21
Veterans' benefits	0.10	0.08	0.04	0.04	0.04	0.05	0.05	0.02
Less welfare contributions	1.53	-0.31	-0.18	0.02	0.06	-0.07	-0.14	-0.18

Source: Bureau of Economic Analysis

The Bureau of Economic Analysis reports an inflation-adjusted one-year change in after-tax income per person (see —) of 7.6 percent in June 2020, 9.7 percent in May 2020, and 1.4 percent in June 2019. Over the past year, the measure has averaged 3.4 percent.

After-Tax Income Growth

annual growth, per capita real disposable personal income, percent



Source: Bureau of Economic Analysis

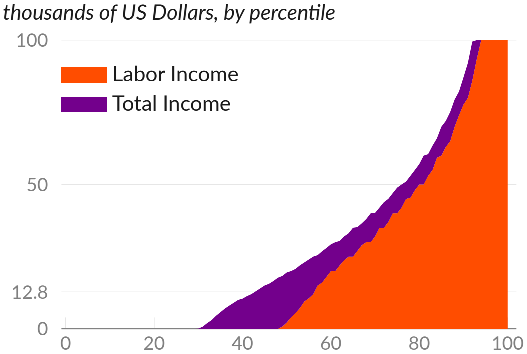
Distribution of Personal Income

Labor income, which includes wages and salaries as well as self-employment income, is the vast majority of personal income. Over calendar year 2018, 52 percent of people have any labor income (see ■). Only 43 percent of people have labor income above the single-person poverty threshold of $12,800.

Total income, labor income less taxes and including welfare and capital income, reaches 71 percent of people (see ■). In most cases, the people who do not receive any income live with people who receive income or receive private transfers. Values of high-earners are not show because of space constraints. The top one percent income threshold is around $420,000.

Distribution of Personal Income, 2018

thousands of US Dollars, by percentile

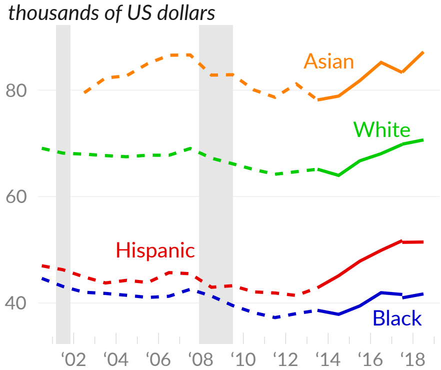


Source: CPS ASEC

Household Income

Given the massive variance in personal income, with half of the population receiving no market income, the sharing of income between people is key to survival. Household income measures the combined income of all people in a given housing unit. Even among individuals who receive market income, this income is distributed very unevenly. Likewise, the share of the household that receives income varies between households. As a result, differences in income between individual households are still massive.

Real Median Household Income
thousands of US dollars



Source: Economic Policy Institute, Census

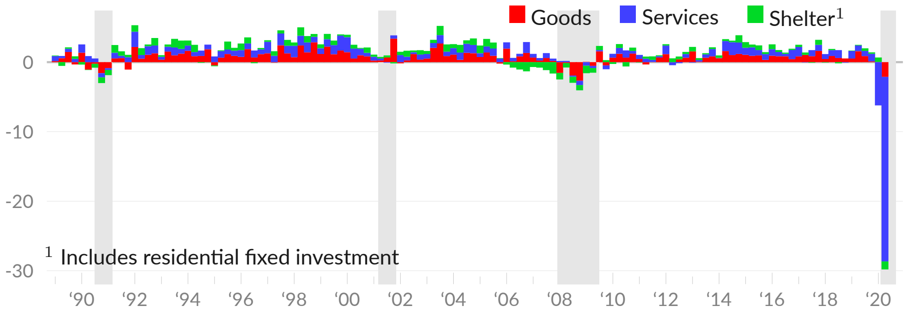
Black median household income in 2018 was $41,692, compared to an inflation adjusted equivalent of $40,963 in 2017. White, non-Hispanic median household income was $70,462 compared to $69,851 in 2017. Hispanic median household income in 2018 was $51,450 compared to $51,390 in 2017. Asian median household income was $87,194 in 2018 and $83,376 in 2017. 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 Expenditures

This section covers household spending on goods (see ■), services excluding housing and utilities (see ■), and shelter (see ■ , calculated as housing services and utilities combined with residential fixed investment). These categories subtracted 28.05 percentage points from GDP growth in 2020 Q2, far below the average subtraction of 1.18 percentage points over the past three years.

Consumer Spending and Residential Investment

percentage point contribution to real GDP growth



Source: Bureau of Economic Analysis

In the the second quarter of 2020, household spending on goods subtracted 2.12 percentage points from GDP growth, household spending on services other than housing and utilities subtracted 26.54 percentage points, and shelter spending and investment subtracted 1.15 percentage points. Spending on health care services subtracted 9.50 percentage points from GDP growth in 2020 Q2 and has subtracted 0.65 percentage point, on average, over the past three years.

Consumer Spending and Residential Investment

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

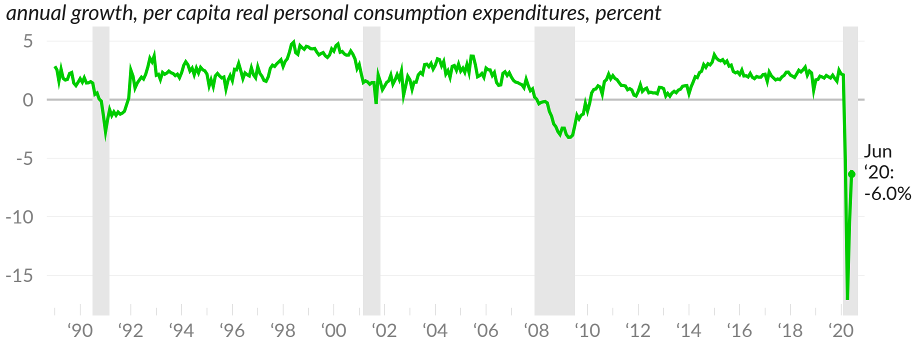
	2020 Q2	'20 Q1	'19 Q4	'19 Q3	'19 Q2	3-year	10-year	30-year
Total	-28.05	-6.23	1.18	1.82	2.57	-1.18	0.72	1.40
■ Goods	-2.12	0.03	0.12	0.87	1.57	0.54	0.67	0.72
Motor Vehicles and Parts	0.15	-0.78	0.08	0.01	0.26	0.01	0.10	0.07
Furniture and HH Equipment	-0.17	-0.07	0.05	0.09	0.16	0.06	0.09	0.08
Recreational Durable Goods	0.77	0.10	0.10	0.27	0.40	0.25	0.19	0.22
Groceries	-0.31	1.33	-0.09	0.23	0.20	0.16	0.10	0.09
Clothes and Shoes	-0.95	-0.75	0.11	-0.04	0.20	-0.07	0.01	0.06
■ Services (ex. Shelter)	-26.54	-6.22	1.08	0.74	0.83	-1.90	-0.11	0.45
Health Care Services	-9.50	-2.00	0.54	0.09	0.44	-0.65	0.01	0.17
Transportation	-2.88	-0.66	0.01	0.15	0.10	-0.21	-0.02	0.03
Recreational	-4.69	-1.05	0.09	-0.03	0.10	-0.41	-0.09	0.02
Food and Accommodations	-5.55	-1.67	0.00	0.11	0.21	-0.49	-0.07	0.02
Financial and Insurance	0.17	-0.11	0.19	0.12	0.00	0.07	0.04	0.13
■ Shelter	-1.15	0.64	0.21	0.38	0.09	0.09	0.27	0.26
Housing Services and Utilities	0.61	-0.04	-0.01	0.21	0.17	0.18	0.16	0.23
Residential Fixed Investment	-1.76	0.68	0.22	0.17	-0.08	-0.09	0.11	0.03

Source: Bureau of Economic Analysis

Consumer spending is also reported on a monthly basis. Inflation- and population-adjusted consumer spending decreased by 6.0 percentover the year ending June 2020 (see —), far below the previous year rate (an increase of 2.1 percent for the year ending June 2019).

Consumer Spending Growth

annual growth, per capita real personal consumption expenditures, percent



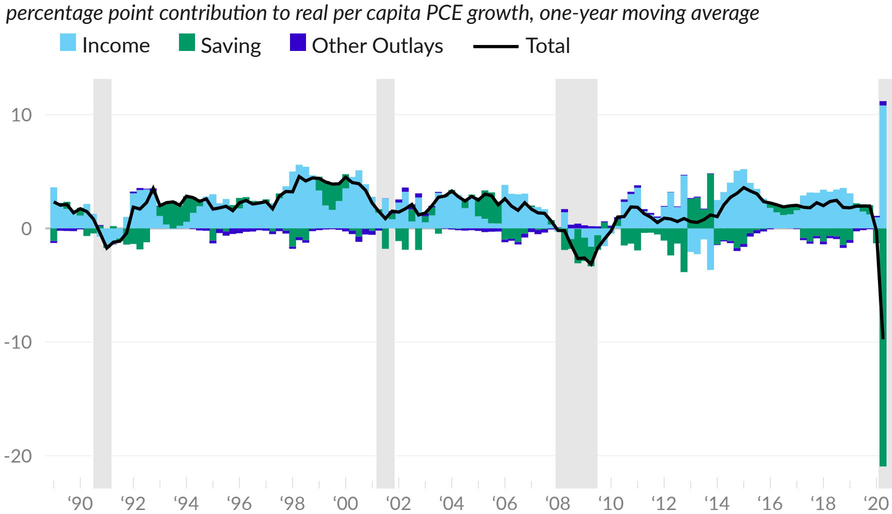
Source: Bureau of Economic Analysis

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 decreased at an average rate of 9.7 percent over the four quarters ending 2020 Q2. Changes to disposable income added 10.8 percentage points, changes to saving subtracted 20.9 percentage points, and changes to other outlays added 0.4 percentage points. Over the past three years, real per capita consumer spending growth has averaged -1.8 percent, with income growth contributing an average of 5.3 percentage points and saving subtracting an average of 7.1 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 referred to as the *personal saving rate*. Households use savings to handle unexpected expenses or cover expenses when income falls. 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 June 2020, the Bureau of Economic Analysis reports a rate of personal saving of 19.0 percent (see —). Since February 2020, the personal saving rate increased by a total of 10.7 percentage points.

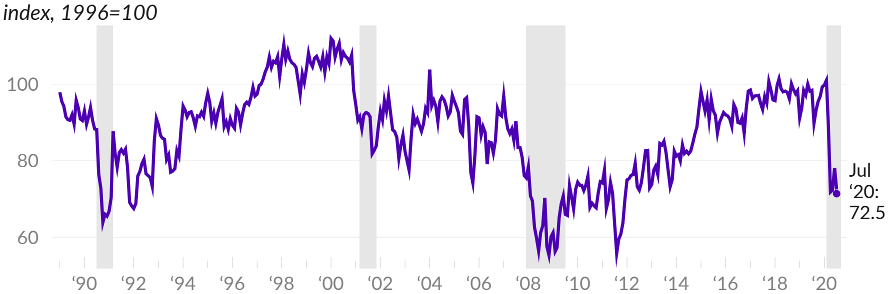
Personal Saving Rate
personal saving as a share of disposable personal income

Source: Bureau of Economic Analysis

Consumer Sentiment

The University of Michigan conducts a regular monthly survey used 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 July 2020, the latest value of the consumer sentiment index is 72.5, compared to 78.1 in June 2020 and 98.4 in July 2019.

Consumer Sentiment
index, 1996=100



Source: University of Michigan

Household Balance Sheets

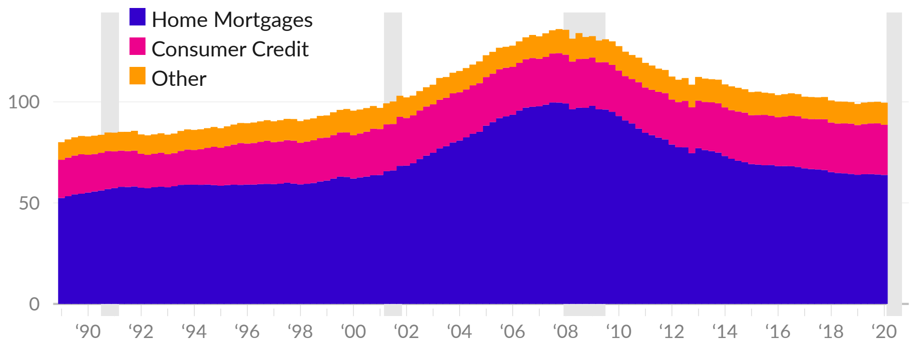
Liabilities

The Federal Reserve reports total liabilities of households and nonprofits of $16.63 trillion in 2020 Q1. The vast majority–$10.66 trillion or 64.1 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 $4.15 trillion (24.9% 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 99.6 percent in 2020 Q1 from its housing-bubble peak of 136.0 percent in 2007 Q4. Over the past three years, nominal household and nonprofit debt has increased 10.8 percent while nominal disposable personal income has increased 23.0 percent. As a result, the ratio of household and nonprofit debt to disposable personal income has fallen by 3.0 percentage points.

Household and Nonprofit Debt

by type, as share of disposable personal income

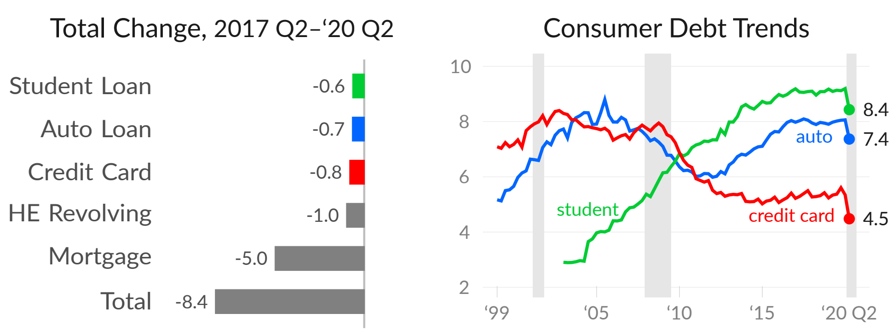


Source: Federal Reserve and Bureau of Economic Analysis

Federal Reserve Bank of New York (FRBNY) analysis of Equifax data shows $14.3 trillion in total consumer debt in 2020 Q2, which is equivalent to 78.2 percent of disposable personal income. Over the past three years, total consumer debt has increased by $1.43 trillion compared to an increase of $3.41 trillion in disposable personal income. As a result, the ratio of total consumer debt to disposable personal income has fallen by 8.4 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 $10,151 billion in 2020 Q2, equivalent to 55.7 percent of disposable personal income (DPI). Student loans totalled $1,537 billion, or 8.4 percent of DPI; auto loans totalled $1,343 billion (7.4 percent of DPI); and credit card debt totalled $817 billion (4.5 percent of DPI).

Over the past three years, the ratio of total mortgage debt to disposable personal income fell by 6.0 percentage points, compared to a decrease of 0.6 percentage points for student loans, a decrease of 0.7 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 Q2	2020 Q1	'20 Q2	'20 Q1	'17 Q2	'13 Q1	'03 Q1
Financial Accounts Total*	–	$16.63T	–	99.6	102.4	112.3	108.5
Mortgage Debt Total	–	$10.66T	–	63.8	66.7	77.1	74.8
Consumer Credit	–	$4.15T	–	24.8	24.8	23.6	24.0
Other	–	$1.83T	–	10.9	10.9	11.7	9.7
Consumer Credit Panel Total	$14.27T	$14.30T	78.2	85.6	86.6	90.9	87.2
Mortgage Debt Total	$10.15T	$10.10T	55.7	60.5	61.7	68.7	62.5
Mortgage	$9.78T	$9.71T	53.6	58.2	58.6	64.2	59.6
Home Equity Revolving	$0.38T	$0.39T	2.1	2.3	3.0	4.5	2.9
Consumer Credit	$4.12T	$4.20T	22.6	25.2	24.9	22.2	24.7
Auto Loan	$1.34T	$1.35T	7.4	8.1	8.0	6.4	7.7
Credit Card	$0.82T	$0.89T	4.5	5.3	5.3	5.3	8.3
Student Loan	$1.54T	$1.53T	8.4	9.2	9.1	8.0	2.9
Other	$0.42T	$0.43T	2.3	2.6	2.6	2.5	5.8

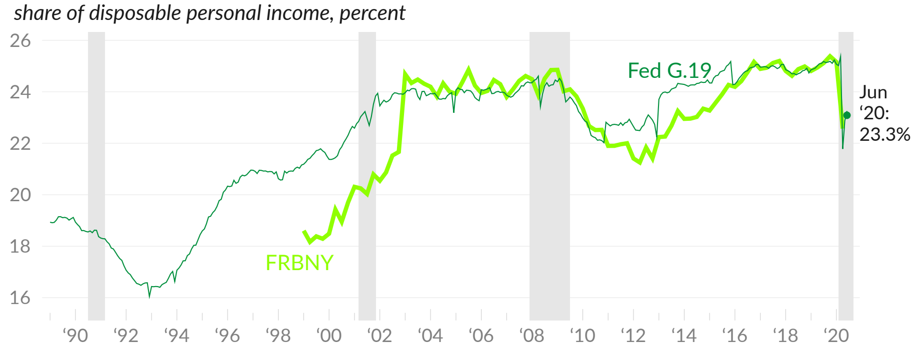
Source: Federal Reserve, Federal Reserve Bank of New York, Bureau of Economic Analysis

Consumer Credit

The Federal Reserve also reports consumer credit credit on a monthly basis. Consumer credit totals $4.12 trillion US dollars on a seasonally-adjusted and annualized basis in June 2020. Over the past year, consumer credit increased by 0.9 percent, while after-tax income increased by 8.9 percent. As a result, the ratio of consumer credit to disposable income decreased by a total of 1.8 percentage points. In June 2020, total consumer credit is equivalent to 23.3 percent of annualized June 2020 disposable income (see —).

The latest comparable figure from the FRBNY data, which covers 2020 Q2, shows consumer credit is equivalent to 22.6 percent of one year of disposable personal income (see —). Over the past year, the ratio decreased by a total of 2.4 percentage points.

Consumer Credit
share of disposable personal income, percent

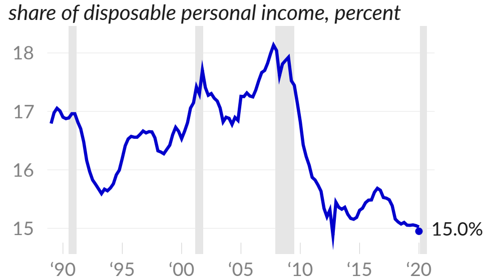


Source: Federal Reserve; FRBNY

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 reports financial obligations as a share of disposable personal income. As of 2020 Q1 the financial obligations ratio is 15.0 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

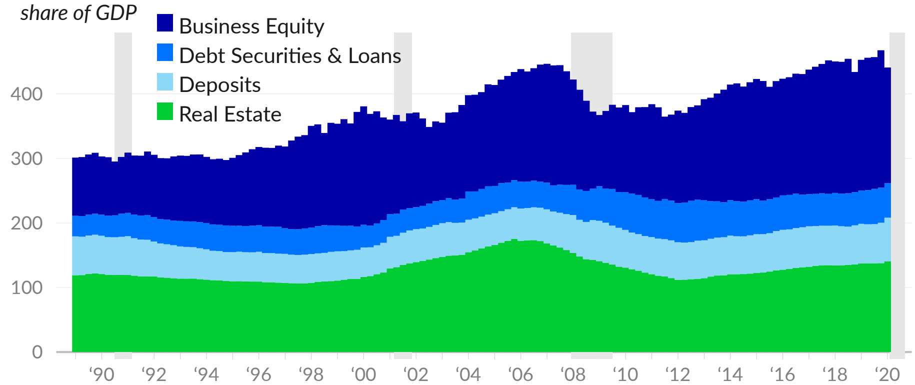
Assets of households and nonprofits were valued at $127.4 trillion in 2020 Q1, equivalent to 592 percent–or 5.92 years–of GDP. Of this, $40.4 trillion, or 31.7 percent of the total, are tangible assets and $87.0 trillion, or 68.3 percent, are financial assets.

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 $30.3 trillion in 2020 Q1, equivalent to 1.41 years of GDP (see ■). Consumer durable goods have a replacement value of $5.8 trillion, or 0.27 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 Q1.

Financial assets include equity in businesses–corporate and non-coporate–with a market value of $38.6 trillion, or 1.8 years of GDP (see ■), in 2020 Q1. Debt securities and loan assets total $11.5 trillion, or 0.53 years of GDP (see ■). Cash and deposits, including money market accounts, total $14.5 trillion, or 0.68 years of GDP (see ■). All other financial assets total $22.3 trillion.

