Will the Recovery Ever End?

Boulder Economic Forecast

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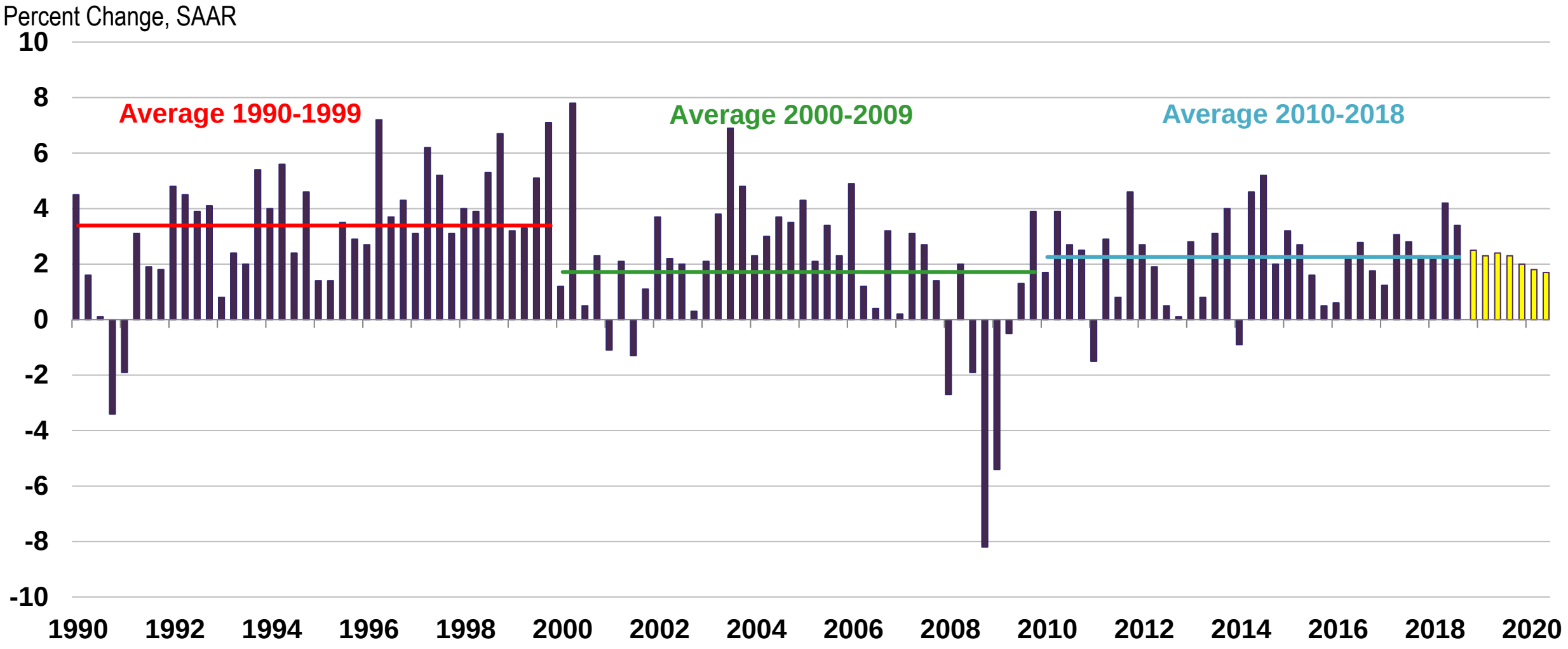
#COBizOutlook

Leeds School of Business
UNIVERSITY OF COLORADO BOULDER
BUSINESS RESEARCH DIVISION

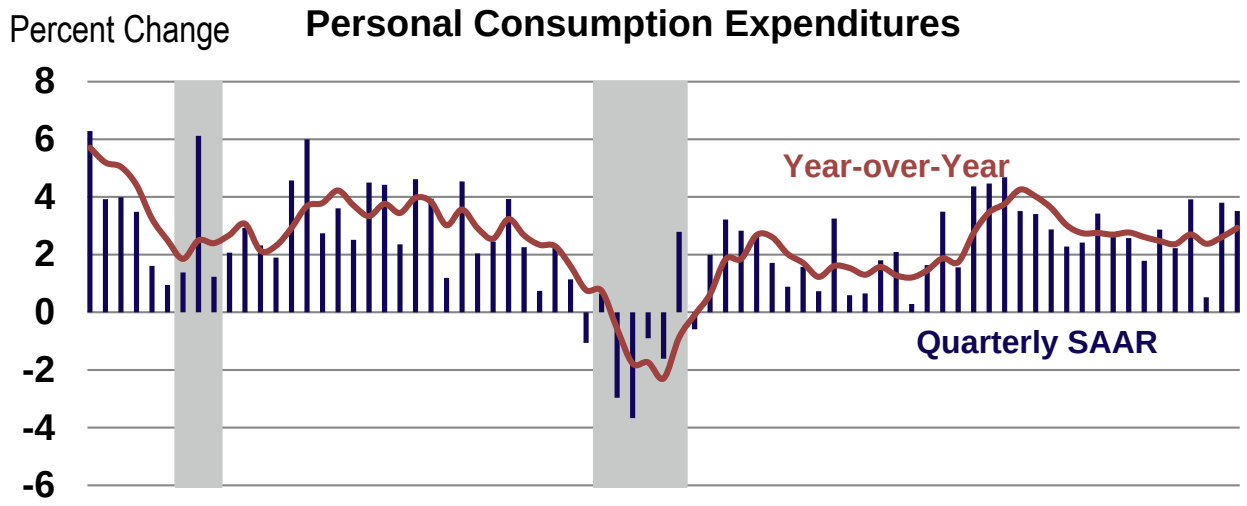
Real GDP Growth

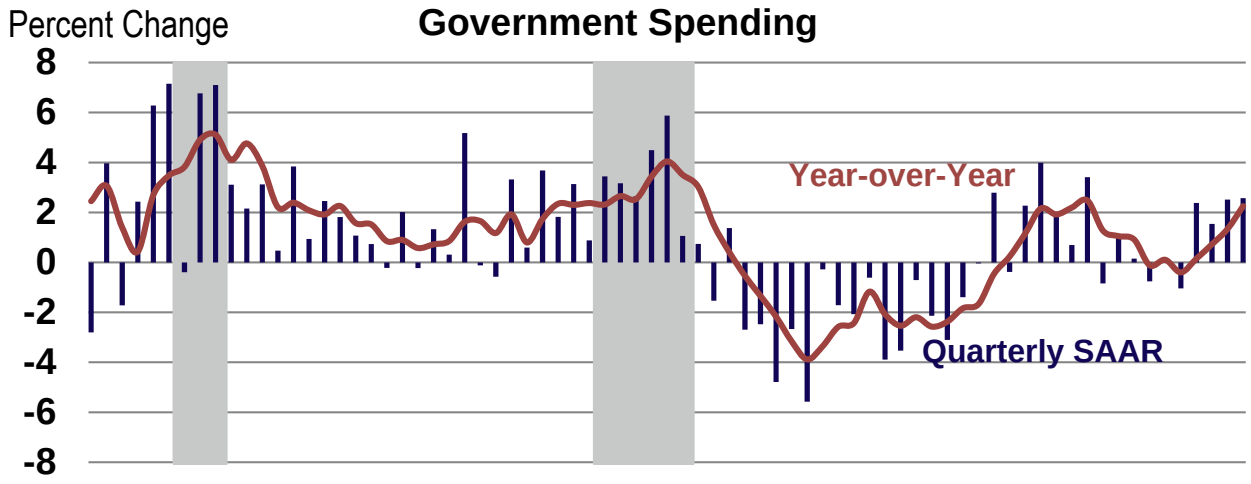
Quarterly Real GDP

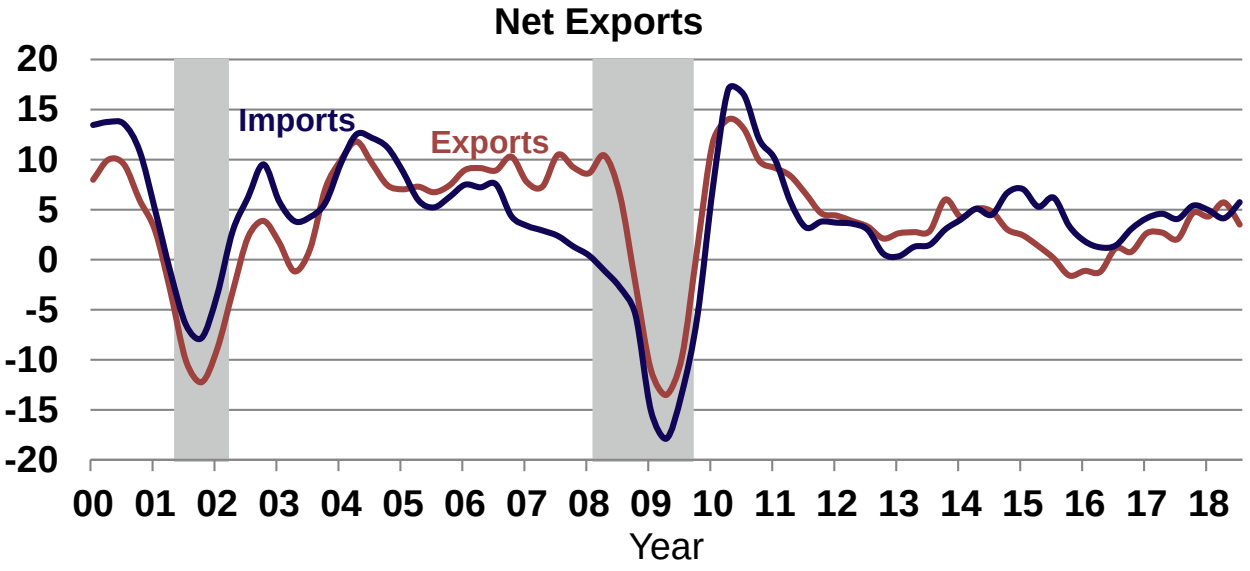


Sources: Bureau of Economic Analysis and Consensus Forecasts.

Economic Growth



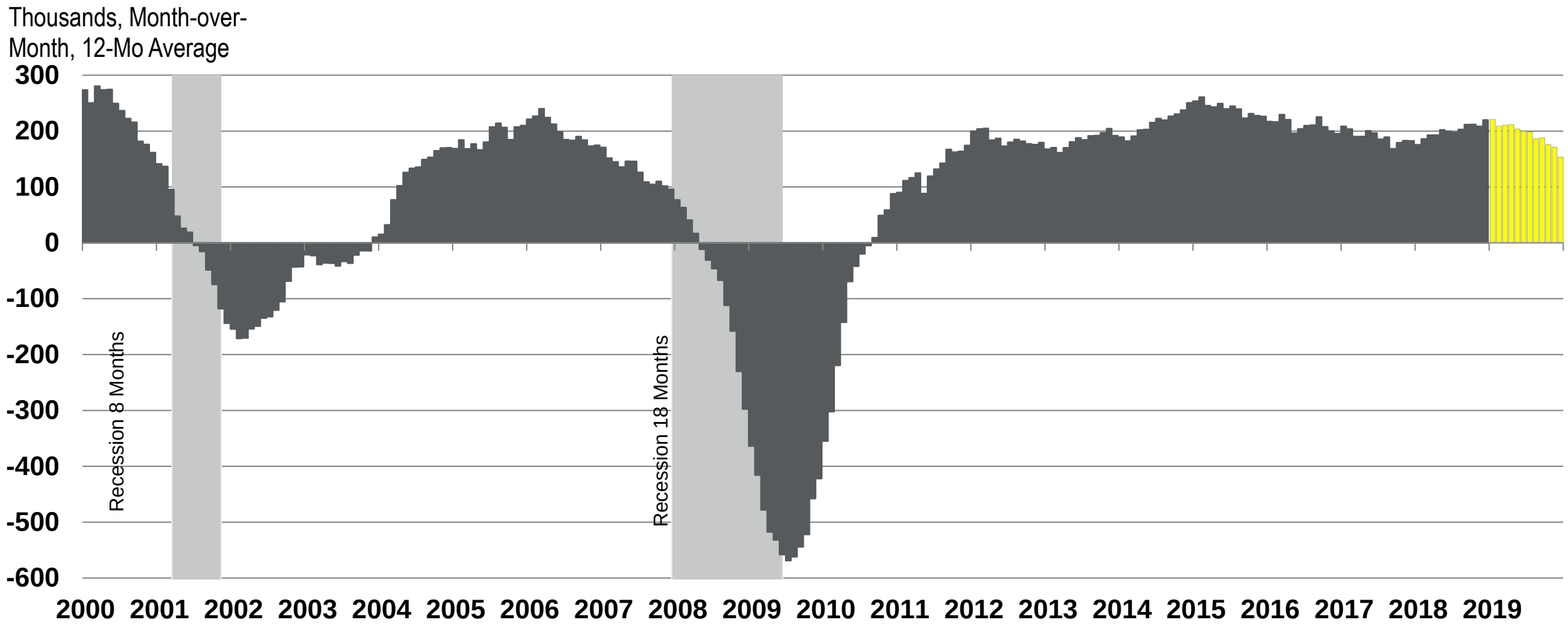




Sources: Bureau of Economic Analysis, the National Bureau of Economic Research, and the Business Research Division.

National Employment

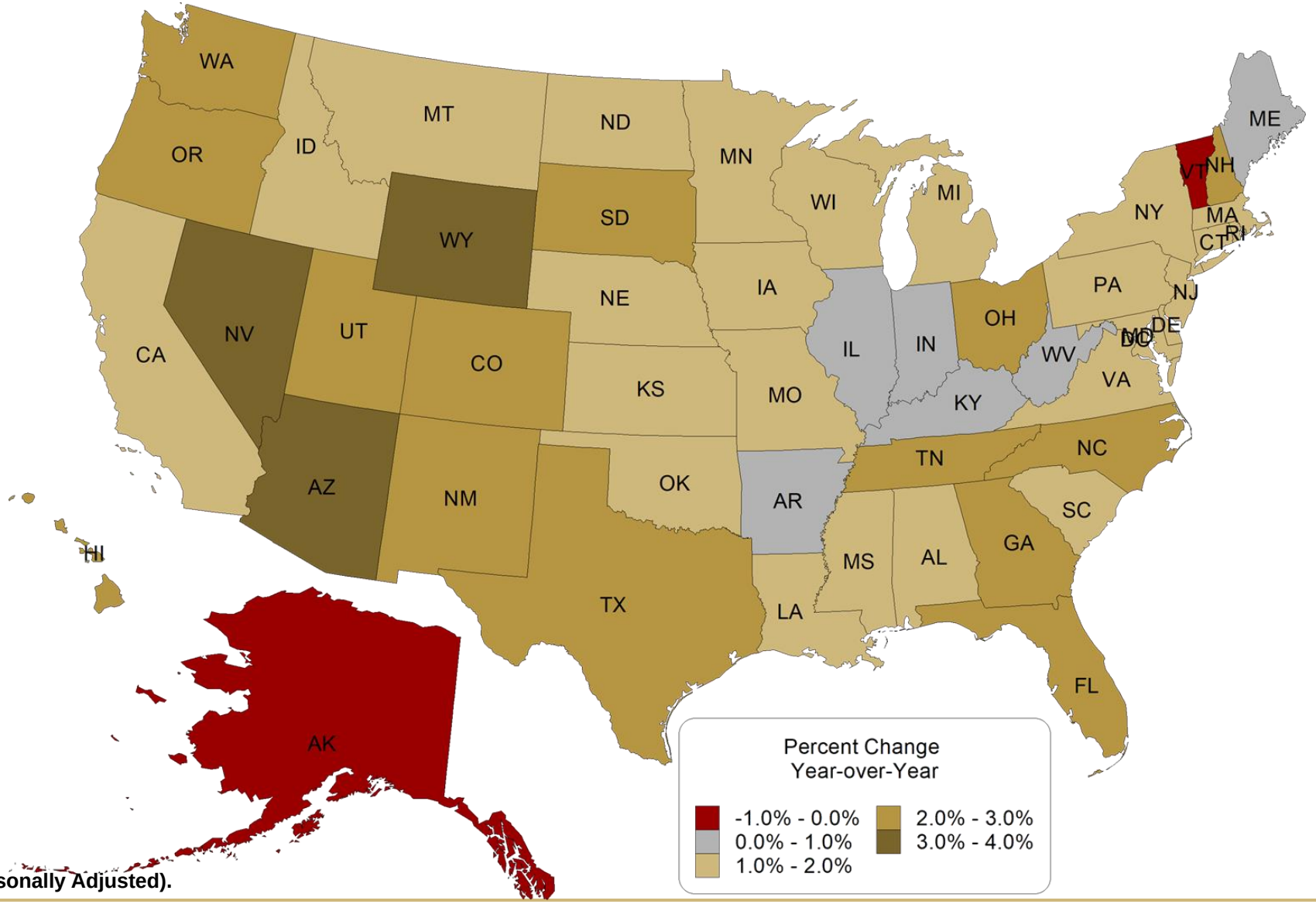
Month-over-Month Change, 12-Month Average



Sources: Bureau of Labor Statistics (Seasonally Adjusted), Moody's Analytics, and NBER.

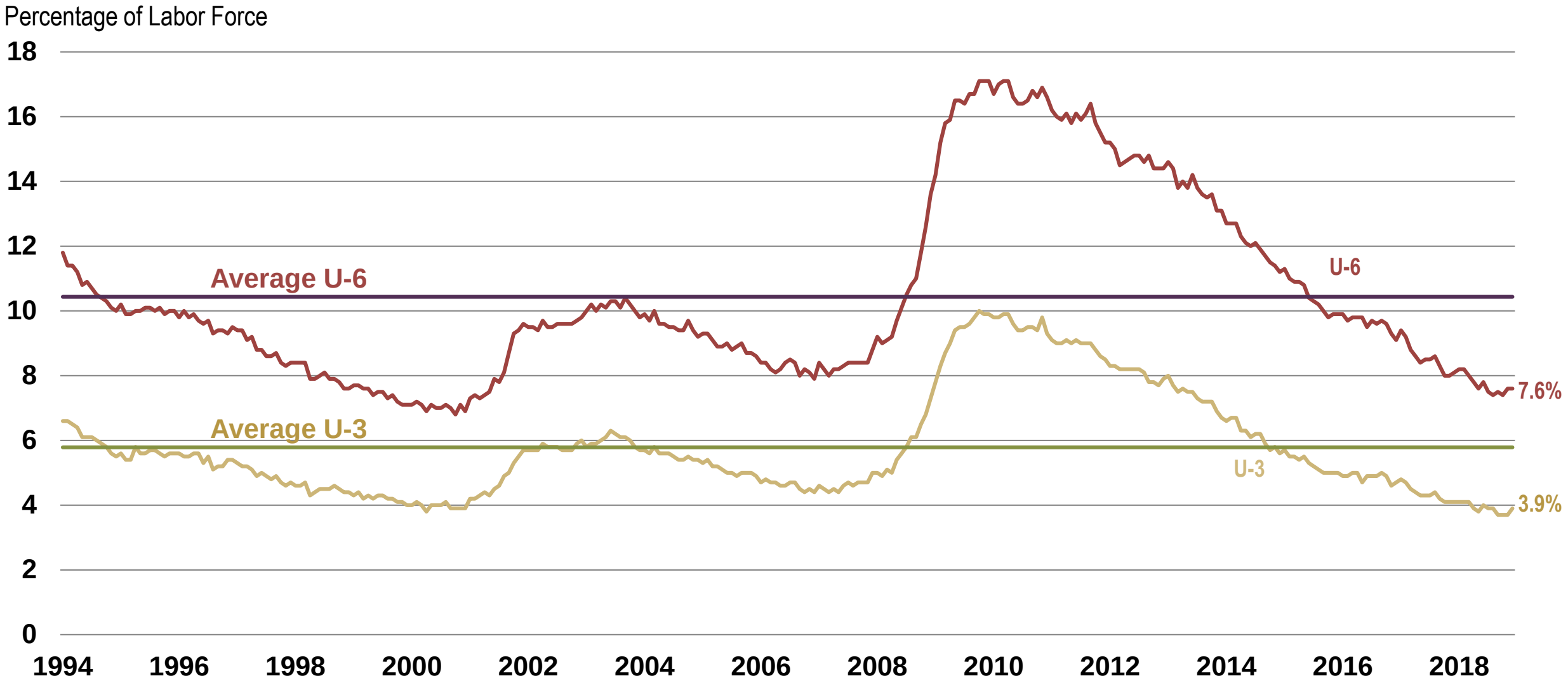
State Employment Growth

Year-over-Year November 2018



Source: Bureau of Labor Statistics (Seasonally Adjusted).

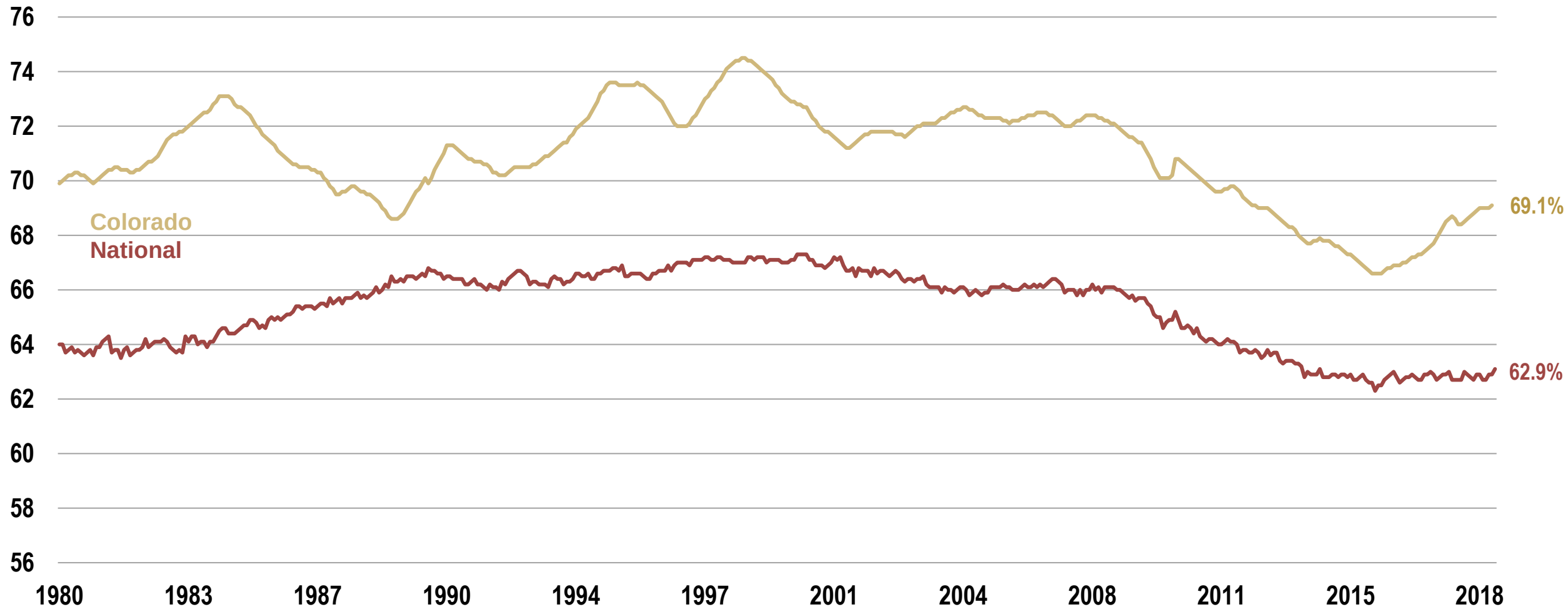
Labor Underutilization



Source: Bureau of Labor Statistics (Seasonally Adjusted).