Selected Household and Nonprofit Assets

share of GDP

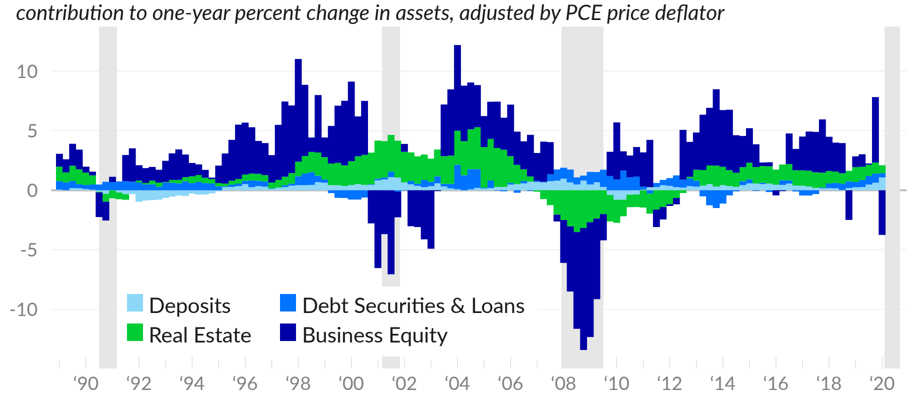


Source: Federal Reserve, Bureau of Economic Analysis

Household and nonprofit assets decreased in value by 1.4 percent over the year ending 2020 Q1. Owner-occupied real estate contributed 0.7 percentage points to total growth, and business equity subtracted 3.8 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 Q1	2020 Q1	2019 Q1	One-year	Three-year	20-year
Total Assets	$127.4	591.6	602.9	-1.4	2.3	2.8
Non-financial assets	40.4	187.7	183.2	2.9	4.1	2.9
Owner-occupied real estate	30.3	140.7	137.4	2.9	4.4	3.1
Consumer durable goods	5.8	26.9	26.5	2.0	1.9	1.4
Nonprofit assets	4.3	20.0	19.3	4.3	4.9	4.2
Financial assets	87.0	403.9	419.7	-3.3	1.5	2.8
Deposits, incl. money market	14.5	67.5	61.3	10.6	4.8	4.1
Debt securities and loans	11.5	53.3	51.4	4.2	4.7	4.2
Business equity	38.6	179.3	202.7	-11.1	-0.3	2.0
Corporate equities	26.1	121.4	146.8	-16.9	-2.3	1.5
Noncorporate business equity	12.5	57.9	55.9	4.0	4.8	3.3

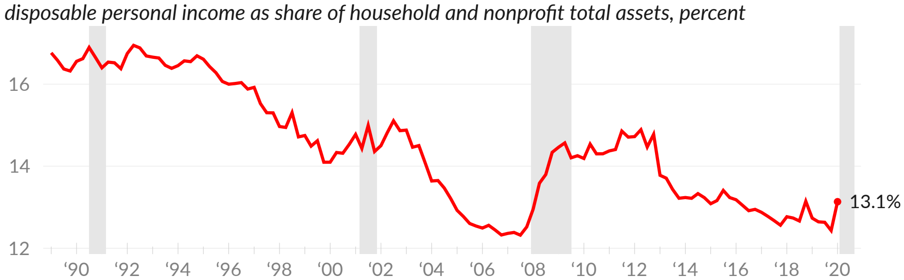
Source: Federal Reserve, Bureau of Economic Analysis

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 Q1, disposable income was equivalent to 13.1 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

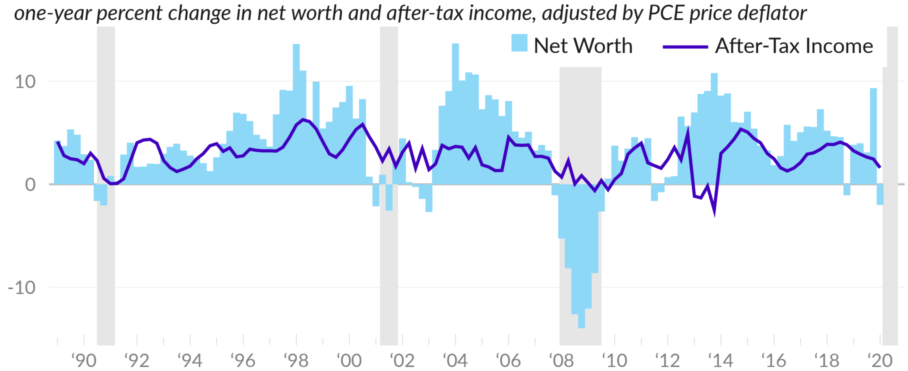
Net Worth

The market value of assets of households has risen much faster than their total liabilities, causing a **substantial increase in net worth**. Net worth is an aggregate measure of the financial position of households, measured as total assets minus total liabilities. In 2020 Q1, household and nonprofit institution net worth was $110.8 trillion, equivalent to 6.6 years of disposable personal income; the result of total assets of $127.4 trillion and total liabilities of $16.6 trillion.

In 2020 Q1, inflation-adjusted net worth decreased by 2.0 percent (see), and inflation adjusted after-tax income increased by 1.6 percent (see –). Over the past three years, real net worth grew at an average rate of 4.2 percent, while real after-tax income grew at an average rate of 3.1 percent

Net Worth and After-Tax Income Growth

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

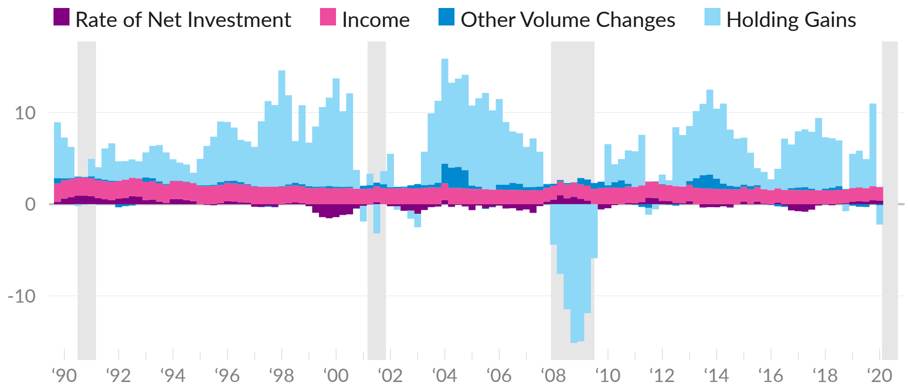


Source: Federal Reserve, Bureau of Economic Analysis

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

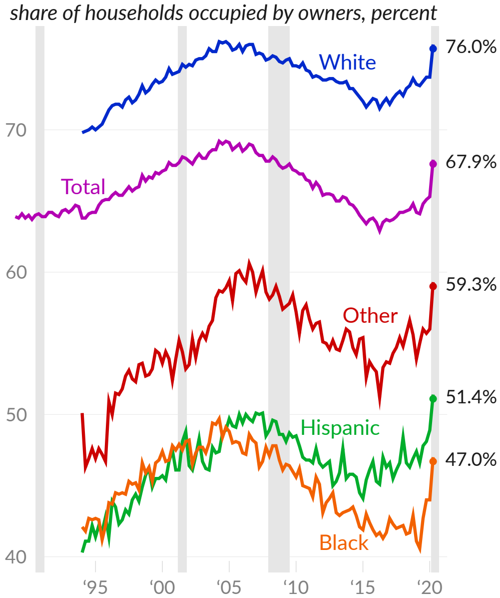
In the the first quarter of 2020, holding gains subtracted 2.1 percentage points from the -0.3 percent change in net worth. Income invested at the 1989-onward average rate of 9.9 percent would have contributed 1.5 percentage points; an additional 0.4 percentage points were added as household net investment was 12.6 percent of disposable person income in 2020 Q1. Other volume changes subtracted 0.1 percentage points. Over the past three years, nominal one-year growth of net worth averaged 6.1 percent. Holding gains contributed 4.6 percentage points on average; net investment of income contributed 1.9 percentage points; and other volume changes did not contribute significantly.

Homeownership

The **homeownership rate** measures the percent of 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 Q2, the Census Bureau reports a rate of home-ownership of 67.9 percent (see —). Over the past three years, the overall US homeownership rate increased by a total of 4.2 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 (76.0 percent in 2020 Q2) of non-Hispanic white households own their home (see —), compared to fewer than half of black and Hispanic households.

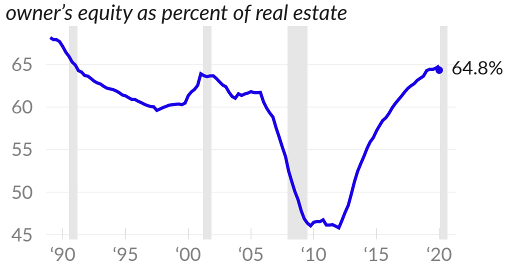
During the housing bubble, the homeownership rate for black households increased by nearly ten percentage points, peaked at 49.7 percent in the second quarter of 2004, and fell to 40.6 percent in 2019 Q2. The current homeownership rate for black households is 47.0 percent, as of 2020 Q2 (see —). The homeownership rate for Hispanic households of any race is 51.4 percent in 2020 Q2, in line with the 51.4 percent peak rate in the second quarter of 2020 (see —).

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 Q1, the Federal Reserve reports owners' equity is 64.8 percent of residential real estate (see —). Over the past three years, the owners' equity share increased by a total of 3.5 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

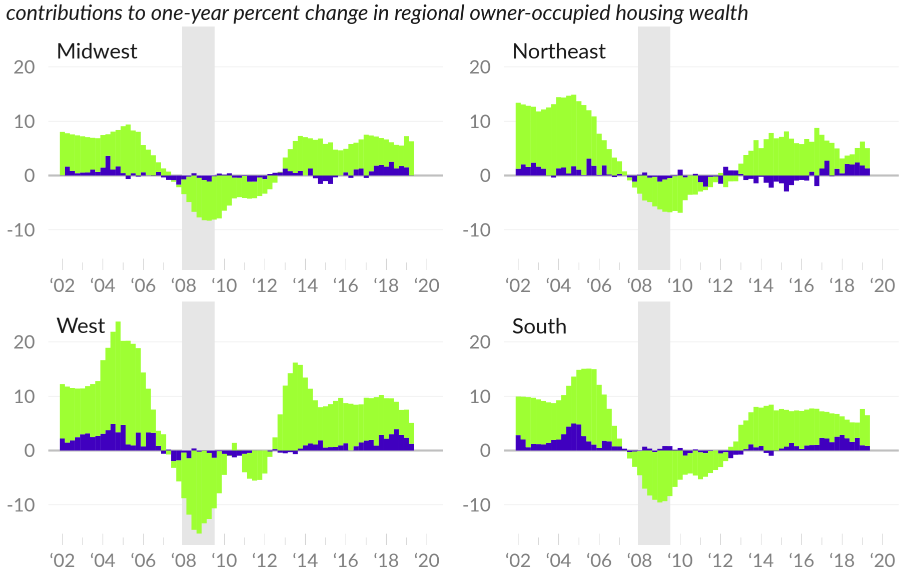


Source: Federal Reserve

Housing

Owner-Occupied Housing Wealth

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

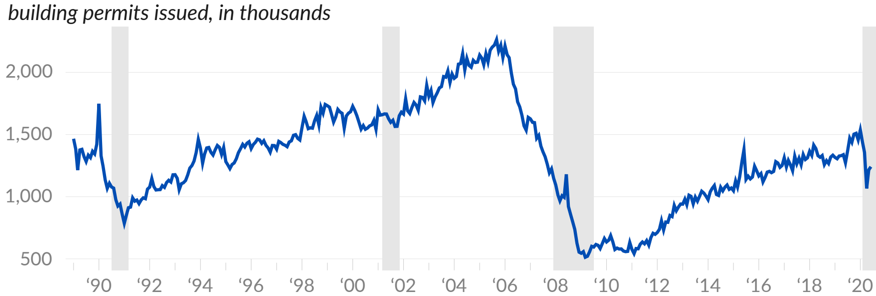


Source: Federal Reserve and Census Bureau

The Census Bureau tracks the issuance of new residential building permits, which offer insight into planned residential construction. In June 2020, a seasonally-adjusted annual rate of 1,241,000 new residential housing units were authorized by building permits (see —). Permits issued increased by 25,000 (2.1 percent) over the previous month, decreased by 32,000 (-2.5 percent) over last June, and decreased by 137,000 (-9.9 percent) total over the past five years.

Residential Construction

building permits issued, in thousands

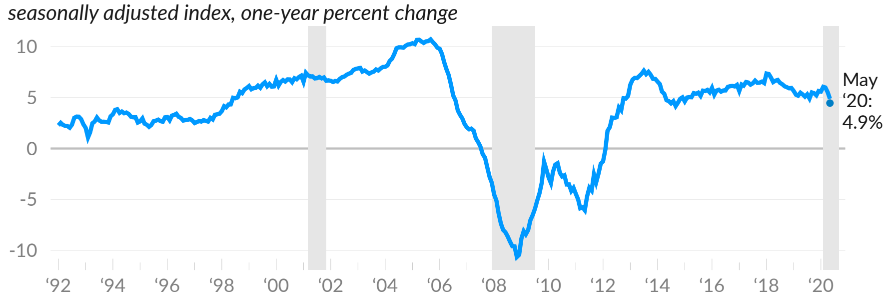


Source: Census Bureau

The Federal Housing Finance Agency (FHFA) housing price index (see —) increased by 4.9 percent over the year ending May 2020. Among Census Divisions, the fastest one-year housing price index growth rate in May 2020 was 6.3 percent in the Mountain Division, which includes Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, and Wyoming

House Price Index

seasonally adjusted index, one-year percent change



Source: Federal Housing Finance Agency

Housing Price Growth

seasonally adjusted, one-year percent change

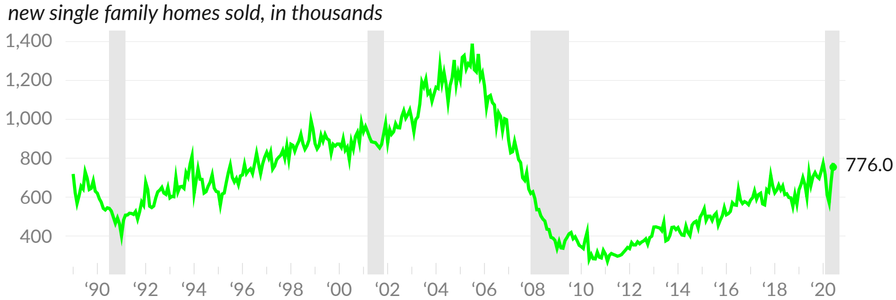
	May '20	Apr '20	Mar '20	Feb '20	May '19	May '18	May '17	'03–'05 Average	'09–'12 Average
Mountain	6.3	6.8	8.6	8.3	7.4	9.2	8.1	11.1	-4.2
East South Central	5.8	5.9	6.5	6.1	5.0	6.9	5.4	5.1	-1.6
West North Central	5.0	5.3	4.6	5.9	4.9	5.7	5.8	5.4	-1.1
East North Central	5.0	5.9	5.6	5.4	5.6	6.3	6.2	4.3	-2.3
South Atlantic	4.9	5.2	6.5	6.8	5.8	7.4	6.8	11.3	-3.7
United States	4.9	5.5	6.0	6.1	5.3	6.7	6.5	9.2	-2.5
West South Central	4.7	5.1	4.4	4.6	4.4	5.0	6.5	4.3	0.3
Middle Atlantic	4.6	5.1	5.5	5.7	4.6	5.6	4.1	11.3	-2.2
Pacific	4.0	5.5	6.2	6.5	5.0	7.5	8.5	18.4	-3.9
New England	3.7	5.3	6.6	4.6	4.5	6.0	5.4	10.3	-2.2

Source: Federal Housing Finance Agency

In June 2020, the Census Bureau report seasonally-adjusted single family new homes sales totalling 776,000 (see —). Over the past year, new homes sales was virtually unchanged.

New Home Sales

new single family homes sold, in thousands

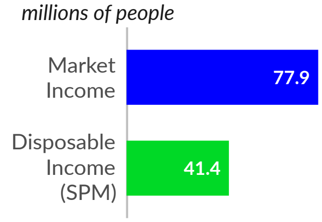


Source: Census Bureau

Poverty

In 2018, income from labor and capital ownership, called *market income*, was below the Census Bureau threshold for poverty for 77.9 million people in the US. Disposable income subtracts taxes and includes market income plus income from government programs and tax credits. According to the Census Bureau Supplemental Poverty Measure (SPM), **41.4 million people are in poverty** after taxes and transfers. Government programs and tax credits moved the income of 36.5 million people above the poverty threshold.

In Poverty, 2018
millions of people

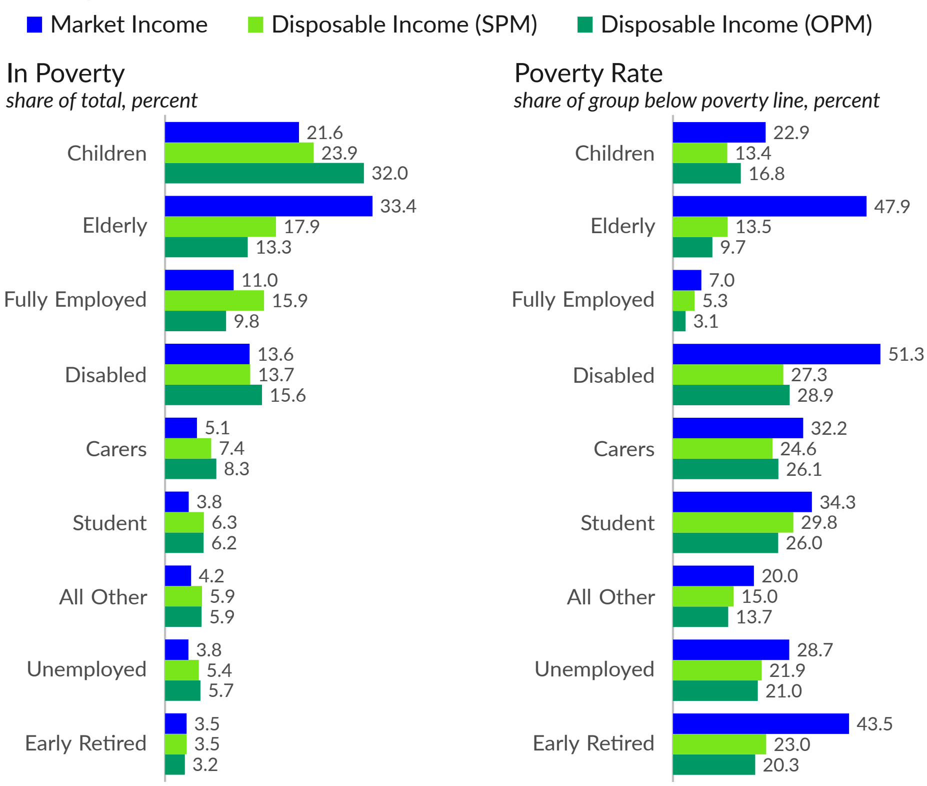


Source: CPS ASEC

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 children, elderly, disabled, caregivers, and students**. These groups represent 69.2 percent of those in poverty in 2018. 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.

Poverty Measures, 2018

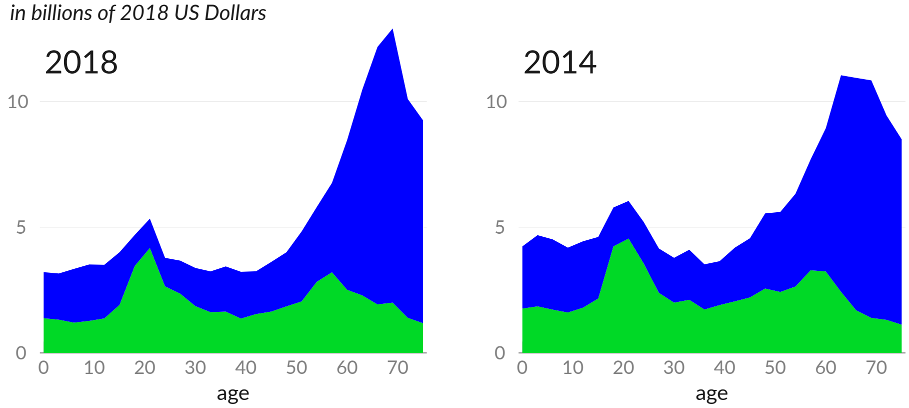


Source: CPS ASEC; Author's Replication of Bruenig, see

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 2018, students, caregivers, and the disabled had the highest rates of poverty. Those fully-employed have a very low rate of poverty. The elderly also have a much lower poverty rate as the result of Social Security.

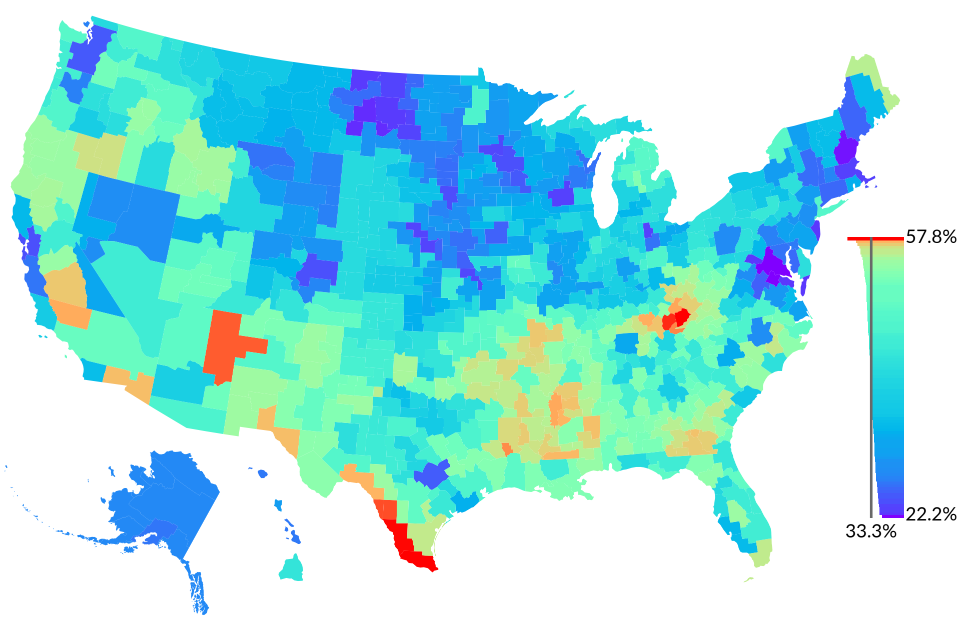
By age, market income (see ■) leaves the elderly particularly vulnerable to poverty, as they are not as likely to have labor income. After social benefits and taxes (disposable income [see ■]), the elderly have much lower rates of poverty than other age cohorts. Higher survivorship for the wealthy also 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
in billions of 2018 US Dollars



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

Share of local population in bottom third of housing-adjusted income, 2018
Share of commuting zone householders with after-housing-expense annual income below $13,573



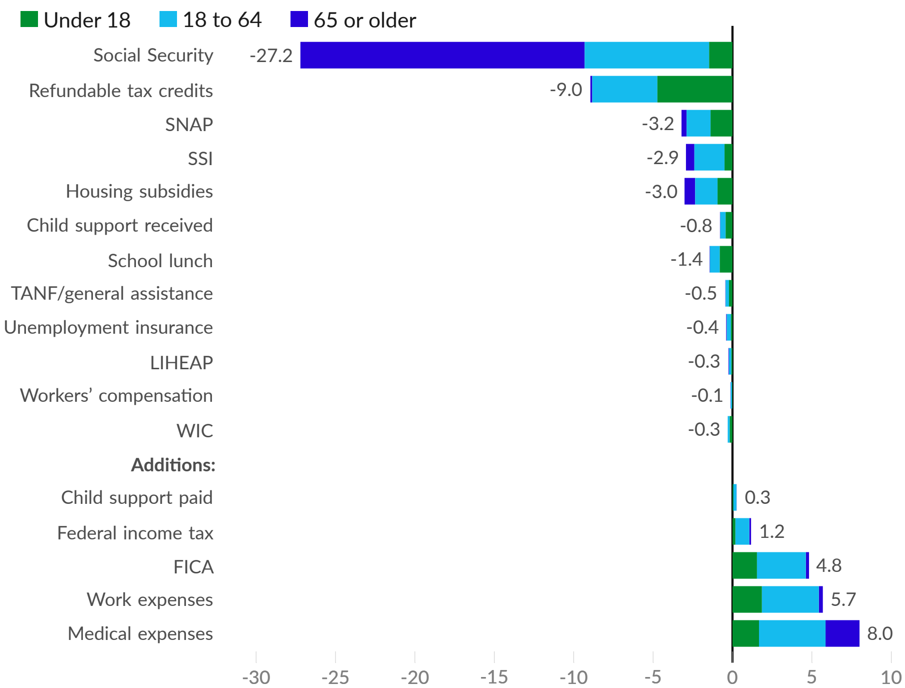
Source: American Community Survey

The Census Bureau reports 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 2018, Social Security lifted income above the poverty line for 27.2 million people, by far the most effective program for reducing poverty. Refundable tax credits, such as the earned income tax credit and child tax credit, lifted nine million people out of poverty. These tax credits are phased-in (not fully-refundable), meaning they do not reach the poorest of poor people. As a result, phased-in tax credits have more impact on the poverty headcount than on poverty, relative to programs designed to help the poorest of the poor.

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 eight million people to fall below the poverty line. Work expenses additionally put 5.7 million people in poverty.

Effect of Individual Elements on Poverty Headcount

individual element effect on number of people in poverty, millions, 2018



Source: Census Bureau Supplemental Poverty Measure

Businesses

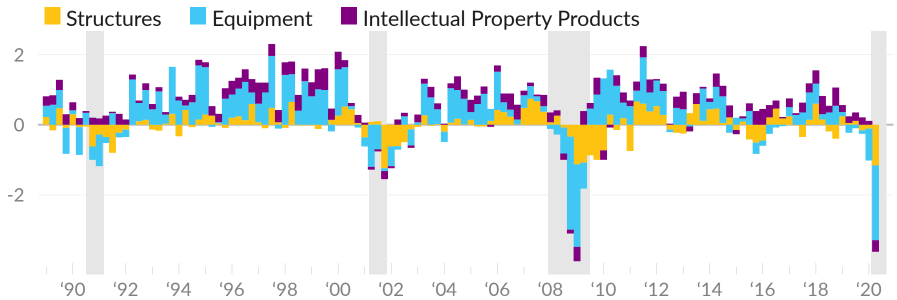
The factories, offices, and equipment that workers use to produce goods and services are all important to the economy. This section looks at the loosely defined business sector, with data covering business investment, retail sales, industrial production, corporate profits, and the financial activities of businesses.

Fixed Investment

When businesses purchase items with a useful life of more than one year it is considered an investment, an exchange of assets rather than an expense. **Investments in fixed assets make workers more productive**, as they allow businesses to produce goods and services per hour of work. Business investments in fixed assets are grouped broadly as structures (see ■), equipment (see ■), and intellectual property products (see ■).

Business Fixed Investment

percentage point contribution to real GDP growth



Source: Bureau of Economic Analysis

Business investment subtracted 3.62 percentage points from GDP growth in 2020 Q2, far below the average contribution of 0.11 percentage point over the past three years. In 2020 Q2, investment in structures subtracted 1.16 percentage points from GDP growth, investment in equipment subtracted 2.13 percentage points, and investment in intellectual property products subtracted 0.33 percentage point.

Business Investment

percentage point contribution to real GDP growth

	2020 Q2	'20 Q1	'19 Q4	'19 Q3	'19 Q2	*moving averages* 3-year	10-year	30-year
Total	-3.62	-0.91	-0.04	0.25	0.01	0.11	0.51	0.49
■ Structures	-1.16	-0.11	-0.16	0.11	0.05	-0.08	0.05	-0.00
■ Equipment	-2.13	-0.91	-0.10	-0.10	-0.23	-0.03	0.24	0.29
Information processing	0.40	-0.25	-0.02	-0.01	0.02	0.10	0.12	0.21
Computers and peripherals	0.32	-0.11	0.08	-0.05	0.11	0.06	0.03	0.11
Industrial equipment	-0.28	-0.07	-0.12	0.02	0.01	0.02	0.05	0.02
Transportation equipment	-1.79	-0.50	0.12	-0.13	-0.32	-0.15	0.05	0.04
■ Intellectual property products	-0.33	0.11	0.21	0.24	0.19	0.22	0.21	0.20
Software	-0.02	0.18	0.15	0.16	0.08	0.15	0.13	0.12
Research and development	-0.21	-0.04	0.06	0.07	0.11	0.07	0.08	0.07

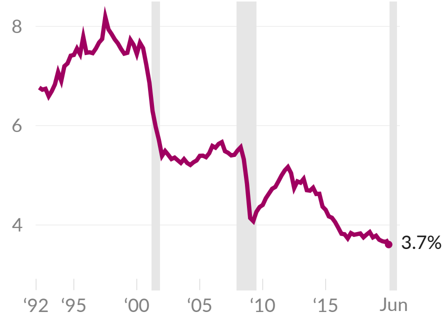
Source: Bureau of Economic Analysis

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 $64 billion in June 2020, equivalent to 3.7 percent of GDP (see –). New orders decreased by 3.2 percent over the past year.

New Orders for Core Capital Goods

nondefense capital goods ex-aircraft, share of GDP



Source: Census Bureau

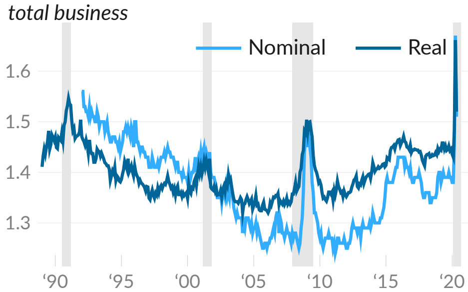
Inventories

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 reports an inflation adjusted indicator of the ratio of inventories to sales in manufacturing and trade businesses (see –) as part of the underlying details tables.

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

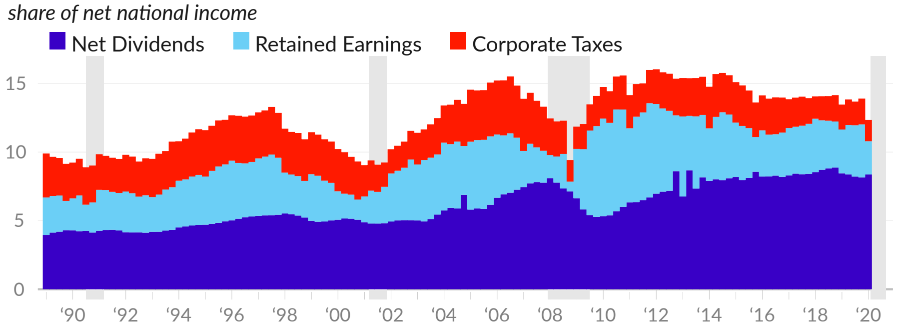
Census reports the nominal ratio of inventories to sales for the total business sector (see –). In May 2020, the ratio of inventories to sales was 1.51, compared to 1.67 in April 2020, and 1.40 in May 2019. The inflation adjusted version from BEA shows inventories at 1.52 times sales in May 2020, compared to 1.66 in May 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 first quarter of 2020, aggregate corporate profits were $2.04 trillion, or 12.3 percent of net national income. Of this, $1.38 trillion, equivalent to 8.4 percent of net national product, were paid out as dividends (see ■), $400 billion were retained (see ■), and $256 billion went to corporate income tax (see ■).

Destination of Corporate Profits

share of net national income

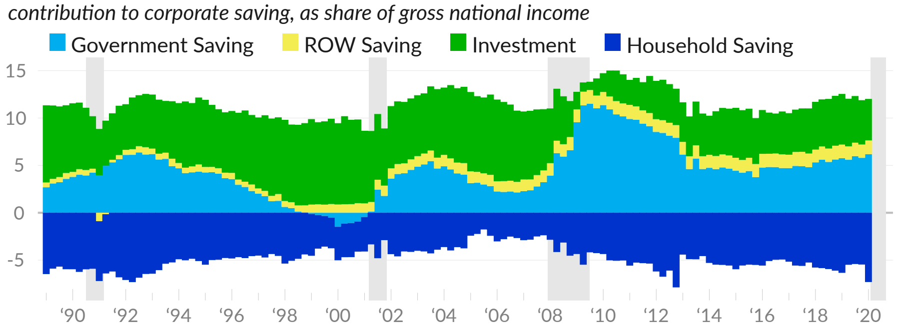


Source: Bureau of Economic Analysis

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



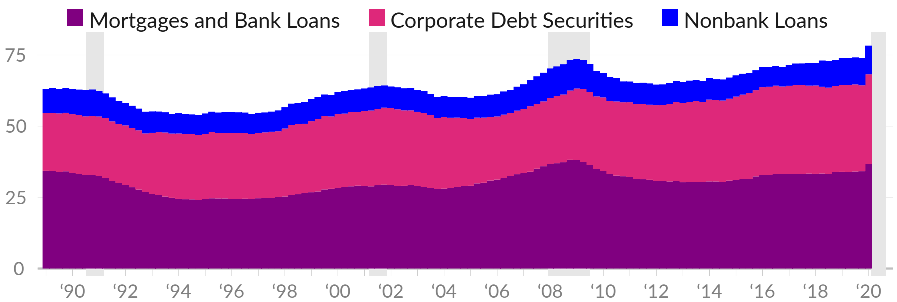
Source: Bureau of Economic Analysis

Business Debt

As of 2020 Q1, nonfinancial business debt–the debt security and loan liabilities of nonfinancial businesses–both corporate and non-corporate–totals $16,865 billion, with $10,548 billion (62.5%) 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 6.8 percentage points to 78.3 percent in 2020 Q1 from 71.5 percent in 2017 Q1. The vast majority of the increase, 2.8 percentage points, comes from nonbank loans (see ■).

Nonfinancial Business Debt

by type, as share of GDP



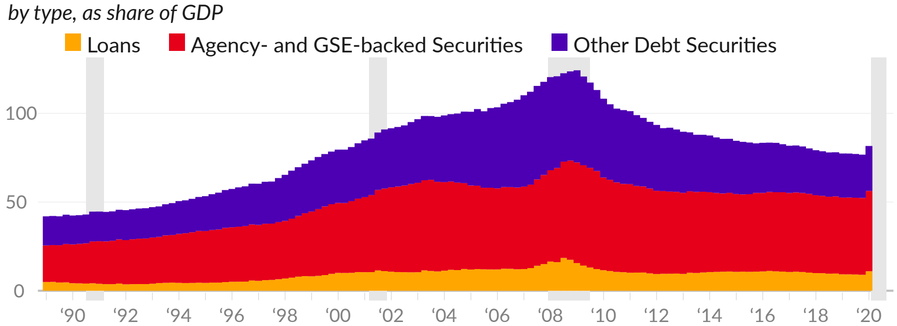
Source: Federal Reserve and Bureau of Economic Analysis

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 81.6 percent in 2020 Q1 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

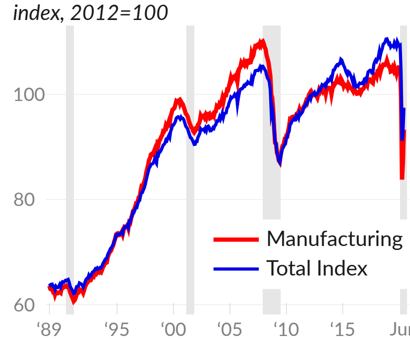
Industrial Production

A monthly index produced by the Federal Reserve shows industrial production decreased by 10.8 percent over the year ending June 2020, following a decrease of 15.4 percent over the year ending May 2020. One-year growth in manufacturing production was -11.2 percent in June 2020, and manufacturing subtracted 8.4 percentage points from the overall change in industrial production. Over the same period, mining subtracted 2.3 percentage points from the overall change, and electric and gas utilities contributed 0.1 percentage point.

By market group, production of consumer goods subtracted 2.0 percentage points from one-year industrial production growth in June 2020. Production of business equipment subtracted 2.0 percentage points, production of nonindustrial supplies subtracted 1.5 percentage points, and production of materials subtracted 5.2 percentage points.

Industrial Production

index, 2012=100



Source: Federal Reserve

Industrial Production Growth

One-year growth

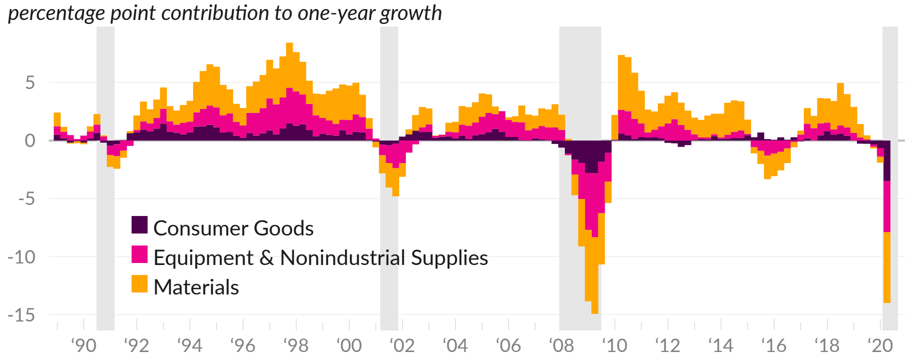
	contribution to total				*rate, percent*			
	Jun '20	May '20	Apr '20	Jun '19	Jun '20	May '20	Apr '20	Jun '19
Total index	-10.8	-15.4	-16.3	1.0	-10.8	-15.4	-16.3	1.0
Manufacturing	-8.4	-12.3	-14.2	0.1	-11.2	-16.7	-19.7	0.2
Durable manufacturing	-5.3	-7.9	-9.1	0.5	-14.3	-22.9	-27.6	1.3
Motor vehicles & parts	-1.2	-1.5	-0.9	0.1	-24.6	-62.2	-82.4	1.6
Nondurable manufacturing	-2.7	-3.7	-4.2	-0.3	-7.4	-9.8	-11.2	-0.8
Mining	-2.3	-2.1	-1.4	1.2	-16.9	-14.1	-8.8	8.4
Utilities	0.1	-0.9	-0.3	-0.4	0.6	-7.4	-2.2	-3.6
Consumer goods	-2.0	-3.9	-4.5	-0.1	-6.8	-14.1	-16.5	-0.2
Consumer durables	-1.0	-1.7	-1.8	0.0	-16.0	-37.8	-48.5	0.5
Automotive products	-0.6	-0.9	-0.7	0.0	-22.4	-58.3	-76.0	1.2
Consumer nondurables	-0.9	-1.7	-1.7	-0.1	-4.1	-7.2	-7.2	-0.4
Foods and tobacco	-0.6	-0.7	-0.9	0.1	-6.4	-7.0	-8.5	1.0
Chemical products	-0.0	-0.2	-0.3	-0.1	-0.1	-2.4	-4.4	-1.0
Consumer energy products	-0.0	-0.5	-0.2	-0.1	-0.9	-9.3	-4.1	-2.7
Equipment & nonindustrial supplies	-3.5	-4.6	-5.1	0.3	-13.8	-18.1	-20.2	1.0
Equipment	-2.0	-2.7	-3.0	0.3	-17.6	-24.1	-27.8	2.5
Industrial equipment	-0.4	-0.5	-0.6	0.1	-12.2	-16.4	-20.1	3.0
Nonindustrial supplies	-1.5	-1.9	-2.1	-0.0	-10.7	-13.4	-14.5	-0.2
Construction supplies	-0.5	-0.6	-0.7	0.1	-9.8	-10.1	-12.0	2.0
Business supplies	-1.0	-1.3	-1.4	-0.1	-11.3	-15.5	-16.0	-1.5
Materials	-5.2	-6.6	-6.5	0.8	-11.4	-14.3	-13.7	1.7
Consumer parts	-0.6	-0.8	-0.8	-0.1	-24.9	-45.7	-58.5	-3.1
Equipment parts	-0.5	-0.6	-0.6	0.1	-10.4	-13.1	-12.7	2.9
Chemical materials	-0.3	-0.5	-0.5	-0.1	-4.9	-7.0	-6.9	-1.8
Energy materials	-2.0	-2.2	-1.6	0.9	-11.2	-11.7	-7.9	5.2

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

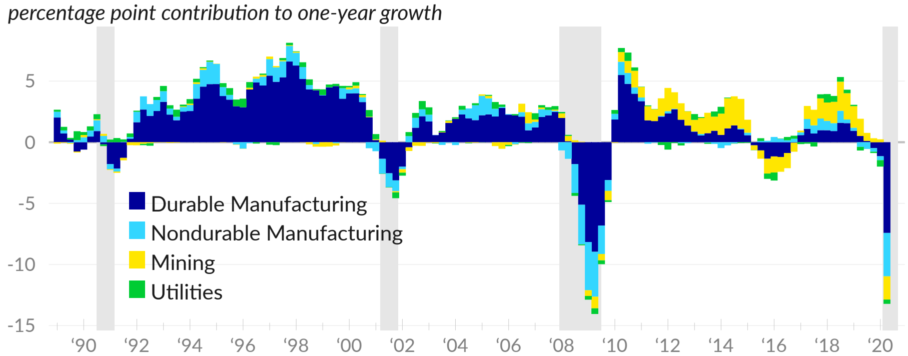


Source: Federal Reserve

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

Industrial Production Growth, Industry Group

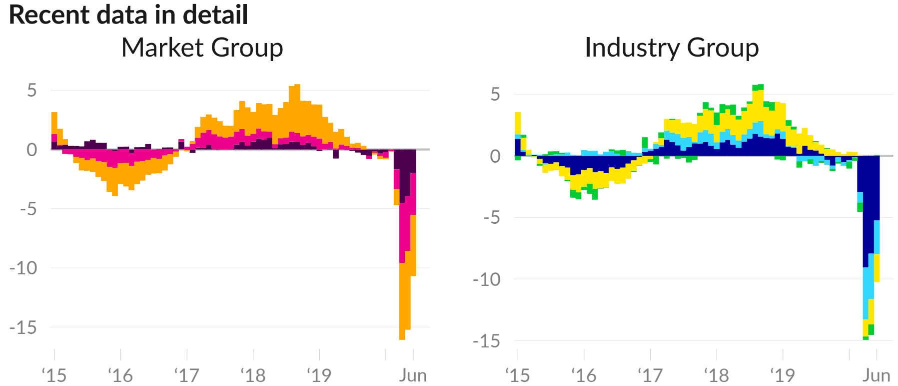
percentage point contribution to one-year growth



Source: Federal Reserve

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

Recent data in detail



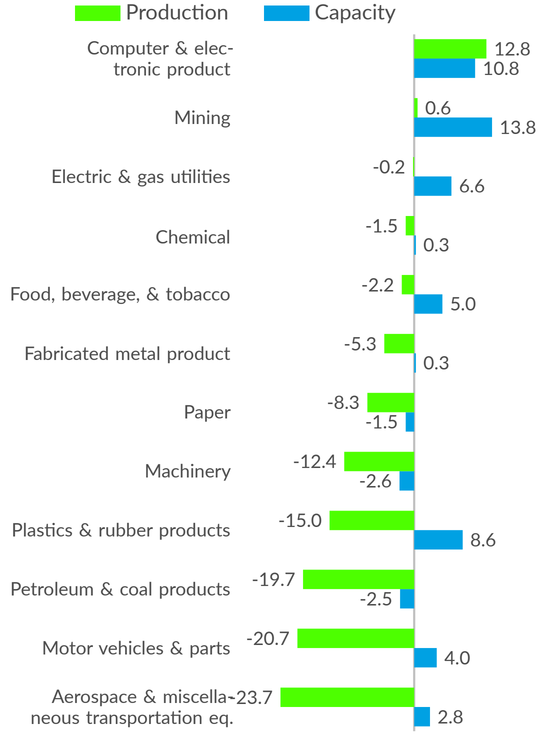
Source: Federal Reserve

Of a subset of 12 industries that contribute the majority of industrial production, two increased **production** over the past three years, ten decreased production, and none were unchanged (see ■). Over the three years ending June 2020, aerospace & miscellaneous transportation equipment production decreased by 23.7 percent, motor vehicles & parts production decreased by 20.7 percent, production of petroleum & coal products decreased by 19.7 percent, and production of plastics & rubber products decreased by 15.0 percent.

Over the three years ending June 2020, nine of the 12 industries increased **capacity**, three decreased capacity, and none were unchanged (see ■). Over the three-year period, mining capacity increased by 13.8 percent, production capacity for computer & electronic products increased by 10.8 percent, and production capacity for plastics & rubber products increased by 8.6 percent.

Industrial Production and Capacity

total three-year growth, percent, June 2020

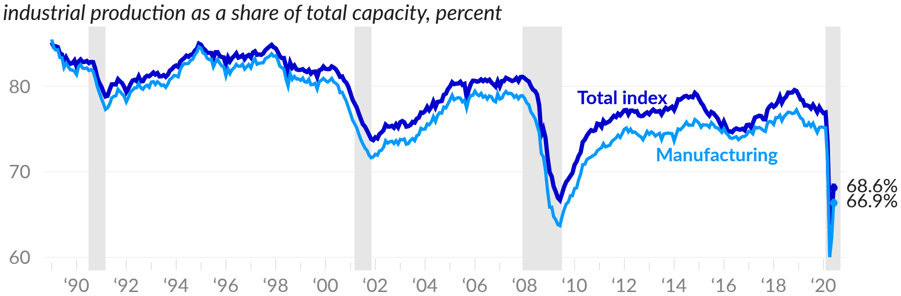


Source: Federal Reserve

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 June 2020, the industrial capacity utilization rate was 68.6 percent (see —), and the manufacturing capacity utilization rate was 66.9 percent (see —). Total capacity utilization has fallen by 16.5 percentage points since January 1989.