Labor Force Participation Rate

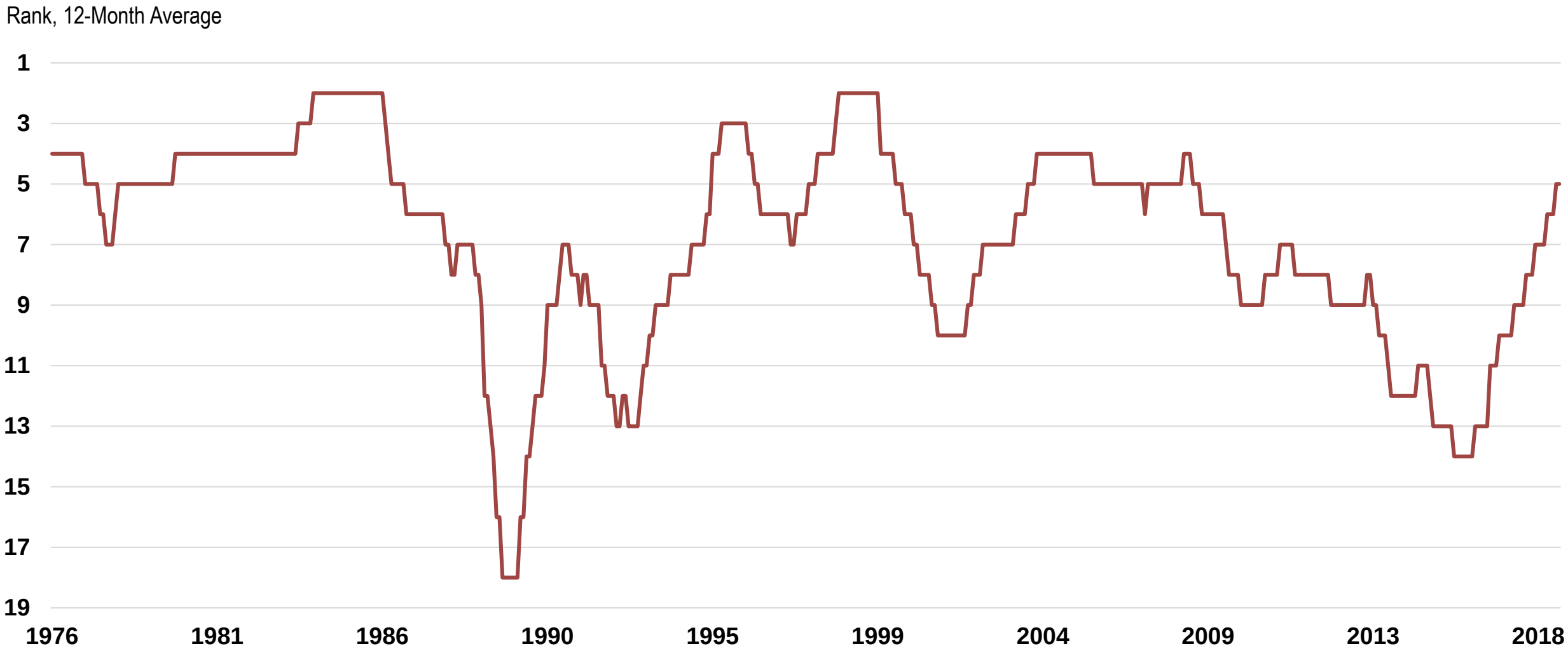
Percent of Population 16 and Over



Source: Bureau of Labor Statistics (Seasonally Adjusted).

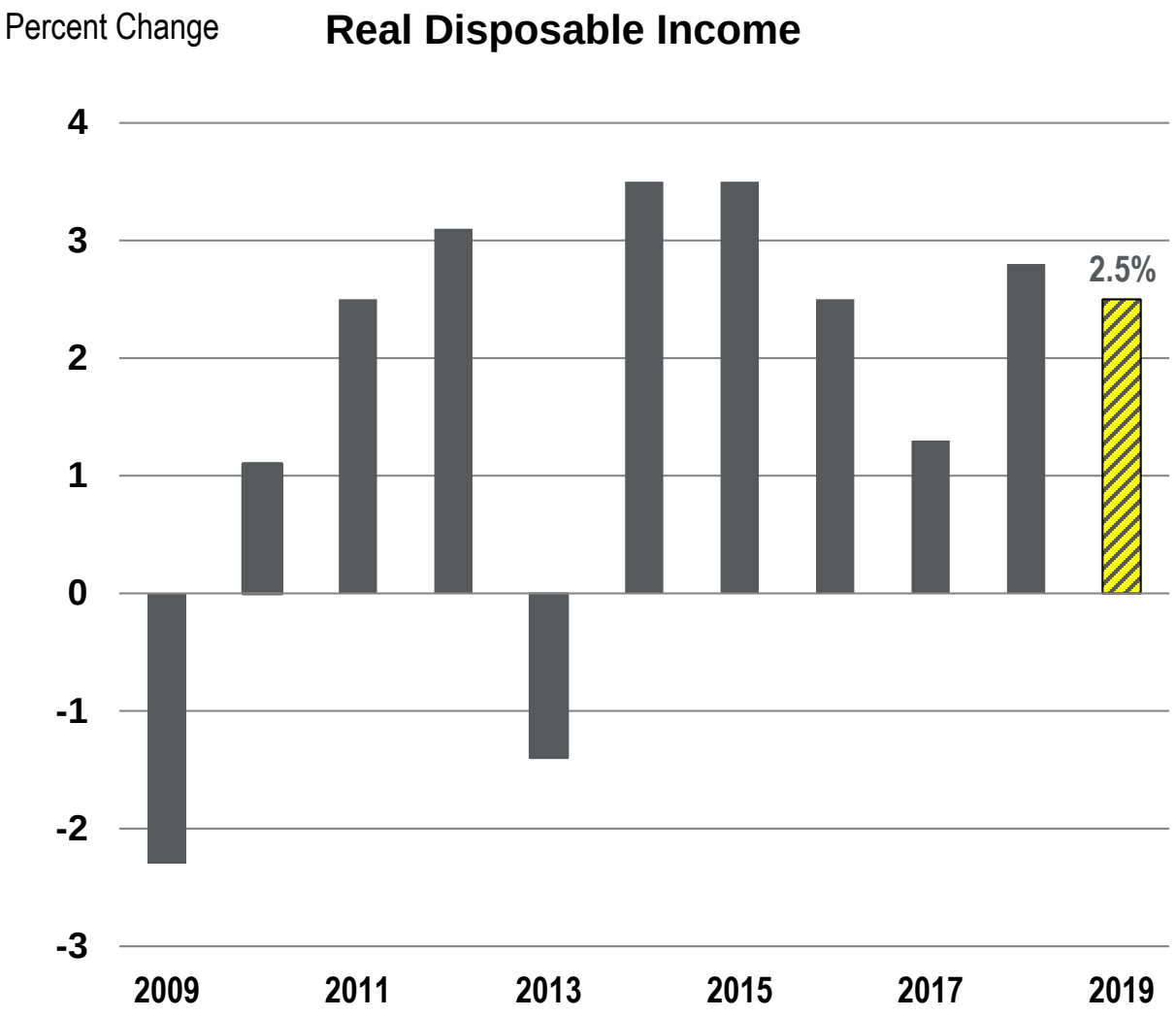
Colorado LFPR State Ranking

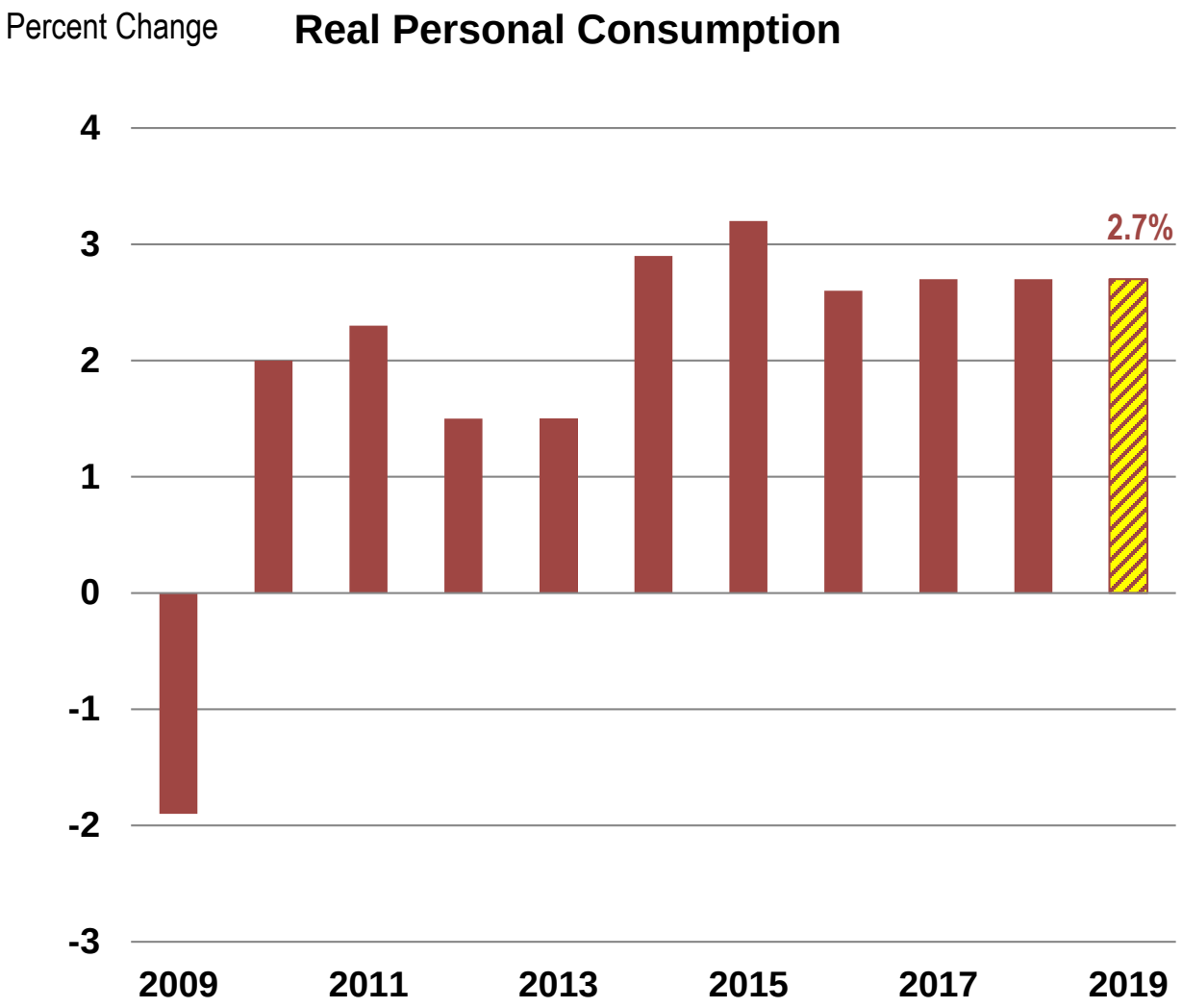
December 1976 - November 2018



Source: Bureau of Labor Statistics, Current Population Survey. Notes: Colorado ranked 6th in July 2018 based on the 12-month average and 4th in July alone.

U.S. Income and Consumption

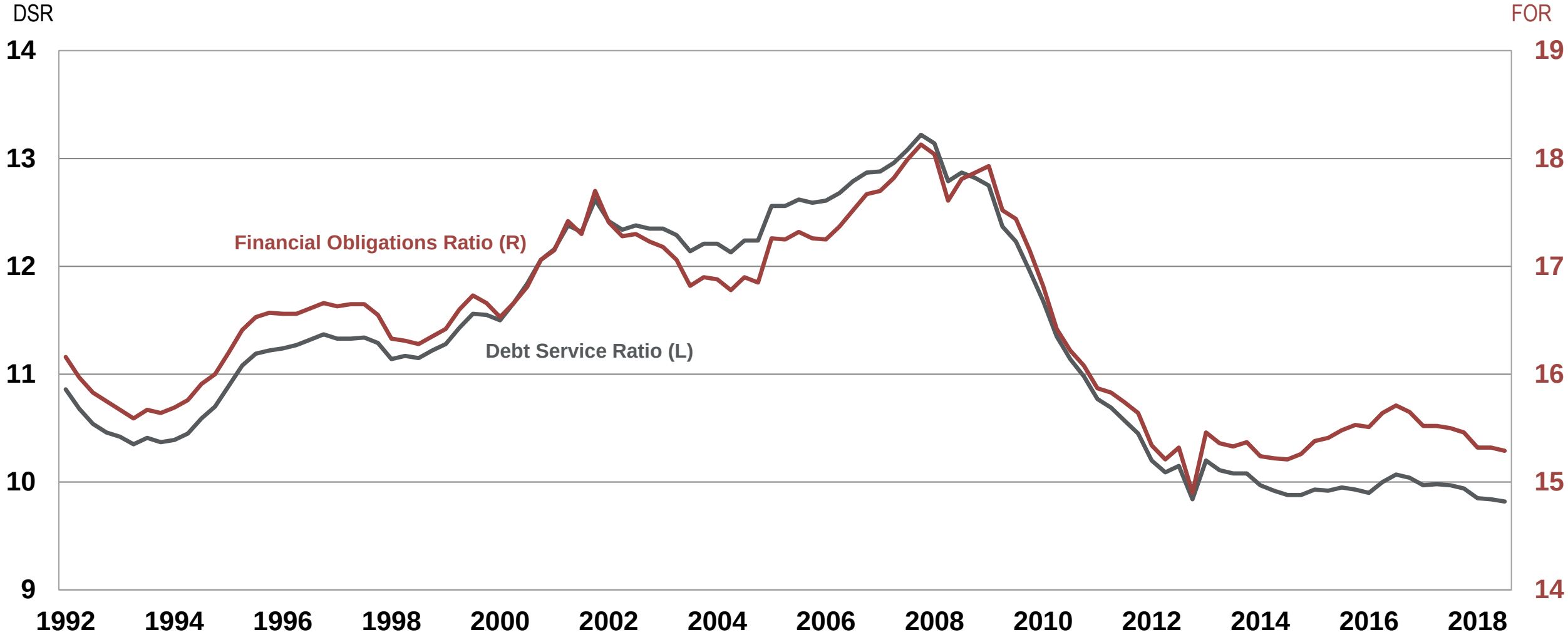




Source: Consensus Forecasts.

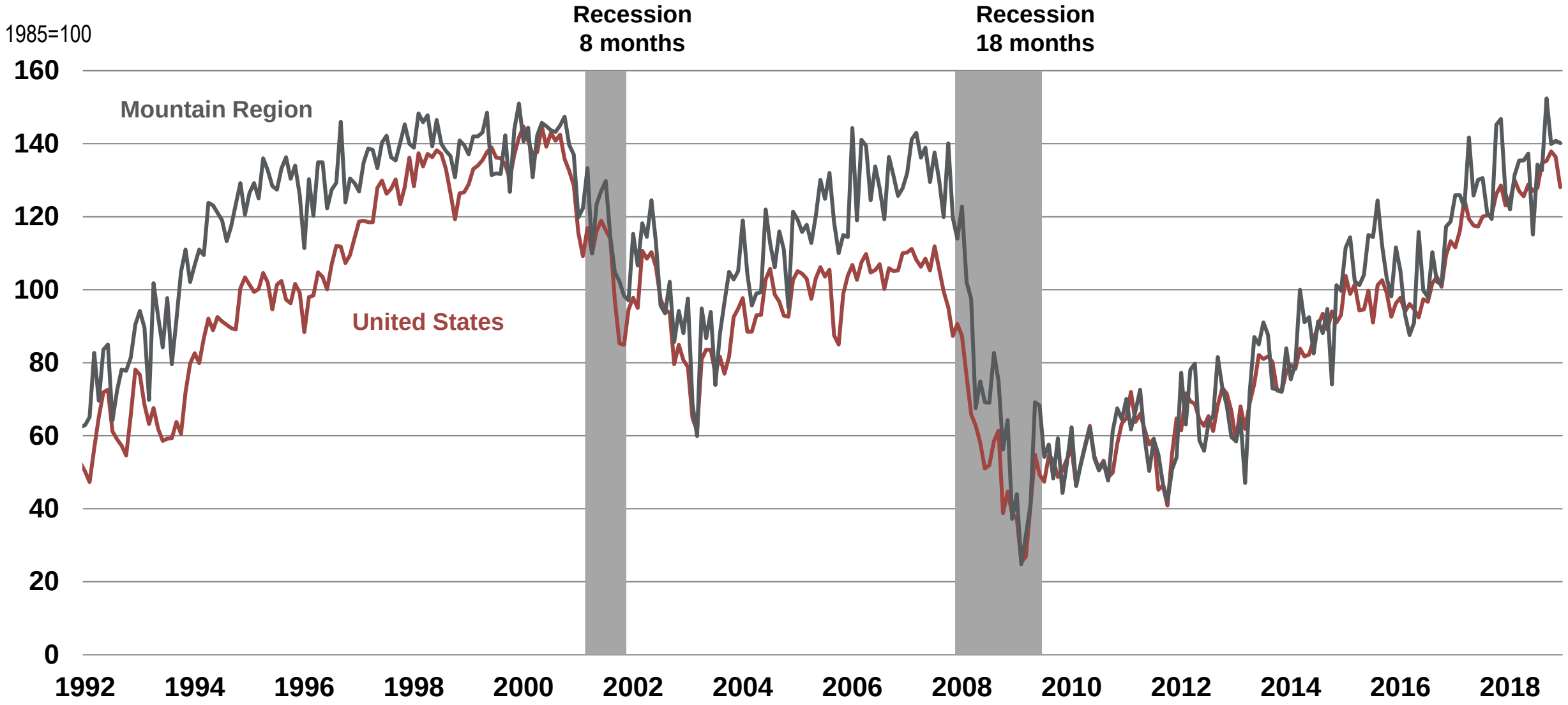
Household Debt Burden

Percent of Disposable Income



Source: Federal Reserve, Household Debt Service and Obligations Ratios.

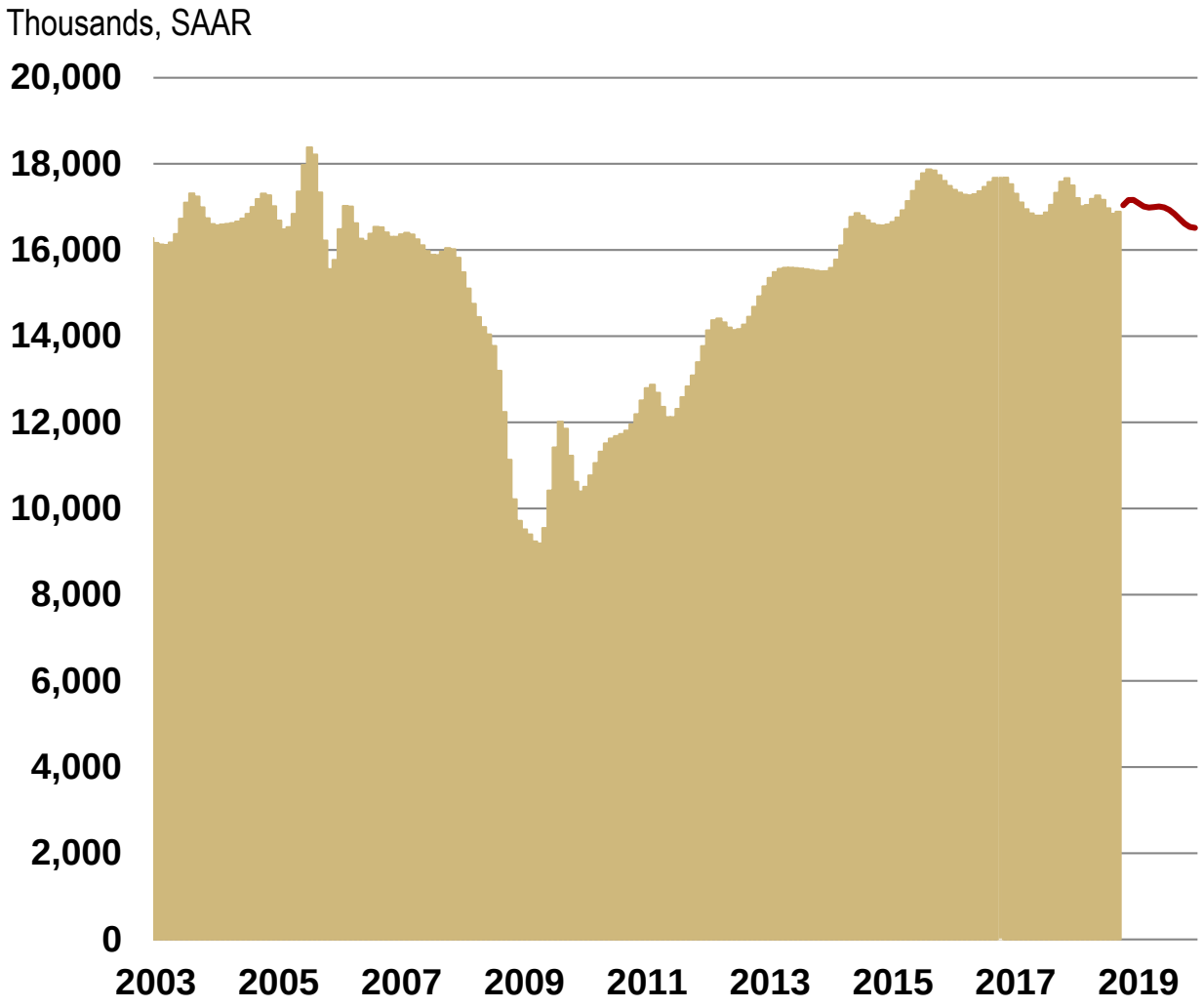
Index of Consumer Confidence



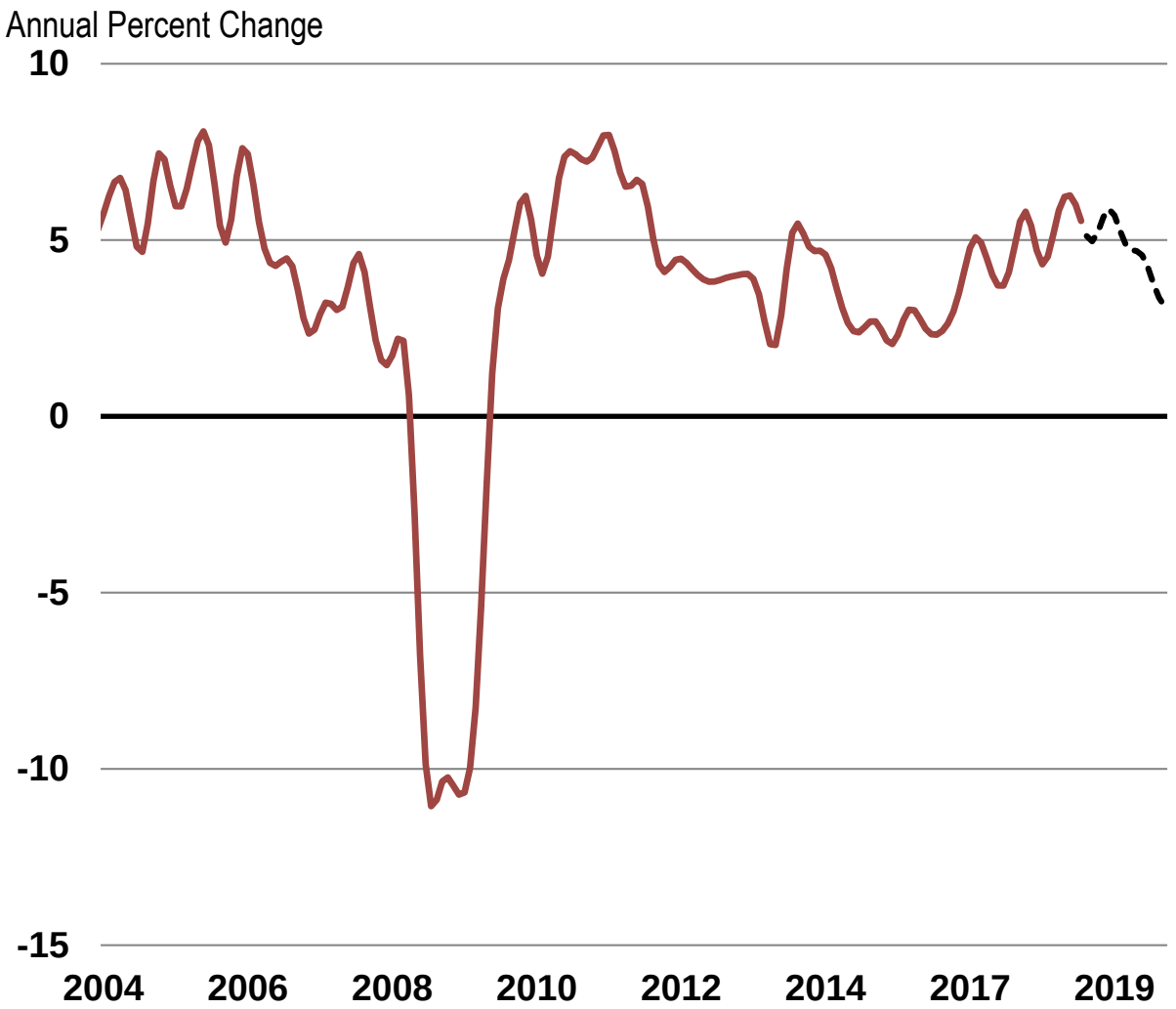
Sources: The Conference Board and National Bureau of Economic Research.