Capacity Utilization

industrial production as a share of total capacity, percent



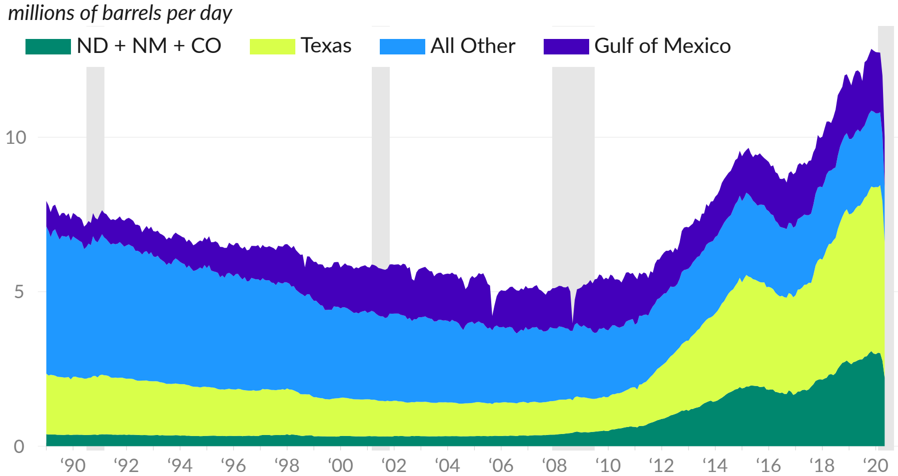
Source: Census Bureau

Energy Production and Use

The Energy Information Administration reports 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



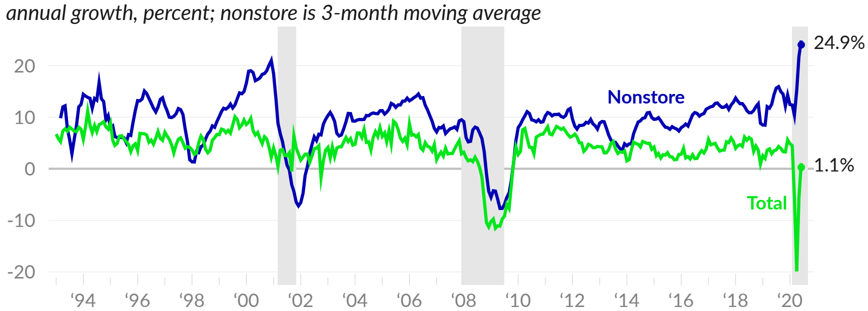
Source: Energy Information Administration

Retail Sales

According to the Census Bureau, retail and food service sales total $524.3 billion in June 2020, equivalent to 29.2 percent of GDP on an annualized basis. Over the past year, retail and food service sales increased by 1.1 percent, without adjusting for prices (see —). Nonstore sales, which include online retailers, have increased by 23.5 percent over the same period (see —), and total $82.8 billion, or 4.6 percent of GDP.

Retail Sales and Food Services

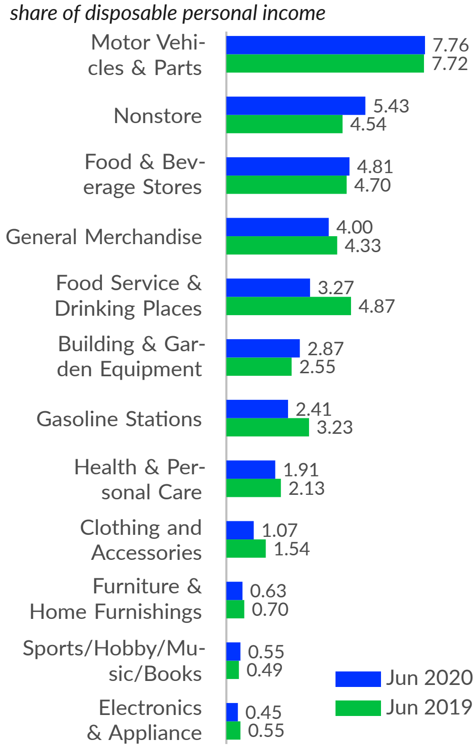
annual growth, percent; nonstore is 3-month moving average



Source: Census Bureau

Retail sales

share of disposable personal income



Source: Census, BEA

Government

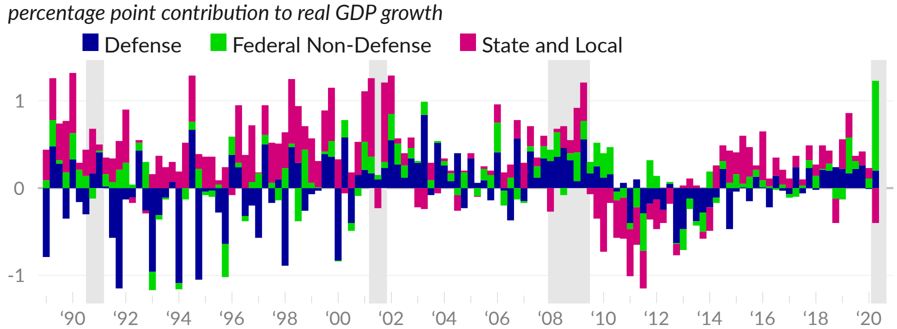
Public institutions are collectively referred to as the *public-sector* or the *government*. In the United States, the government has the authority to spend, tax, and create money, as well as to regulate economic and financial activity. The government also enforces and determines the ownership of property.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

Government Spending and Investment

Government consumption expeditures and gross investment, which provide services and infrastructure, contributed 0.82 percentage point to real GDP growth in 2020 Q2, substantially above the average contribution of 0.46 percentage point over the past year, and far above the average of 0.24 percentage point since 1989. In 2020 Q2, federal defense spending and investment (see ■) contributed 0.20 percentage point, nondefense federal government spending and investment (see ■) contributed 1.03 percentage points, and state and local government (see ■) subtracted 0.40 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 — *moving averages*

	2020 Q2	'20 Q1	'19 Q4	'19 Q3	'19 Q2	3-year	10-year	30-year
Total	0.82	0.22	0.42	0.37	0.86	0.38	0.02	0.22
Federal total	1.23	0.10	0.26	0.31	0.58	0.29	0.00	0.07
■ National defense	0.20	-0.01	0.26	0.22	0.17	0.16	-0.04	0.01
Consumption expenditures	0.08	0.03	0.13	0.10	0.17	0.10	-0.03	0.01
Gross investment	0.12	-0.04	0.13	0.12	0.00	0.07	-0.01	0.00
■ Nondefense	1.03	0.11	0.00	0.09	0.41	0.13	0.04	0.06
Consumption expenditures	1.05	0.08	-0.03	0.05	0.35	0.11	0.03	0.05
Gross investment	-0.02	0.03	0.04	0.04	0.06	0.02	0.01	0.02
■ State & local total	-0.40	0.12	0.16	0.06	0.28	0.09	0.02	0.15
Consumption expenditures	-0.37	-0.13	0.07	0.12	0.07	0.04	0.01	0.12
Gross investment	-0.04	0.25	0.09	-0.06	0.21	0.05	0.01	0.03

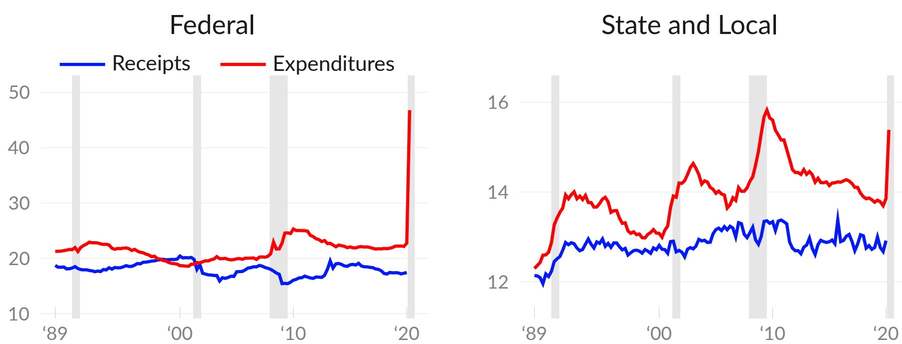
Source: Bureau of Economic Analysis

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 gives, means the government is increasing household income and corporate profits.

Federal government expenditures total $9.1 trillion, or 46.8 percent of GDP, in 2020 Q2. BEA has not yet released receipts data for 2020 Q2, however, in 2020 Q1, federal government receipts total $3.8 trillion, or 17.4 percent of GDP. In 2020 Q1, the federal government deficit was $1,146 billion or 5.3 percent of GDP.

Combined state and local government expenditures total $3.0 trillion, or 15.4 percent of GDP, in 2020 Q2. BEA has not yet released receipts data for 2020 Q2, however, in 2020 Q1, combined state and local government receipts total $2.8 trillion, or 12.9 percent of GDP. In 2020 Q1, the combined state and local government deficit was $203 billion or 0.9 percent of GDP.

Receipts and Expenditures as Share of GDP



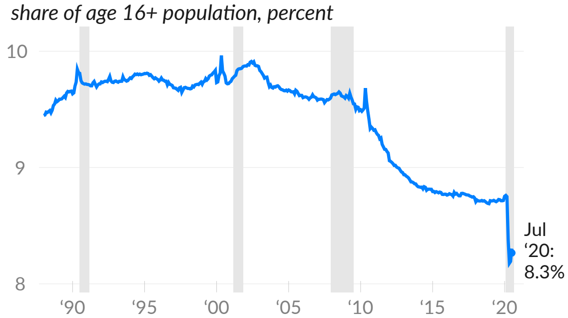
Source: Bureau of Economic Analysis

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

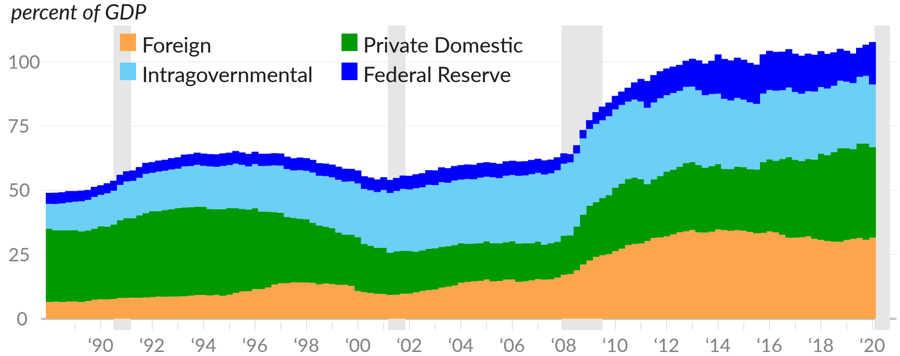
In July 2020, there were 21.6 million government jobs, equivalent to 8.3 percent of the age 16+ population (see —). The previous year, in July 2019, there were 22.6 million government jobs, equivalent to 8.7 percent of the age 16 or older population. Since February 2020, the US has lost 1.1 million total government jobs.

Government Balance Sheets

Liabilities

In the first quarter of 2020, total public debt was $23.2 trllion, equivalent to 107.7 percent of GDP. Of this, $7.6 trillion, or 32.7 percent of the total, is held by private domestic investors (see ■). An additional $6.8 trillion, or 29.3 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



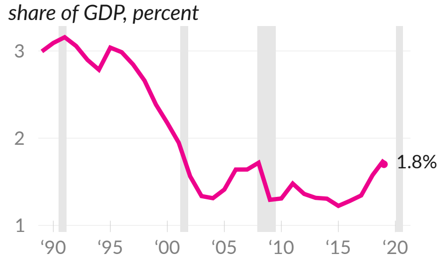
Source: Treasury

The ratio of public debt to GDP is fairly stable, and the interest income from holding public debt is lower than in the past 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 $375.2 billion in fiscal year 2019, compared to $325.0 billion in fiscal year 2018. Put into the context of the size of the economy, federal interest outlays in 2019 were equivalent to 1.8 percent of GDP, 1.6 percent of GDP in 2018, 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

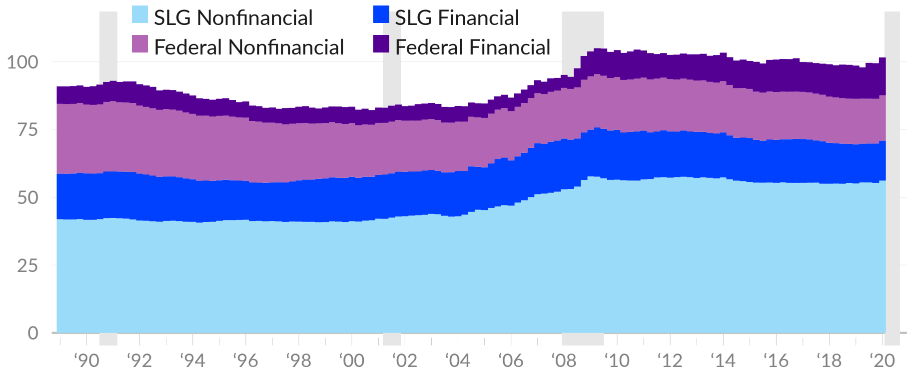
US government assets include financial assets but are mostly comprised of the non-financial assets of state and local governments (SLG), such as buildings and equipment. Land is not included in US measures of government assets.

In the first quarter of 2020, public/government assets excluding land are valued at $21.9 trillion, equivalent to 101.6 percent of GDP. Of this, state and local government nonfinancial assets, such as buildings and equipment, are equivalent to 56.2 percent of GDP (see), and state and local government financial assets, such as insurance trust funds, are equivalent to 14.7 percent of GDP (see).

Federal government nonfinancial assets are equivalent to 16.7 percent of GDP in 2020 Q1 (see). Federal government financial assets have a market value equivalent to 14.0 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).

Balance of Payments

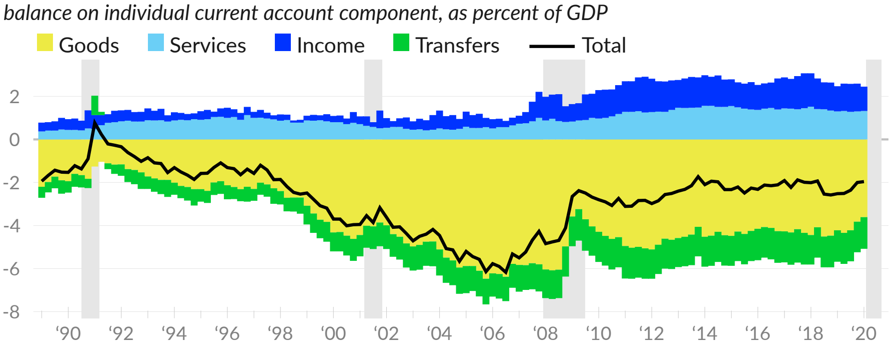
The **current account balance** captures international payments for goods and services as well as international transfers of money and net income received from ownership of foreign assets. It is the result of a set of payments to US residents, called current receipts, which are largely for exports of 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 Q1, the US runs a current account deficit of 2.0 percent of GDP, primarily as the result of a trade deficit on goods of 3.6 percent of GDP. The initial GDP report for 2020 Q2 does not include the data needed to calculate the current account balance, however, the goods trade deficit for 2020 Q2 is equivalent to 4.1 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

	2020 Q2	'20 Q1	'19 Q4	'19 Q3	'19 Q2	'19 Q1	*moving averages* 3-year	10-year
Current receipts	–	16.87	17.59	17.83	18.02	18.08	–	–
Exports	9.26	11.31	11.57	11.63	11.79	11.95	11.78	12.59
Goods	5.84	7.42	7.49	7.55	7.65	7.86	7.68	8.45
Durable	3.24	4.35	4.45	4.51	4.57	4.77	4.63	5.21
Nondurable	2.60	3.07	3.04	3.04	3.08	3.09	3.05	3.24
Services	3.42	3.89	4.08	4.08	4.14	4.09	4.10	4.15
Income receipts	–	4.89	5.36	5.48	5.55	5.44	–	–
Transfer receipts	0.72	0.67	0.66	0.72	0.68	0.69	0.73	0.74
Current payments	–	18.84	19.59	20.19	20.53	20.60	–	–
Imports	12.07	13.60	14.10	14.56	14.81	14.87	14.61	15.64
Goods	9.98	11.03	11.31	11.77	11.98	12.08	11.88	12.86
Durable	6.21	7.05	7.31	7.62	7.70	7.89	7.71	7.92
Nondurable	3.77	3.98	4.01	4.15	4.29	4.19	4.18	4.95
Services	2.09	2.57	2.78	2.80	2.83	2.79	2.73	2.77
Income payments	–	3.76	4.07	4.18	4.28	4.27	–	–
Transfer payments	1.60	1.47	1.42	1.44	1.44	1.46	1.46	1.42
Current account balance	–	-1.96	-2.00	-2.36	-2.51	-2.52	–	–

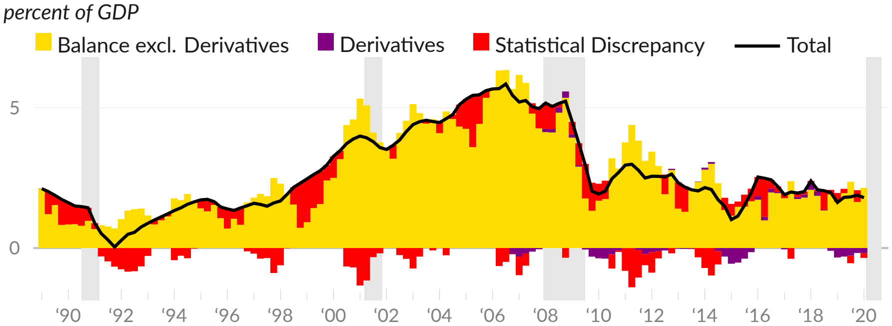
Source: Bureau of Economic Analysis

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 Q1, net domestic acquisitions of foreign assets were equivalent to 5.0 percent of GDP, while net domestic incurrence of foreign liabilities total 7.2 percent of GDP. Domestic net borrowing totals 1.8 percent of GDP.

Financial Account Balance

percent of GDP



Source: Bureau of Economic Analysis

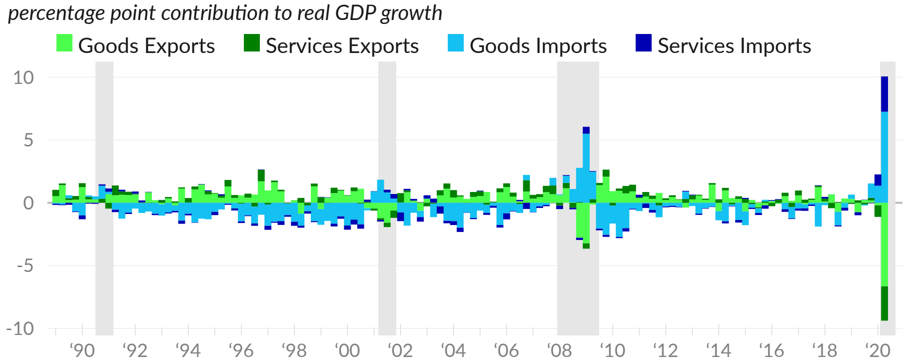
Trade

The **trade balance** (exports of goods ■ and services ■ minus imports of goods ■ and services ■) acts as an adjustment to consumption and investment in GDP calculations. As the US runs a persistent trade deficit, trade will generally subtract from GDP growth. In the income approach, the expanded trade deficit reduced nominal compensation of employees (extensive margin through outsourcing, intensive margin through lower wages from labor market slack) and reduced prices.

Goods exports subtracted 6.65 percentage points from GDP growth in the second quarter of 2020 while services exports subtracted 2.73 percentage points. Good imports contributed 7.25 percentage points to GDP growth and services imports contributed 2.81 percentage points.

International Trade

percentage point contribution to real GDP growth

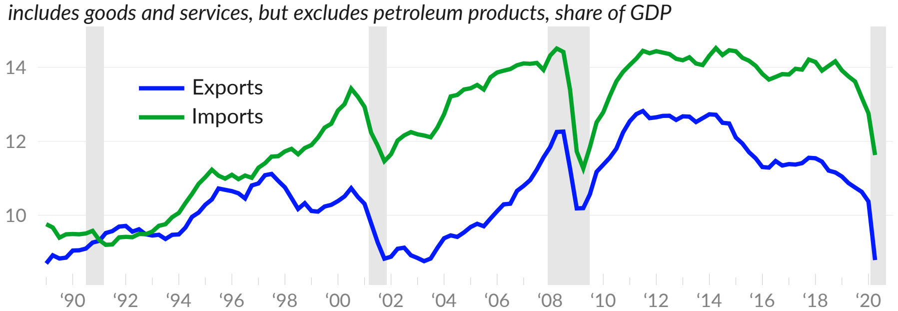


Source: Bureau of Economic Analysis

Nonpetroleum goods and services imports (see —) were equivalent to 11.6 percent of GDP in the second quarter of 2020, while exports of nonpetroleum goods and services (see —) were equivalent to 8.8 percent of GDP.

Imports and Exports, Nonpetroleum

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



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 captures the nominal value of major categories of goods and services as a share of nominal gross domestic product at various points over the past 30 years.

Exports and Imports by Type

percentage point share of GDP

					period averages			
	2020 Q2	'20 Q1	'19 Q2	2016	2012 –13	2005 –06	1998 –99	1989 –93
Exports of goods and services	9.26	11.31	11.79	11.88	13.54	10.33	10.41	9.42
Exports of goods	5.84	7.42	7.65	7.70	9.34	7.32	7.52	6.84
Foods, feeds, and beverages	0.64	0.61	0.63	0.70	0.82	0.46	0.50	0.60
Industrial supplies & materials	1.90	2.48	2.48	2.07	2.96	1.92	1.55	1.65
Petroleum and products	0.48	0.94	0.92	0.53	0.90	0.28	0.11	0.12
Capital goods, except automotive	2.04	2.45	2.54	2.77	3.22	2.84	3.27	2.61
Automotive vehicles, & parts	0.32	0.70	0.76	0.80	0.91	0.77	0.79	0.67
Consumer goods, ex. food & auto	0.69	0.87	0.96	1.03	1.12	0.91	0.86	0.74
Durable goods	0.24	0.44	0.51	0.56	0.61	0.50	0.44	0.39
Nondurable goods	0.45	0.44	0.45	0.47	0.51	0.41	0.42	0.35
Exports of services	3.42	3.89	4.14	4.18	4.19	3.02	2.90	2.58
Transport	0.18	0.38	0.43	0.44	0.52	0.41	0.48	0.59
Travel	0.27	0.72	0.92	1.03	1.03	0.77	0.95	0.90
Intellectual property charges	0.59	0.55	0.55	0.60	0.77	0.59	0.44	0.29
Other business services	2.16	2.04	2.04	1.92	1.67	1.04	0.85	0.60
Imports of goods and services	12.07	13.60	14.81	14.61	16.76	15.89	12.63	10.38
Imports of goods	9.98	11.03	11.98	11.85	13.95	13.44	10.59	8.45
Foods, feeds, and beverages	0.76	0.72	0.72	0.70	0.69	0.54	0.46	0.43
Industrial supplies & materials	1.86	2.23	2.51	2.33	4.26	4.24	2.22	2.16
Petroleum and products	0.44	0.85	1.06	0.85	2.50	2.15	0.65	0.87
Capital goods, except automotive	3.01	3.00	3.20	3.17	3.37	3.00	3.03	2.04
Automotive vehicles, & parts	0.84	1.63	1.80	1.87	1.84	1.84	1.74	1.46
Consumer goods, ex. food & auto	2.88	2.80	3.10	3.12	3.19	3.20	2.47	1.83
Durable goods	1.26	1.28	1.53	1.63	1.71	1.75	1.29	0.97
Nondurable goods	1.62	1.51	1.56	1.49	1.48	1.46	1.18	0.86
Imports of services	2.09	2.57	2.83	2.77	2.81	2.45	2.04	1.93
Transport	0.24	0.42	0.50	0.49	0.53	0.57	0.54	0.55
Travel	0.05	0.46	0.65	0.58	0.60	0.61	0.63	0.61
Intellectual property charges	0.19	0.19	0.20	0.22	0.24	0.19	0.13	0.06
Other business services	1.43	1.31	1.28	1.28	1.24	0.83	0.54	0.38

Source: Bureau of Economic Analysis

Import Penetration

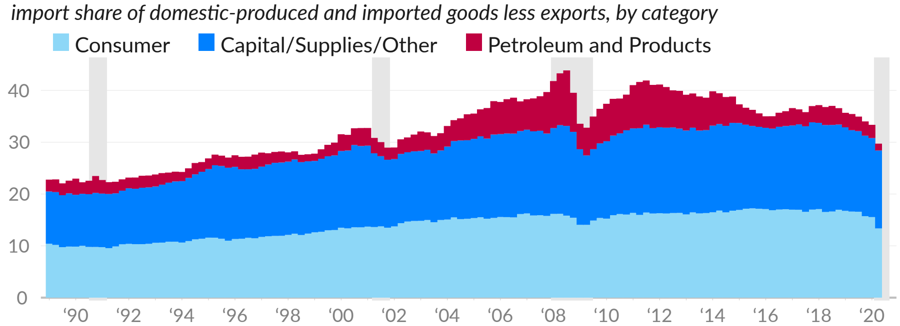
Goods can be produced domestically or imported or some combination of the two. The import share of the total US demand for goods, measured as US produced goods and imported goods less exported goods, is also referred to as *import penetration*. This measure has risen considerably over the past thirty 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 Q2, imports of consumer goods excluding petroleum and petroleum products are equivalent to 13.4 percent of domestic consumption of goods (see ■). Petroleum-related imports claim 1.3 percent (see ■) and imports of all other goods, primarily capital goods, industrial supplies, and materials are equivalent to 15.0 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 decreased by the equivalent of 3.0 percent of domestic goods demand; imports of petroleum and products decreased by the equivalent of 7.0 percent; and other imports decreased by the equivalent of 1.3 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 reports monthly data on US trade in goods, including by partner country. In June 2020, trade with the top 25 trading partners (see table) comprises 85.5 percent of total US trade in goods.

US Trade in Goods *census basis, millions of USD, not seasonally adjusted*	June 2020			June 2019		
	Imports	Exports	Total	Imports	Exports	Total
Total, All Countries	179,728	105,043	284,771	207,166	137,870	345,037
China	37,639	9,242	46,881	38,967	9,166	48,134
Mexico	25,803	15,787	41,591	30,473	20,599	51,072
Canada	20,357	20,102	40,460	27,688	24,875	52,564
Germany	7,763	3,944	11,708	9,595	4,747	14,342
Japan	6,650	4,776	11,427	11,917	6,134	18,051
South Korea	5,882	3,982	9,864	6,211	5,140	11,351
Switzerland	7,478	1,040	8,519	3,472	1,676	5,149
United Kingdom	3,313	4,549	7,863	4,812	5,386	10,198
Taiwan	4,804	2,255	7,059	4,257	2,510	6,768
Vietnam	5,896	673	6,570	4,603	860	5,463
Ireland	4,843	807	5,651	5,049	769	5,818
Italy	3,768	1,634	5,403	4,641	2,048	6,689
India	3,228	1,824	5,052	4,152	3,218	7,371
Netherlands	1,976	2,943	4,920	2,448	4,477	6,925
France	3,035	1,844	4,879	4,708	3,138	7,847
Singapore	2,376	2,098	4,474	2,623	2,624	5,248
Malaysia	3,413	981	4,395	3,098	1,062	4,161
Brazil	1,915	2,198	4,114	2,621	3,884	6,505
Thailand	2,912	826	3,738	2,595	1,038	3,633
Belgium	1,691	1,903	3,595	1,787	2,719	4,506
Hong Kong	727	2,045	2,773	310	2,835	3,146
Australia	833	1,737	2,571	869	2,057	2,927
Saudi Arabia	1,435	712	2,147	1,287	982	2,269
Spain	1,248	888	2,137	1,398	1,321	2,720
Indonesia	1,468	538	2,006	1,530	703	2,234

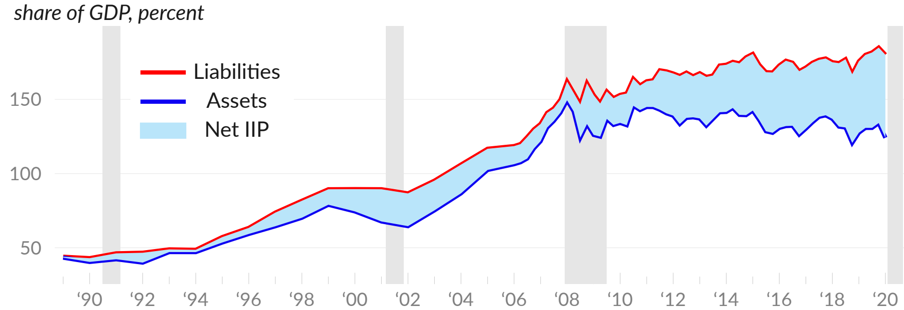
Source: Census Bureau

International Investment Position

The Bureau of Economic Analysis reports the US International Investment Position (IIP). These data are reported on a quarterly basis beginning in 2006.

In 2020 Q1, domestic holdings of foreign assets are equivalent to 124.1 percent of GDP (see —), compared to 106.3 percent in 2006 Q1. Domestic liabilities to the foreign sector total 180.1 percent of GDP in 2020 Q1 (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 55.9 percent of GDP in 2020 Q1 (see) and 12.2 percent of GDP in 2006 Q1.

International Investment
share of GDP, percent



Source: Bureau of Economic Analysis

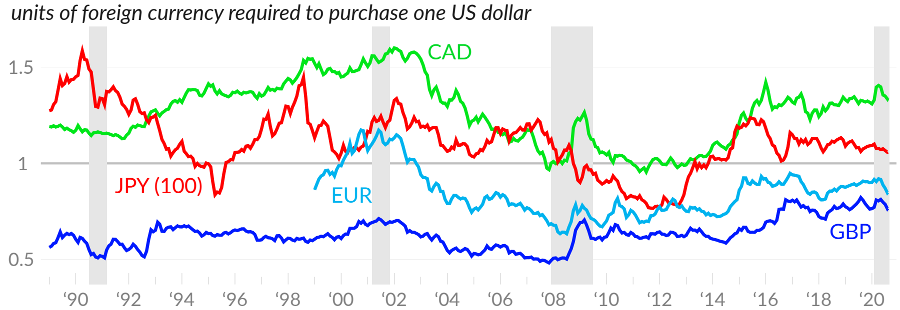
Exchange Rates

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 August 7, 2020, one US dollar buys approximately: 1.34 Canadian dollars (see —), 106 Japanese Yen (see —), 0.85 Euros (see —), and 0.77 British Pounds (see —). Over the past three years, the nominal exchange rate between the US dollar and the Canadian dollar increased by 0.5 percent, the USD-JPY rate increased by 0.3 percent, the USD-EUR rate decreased by 4.6 percent, and the USD-GBP rate decreased by 6.8 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 August 7, 2020, is 118.0, an increase of 18.0 percent since inception in 2006. Over the past three years, the index value has averaged 114.7, compared to an average of 109.6 over the previous three-year period.

Selected Exchange Rates

units of foreign currency required to buy one US Dollar

	Aug 7, 2020	1-month moving average	1-year moving average	1-month percent change	1-year percent change	5-year percent change
EUR	0.849	0.862	0.902	-3.8	-4.6	-6.4
GBP	0.767	0.780	0.792	-3.5	-6.8	19.9
JPY	105.9	106.3	107.9	-1.4	0.3	-14.5
CAD	1.339	1.345	1.347	-1.1	0.5	2.7
MXN	22.48	22.37	20.89	-1.6	14.2	40.0
CNY	6.97	6.99	7.04	-0.5	-1.3	12.2
CHF	0.914	0.926	0.970	-2.6	-5.9	-5.1
HKD	7.75	7.75	7.79	0.0	-1.2	-0.0
INR	75.04	74.94	73.13	0.1	5.4	17.5
AUD	1.396	1.410	1.490	-2.7	-5.7	2.4
NZD	1.514	1.512	1.574	-0.7	-2.2	0.3
BRL	5.43	5.28	4.64	1.4	36.3	59.5
KRW	1189.2	1197.2	1197.4	-0.5	-2.1	2.5
MYR	4.19	4.24	4.22	-1.9	0.1	9.8
DKK	6.32	6.42	6.73	-3.8	-4.8	-6.5
NOK	9.06	9.18	9.44	-3.8	1.1	11.4
SEK	8.75	8.89	9.59	-4.8	-9.1	1.9
ZAR	17.63	16.83	15.98	3.9	17.0	39.7
SGD	1.373	1.382	1.386	-1.4	-0.7	0.3
TWD	29.39	29.39	30.23	-0.1	-6.7	-7.0

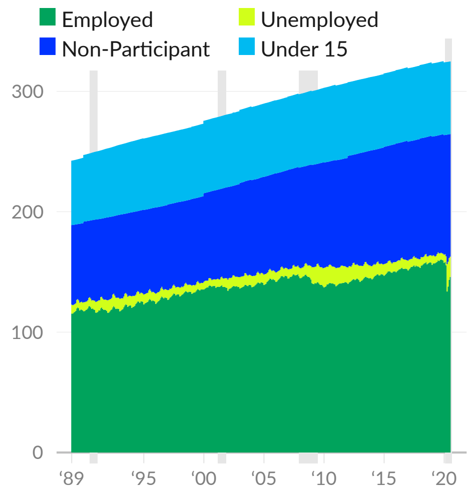
Source: Federal Reserve

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 July 2020, 145.8 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 44.9 percent as of July 2020.

Labor Force Status of Population
millions of people

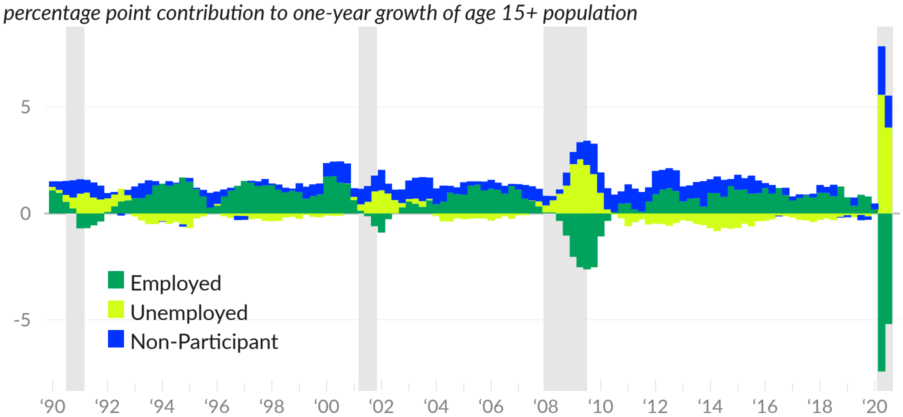


Source: Author's Calculations from CPS

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 July 2020, there are 16.9 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 10.4 percent. The number of people in the labor force divided by the total population is the labor force participation rate, currently 50.1 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 162.1 million in July 2020. The category includes children (60.3 million), students (15.1 million), unpaid caregivers (12.7 million), those unable to work due to disability or illness (13.0 million), those who want a job but have given up looking (7.4 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

July 2020, 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	264,509	32,256	61,308	34,510	31,938	63,602	40,895
Employed	145,776	17,346	49,139	11,343	16,311	42,253	9,384
Multiple jobs	6,619	645	2,260	455	786	2,105	368
Full-time	103,444	11,976	40,638	7,957	9,083	28,444	5,347
Part-time	42,332	5,370	8,501	3,386	7,228	13,809	4,037
Economic reasons	8,649	1,469	2,370	516	1,373	2,442	478
Unemployed	16,915	3,390	3,977	970	3,038	4,504	1,036
Not in Labor Force	101,819	11,520	8,191	22,197	12,589	16,846	30,474
Discouraged	7,368	1,517	1,321	659	1,523	1,647	700
Disabled/Ill	13,013	975	3,488	1,957	629	3,577	2,386
Family/Care	12,666	565	782	100	2,280	7,989	951
School	15,140	7,236	332	17	7,078	438	40
Retirement	49,724	129	1,566	19,245	246	2,376	26,161

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

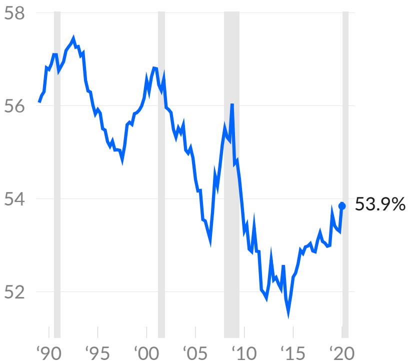
Change from July 2019 to July 2020, thousands of people

	Total, 15+	Men, 15–29	Men, 30–59	Men, 60+	Women, 15–29	Women, 30–59	Women, 60+
Population	1,118	-324	-32	927	-336	-100	982
Employed	-13,728	-3,308	-3,123	-949	-2,792	-2,969	-588
Multiple jobs	-1,734	-274	-355	-104	-418	-444	-139
Full-time	-12,634	-2,801	-3,962	-595	-2,112	-2,961	-203
Part-time	-1,094	-507	839	-354	-680	-8	-385
Economic reasons	4,504	603	1,442	325	454	1,358	321
Unemployed	10,137	1,762	2,579	640	1,580	2,873	703
Not in Labor Force	4,709	1,222	513	1,236	875	-4	867
Discouraged	2,381	465	524	113	615	557	107
Disabled/Ill	-1,380	137	-448	-287	116	-449	-449
Family/Care	-874	119	-18	13	-322	-625	-41
School	678	354	-26	-10	296	43	22
Retirement	3,151	23	250	1,303	74	324	1,177

Source: Author's Calculations from CPS

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 first quarter of 2020, labor receives 53.9 percent of gross domestic income, and the labor share increased by a total of 0.3 percentage point over the past year. The labor share is 2.3 percentage points above its 30-year low of 51.6 percent in 2014 Q3, but 3.5 percentage points below the 30-year high of 57.4 percent in 1992 Q3.

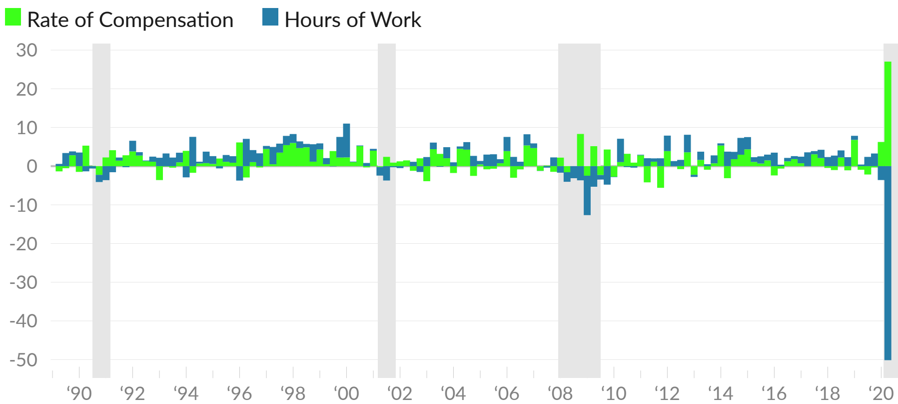
Gross Labor Income

In labor markets, unlike other markets, wages (the price of labor) tend not to be cut in response to a 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 ■), decreased at an annualized and inflation-adjusted rate of 23.13 percent in 2020 Q2. Changes in wages contributed 27.02 percentage points, and changes in total hours worked subtracted 50.15 percentage points.

Gross Labor Income Growth

percentage point contribution to gross labor income growth



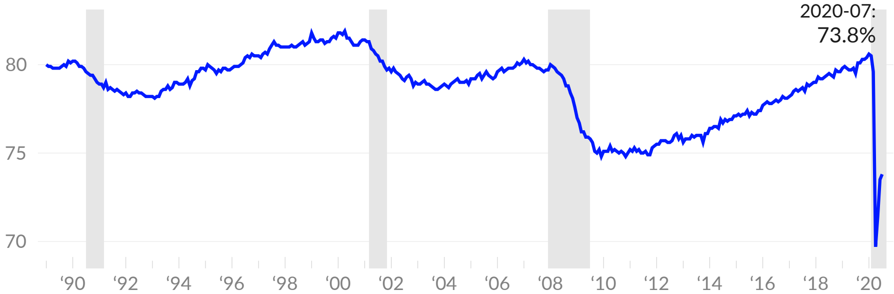
Source: Author's Calculations

Employment

In July 2020, 73.8 percent of 25-54 years olds were employed, compared to 73.5 percent in June 2020. Over the past year, the age 25-54 employment rate has fallen by 5.7 percentage points. The current age 25-54 employment rate is 7.5 percentage points (equivalent to 9.4 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



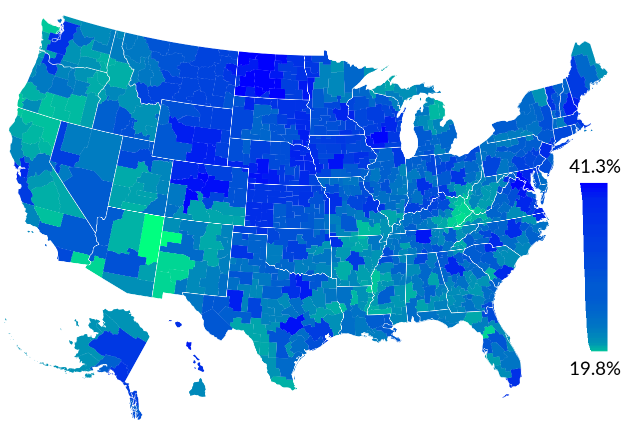
Source: Bureau of Labor Statistics

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 reports 118 million fully-employed people in 2018, equivalent to 36 percent of the population.

In 2018, fewer than half (43.0 percent) of commuter zones have at least a third of their population working full-time and full-year. A total of 18 commuter zones (out of 741), covering 2.6 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, 2018



Top 10:
41.2% Bismarck, ND
40.9% Madison, WI
40.8% Arlington, VA
40.1% Denver, CO
39.9% Austin, TX
39.8% Glenwood Springs, CO
39.7% Des Moines, IA
39.4% Nashville-Davidson, TN
39.3% Fargo, ND
39.1% Fredericksburg, VA

Bottom 10:
19.8% Gallup, NM
22.4% Hazard, KY
23.3% Yuma, AZ
23.4% Pikeville, KY
23.5% Ocala, FL
23.6% Corbin, KY
24.5% Port Angeles, WA
24.6% Greenville, MS
25.0% Huntington, WV
25.0% Altamont, OR

Source: American Community Survey

Employment Rates of Largest Commuter Zones, 2018

	all ages		*age 25–54*	
	full-time & full-year	employed	full-time & full-year	employed
Los Angeles, CA	33.7	57.4	58.4	87.2
New York, NY	36.0	58.4	62.3	87.8
Chicago, IL	36.7	60.5	64.4	90.3
Houston, TX	36.2	57.4	63.2	88.0
Newark, NJ	37.7	59.9	65.1	89.7
Philadelphia, PA	35.1	60.6	62.0	89.8
Washington, DC	40.8	64.5	68.9	93.4
Boston, MA	36.7	64.4	63.6	91.9
San Francisco, CA	37.9	62.8	64.3	91.3
Atlanta, GA	38.0	60.0	66.6	90.9
Detroit, MI	32.9	58.0	59.6	88.1
Dallas, TX	39.1	60.3	67.1	89.8
Phoenix, AZ	34.4	58.0	62.2	89.0
Seattle, WA	37.3	63.0	62.6	91.5
Miami, FL	37.2	58.0	64.0	88.4

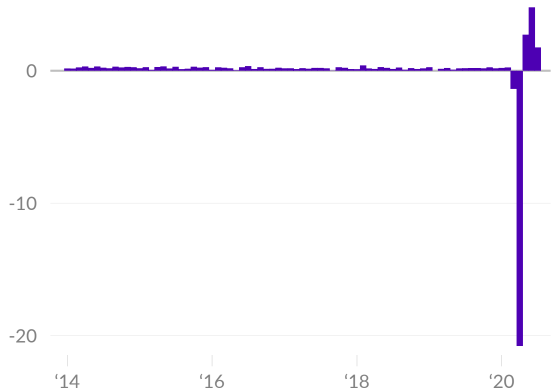
Source: American Community Survey

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 economy added 1,763,000 jobs in July 2020, compared to 4,791,000 added in June 2020, and an average of 3,093,000 added over the past three months. Over the same three months, the US needed to add an average of 148,000 jobs per month to maintain a steady employment rate.