Vehicle Sales and Retail Sales

Vehicle Sales

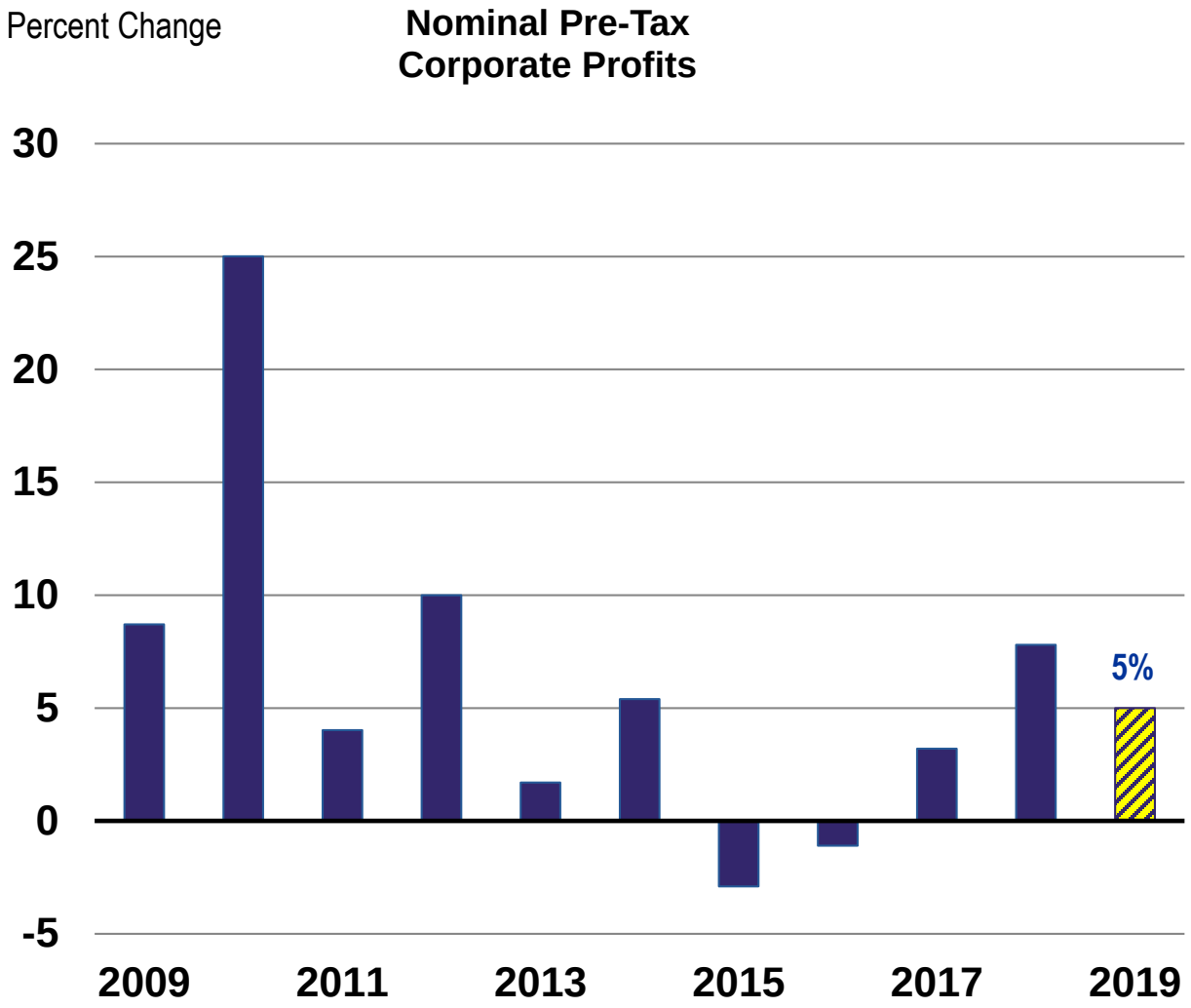


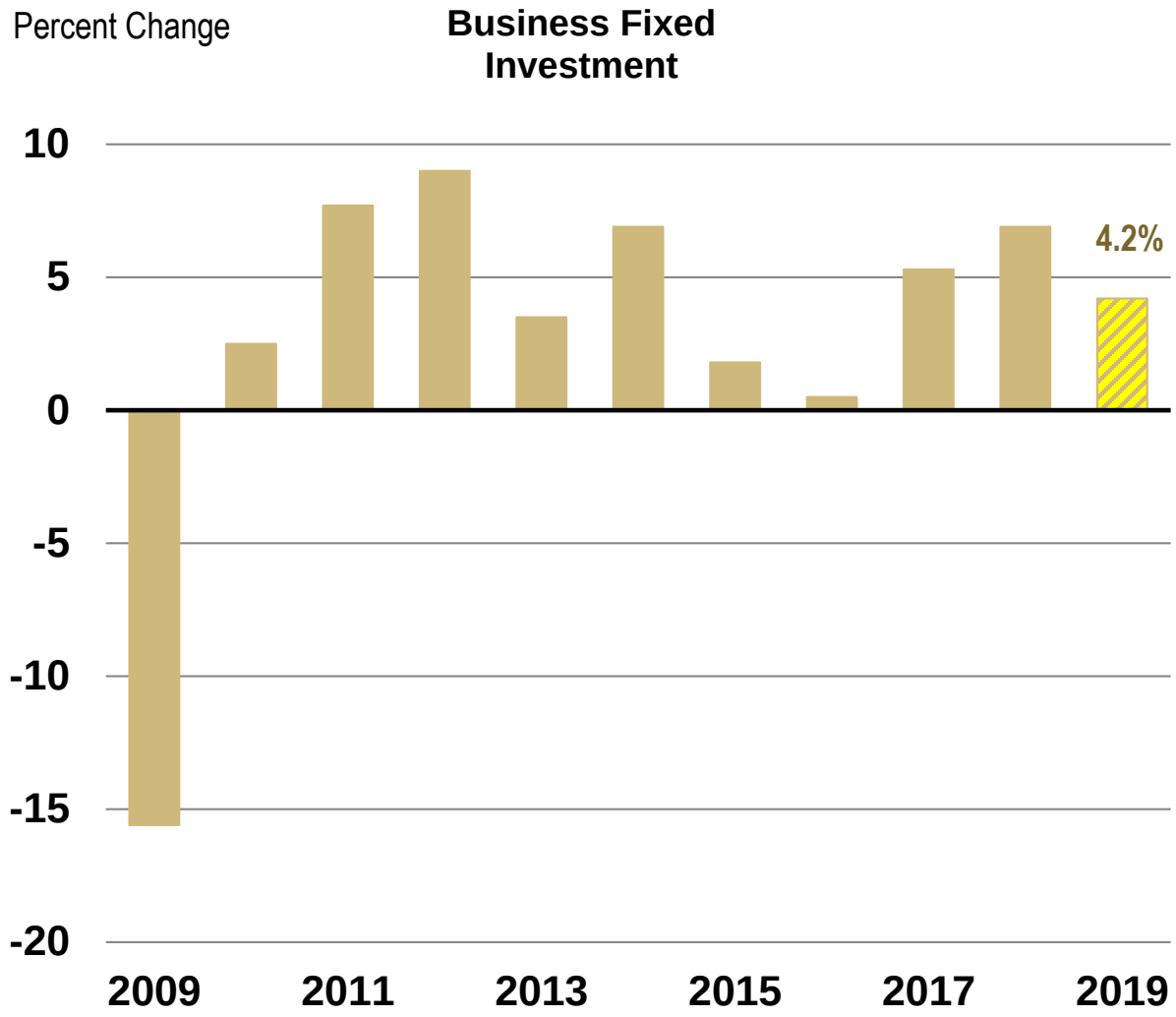
Retail and Food Services Sales



Sources: Bureau of Economic Analysis, Moody's Analytics, U.S. Census Bureau (Seasonally Adjusted Annual Rate).

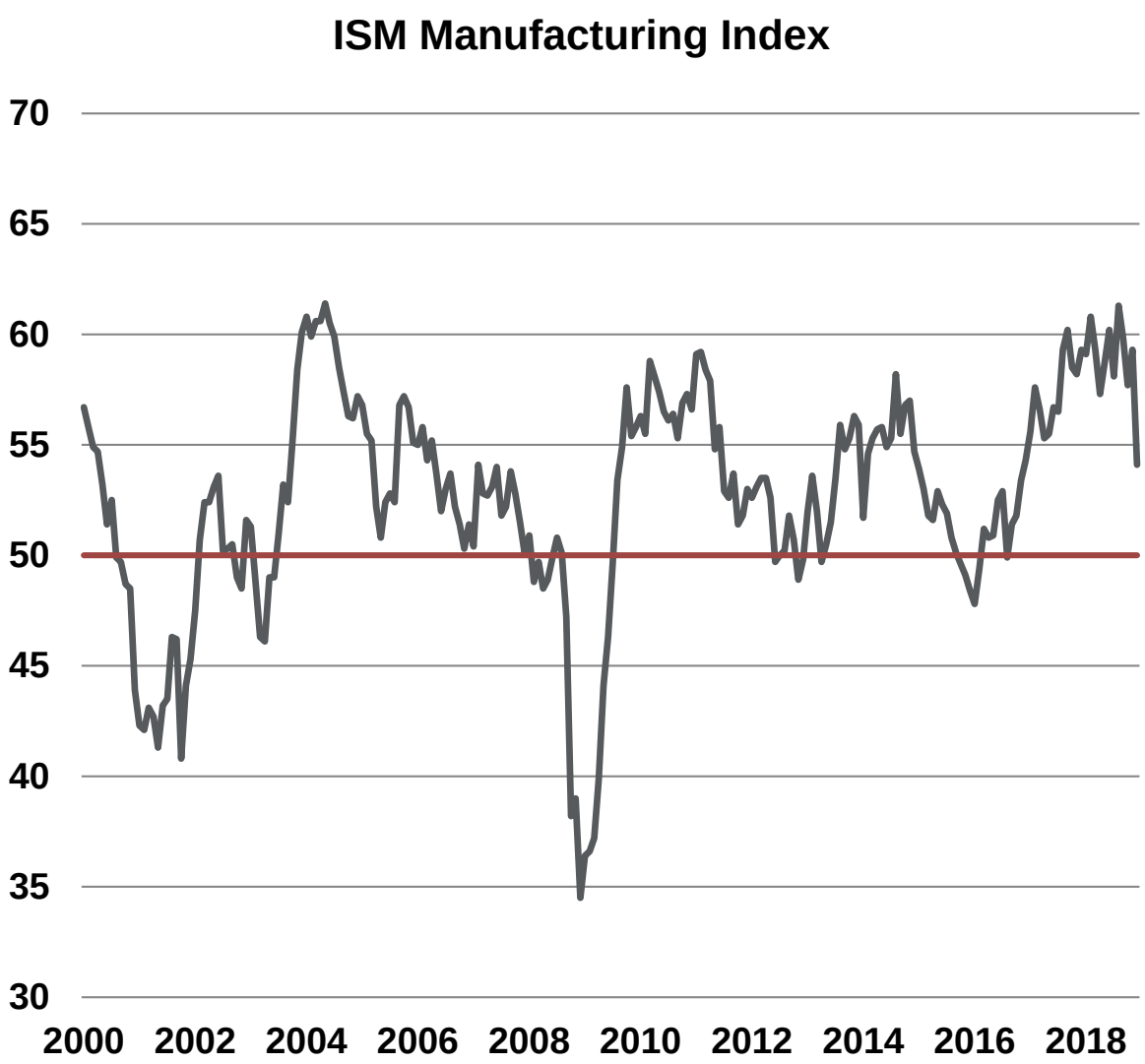
Nominal Corporate Profits and Business Fixed Investment

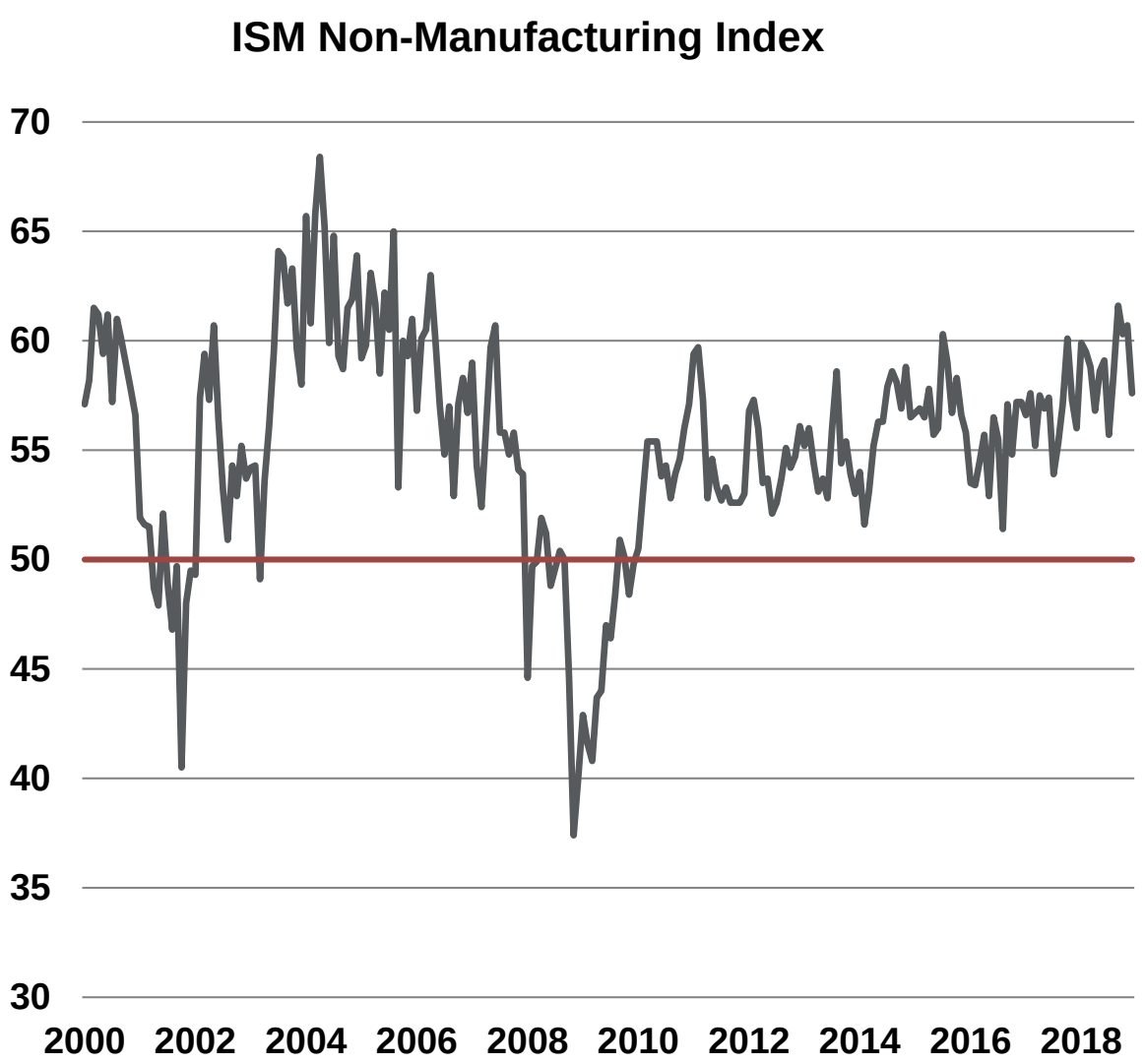




Sources: Bureau of Economic Analysis, Consensus Forecasts.

ISM Indices

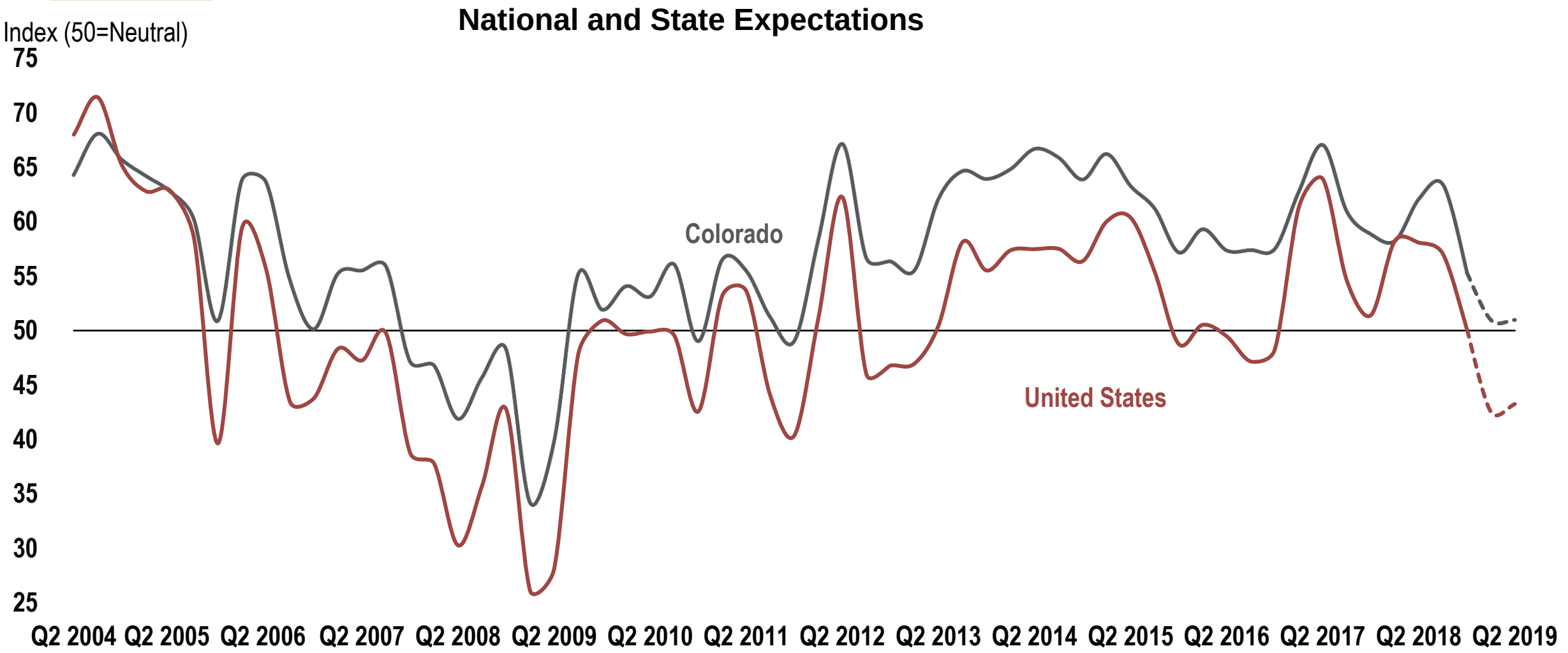




Source: Institute for Supply Management (ISM).

U.S. and Colorado Economies

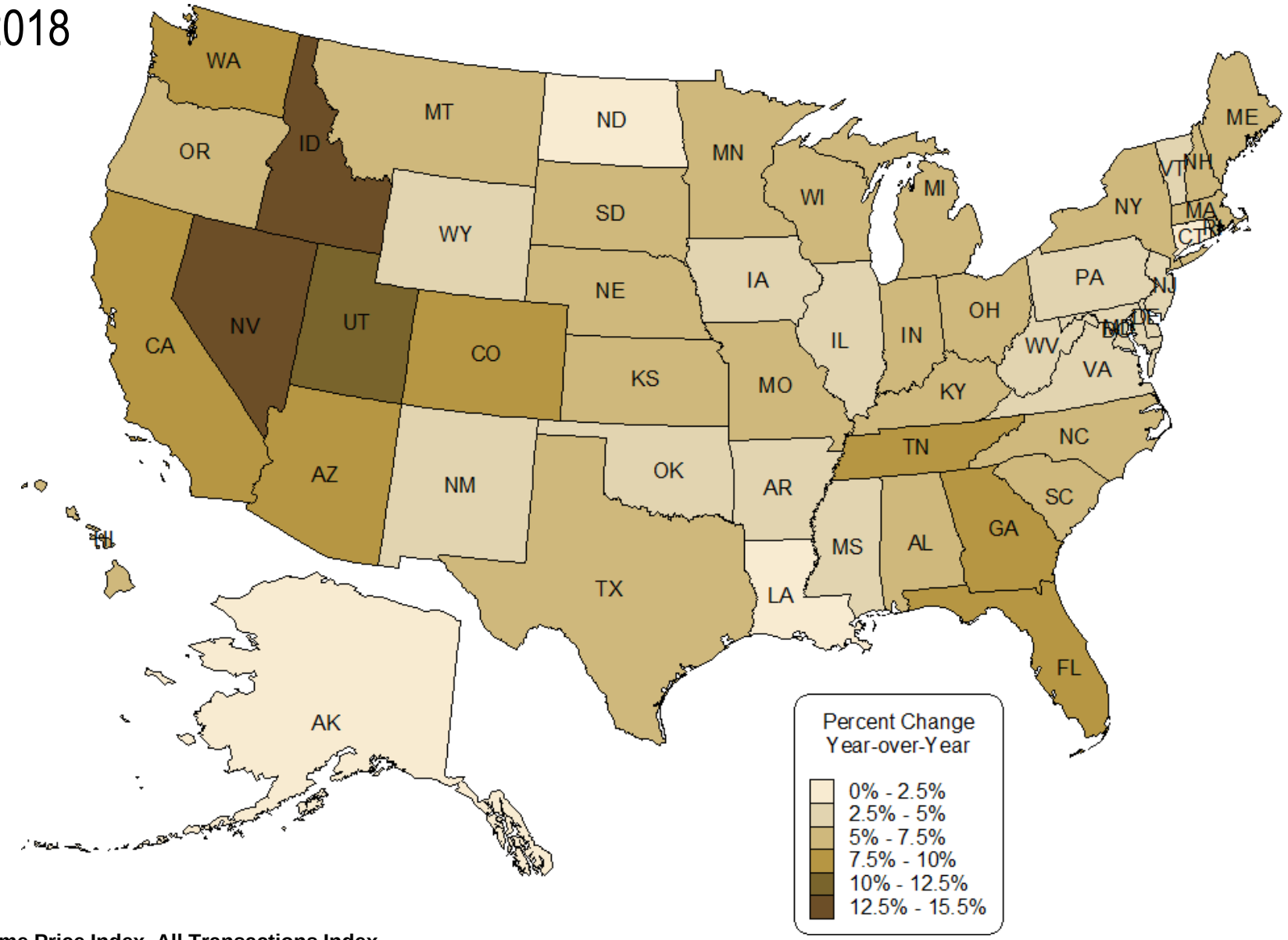
Q2 2004 – Q2 2019



Source: Business Research Division.