Nonfarm Payroll Growth

one-month change in total employment, in millions



Source: Bureau of Labor Statistics

Nonfarm Payrolls by Industry Group

seasonally adjusted, thousands

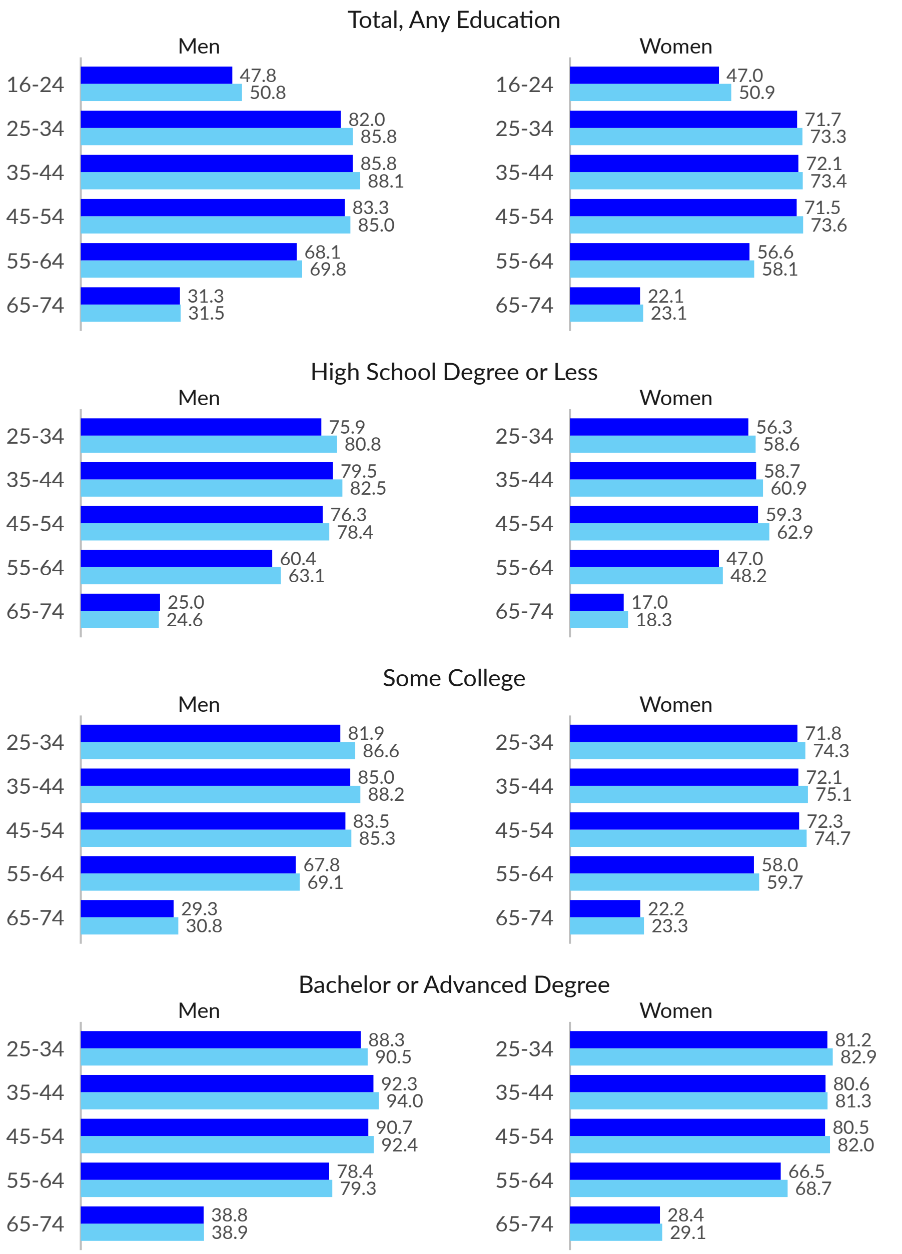
	levels		*monthly change*				
	Jul 2020	Jul 2019	Jul '20	Jun '20	May '20	Apr '20	Mar '20
Information	2564	2862	-15	10	-40	-279	-6
Mining & Logging	621	736	-7	-5	-20	-53	-8
Wholesale Trade	5618	5906	-5	63	23	-385	-12
Utilities	537	549	0	-3	-1	-3	0
Construction	7195	7504	20	163	456	-1018	-65
Financial Activities	8629	8753	21	23	19	-261	-18
Manufacturing	12112	12845	26	357	240	-1317	-46
Transportation & Warehousing	5208	5622	37	87	-25	-559	-9
Professional & Business Serv.	19902	21337	170	318	160	-2202	-94
Education & Health Services	22975	24204	215	567	388	-2603	-178
Retail Trade	14758	15614	258	826	385	-2299	-85
Government	21620	22587	301	54	-511	-952	-17
Leisure & Hospitality	12527	16528	592	1981	1405	-7575	-743
Total	139582	150953	1763	4791	2725	-20787	-1373

Source: Bureau of Labor Statistics

Employment rates vary over time, but also by age, gender, and education. Over the 12 months ending July 2020 , the employment rate for most education groups lower than it was one year prior.

Employment Rates ■ July 2020 ■ July 2019

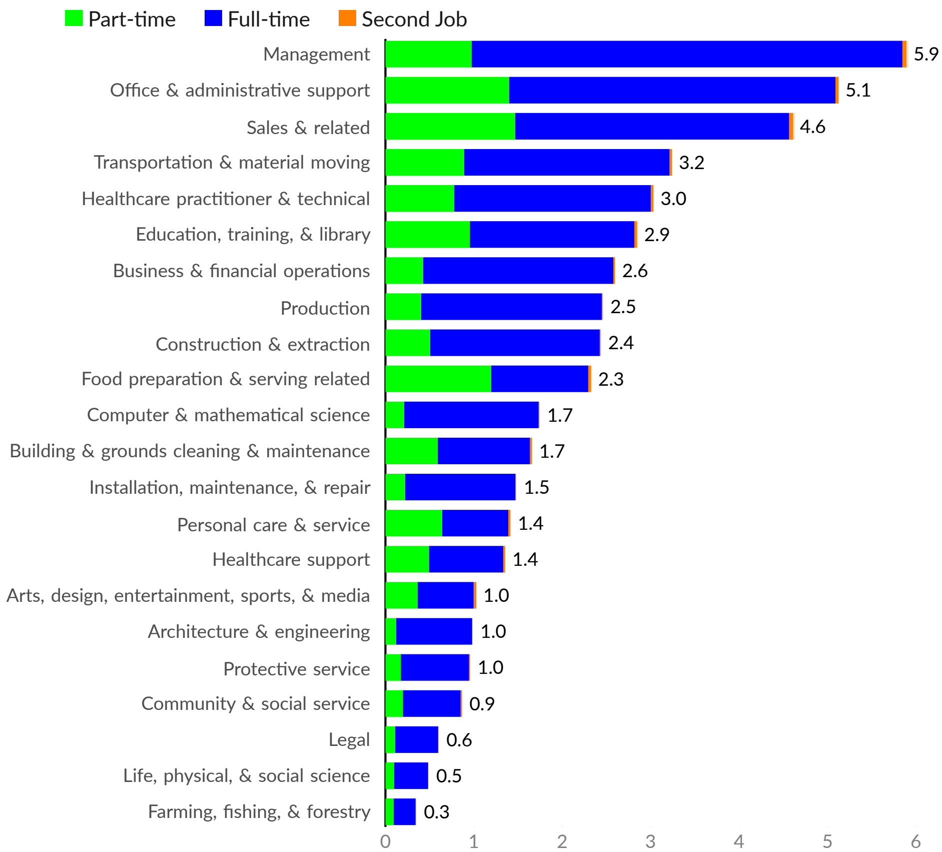
employed share of age group population, percent



Source: Author's Calculations from CPS

Occupational Employment, July 2020

share of population employed, 12-month average, percent



Source: Author's Calculation from CPS

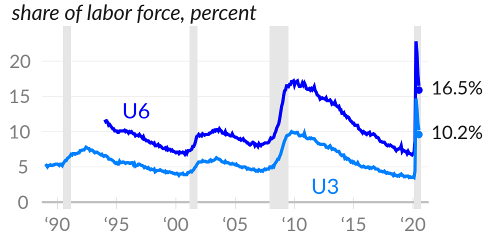
Unemployment

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 16.3 million unemployed persons in July 2020, and an unemployment rate of 10.2 percent (see —), slightly below the June 2020 rate of 11.1 percent, but far above the July 2019 rate of 3.7 percent.

BLS also reports a broader measure of unemployment, known as U6. This labor under-utilization rate 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 July 2020, the labor under-utilization rate is 16.5 percent (see —).

Unemployment Measures

share of labor force, percent

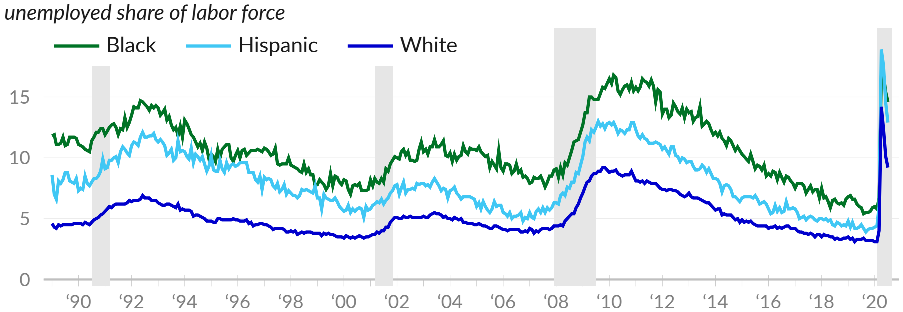


Source: BLS

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 8.8 percentage points to 14.6 percent (see —).

Unemployment Rate

unemployed share of labor force



Source: Bureau of Labor Statistics

Unemployment Measures

seasonally adjusted, percent

	Jul '20	Jun '20	May '20	Apr '20	Mar '20	Feb '20	GFC peak	Date
Under-utilization Rate (U6)	16.5	18.0	21.2	22.8	8.7	7.0	17.2	Dec '09
Unemployment Rate (U3)	10.2	11.1	13.3	14.7	4.4	3.5	10.0	Oct '09
by race/ethnicity:								
White	9.2	10.1	12.4	14.2	4.0	3.1	9.2	Oct '09
Black	14.6	15.4	16.8	16.7	6.7	5.8	16.8	Mar '10
Hispanic	12.9	14.5	17.6	18.9	6.0	4.4	13.0	Aug '09
Asian	12.0	13.8	15.0	14.5	4.1	2.5	8.4	Dec '09

Source: Bureau of Labor Statistics

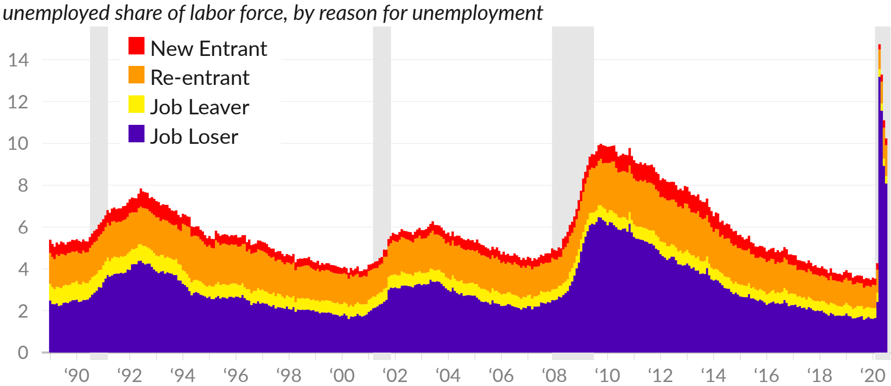
Reasons for unemployment

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 July 2020, 8.1 percent of the labor force were unemployed because of losing a job or having a temporary job end. Of these, 5.8 percent of the labor force are unemployed due to temporary layoff, equivalent to 56.5 percent of the unemployed. Additionally, 0.4 percent of the labor force were re-entrants, 1.5 percent were new entrants, and 0.3 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

	Jul '20	Jun '20	May '20	Apr '20	Mar '20	Jul '19	Jun '19	May '19	Apr '19	Mar '19
Unemployed, Any Reason	10.2	11.1	13.3	14.7	4.4	3.7	3.7	3.6	3.6	3.8
Job Loser	8.1	8.9	11.6	13.2	2.4	1.7	1.7	1.6	1.6	1.7
Temporary Layoff	5.8	6.6	9.7	11.5	1.1	0.5	0.5	0.5	0.4	0.5
Permanent Separation	1.8	1.8	1.5	1.3	0.9	0.8	0.8	0.8	0.8	0.8
Re-entrant	1.5	1.5	1.0	0.9	1.1	1.1	1.1	1.1	1.2	1.2
New entrant	0.3	0.4	0.3	0.2	0.3	0.4	0.3	0.4	0.3	0.4
Job Leaver	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.5
See also:										
Employed, Not at Work	6.0	4.9	5.3	7.4	4.0	6.1	4.4	2.6	2.5	3.1

Source: Bureau of Labor Statistics; Author

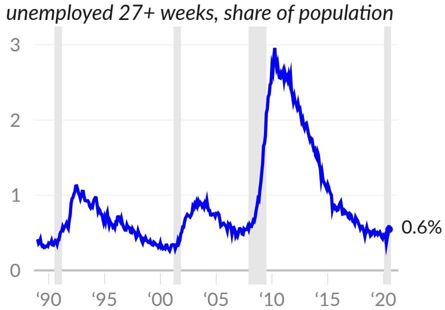
Duration of unemployment

When someone is unemployed for an extended period of time they risk running out of unemployment benefits, thereby having a sharp reduction in income. Additionally, people may have more trouble re-entering the labor market after a long period of unemployment.

As of July 2020, BLS reports that 0.60 percent of the age 16+ population have been unemployed for 27 weeks or longer, compared to 0.48 percent in July 2019 (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.

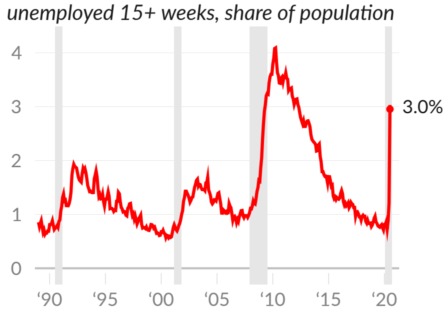
In July 2020, 3.03 percent of the age 16+ population are unemployed for at least 15 weeks, following 1.21 percent in June 2020, and 0.88 percent in May 2020.

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



Source: BLS

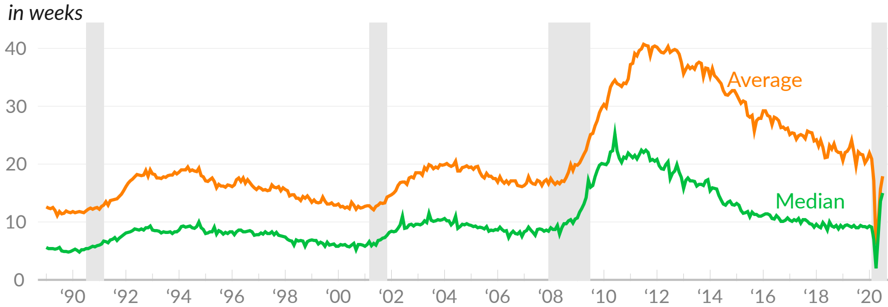
Long-term Unemployed
unemployed 15+ weeks, share of population



Source: BLS

Among those who are unemployed, the average (mean) duration of unemployment is 17.9 weeks, and the typical (median) duration of unemployment is 15.0 weeks, as of July 2020.

Duration of Unemployment
in weeks

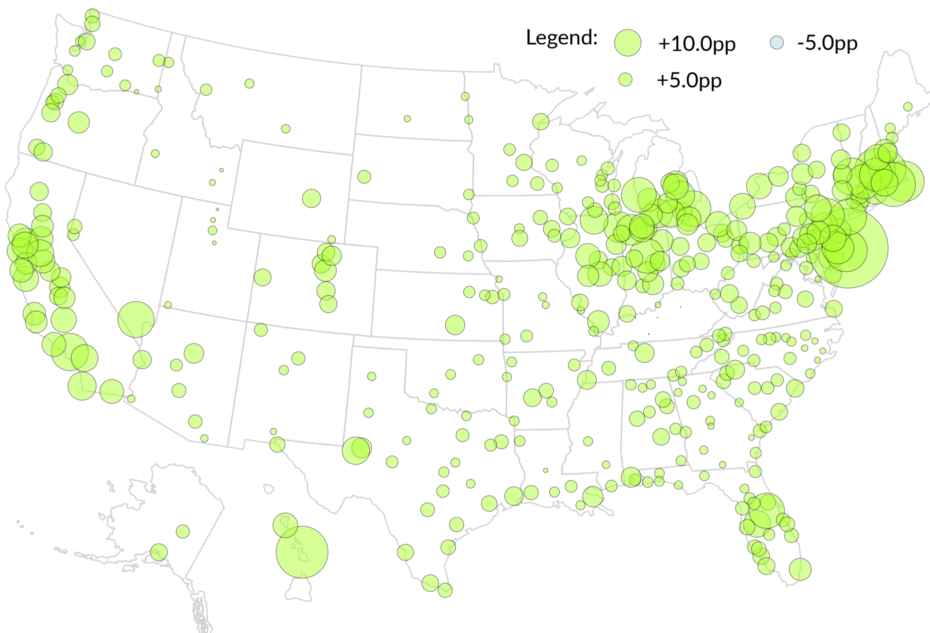


Source: BLS

Unemployment by metro area

The Bureau of Labor Statistics produce local area estimates of unemployment, including the **unemployment rate for metro areas**.

Change in Unemployment Rate by Metro Area
one-year change, in percentage points, June 2020



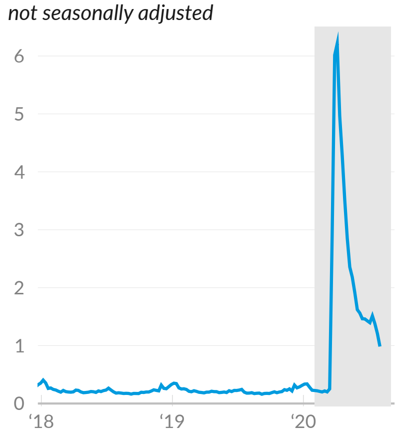
Source: Bureau of Labor Statistics

Jobless Claims

The Department of Labor reported 984,192 actual new claims for unemployment insurance (UI; see —) during the week ending August 1, 2020, a one-week decrease of 222,900. Over the past four weeks, new claims have averaged 1,270,200 per week. During the same four-week period last year, there were an average of 199,700 new claims per week.

For the week ending July 25, 2020, the Department of Labor reports 15,849,488 continued claims for unemployment insurance (insured unemployed; see —), a one-week decrease of 965,700. One year prior, during the week of July 27, 2019, there were an average of 1,665,300 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

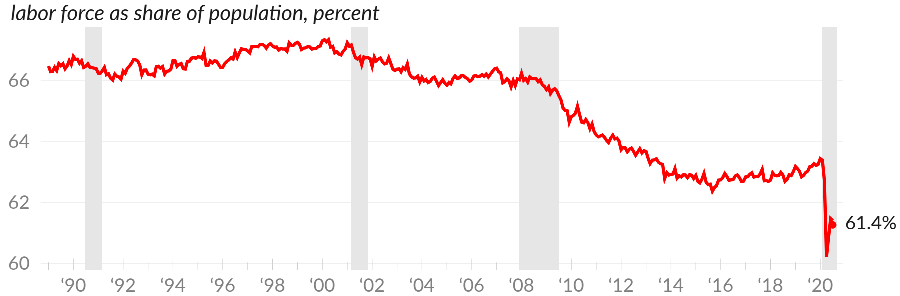
Source: Department of Labor

Labor Force Participation

Those who are either employed or unemployed are considered to be in the labor force. Over the long terms, the share of the US population that is in the labor force has been falling because of the aging of the population. However, non-participation in the labor force is often cyclical and the result of economic conditions. For example, during a downturn more people become discouraged by their labor force prospects and stop looking for work, removing them from the labor force.

In July 2020, 61.4 percent of the age 16+ population was in the labor force, compared to 61.5 percent in June and 60.8 percent in May. In February 2020, when US confirmed cases of COVID-19 were still low, the labor force participation rate was 63.4 percent.

Labor Force Participation Rate
labor force as share of population, percent



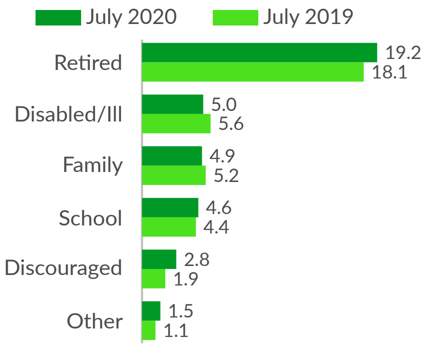
Source: Bureau of Labor Statistics

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 99.0 million in July 2020, or 38.0 percent of the age 15 or older population, compared to 36.4 percent in July 2019. Slightly less than half of non-participants, and 19.2 percent of population, are retirees in July 2020 (see ■). A total of 13.1 million people, or 5.0 percent of the age 15 or older population, are out of the labor force due to disability or illness; 4.6 percent were out of the labor force for school, and 4.9 percent for family or caregiving reasons.

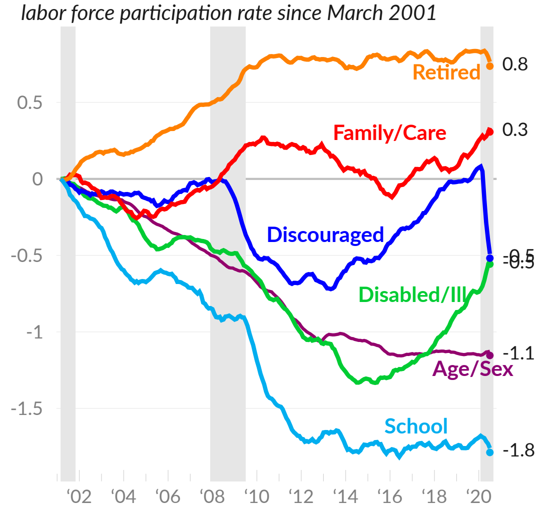
While the recession of 2001 appears mild in measures of expenditure, it was followed by a substantial reduction in the share of the population receiving labor income. The economy was losing jobs at an alarming rate long after the 2001 recession had officially ended, though labor market weakness was partially 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 July 2020, an additional 3.1 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 1.8 percent (see —). Disability and illness reduce the labor force by another 0.5 percent (see —). Less retirement among those age 18–64 increases the labor force by 0.8 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**.

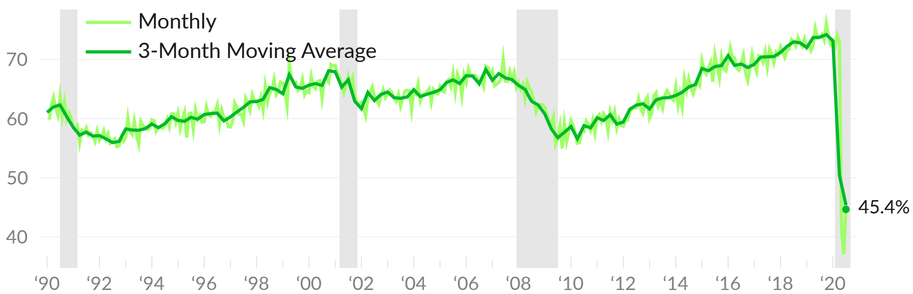
Labor Force Flows

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 publishes many monthly indicators based on labor force flows, and others can be calculated directly from the public use data.