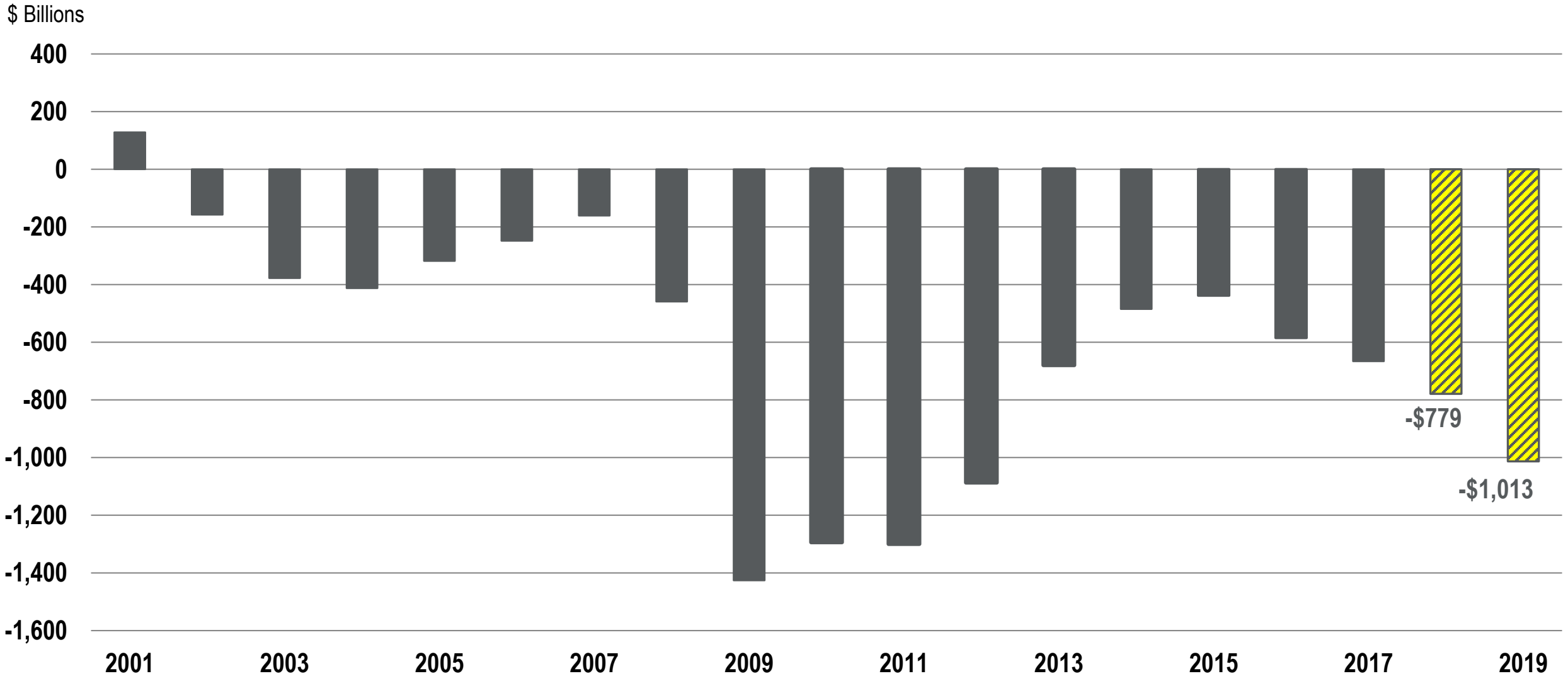
National FHFA Home Price Growth

Year over Year Q3 2018



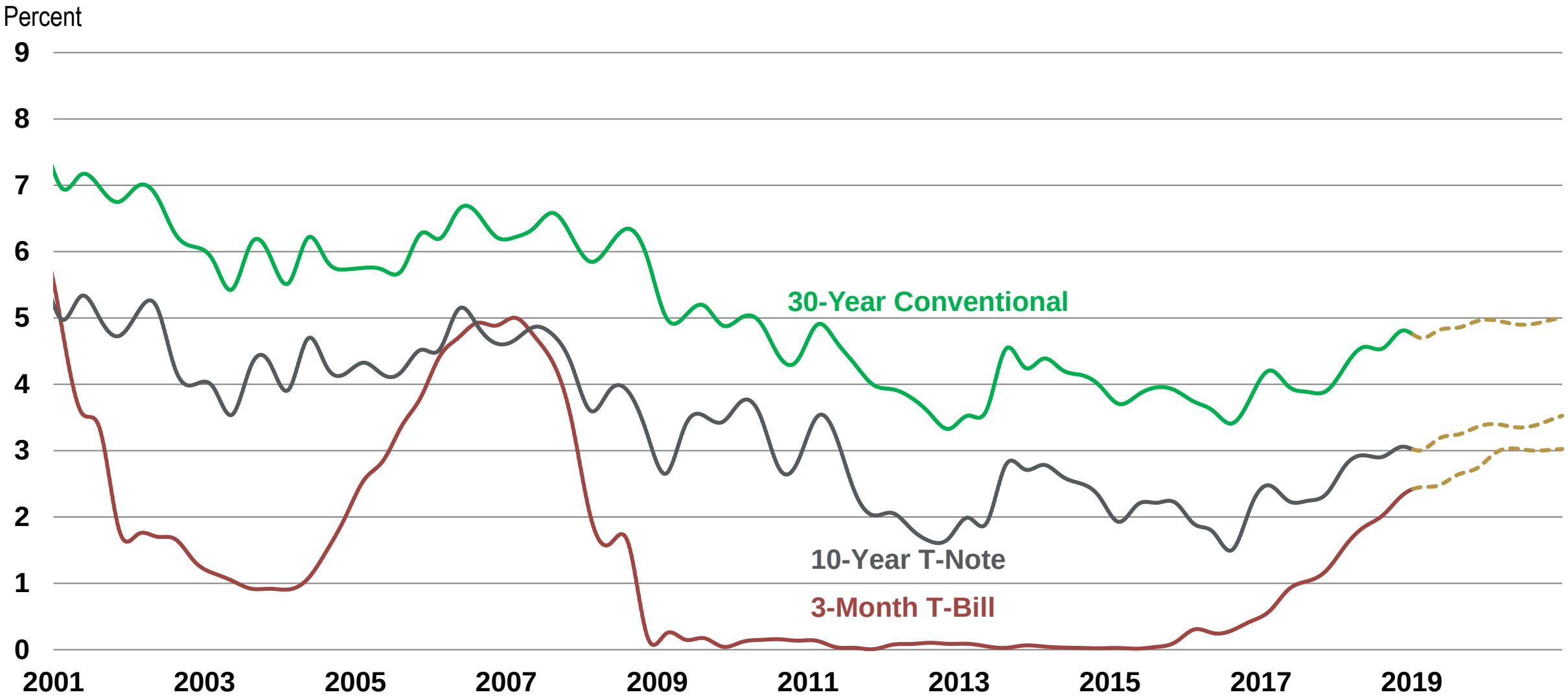
Source: Federal Housing Finance Agency Home Price Index, All Transactions Index.

Federal Budget Balance



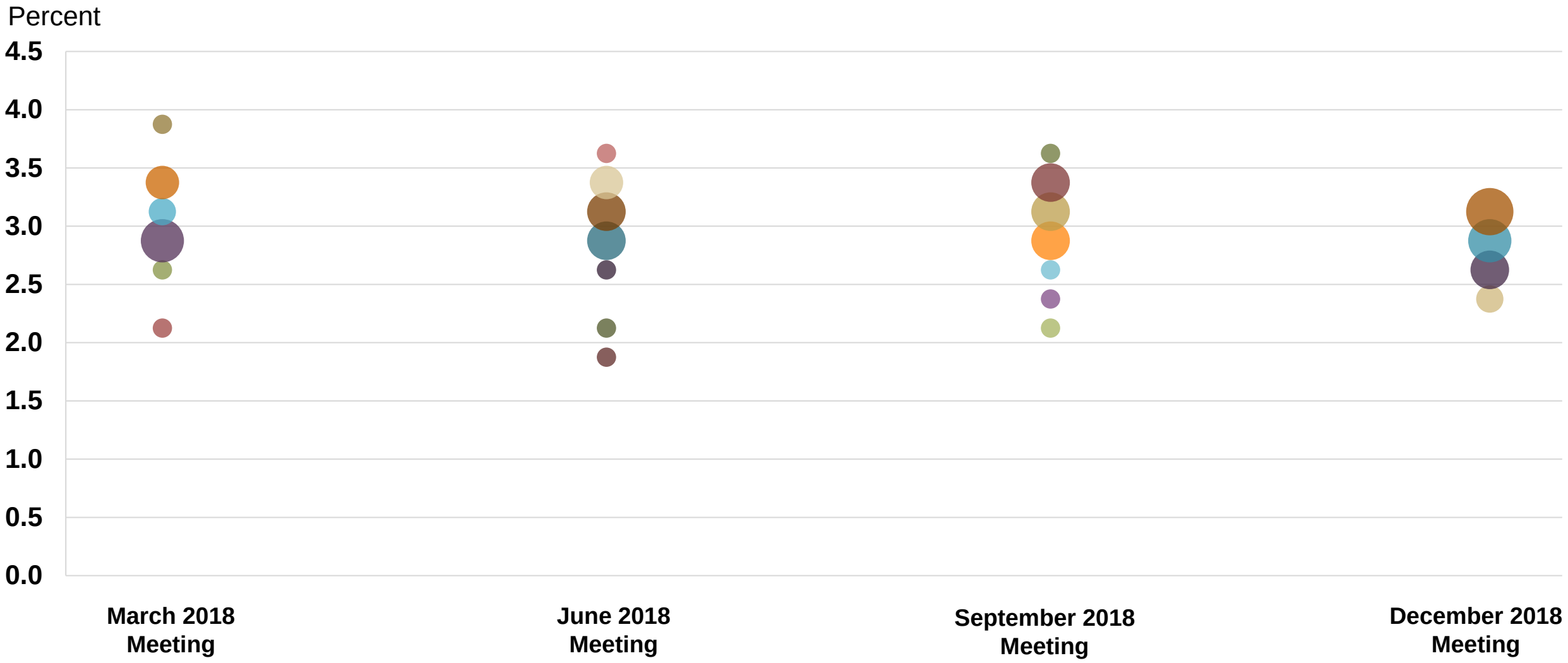
Sources: Bureau of Economic Analysis, NIPA Table 3.18B, Consensus Forecasts.

Interest Rates



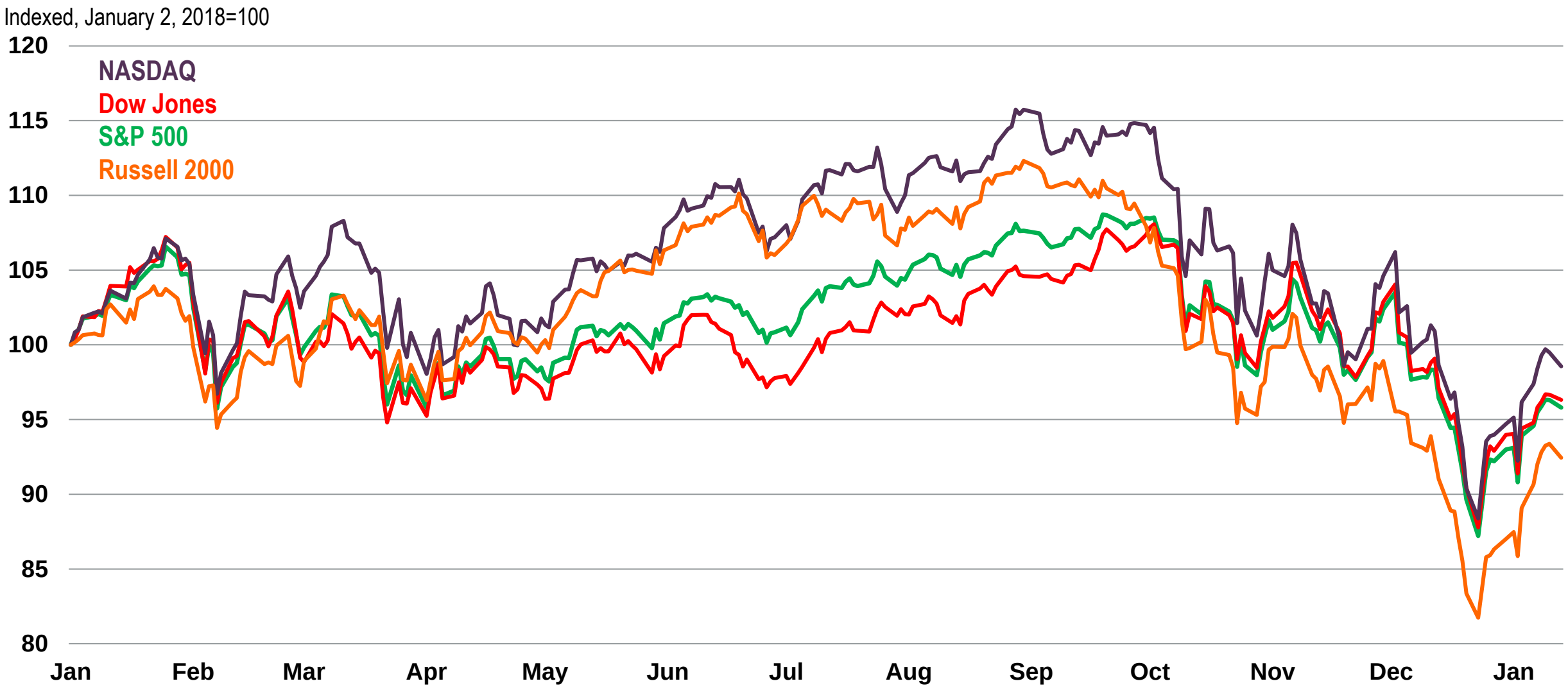
Sources: Federal Reserve and Moody's Analytics.

Federal Funds Rate 2019



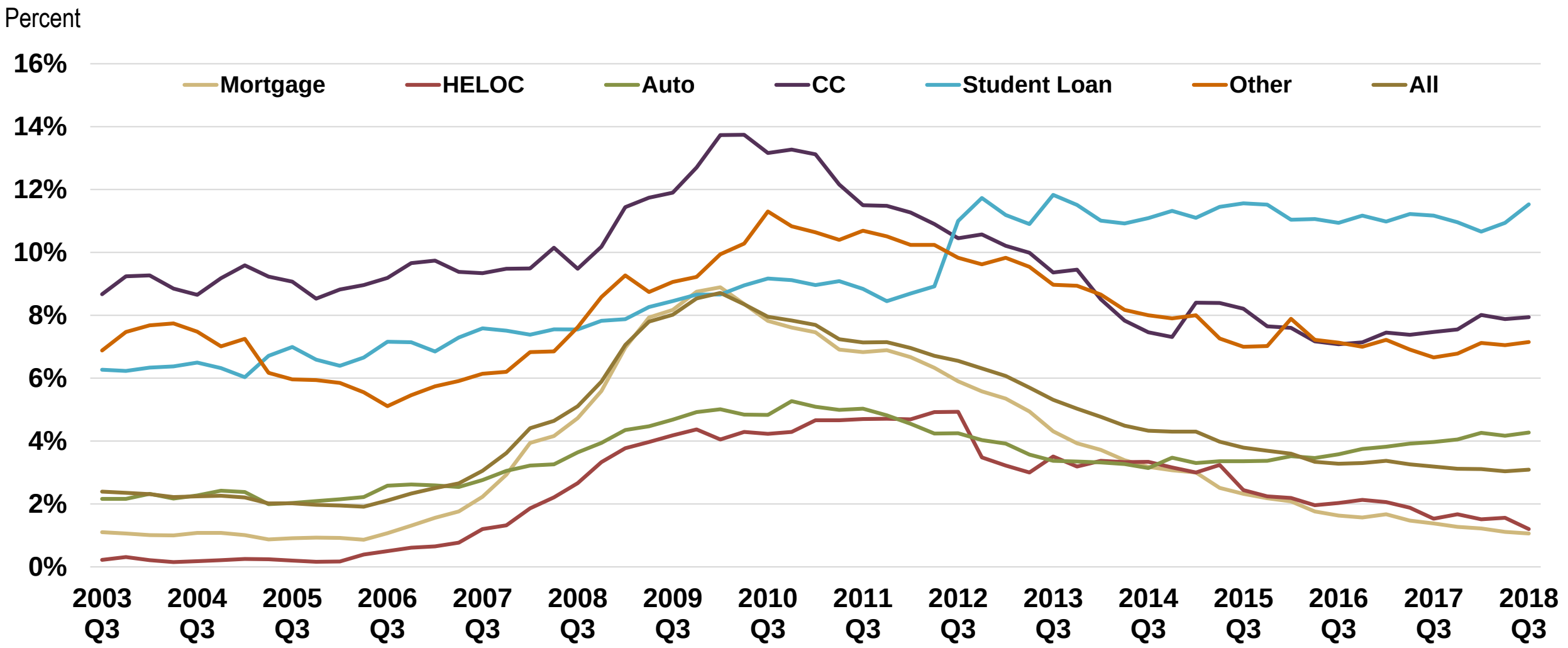
Source: Bloomberg.

2018-2019 Securities Trends



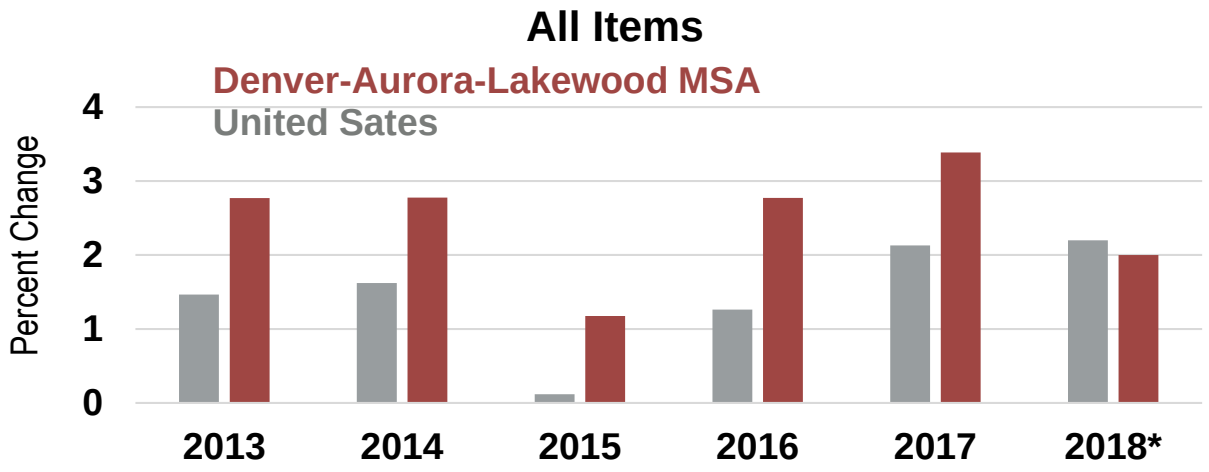
Source: Yahoo! Finance.