Among newly employed workers, the vast majority were considered to be out of the labor force the prior month, as opposed unemployed. In July 2020, 9.3 million people were newly employed (on a gross basis). Of these, 45.4 percent were not looking for work in the prior month (see –). Over the past three months, an average of 45.4 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 July 2017, 68.8 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

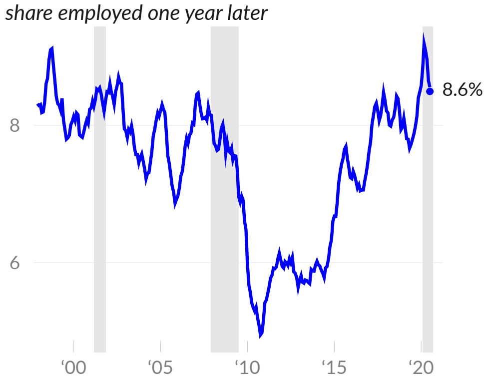


Source: Bureau of Labor Statistics

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 July 2020, 8.6 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

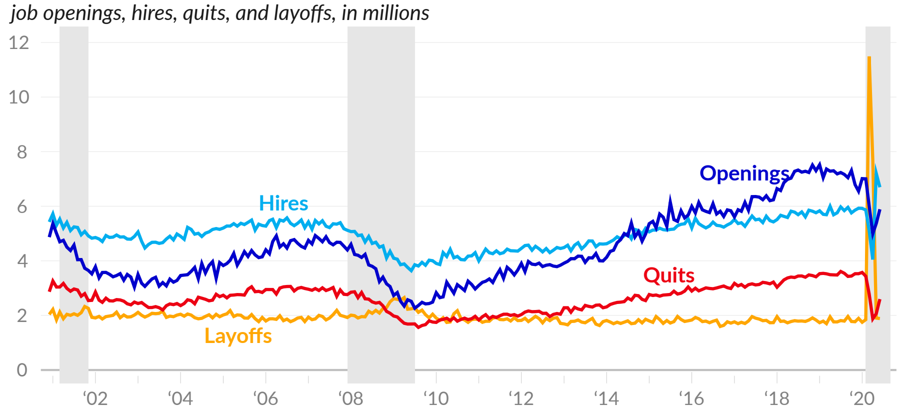
Job Openings and Labor Turnover Survey

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 reports 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 June 2020, there were 5.9 million total nonfarm job openings (see —) and 6.7 million hires completed (see —). In the same month there were 4.8 million nonfarm separations, of which 1.9 million were layoffs (see —) and 2.6 million were voluntary (see —). One year prior, in July 2019, there were 1.8 million layoffs, and 7.2 million job openings.

Job Turnover

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

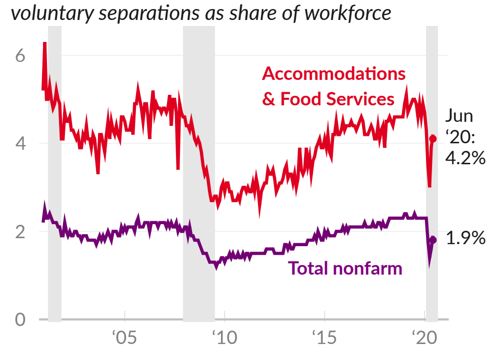


Source: Bureau of Labor Statistics

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



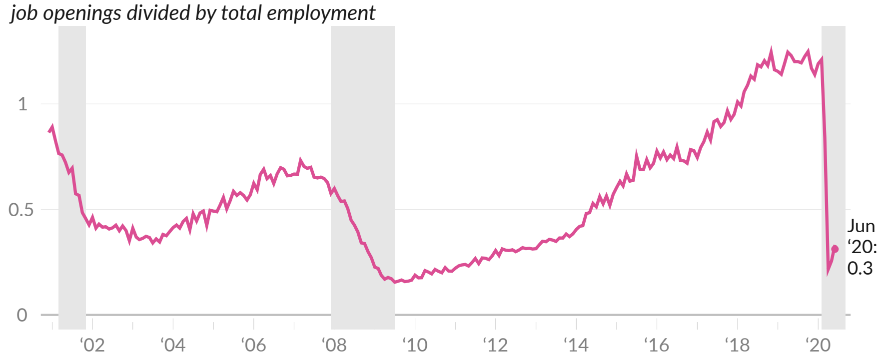
Source: Bureau of Labor Statistics

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 June 2020, the total quits rate in all industries was 1.9 percent (see —). The accommodations and food services quits rate was 4.2 percent (see —); the series high for the industry group was 6.3 percent in January 2001.

For additional context, there are 17.8 million unemployed persons in June 2020. The ratio of job openings to unemployed persons was 0.3 in June 2020 (see —), compared to 1.2 in the same month one year prior, and 0.9 in July 2017.

Job Openings Per Unemployed Person

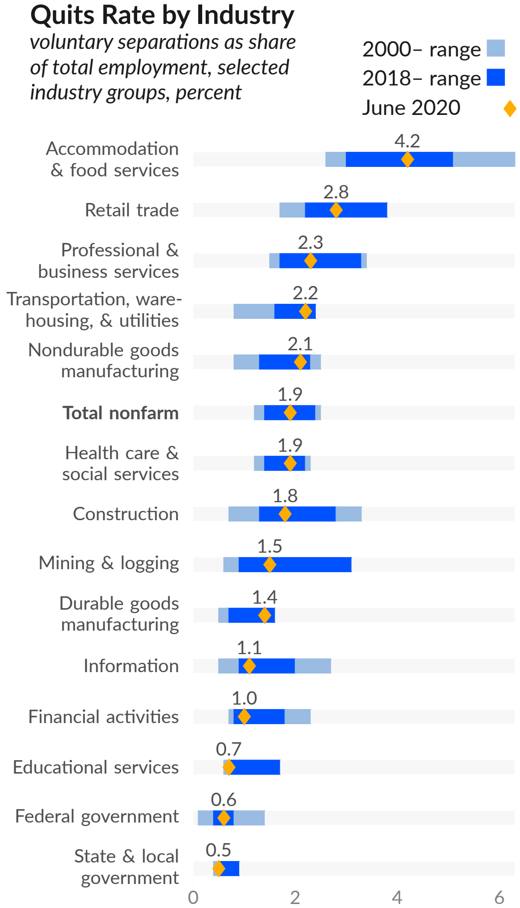
job openings divided by total employment



Source: Bureau of Labor Statistics

Quits Rate by Industry

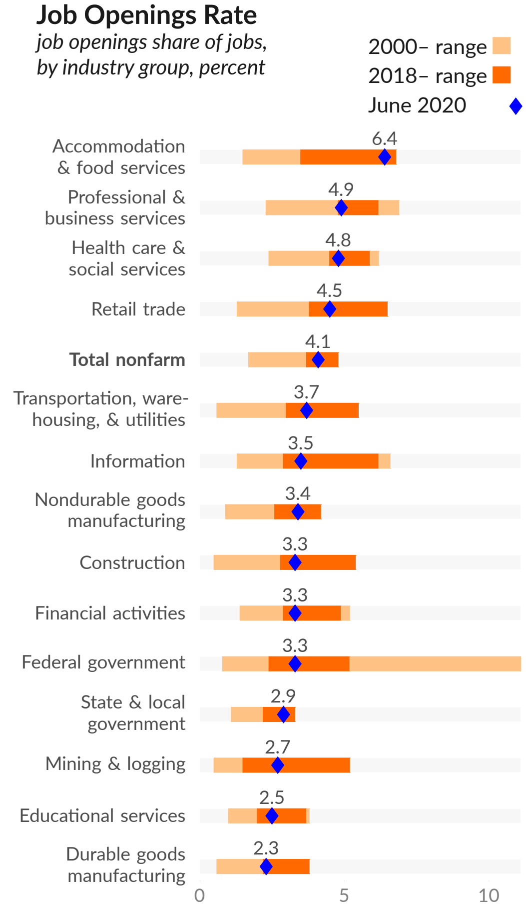
voluntary separations as share of total employment, selected industry groups, percent



Source: Bureau of Labor Statistics

Job Openings Rate

job openings share of jobs, by industry group, percent



Source: Bureau of Labor Statistics

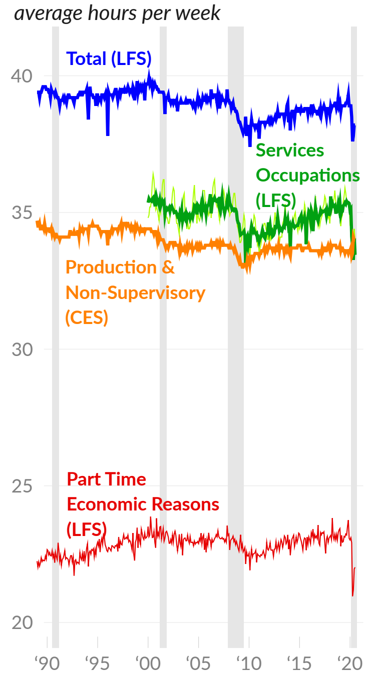
Hours Worked

The Bureau of Labor Statistics (BLS) reports 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 38.2 in July 2020 (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.

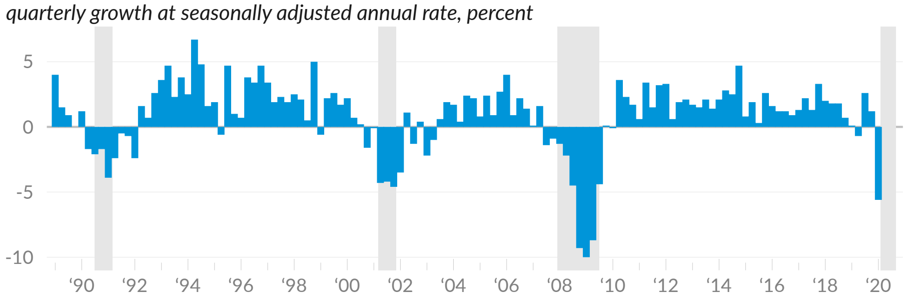
Those in service occupations (see —) work fewer hours on average, with 33.5 average weekly hours in July 2020, substantially below the 35.1 average in February 2020. Those part-time for economic reasons (see —) work an average of 22.0 hours per week in July 2020.

In July 2020, 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 reports a quarterly index tracking aggregate hours worked in nonfarm businesses (see ■). Total hours worked in nonfarm businesses decreased at an annual rate of 5.6 percent in 2020 Q1, following an increase of 1.2 percent in 2019 Q4.



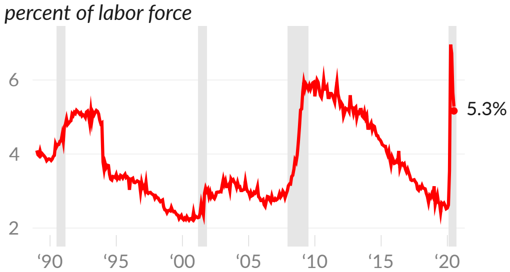
Source: Bureau of Labor Statistics

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

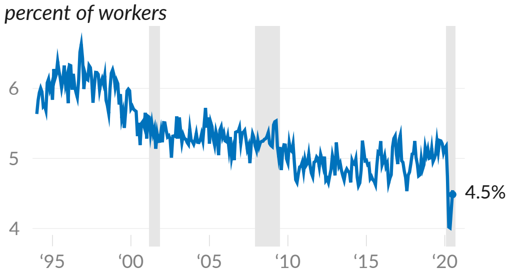
As of July 2020, 8,443,000 people are working part time because of economic reasons, equivalent to 5.3 percent of the labor force (see —), the lowest level since March 2020 and substantially above the February 2020 rate of 2.6 percent. During the great recession, the involuntary part-time share of the 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 usually just work at one job within a given week.

Multiple Jobholders

percent of workers



Source: Bureau of Labor Statistics

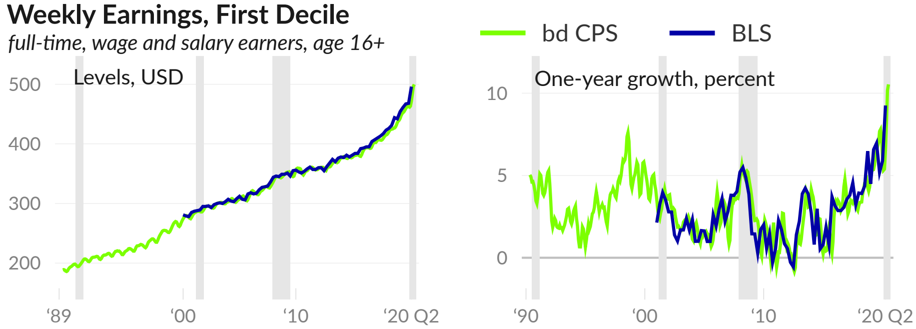
In July 2020, 6,569,000 people are working more than one job, equivalent to 4.5 percent of workers (see —), the highest level since March 2020 and substantially below the February 2020 rate of 5.2 percent. The multiple jobholder share of workers peaked at 6.6 percent in November 1996.

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 reports these data by decile and quartile, with the most commonly used measure being the median usual weekly earnings.

BLS calculations (see —) for 2020 Q2 show nominal first decile usual weekly earnings of $496.00, compared to $454.00 in 2019 Q2, resulting in one-year growth of 9.3 percent. In the previous quarter, 2020 Q1, first decile usual weekly earnings grew by 5.9 percent over the year. Author's calculations from the CPS (see —) show three-month moving average first decile usual weekly earnings of $497.00 in July 2020, $506.00 in June 2020, and $453.00 in July 2019. One-year growth was 11.0 percent for the three months ending July 2020, 10.0 percent for the three months ending June 2020, and 8.0 percent for the three months ending May 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 Q2	2020 Q1	2019 Q4	2019 Q3	2019 Q2	2018 Q2	2017 Q2	2016 Q2	2015 Q2
First decile	496	468	467	461	454	426	410	395	384
First quartile	670	630	623	611	611	585	574	545	524
Median	1002	957	936	919	908	876	859	824	801
Third quartile	1552	1514	1488	1462	1432	1384	1360	1313	1270
Ninth decile	2384	2320	2280	2275	2270	2112	2087	1997	1920

Source: Bureau of Labor Statistics

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

	2020 Q2	2020 Q1	2019 Q4	2019 Q3	2019 Q2	2018 Q2	2017 Q2	2016 Q2	2015 Q2
First decile	9.3	5.9	5.2	7.0	6.6	3.9	3.8	2.9	1.9
First quartile	9.7	4.1	3.7	3.2	4.4	1.9	5.3	4.0	1.7
Median	10.4	5.7	4.0	3.6	3.7	2.0	4.2	2.9	2.7
Third quartile	8.4	4.3	3.5	3.8	3.5	1.8	3.6	3.4	2.1
Ninth decile	5.0	2.4	3.0	8.0	7.5	1.2	4.5	4.0	1.3

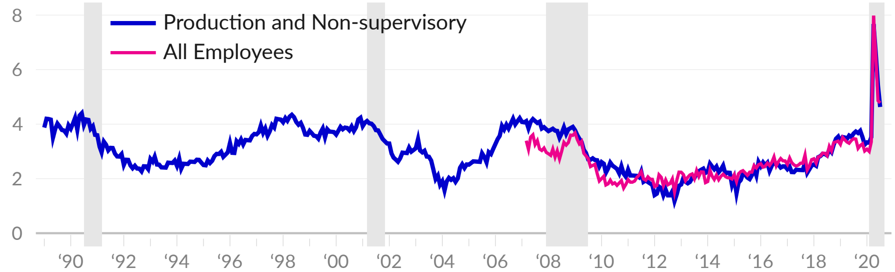
Source: Bureau of Labor Statistics

Nominal Hourly Wages

Over the year ending July 2020, nominal wages increased by 4.8 percent for all employees (see —) and increased by 4.6 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 5.5 percent for all employees and increased at an annual rate of 6.5 percent for production and non-supervisory employees.

Average Hourly Earnings

nominal one-year growth, percent



Source: Bureau of Labor Statistics

By industry, 10 of 12 groups experienced real wage growth (wage growth above the increase in prices indicated by the consumer price index). The information industry had the fastest nominal growth rate, at 6.4 percent, followed by 5.3 percent in financial activities and 5.0 percent in professional & business services.

Average Hourly Earnings Growth by Industry

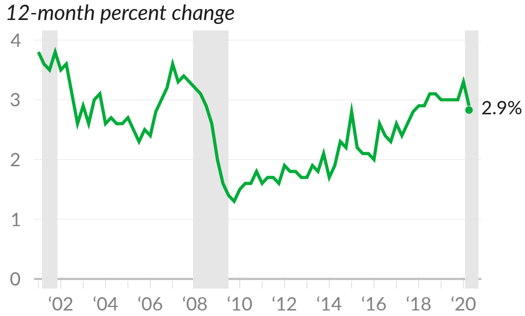
one-year growth, production and non-supervisory, July 2020

Source: Bureau of Labor Statistics

Employment Cost Index

The Bureau of Labor Statistics publishes 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 and wages and salaries.

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



Source: Bureau of Labor Statistics

In the second quarter of 2020, private industry wage and salary costs (see —) increased by 2.9 percent, following an increase of 3.3 percent in 2020 Q1, and an increase of 3.0 percent in 2019 Q4.

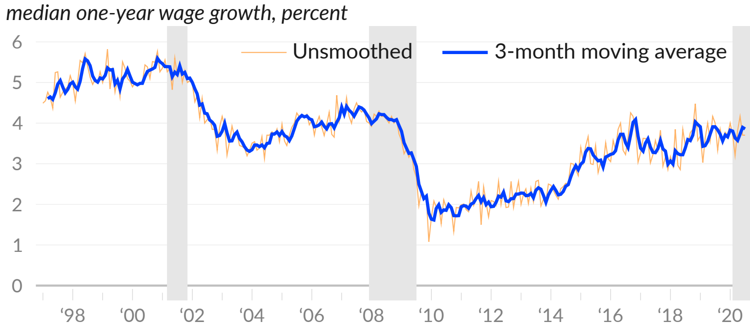
Wage Growth Tracker

The Federal Reserve Bank of Atlanta publishes 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 wage growth of 3.7 percent in July 2020 (see —), and average wage growth of 3.9 percent over the three months ending July 2020 (see —). One year prior, in July 2019, three-month moving average wage growth was also 3.9 percent.

Wage Growth Tracker

median one-year wage growth, percent



Source: Author's Calculations

Matching wage observations one year apart makes it possible to track how many people do not receive a wage increase. The Atlanta Fed measures this as the share of individuals who have one-year wage growth of between -0.5 and 0.5 percent. The Atlanta Fed approach is replicated using the bd CPS and a 3-month moving average. In July 2020, 13.6 percent of individuals had no wage growth, compared to 13.6 in June 2020 (see —). One year prior, in July 2019, 12.6 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

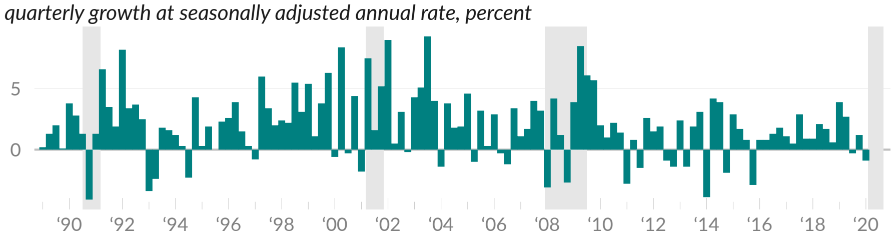
Source: Author's Calculations

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 Q1, labor productivity decreased at an annual rate of 0.9 percent (see ■), as the result of a decrease of 6.5 percent in real ouput and a decrease of 5.6 percent in hours worked. In the prior quarter, 2019 Q4, labor productivity increased at an annual rate of 1.2 percent, as real output increased at an annual rate of 2.4 percent and hours of work increased at an annual rate of 1.2 percent. Over the past five years, labor productivity growth has averaged 1.1 percent, substantially below the 1989-onward average of 1.9 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.

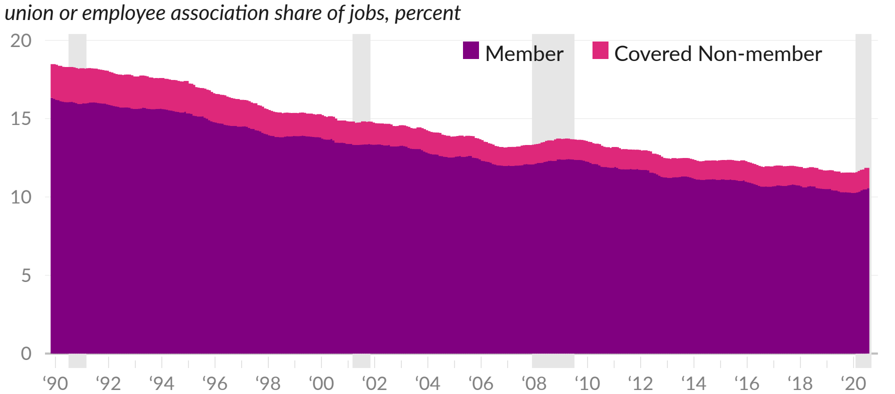
Union Membership

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 July 2020, the share of jobs held by union and employee association members averaged 10.6 percent. In levels, there were 14.4 million union jobs, and 121.7 million nonunion jobs, on average over the period. This union membership rate averaged 10.4 percent during the 12 months ending July 2019, and 10.7 percent during the 12 months ending July 2018. Union jobs decreased by 238,000 from July 2019 to July 2020, while nonunion jobs decreased by 4,661,000.

Union Membership and Coverage

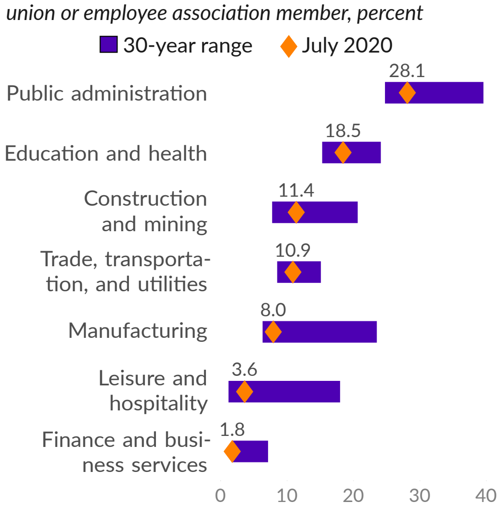
union or employee association share of jobs, percent



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 28.1 percent as of July 2020, followed by education and health with 18.5 percent, and construction and mining with 11.4 percent. The manufacturing industry experienced the largest overall percentage point decrease in union membership rates over the past 30 years, and is currently 15.6 percentage points below its February 1989 rate of 23.5 percent. The lowest union membership rate is in finance and business services (1.8 percent). The union membership rate of the industry was 7.2 percent at its 30-year peak in March 1992.

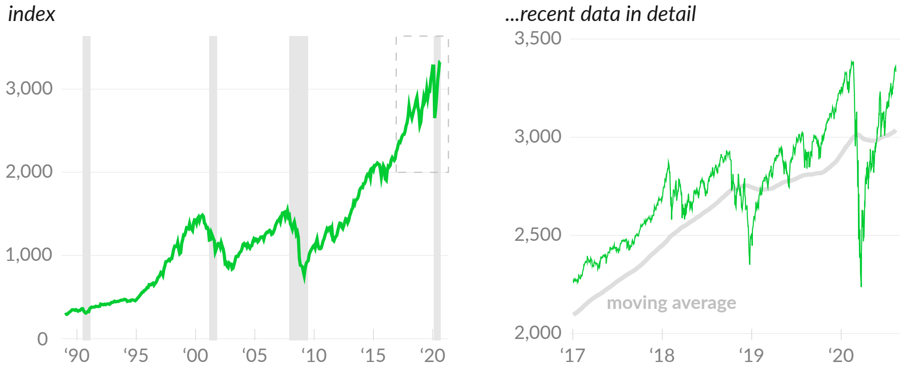
Financial Markets

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 3334 on August 11, 2020. The index is currently 1.8 percent below its one-year high of 3394 on February 19, 2020, and 52.1 percent above its one-year low of 2192 on March 23, 2020. The average over the past year is 3037; the index is 9.8 percent above its one-year moving average (see —).