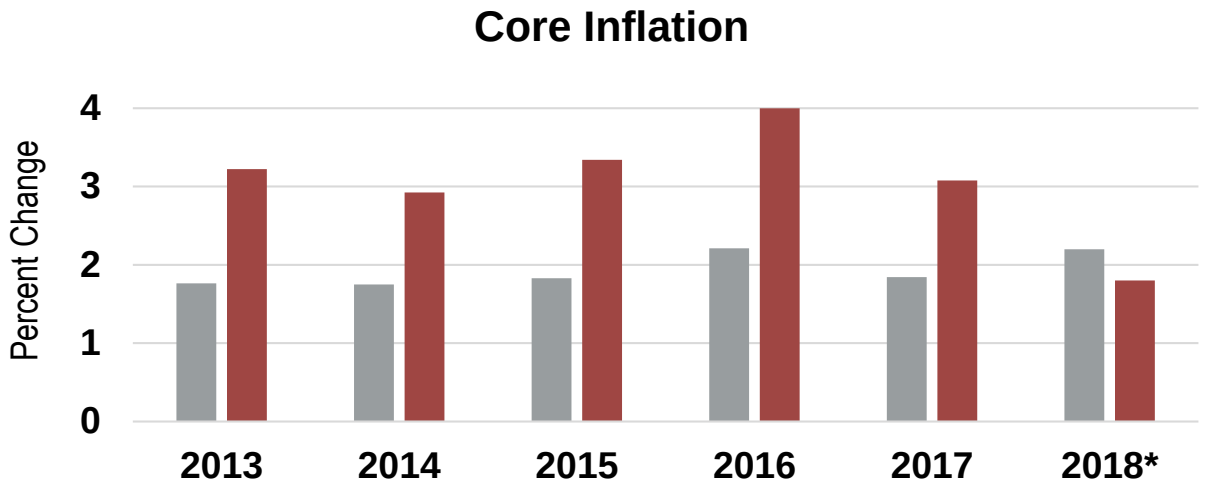
Percent of Balance 90+ Days Delinquent by Loan Type

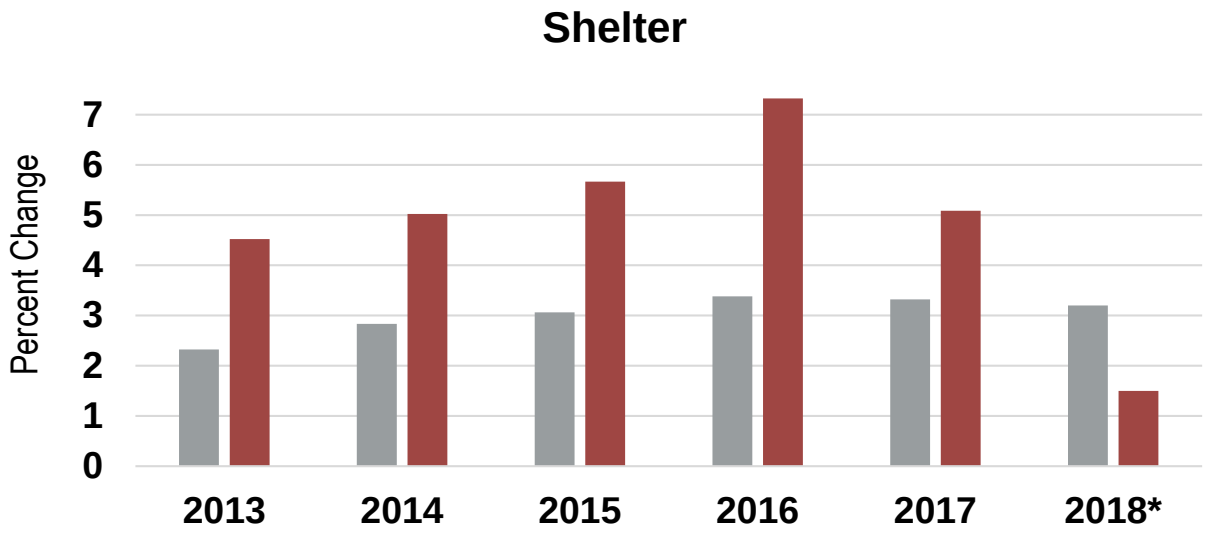


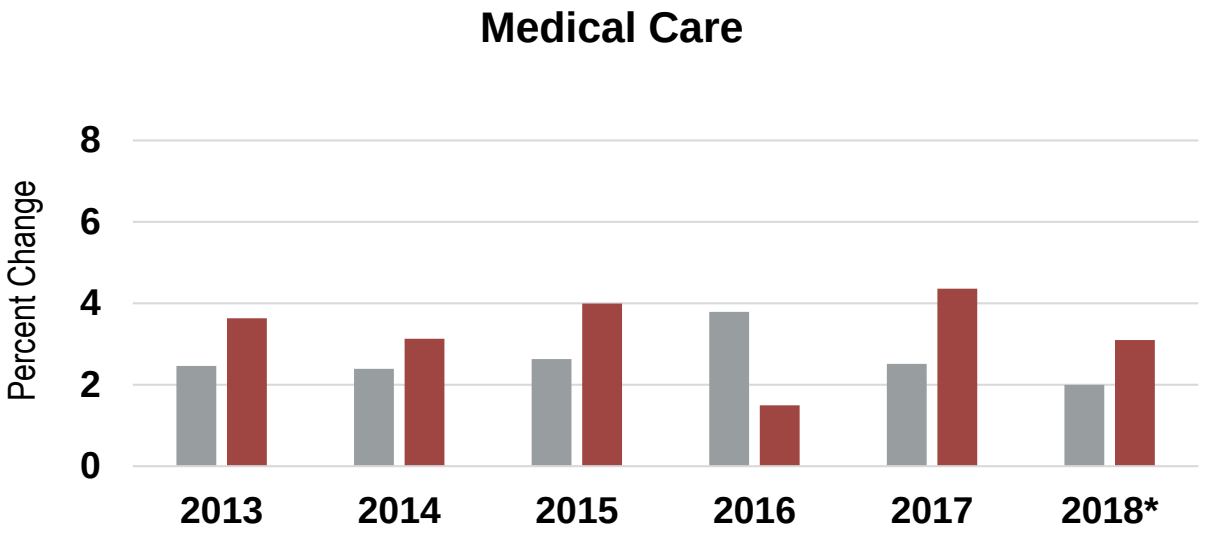
Source: FRBNY Consumer Credit Panel/Equifax.

Inflation





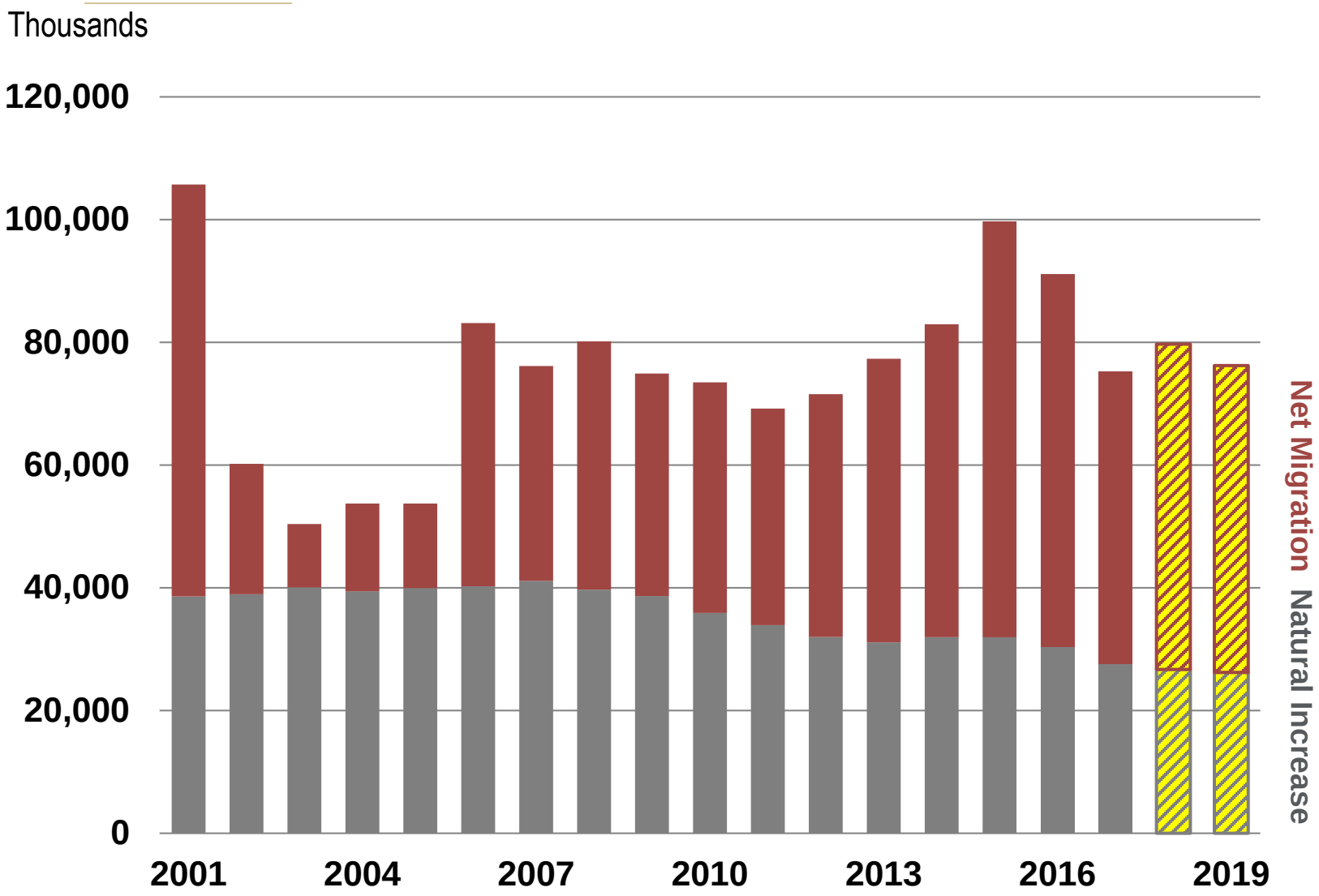




Source: Bureau of Labor Statistics (NSA). * November 2018 year-over-year.

Colorado Population, Employment, and Prices

Colorado Change in Population



Colorado's population changes

- 79,700 in 2018
- 76,200 in 2019

Ranked 8th in total state growth

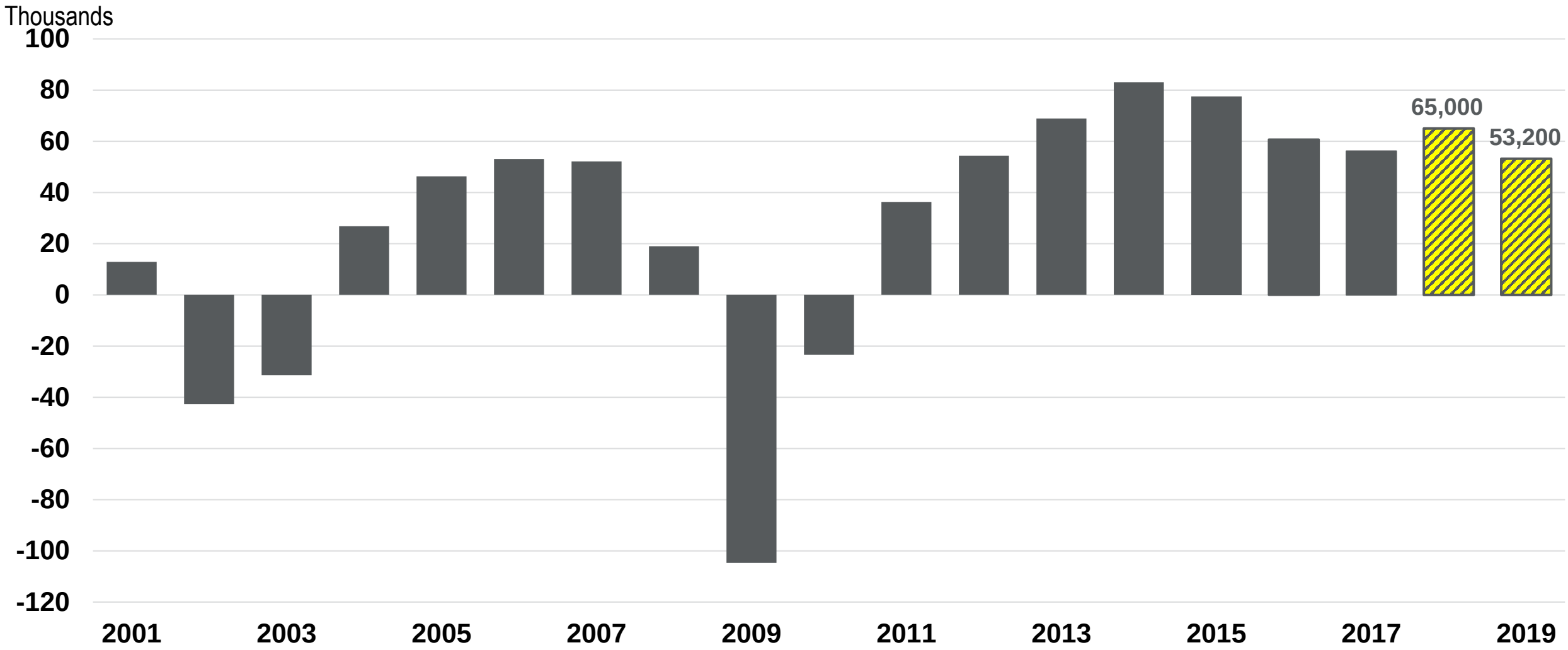
Ranked 9th for fastest growth

Continued net migration into the state

Sources: Colorado Demography Office, U.S. Census Bureau, and the Business Research Division.

Colorado Employment Growth

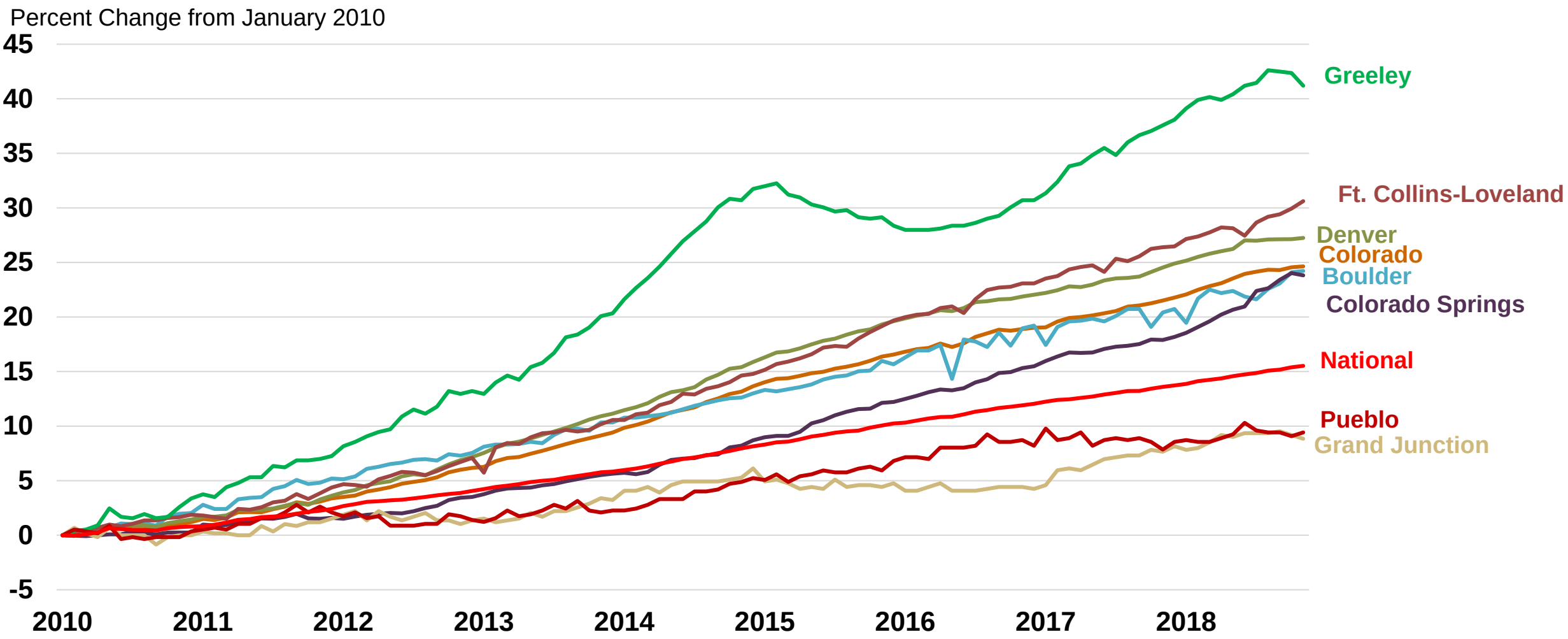
Jobs Added



Sources: Colorado Department of Labor and Employment and the Colorado Business Economic Outlook Committee.

Employment In Current Decade

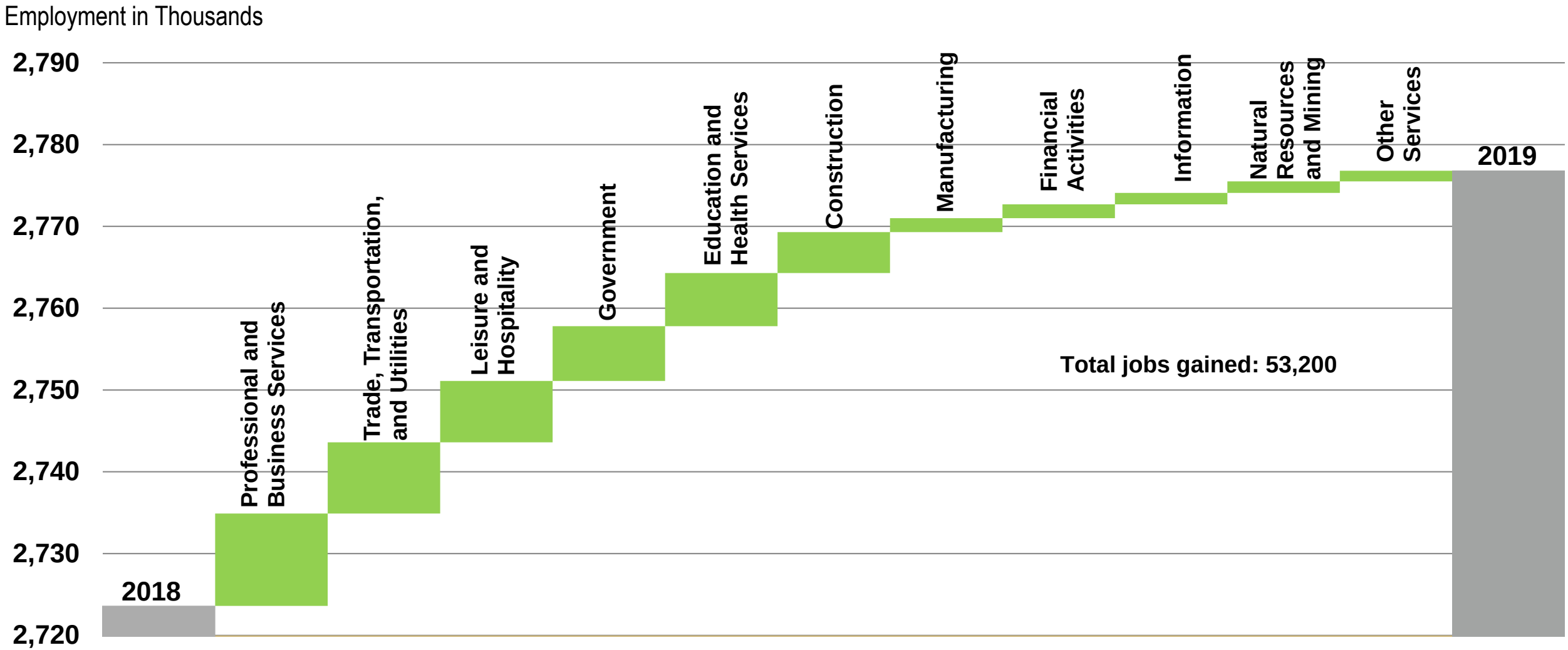
National, State, and Local



Source: Bureau of Labor Statistics (Seasonally Adjusted).

Colorado Employment Change

2019 Growth



Source: Bureau of Labor Statistics, Current Employment Statistics (SA).

Colorado Wages

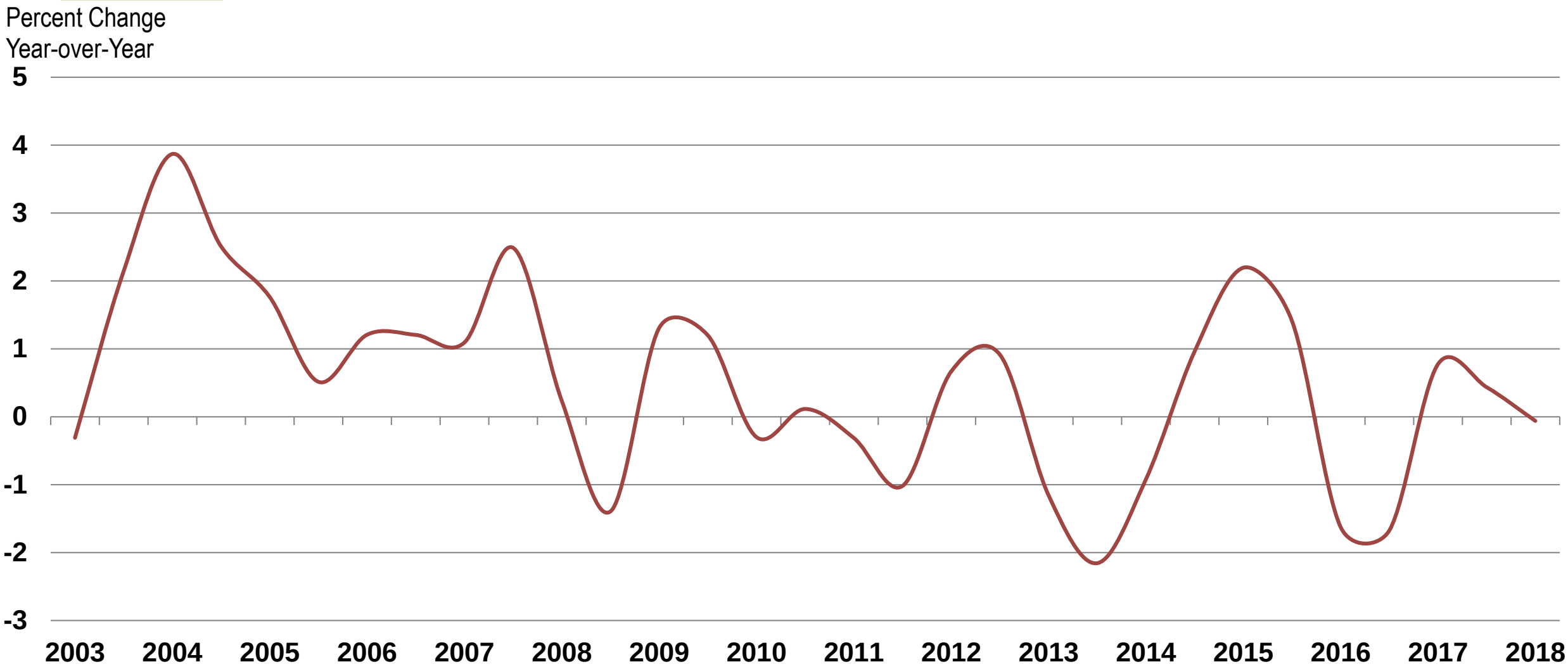
2018 Q2 (4Q Rolling Average)

Sector	Total Employment	YoY Employment Growth	Average Wages	YoY Wage Growth
Management of companies and enterprises	39,800	5.4%	$142,575	0.4%
Utilities	8,025	-1.9%	$101,861	3.4%
Information	73,360	2.3%	$101,292	2.1%
Professional and technical services	219,913	3.4%	$95,558	3.6%
Finance and insurance	111,982	1.5%	$95,013	2.7%
Natural Resources and Mining	45,326	11.0%	$86,563	3.0%
Wholesale trade	107,497	1.8%	$84,291	2.8%
Federal Government	53,024	-1.8%	$80,774	1.6%
Manufacturing	145,550	1.7%	$70,030	2.5%
State Government	101,304	3.6%	$64,287	4.5%
Construction	168,722	6.0%	$60,772	3.0%
All Industries	**2,642,513**	**2.4%**	**$57,858**	**2.9%**
Real estate and rental and leasing	51,469	3.8%	$58,175	3.1%
Transportation and warehousing	74,808	6.7%	$56,169	1.2%
Health care and social assistance	296,230	1.9%	$50,456	1.7%
Local Government	260,655	1.2%	$47,547	2.0%
Administrative and waste services	158,200	-0.3%	$41,978	3.7%
Educational services	36,028	2.3%	$40,911	2.3%
Other services, except public administration	80,979	2.3%	$40,143	2.4%
Arts, entertainment, and recreation	56,232	4.1%	$37,306	4.3%
Retail trade	272,028	0.7%	$31,868	1.5%
Accommodation and food services	280,707	2.3%	$22,711	4.5%

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

Real Wage Growth

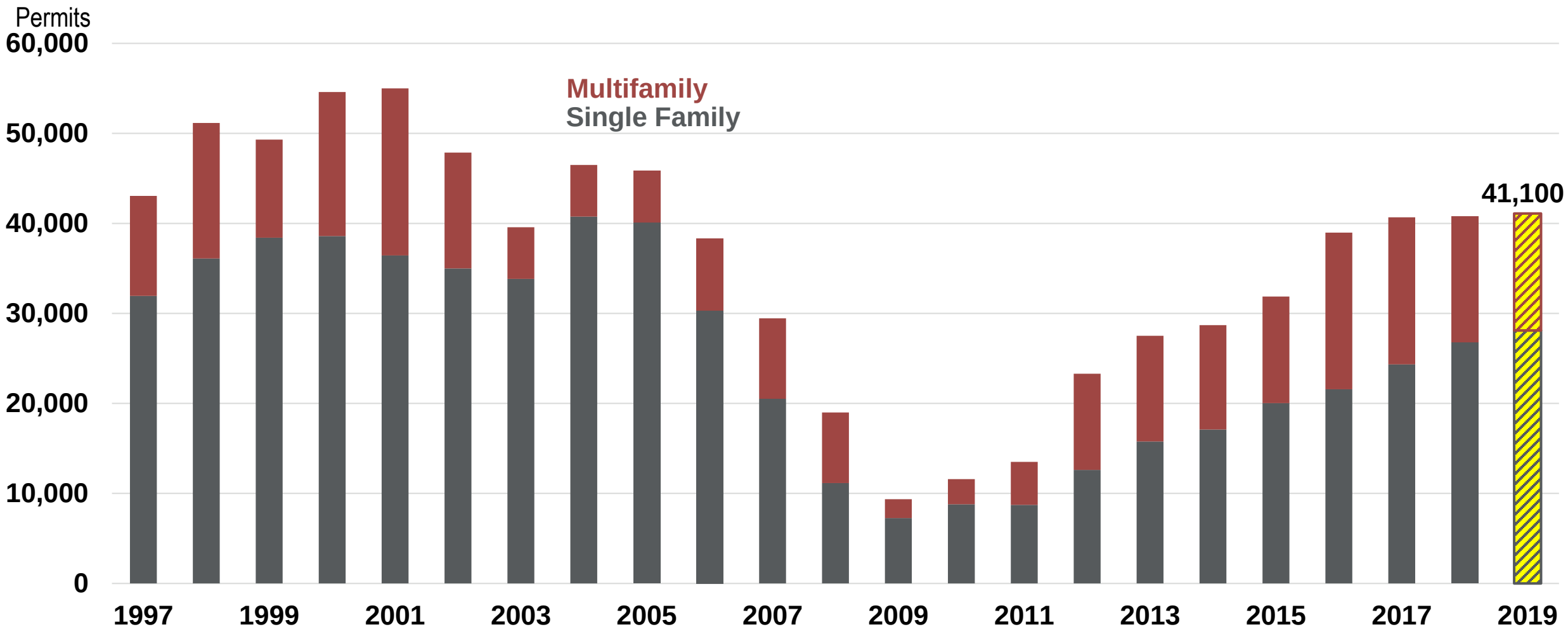
Colorado



Source: Bureau of Labor Statistics, QCEW and the Consumer Price Index. *2018 based on Q1 QCEW.

Residential Building Permits

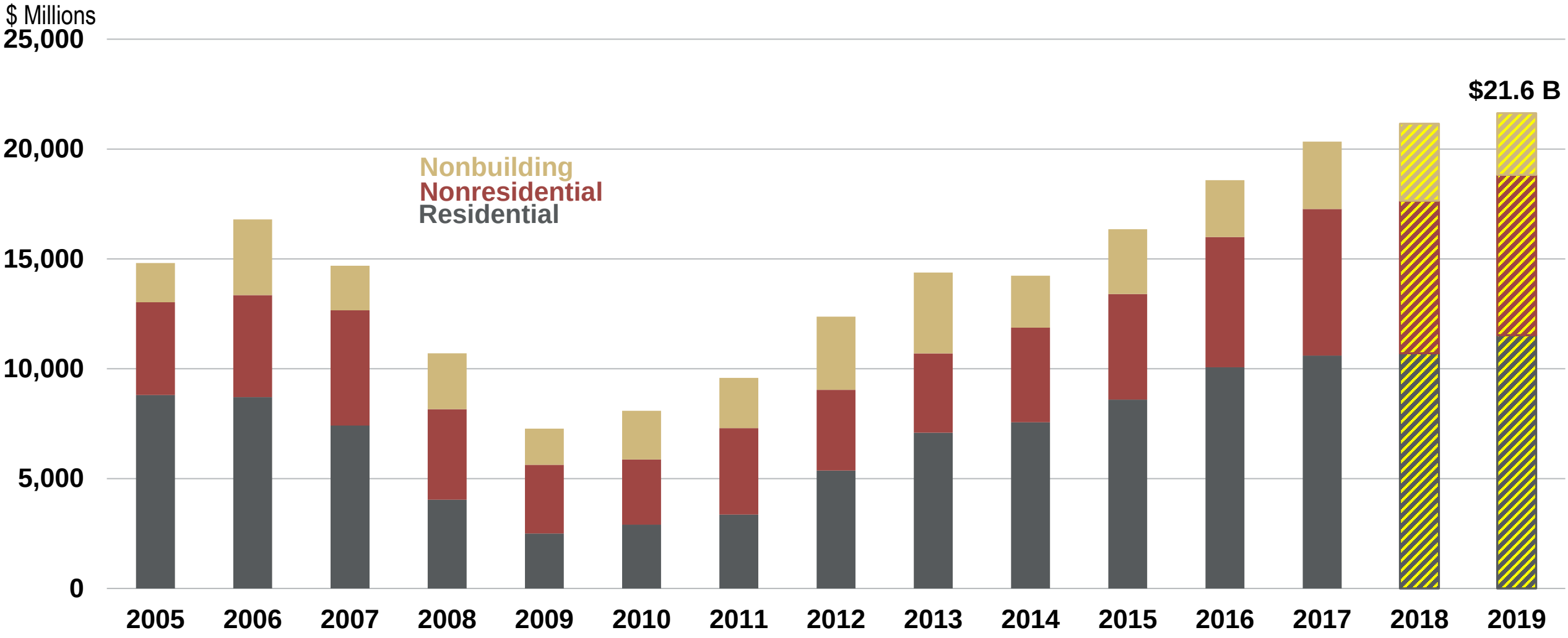
1997-2019



Sources: U.S. Census Bureau and the Colorado Business Economic Outlook Committee.

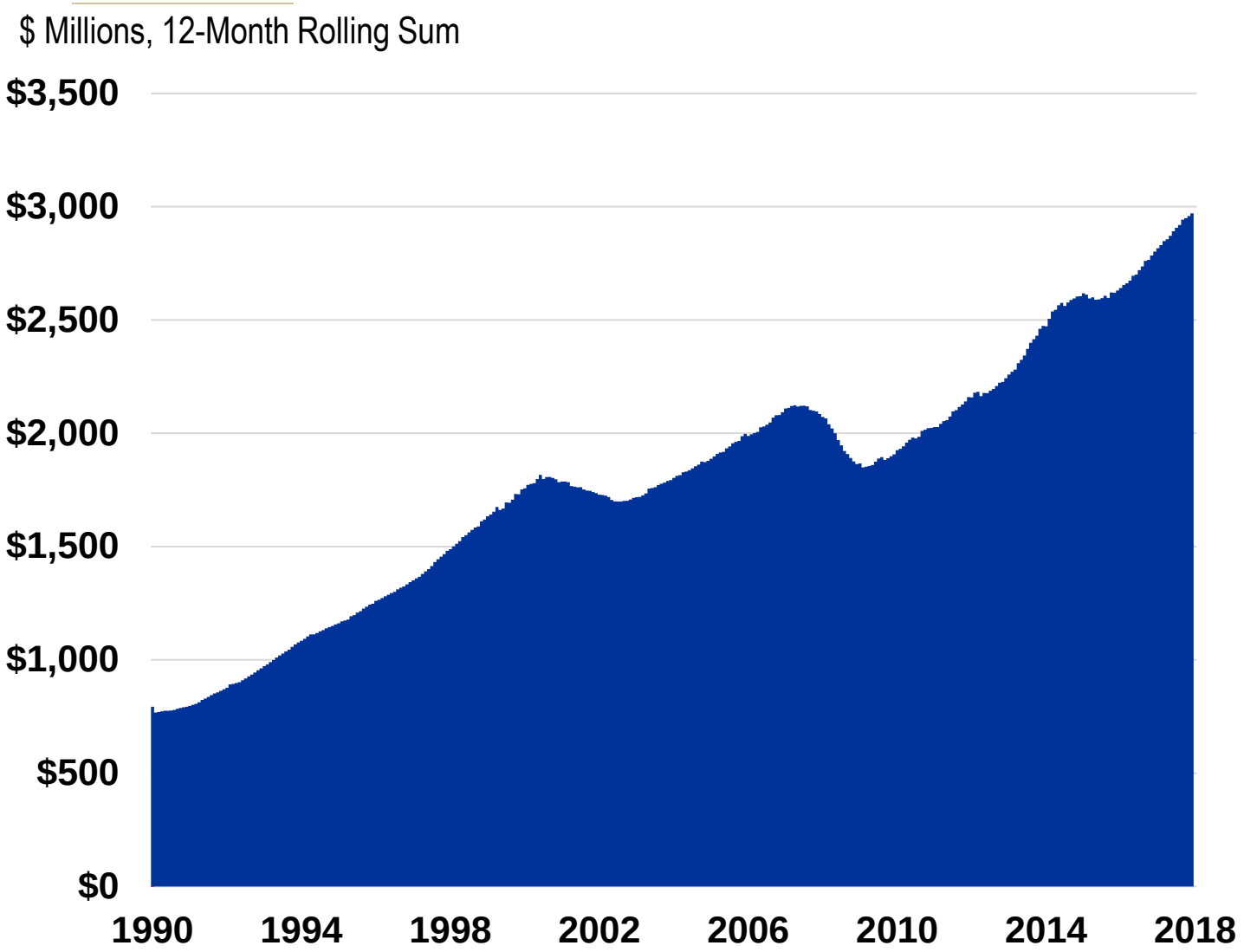
Value of Construction

Colorado 2005-2019



Sources: Dodge Data & Analytics and the Colorado Business Economic Outlook Committee.

Colorado Sales Tax Collections



Strong job and income growth

High consumer confidence

High profile bankruptcies

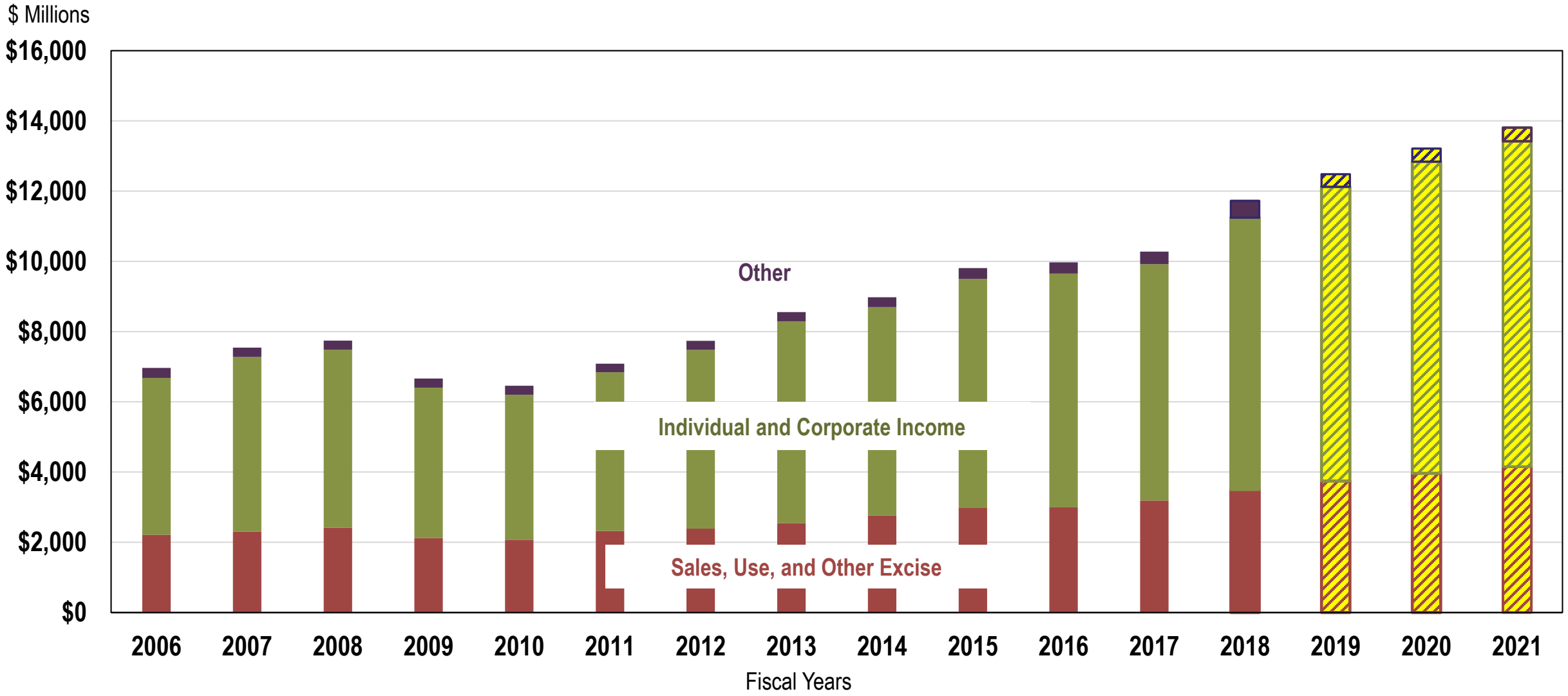
Competition from e-commerce

Retail sales growth

- **5.5% in 2018**
- **5.3% in 2019**

Sources: Colorado Office of the State Controller and the Colorado Department of Revenue.

Colorado General Fund



Source: Colorado Office of the State Controller and the Colorado Office of State Planning and Budgeting (December 2018). Note: Excludes revenue transferred to the State Education Fund.

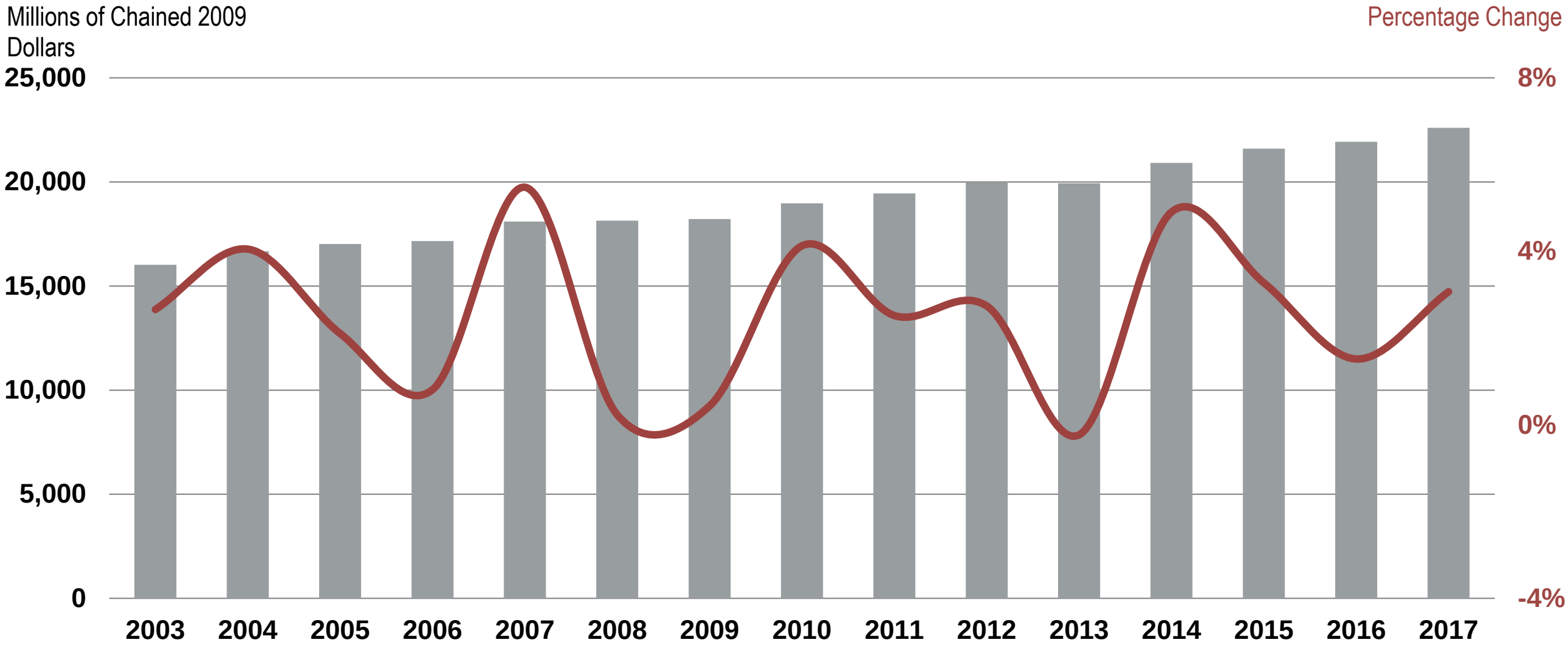
Colorado Ranking Among Other States

Metric	1-Year	3-Year	5-Year	10-Year
Real GDP Growth	8	10	5	6
Employment Growth	8	8	7	3
Population Growth	7	4	6	3
Personal Income Growth	4	12	7	2
PCPI Growth	13	4	1	(NA)
PCPI	13	13	14	(NA)
Average Annual Pay % Growth	5	21	21	19
Average Annual Pay	9	13	13	10
Unemployment Rate	15	5	18	14
Labor Force % Growth	4	1	1	3
FHFA Home Price Index Growth	5	4	2	1

Data Sources: Bureau of Economic Analysis (2018), Bureau of Labor Statistics (10/18), U.S. Census Bureau (2017), Bureau of Labor Statistics (2018), Bureau Federal Housing Finance Agency All Transactions Index (Q3 2018), BRD calculations. Note: 1-year, 3-year, and 5-year are based on the compound annual growth rate.

Real Gross Domestic Product

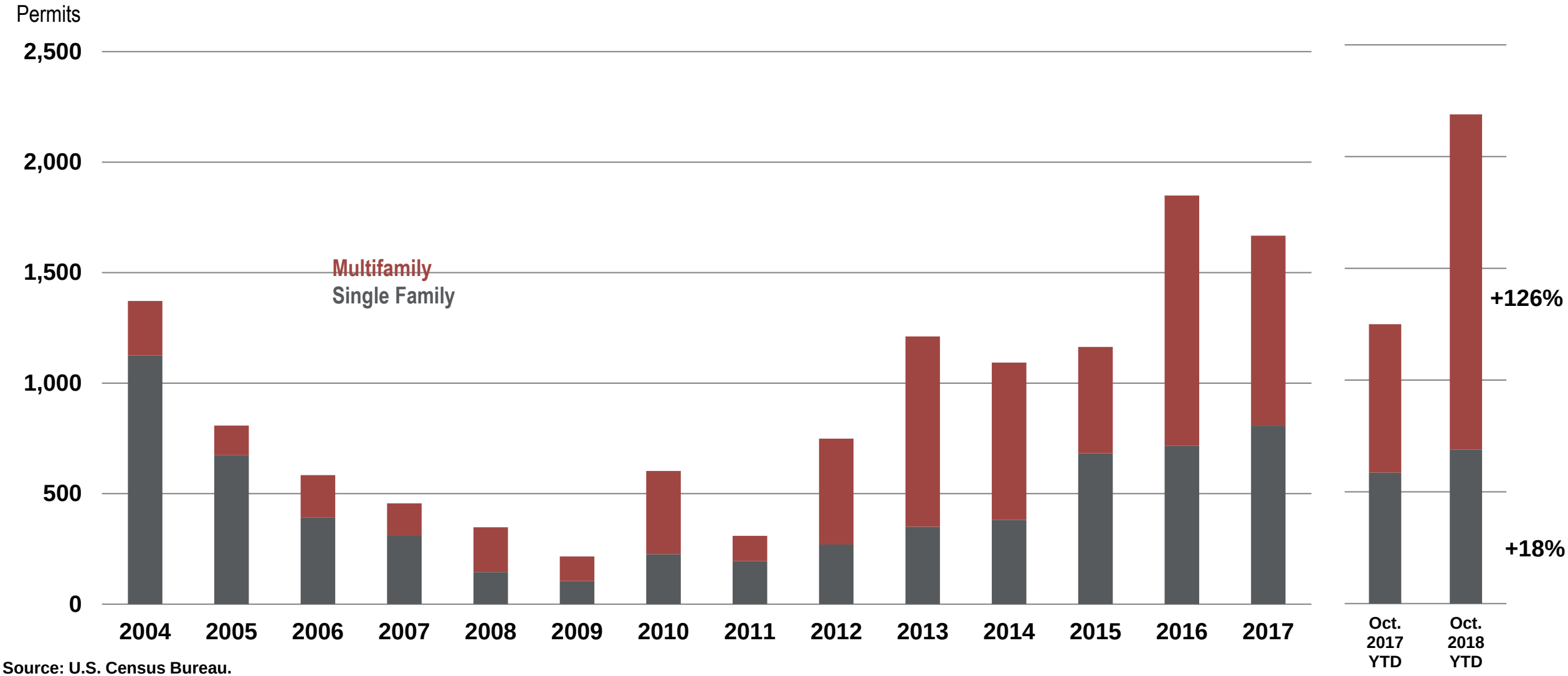
Boulder MSA



Source: Bureau of Economic Analysis.

Single Family v. Multifamily Permits

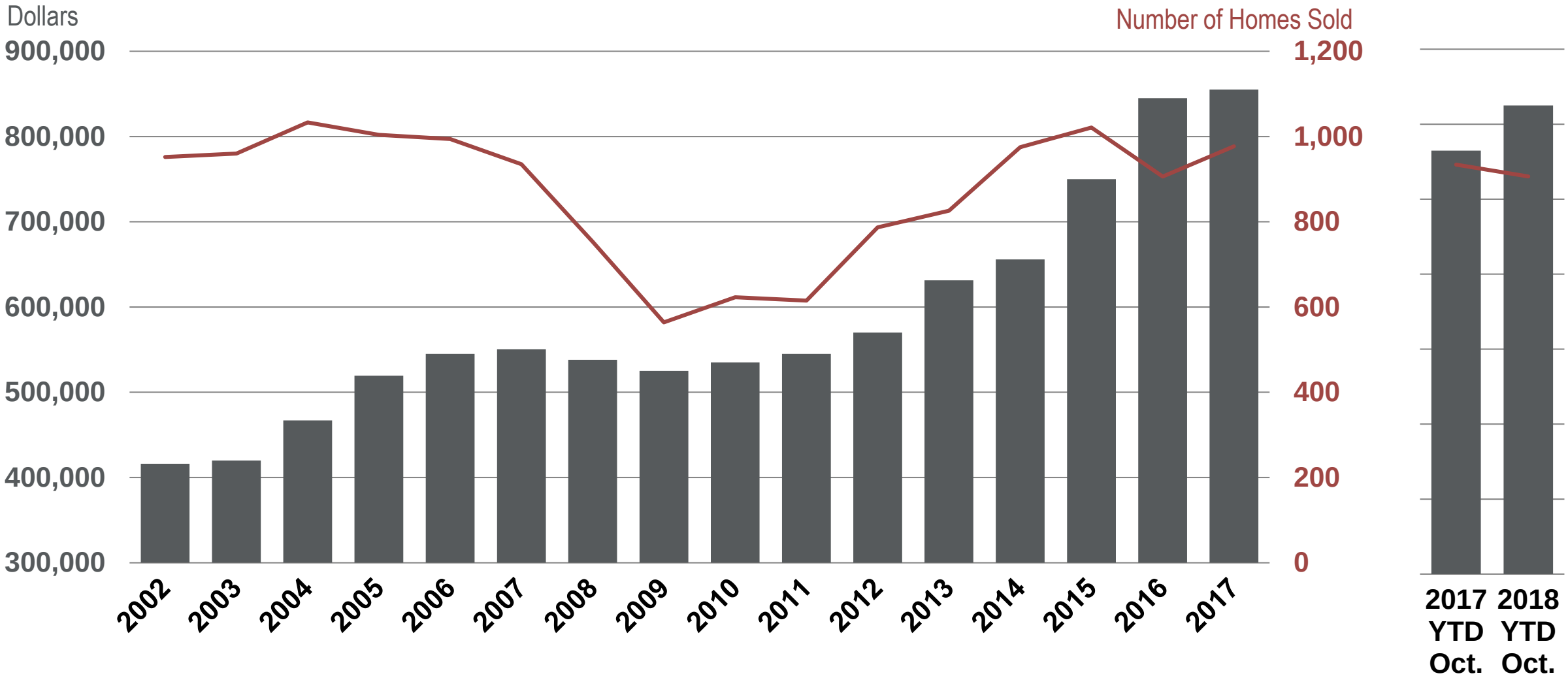
Boulder MSA, Year-to-Date



Source: U.S. Census Bureau.