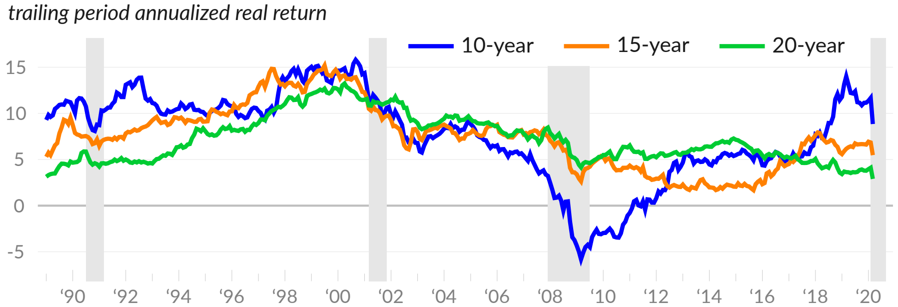
S&P 500
index



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 2.9 percent as of March 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

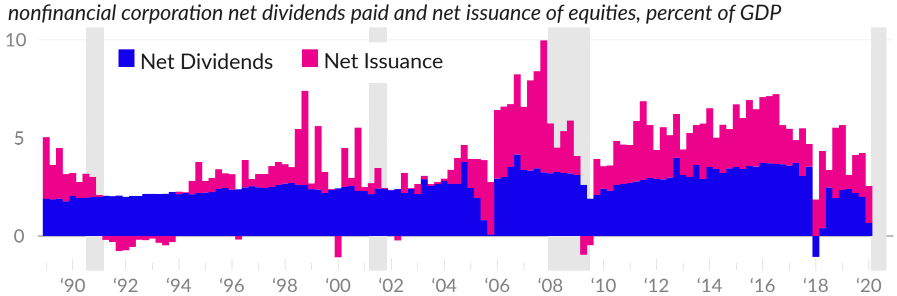


Source: Shiller, Author's Calculations

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.

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 or 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

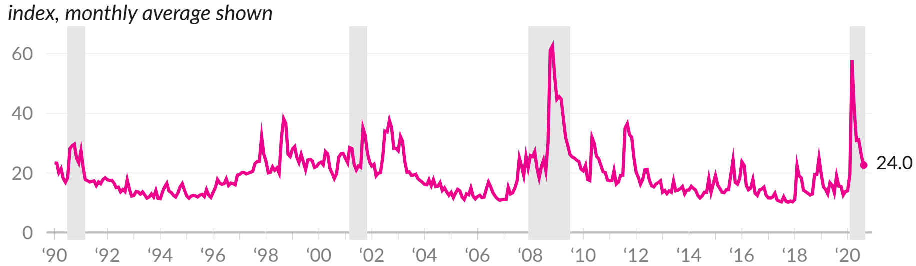
Source: Shiller

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 24.0 on August 11, 2020, slightly above the average index value of 18.8 over the past three years.

S&P 500 Volatility Index

index, monthly average shown



Source: Chicago Board Options Exchange

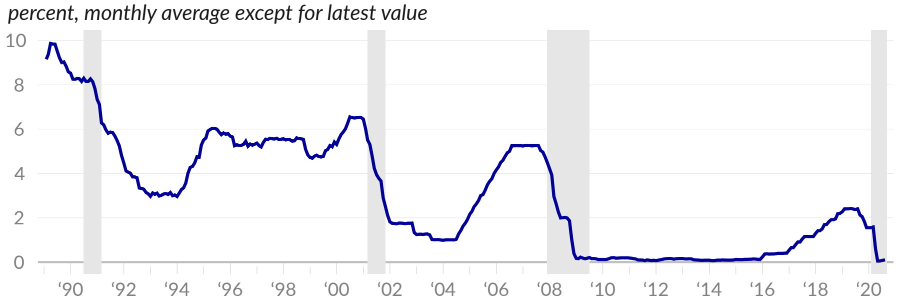
Interest Rates

The US Federal Reserve System (Fed) has a congressional mandate to promote price stability and maximum employment. In practice, a Fed committee (FOMC) determines the federal funds rate, which aims to influence interest rates in the broader economy. Fed monetary policy can be neutral or be used to stimulate or slow the economy.

The effective fed funds rate (see —) is 0.1 percent, as of August 10, 2020. 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



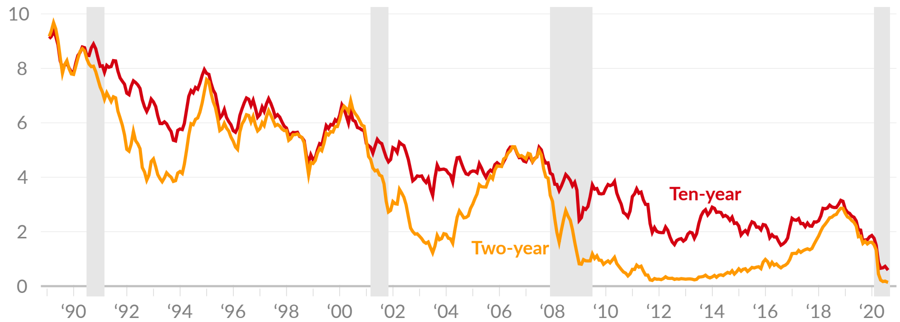
Source: Federal Reserve

Government Bonds

As of August 10, 2020, the constant maturity yield for a ten-year US Treasury bond (see —) is 0.59 percent, compared to 1.63 percent one year prior. The yield for a two-year Treasury (see —) is 0.14 percent, compared to 1.57 percent a year prior.

Treasury Constant Maturity Yields

percent, monthly average except for latest value



Source: Federal Reserve

Selected US Treasury Rates

constant maturity yield, percent

	Aug 10, 2020	Aug 7, 2020	Aug 4, 2020	Jul 10, 2020	May 11, 2020	Feb 10, 2020	Aug 8, 2019	Aug 10, 2015
Three-month	0.11	0.10	0.09	0.13	0.12	1.58	2.02	0.12
Two-year	0.14	0.13	0.11	0.16	0.17	1.37	1.62	0.73
Five-year	0.24	0.23	0.19	0.30	0.36	1.38	1.54	1.62
Ten-year	0.59	0.57	0.52	0.65	0.73	1.56	1.72	2.24
Thirty-year	1.25	1.23	1.19	1.33	1.43	2.03	2.25	2.89

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 August 10, 2020, the spread between a 10-year treasury bond and a three-month treasury bill is 0.48 percentage point (see —), compared to -0.30 percentage point one year prior. The spread between 10-year and 2-year treasuries (see —) was 0.45 percentage point on August 10, 2020, and 0.10 percentage point one year prior.

10-Year – 3-Month Spread
percentage point treasury yield spread

Source: Federal Reserve

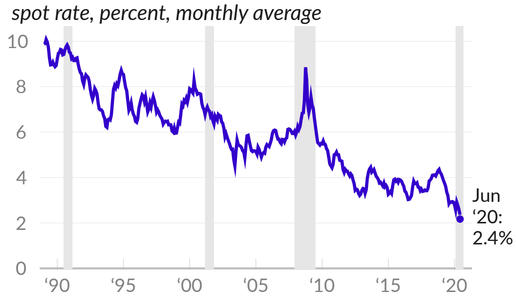
10-Year – 2-Year Spread
percentage point treasury yield spread

Source: Federal Reserve

Corporate Bonds

The US Treasury publishes 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 2.4 percent in June 2020 for high-quality corporate bonds with a maturity of 10 years, following a rate of 2.6 percent in May 2020. In June 2019, the spot rate was 3.4 percent.

10-Year, High Quality
spot rate, percent, monthly average



Source: Treasury

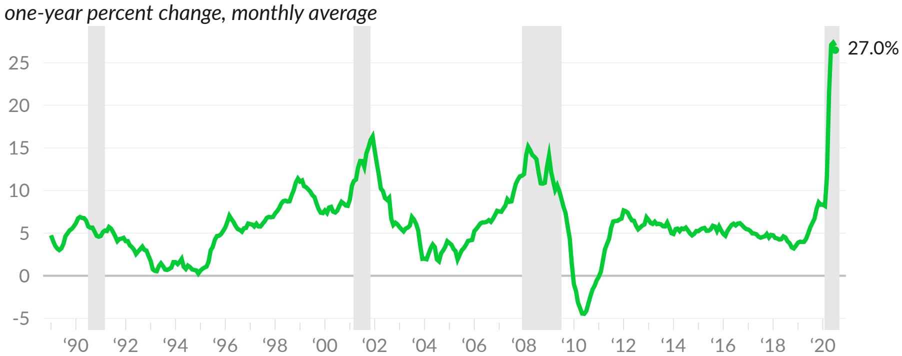
Money and Monetary Policy

The Federal Reserve reports the weekly average **money stock**, broadly, as M2, which includes cash and deposits such as savings accounts and checking accounts. In the week of July 27, 2020, the M2 measure of money averaged $18.1 trillion, equivalent to 93.5 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 $3.1 trillion in the same week, equivalent to 16.0 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 July 2020, the M2 plus institutional money funds measure increased over the equivalent previous year value by 27.0 percent.

M2 and Institutional Money Funds

one-year percent change, monthly average



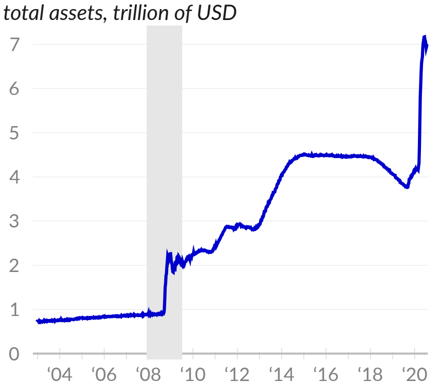
Source: Federal Reserve

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 $6.9 trillion, as of the latest data, covering August 5, 2020. The total value of Fed assets was largely unchanged from the value one week prior.

Federal Reserve Assets
billions of US Dollars

	Aug 5, 2020	Jul 29, 2020	Jul 8, 2020	May 6, 2020	Aug 7, 2019
Total (see —)	6,945.2	6,949.0	6,920.7	6,721.4	3,781.5
U.S. Treasury securities	4,305.7	4,293.6	4,231.4	4,020.2	2,080.7
Mortgage-backed securities	1,933.5	1,933.4	1,911.4	1,605.4	1,511.8
Central bank liquidity swaps	105.7	117.5	179.1	444.9	0.0
Repurchase agreements	0.0	0.0	0.0	172.7	0.0
Loans	84.1	90.5	93.4	113.3	0.1
Payroll Protection Program	67.8	70.8	67.7	29.2	0.0
Net unamortized premium	316.7	315.7	310.0	281.0	116.3
Other	131.8	127.6	127.9	54.8	72.6

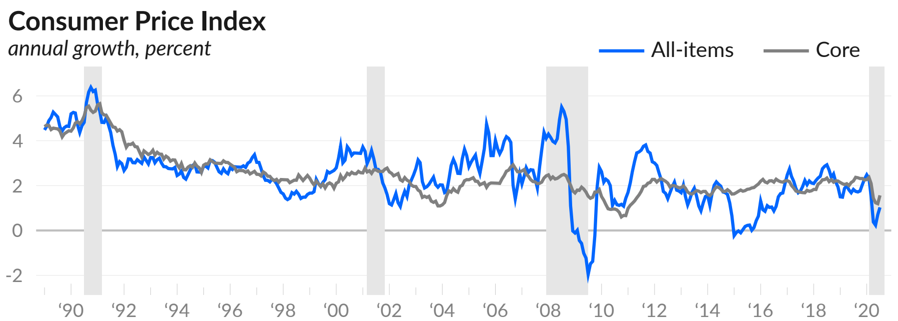
Source: Federal Reserve

Prices

Changes in prices affect the amount of goods and services that can purchased by a fixed amount of income. When researchers try to measure changes in prices, they often look at 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 "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.

Consumer Price Index

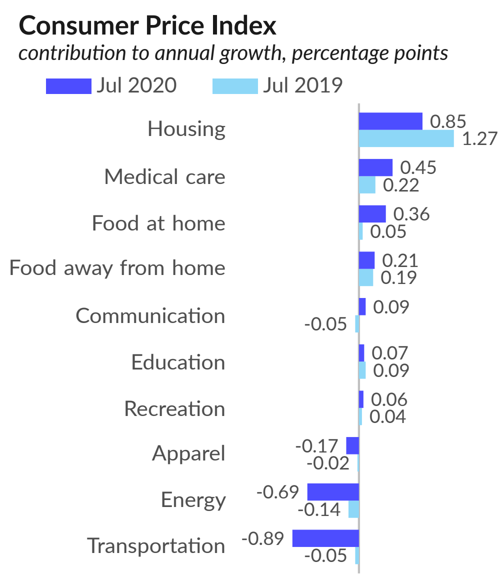
Consumer prices increased by 1.0 percent over the year ending July 2020, according to the CPI for all urban consumers. Core inflation, which does not include the more volatile food and energy prices, was 1.6 percent.



Source: Bureau of Labor Statistics

In July 2020, housing contributed 0.85 percentage points to overall CPI inflation, compared to a contribution of 1.27 percentage points in July 2019. Medical care contributed 0.45 percentage points to overall inflation in July 2020, compared to a contribution of 0.22 percentage points in July 2019.

Transportation subtracted 0.89 percentage points from overall CPI inflation in July 2020, compared to a reduction of 0.05 percentage points in July 2019. Energy subtracted 0.69 percentage points from overall inflation, compared to a reduction of 0.14 percentage points the previous year.



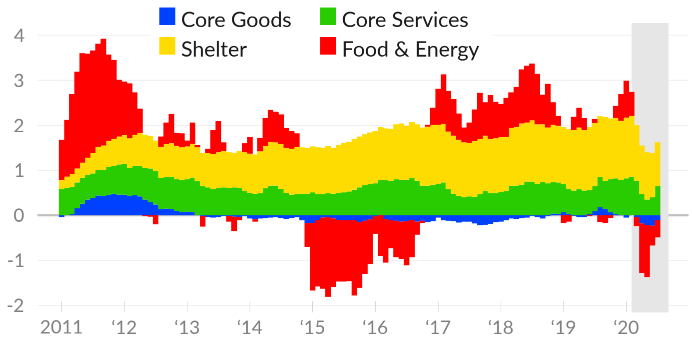
Source: Bureau of Labor Statistics

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. Specifically in this example, economic theory suggests the Fed has more influence over prices of core goods and services than over prices of housing (which is affected more by the housing stock, zoning, and limitations on land) and food and energy (for which prices are historically volatile).

As of July 2020, core goods subtracted 0.11 percentage point from the overall non-seasonally-adjusted CPI inflation rate of 1.17 percent, while core services excluding shelter contributed 0.65 percentage point. Shelter contributed 0.97 percentage point, and food and energy subtracted 0.38 percentage point. One year prior, in July 2019, the corresponding CPI inflation rate was 2.11 percent; core goods contributed 0.09 percentage point, core services excluding shelter contributed 0.56 percentage point, shelter contributed 1.40 percentage points, and food and energy contributed 0.09 percentage point.

CPI Decomposition

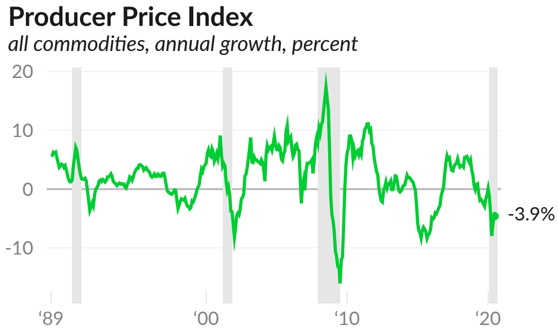
contribution to one-year change in CPI-U, percentage points



Source: Author's calculations from BLS data

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 publishes 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.

Producer Prices

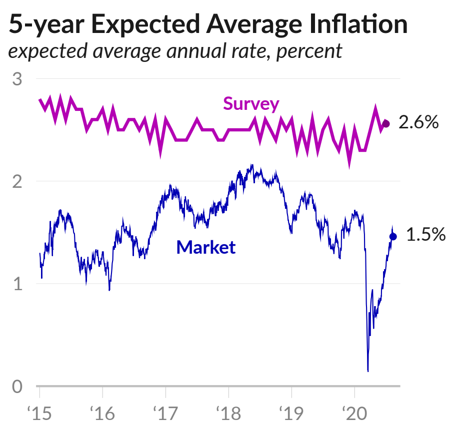


Source: Bureau of Labor Statistics

The Bureau of Labor Statistics reports prices producers receive for the various goods and services they produce. The producer price index for all commodities (see —) decreased by 3.9 percent over the year ending July 2020, slightly below the 12-month growth rate of -1.8 percent in July 2019.

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.



Source: FRED; U. of Michigan

As of July 2020, consumers expect an average inflation rate of 2.6 percent over the next five years, (see —), compared to an expected rate of 2.5 percent in July 2019. Consumers had expected inflation to average 2.8 percent over the past five years, while actual inflation over the period was 1.7 percent.

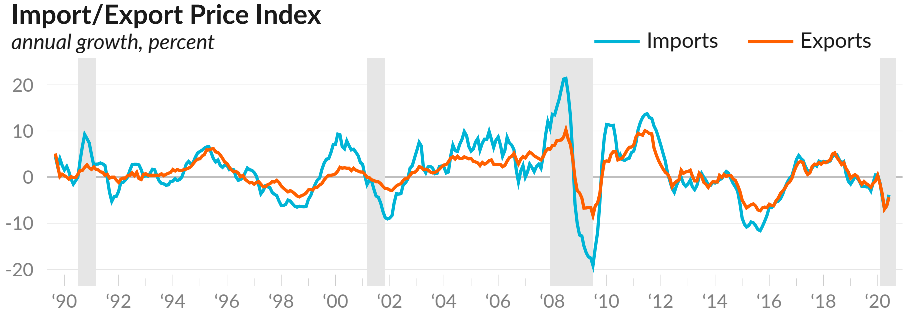
As of August 11, 2020, markets expect an average inflation rate of 1.5 percent over the next five years (see —), compared to an expected rate of 1.39 percent on August 12, 2019. Markets had expected inflation to average 1.31 percent over the past five years, five years ago.

Import/Export Price Index

According to the Bureau of Labor Statistics, US import prices (see —) decreased by 3.8 percent over the 12 months ending June 2020. Import prices decreased by 6.2 percent over the 12 months ending the month prior (May 2020). The latest value is substantially below the past-three-year average growth rate of 0.4 percent.

Prices of US exports (see —) decreased by 4.4 percent over the year ending June 2020, also substantially below its three-year moving average growth rate of 0.6 percent. Export prices decreased by 6.2 percent over the 12 months ending May 2020.

Import/Export Price Index
annual growth, percent

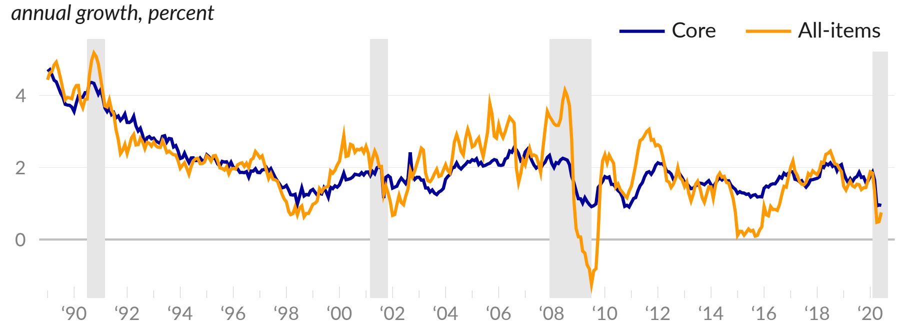


Source: Bureau of Labor Statistics

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 and changes in consumer behavior. The index is additionally updated over time to the latest methodology. As of June 2020, PCE inflation, measured as the one year percent change in the overall index, is 0.8 percent, compared to 0.5 percent in May 2020, and 1.5 percent in June 2019. Core PCE inflation, excluding food and energy, was 0.9 percent in June 2020, 1.0 percent in May 2020, and 1.7 percent in June 2019.

Personal Consumption Expenditure Price Index
annual growth, percent



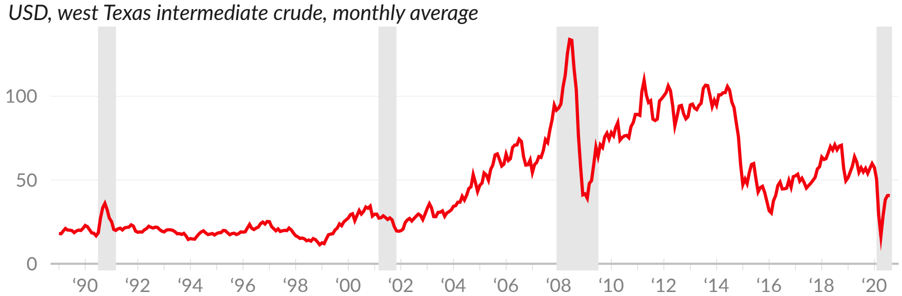
Source: Bureau of Economic Analysis

Commodity Prices

As of August 3, 2020, a barrel of west Texas intermediate (WTI) **crude oil** sells for $40.83 (see —). Over the past year, this measure of oil prices has decreased by 25.5 percent. Over the past three years, the price decreased by 15.0 percent. Currently, the WTI price is $93.05 per barrel below its June 2008 average.

Oil Price

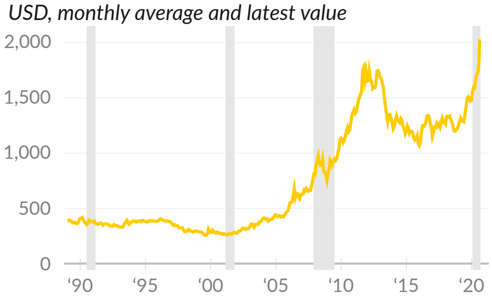
USD, west Texas intermediate crude, monthly average



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 August 10, 2020, one troy ounce of gold sells for $2,030.30 (see —), compared to an average of $1,497.10 per ounce during August 2019. Following the great recession, the monthly average price of gold reached $1,780.65 per ounce, in September 2011.

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