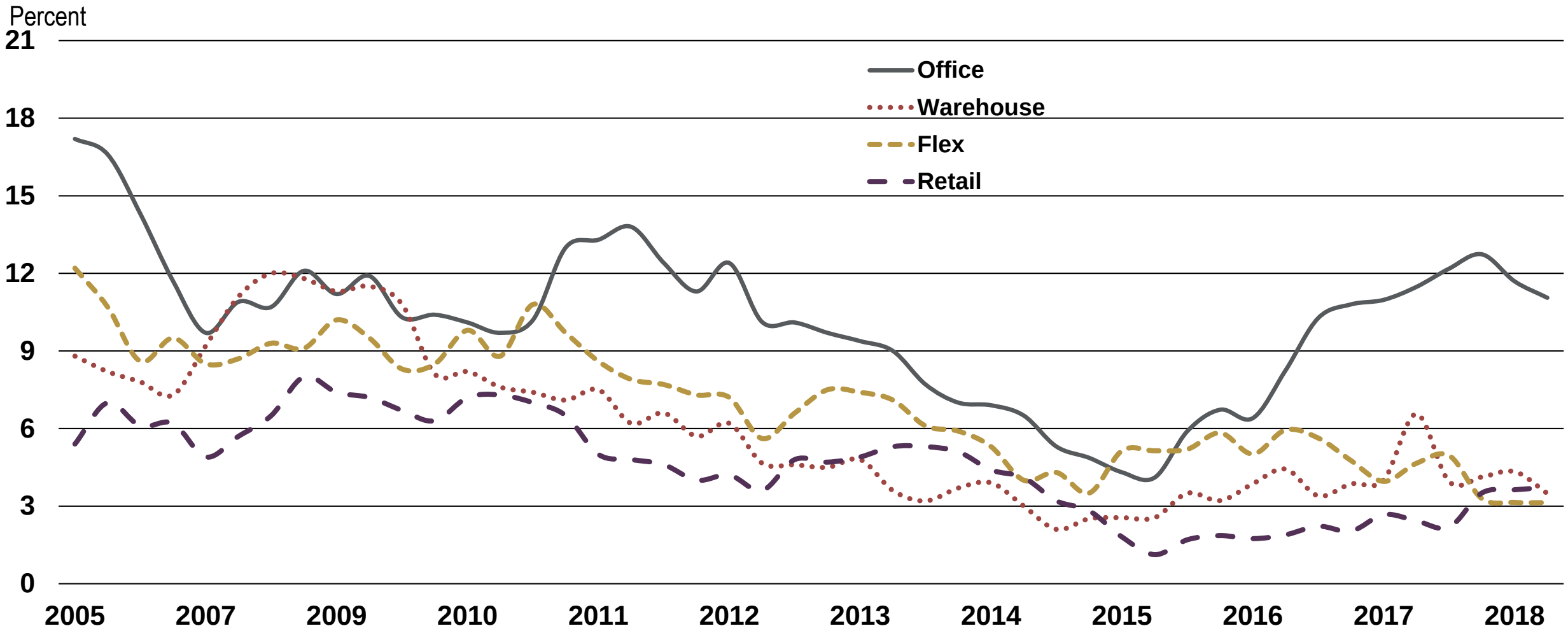
Median Price of Single Family Homes Sold

City of Boulder



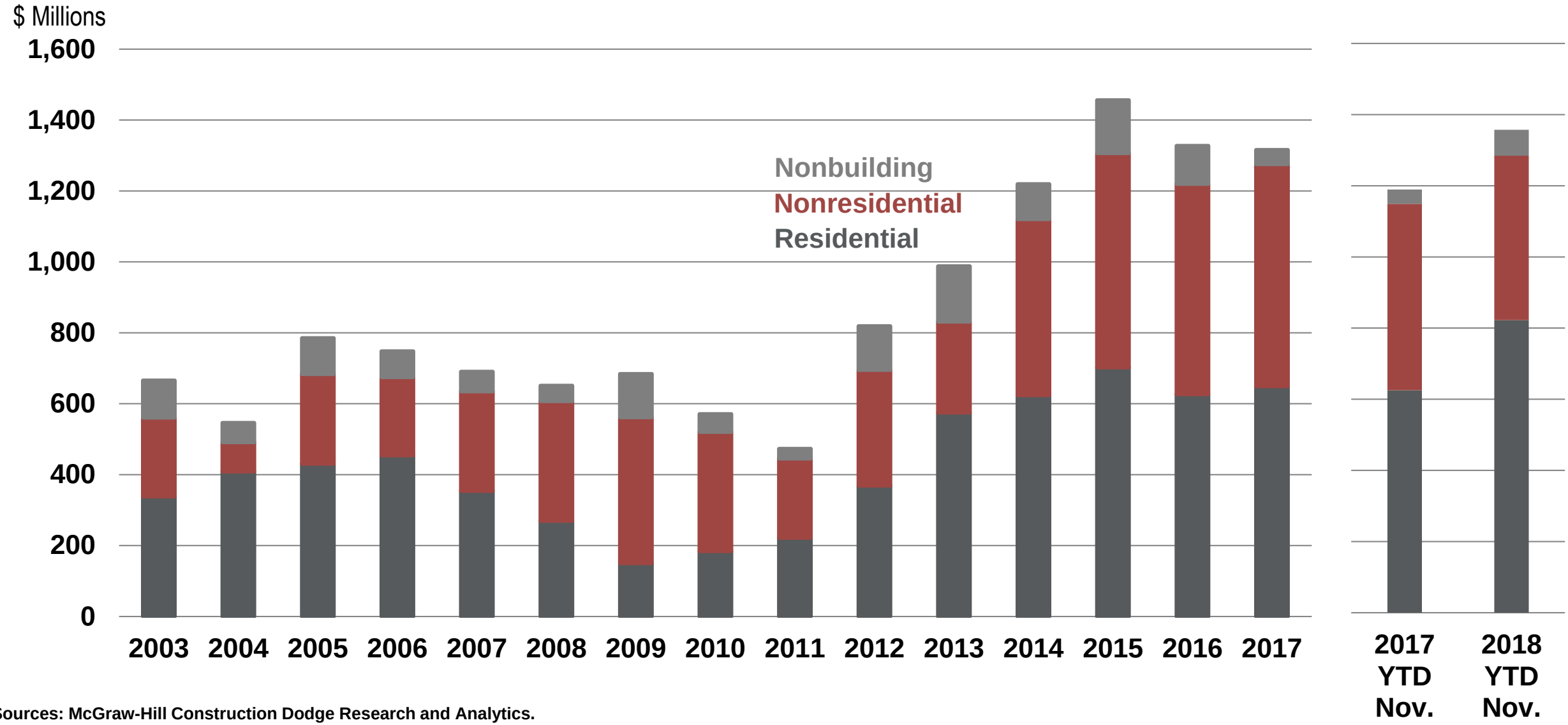
Source: Boulder Area Realtor Association. *YoY through November 2017. Excludes condos and townhomes.

Commercial Vacancy Rates: City of Boulder



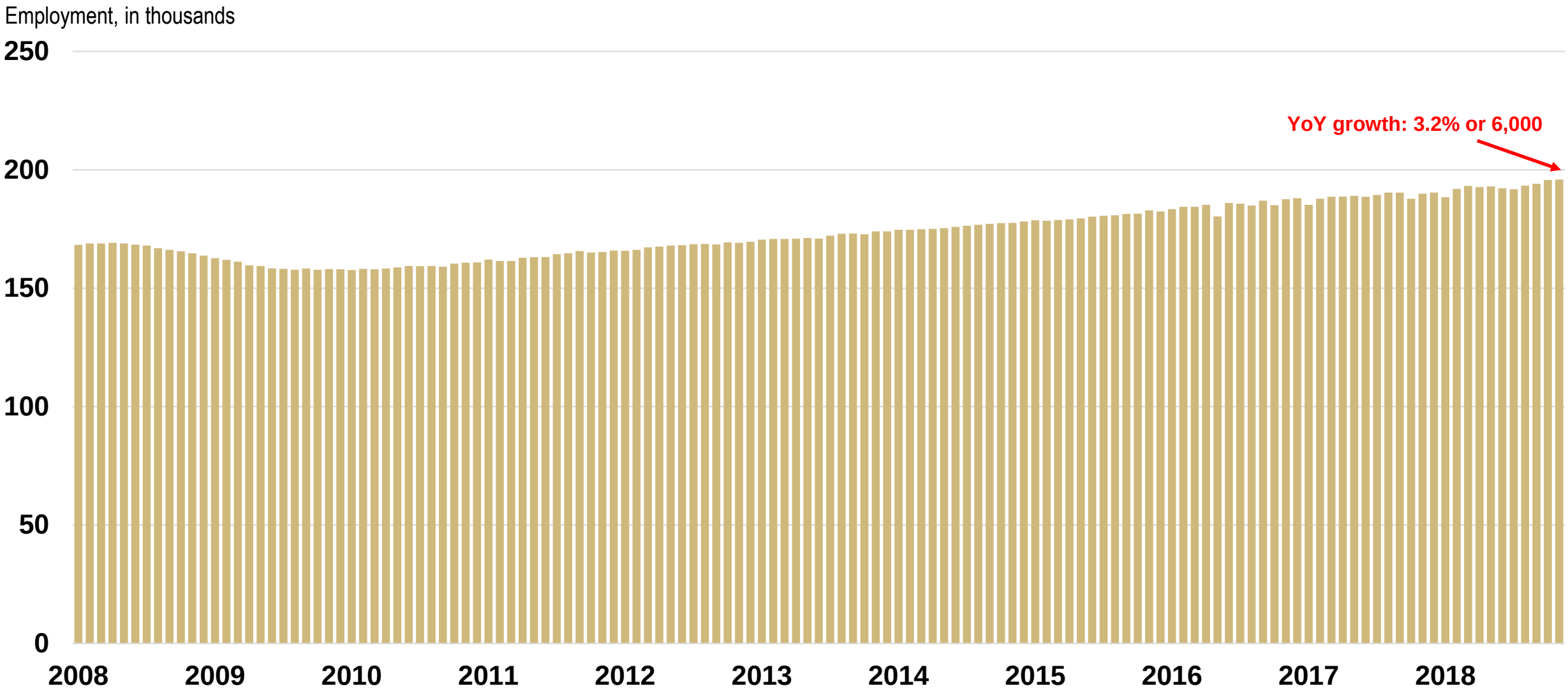
Source: Newmark Grubb Knight Frank.

Boulder County Value of Construction



Sources: McGraw-Hill Construction Dodge Research and Analytics.

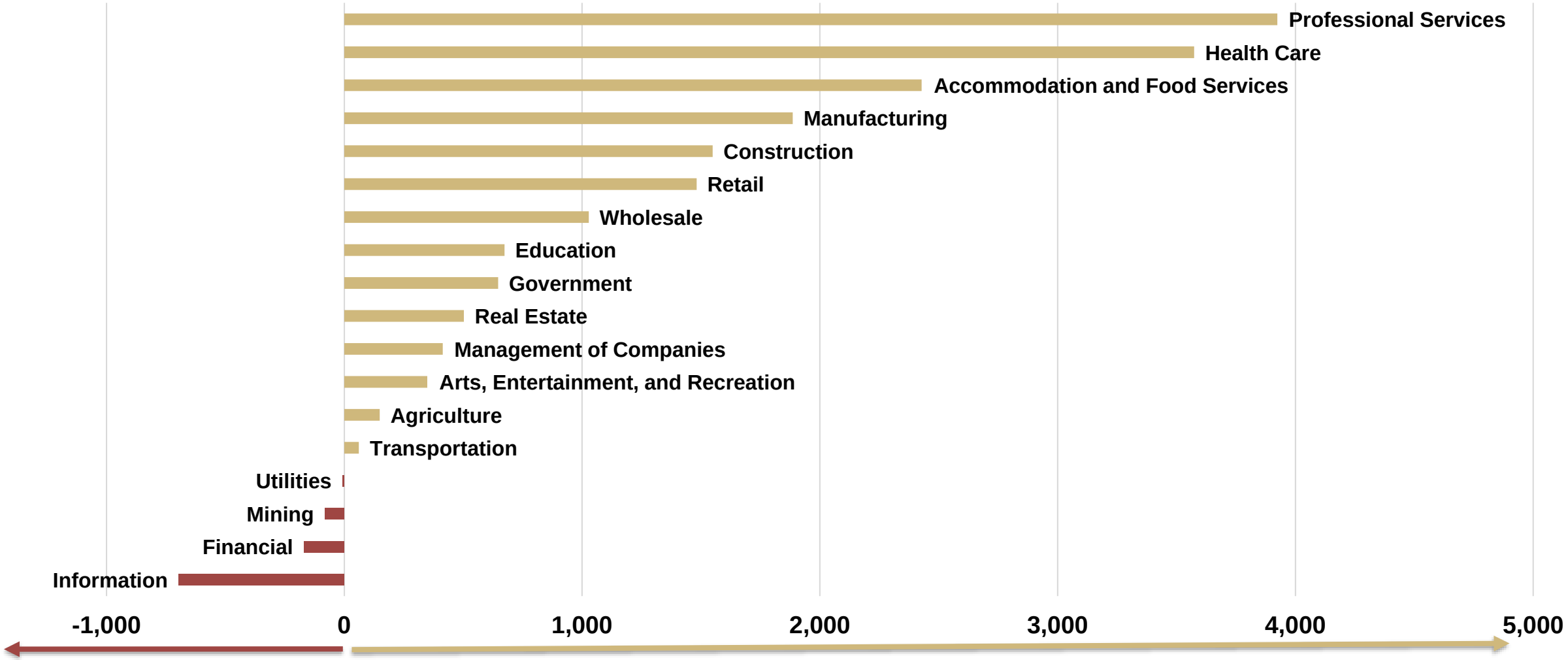
Boulder MSA Employment



Source: Bureau of Labor Statistics, CES (SA), November 2018.

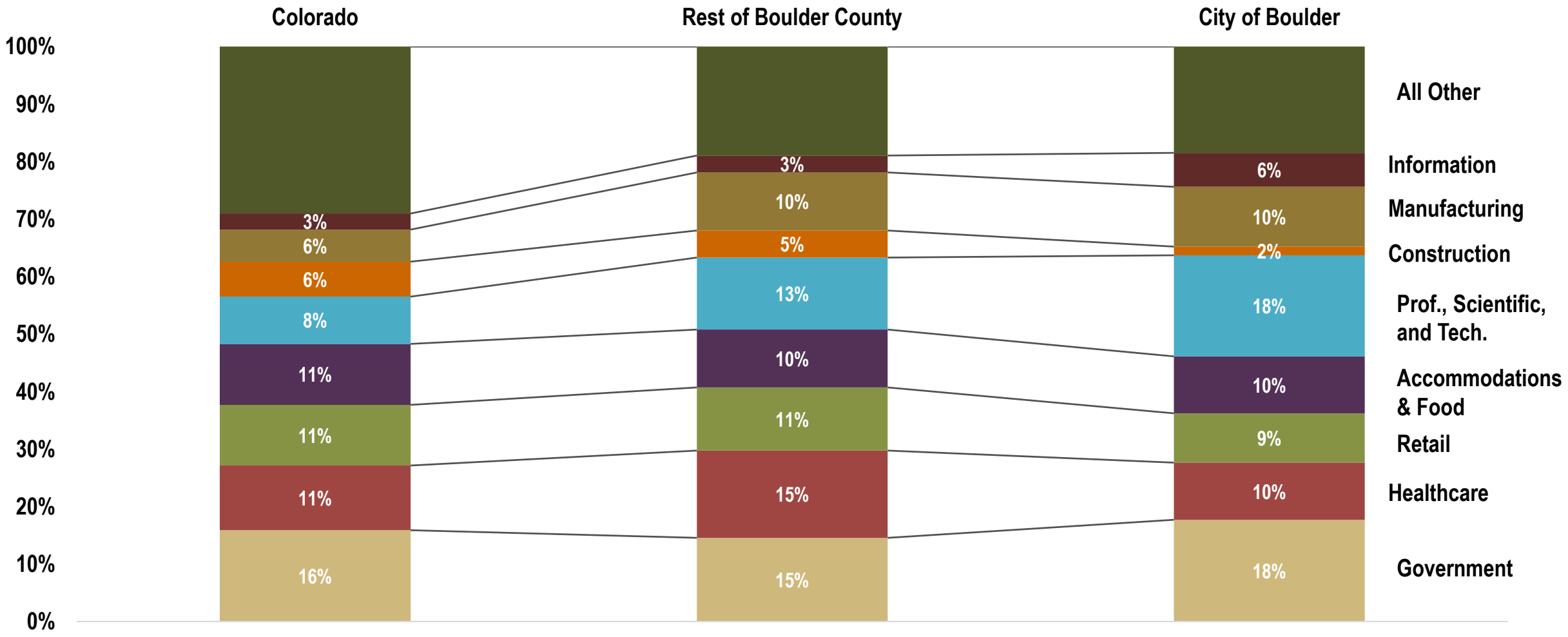
Boulder County

Jobs Added, 5 Years



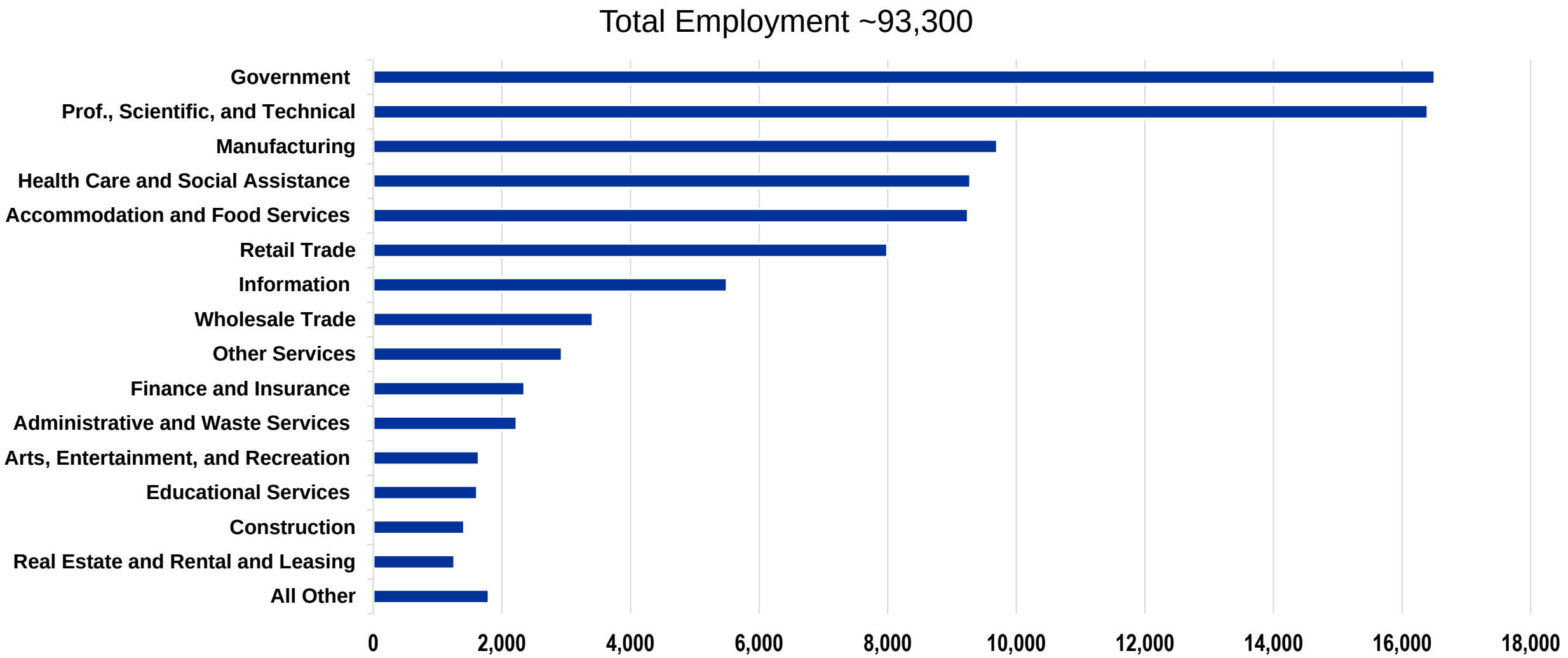
Source: Colorado Department of Labor and Employment, QCEW.

Employment Comparison



Source: Colorado Department of Labor and Employment, QCEW.

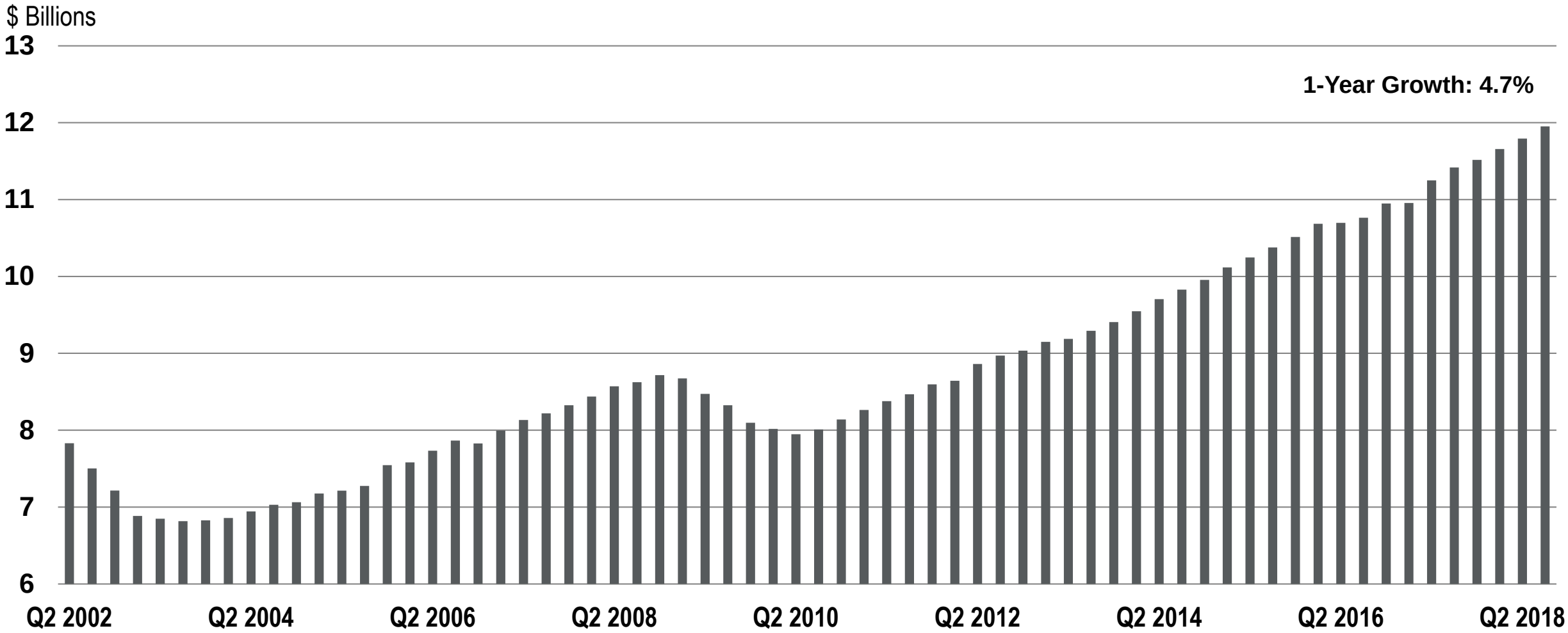
City of Boulder Employment



Source: Colorado Department of Labor and Employment, QCEW, 2017.

Boulder County Wages

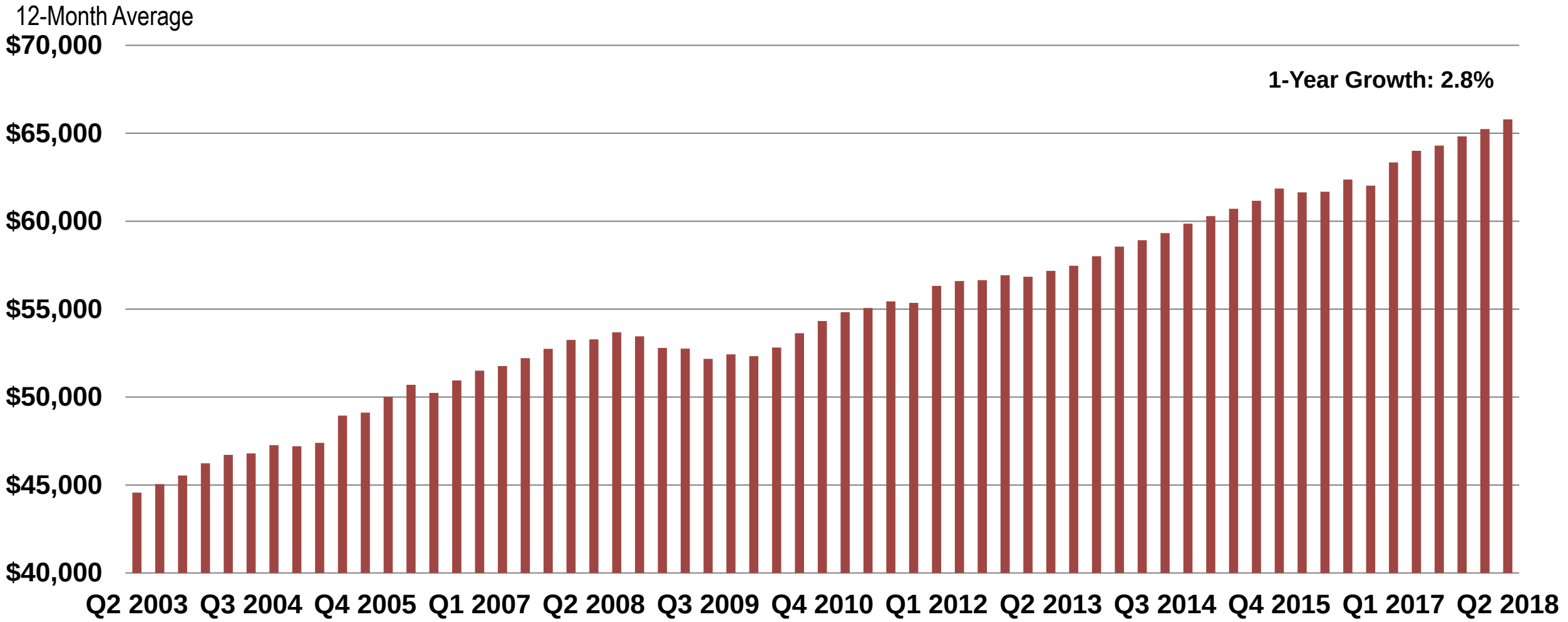
Annual Rate (4Q Rolling)



Source: Bureau of Labor Statistics, QCEW Data Series, NSA.

Boulder County Average Wages

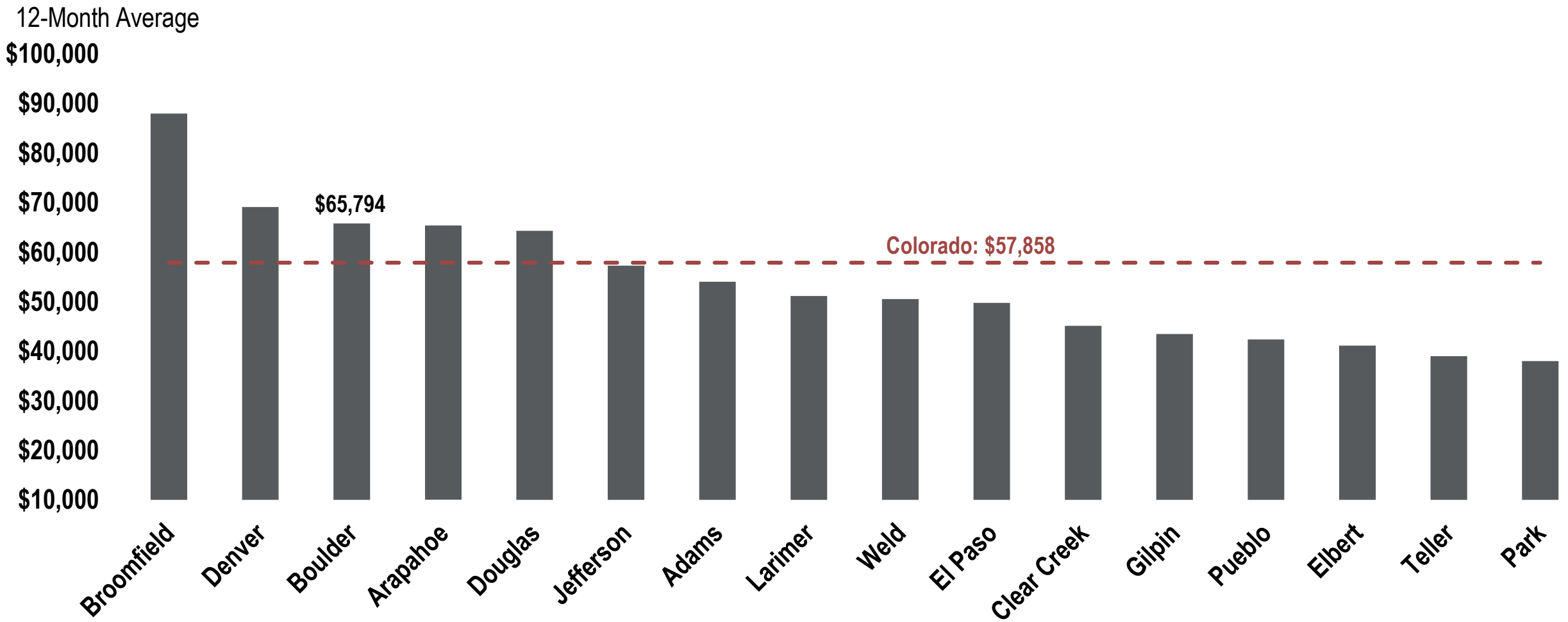
Annual Rate (4Q)



Source: Bureau of Labor Statistics, QCEW Data Series, NSA. Based on data through Q2 2018.

Average Annual Wages

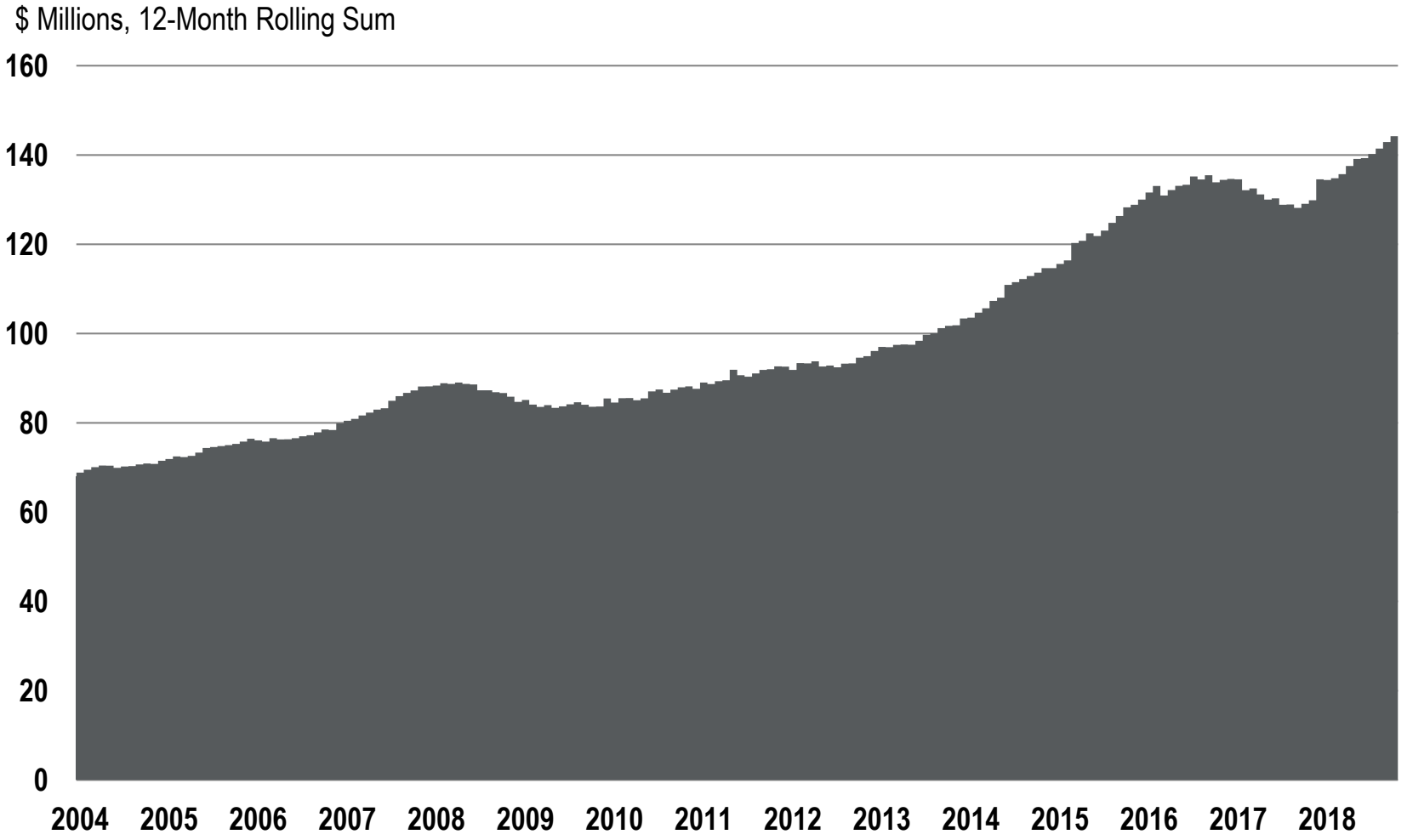
Front Range



Source: Bureau of Labor Statistics, QCEW, as of Q2 2018.

Sales and Use Tax Collections

City of Boulder



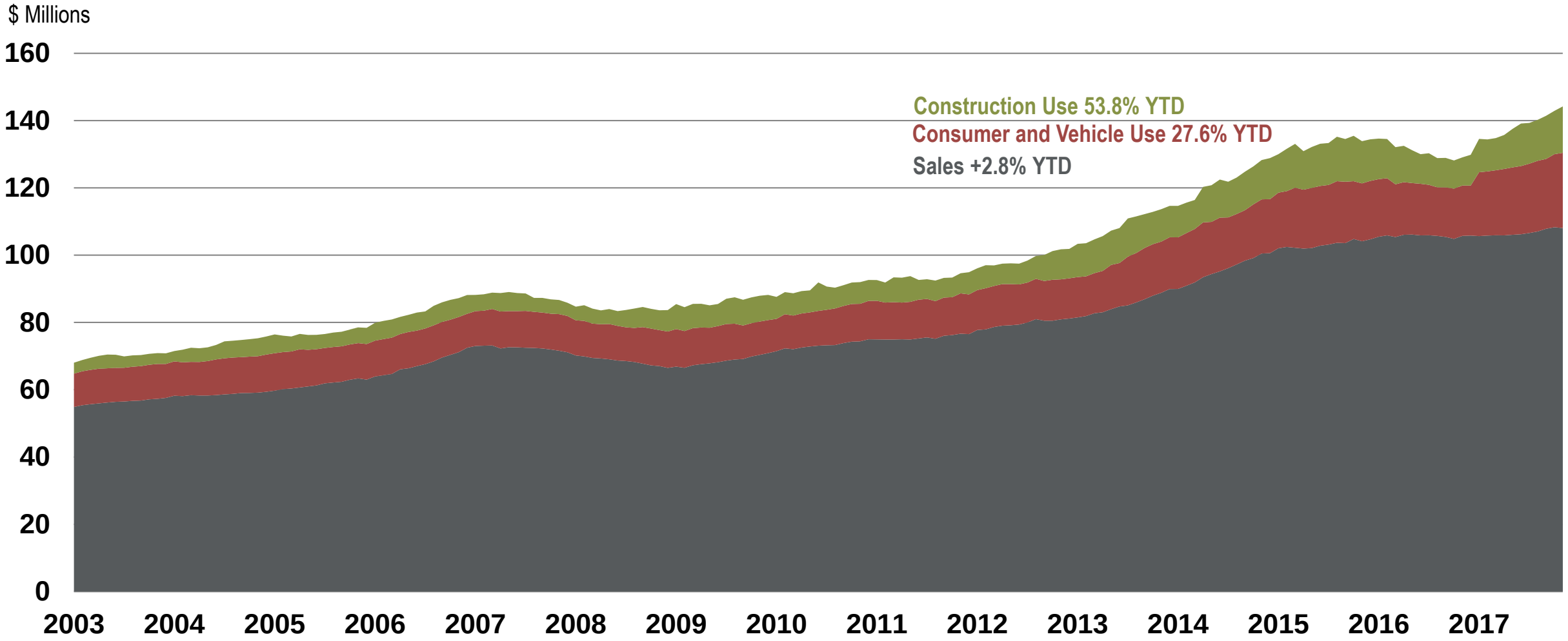
Year-to-Date:

City of Boulder:	9.2%
Longmont*:	11.2%
Broomfield:	9.1%
Colorado:	7.1%

Source: City of Boulder (October 2018), City of Longmont (November 2018) *Includes higher tax rate, City of Broomfield (September 2018), State of Colorado (November 2018) .

Sales and Use Tax Collections

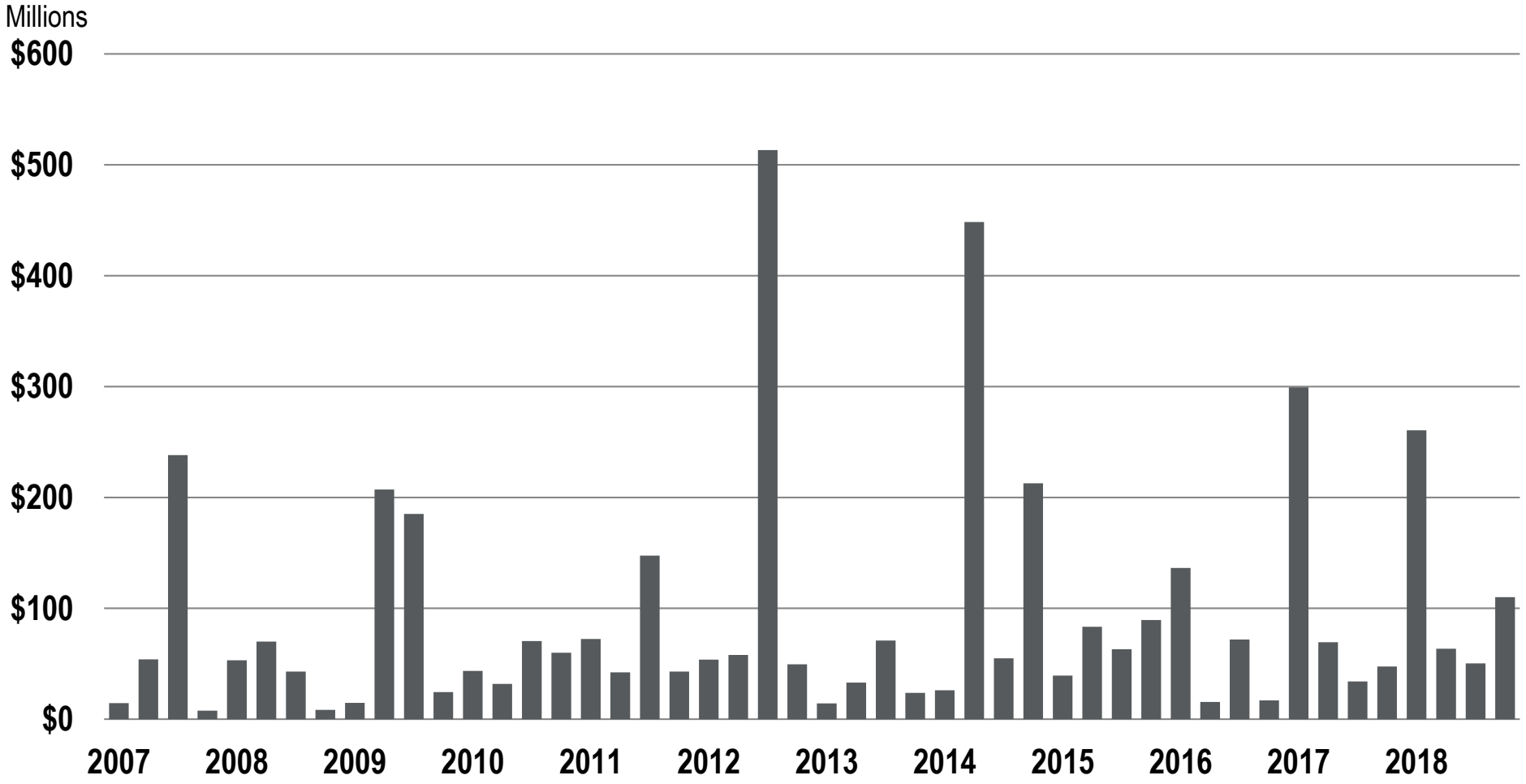
City of Boulder, 12-Month Rolling Sum



Source: City of Boulder, October 2018.

Venture Capital Investment

City of Boulder

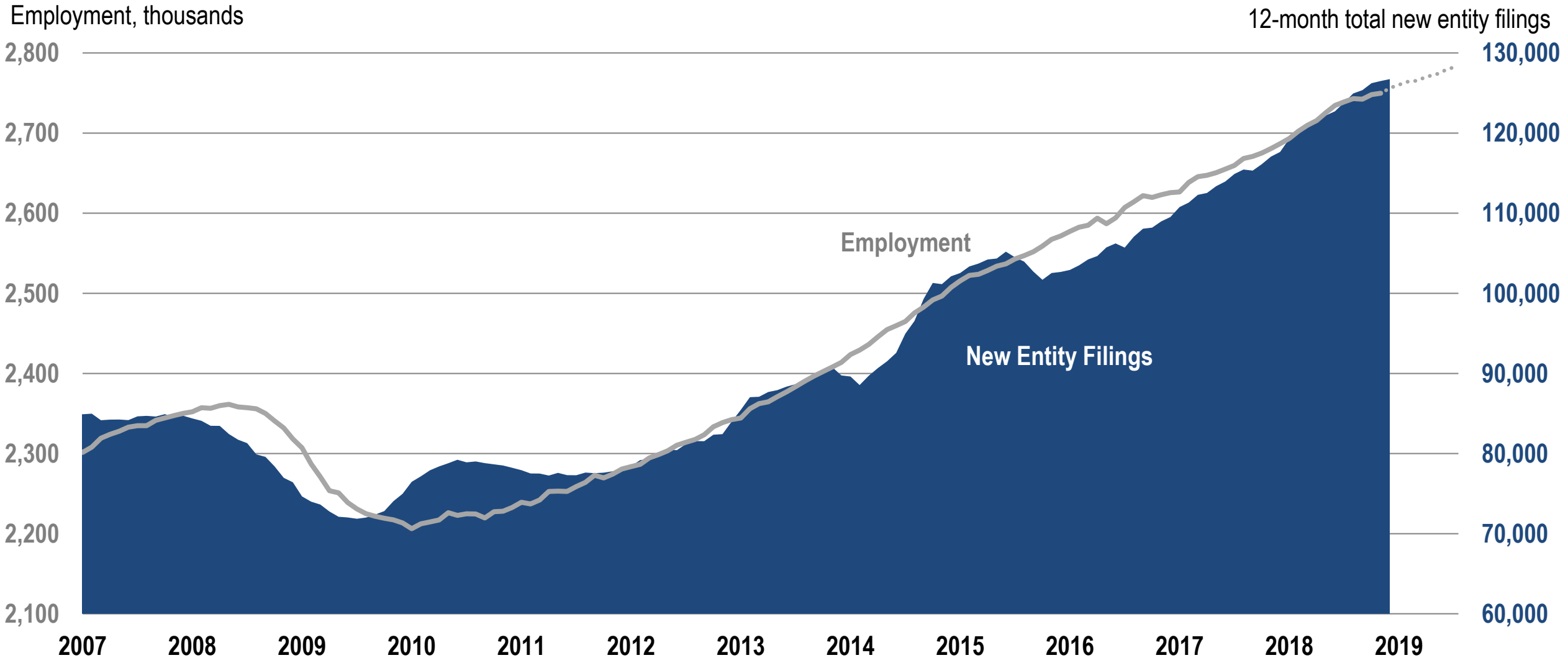


Sample 2018 Deals:

Biodesix
Backbone PLM
MBio Diagnostics
Section.io
Bobo's
Bhakti Chai
Inscripta
DeepGreen
GreenScreens

Source: CB Insights.

Employment and New Entity Filings



Note: Solid line displays actual seasonally adjusted employment numbers; dotted line reflects calculated forecasts.
Source: Seasonally adjusted. Colorado total nonfarm employees from the Bureau of Labor Statistics, Current Employment Statistics (CES), calculations by BRD research team.

Potential Headwinds for 2019

International/National

- **Interest rates**
- **Global growth**
- **Value of the dollar**
- **Trade/Tariffs**

State

- **Commodity prices/cycle**
- **Drought and weather**
- **Housing affordability**
- **Talent shortage**
- **Real wage increases**

FIFTY-FOURTH ANNUAL

COLORADO BUSINESS ECONOMIC OUTLOOK 2019

#COBizOutlook