Colorado Legislative Council Staff

December 2018 | Economic & Revenue Forecast

December 20, 2018

Contents

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Executive Summary

This report presents the budget outlook based on current law and the December 2018 General Fund revenue, cash fund revenue, and TABOR forecasts. This forecast also includes annual forecasts for kindergarten through twelfth grade (K-12) enrollment, assessed valuation, and an updated school finance outlook based on these forecasts, as well as projections for the adult and juvenile corrections populations. Consistent with other quarterly forecasts, this document includes summaries of expectations for the U.S. and Colorado economies and an overview of current economic conditions in nine regions of the state.

General Fund Budget Outlook

FY 2017-18

Preliminary estimates suggest that the General Fund ended FY 2017-18 with a $1.37 billion reserve, equal to 13.1 percent of General Fund operating appropriations. This amount is $691.1 million above the required 6.5 percent reserve. Revenue subject to TABOR exceeded the Referendum C cap by $18.5 million, which will require a TABOR refund in tax year 2018 equal to $39.8 million. This amount includes $21.3 million carried over from the FY 2014-15 TABOR refund obligation and will be refunded via the reimbursements to local governments for the senior homestead and disabled veterans property tax exemptions. The year-end General Fund reserve is $91.6 million higher than expected in September 2018, reflecting updates to preliminary amounts.

FY 2018-19

In FY 2018-19, the General Fund is expected to end the year with a 9.9 percent reserve, $296.7 million above the 7.25 percent statutory reserve. Revenue subject to TABOR is expected to exceed the Referendum C cap by $380.4 million, resulting in a TABOR refund in tax year 2019. The TABOR refund obligation is expected to be refunded via reimbursements to local governments for the property tax exemptions, with the remaining balance refunded through the six-tier sales tax refund mechanism.

FY 2019-20 Unbudgeted

The General Assembly is projected to have $1.22 billion, or 9.6 percent, more to spend or save in the General Fund than what is budgeted to be spent and saved in FY 2018-19. Any changes to revenue or expenditures in FY 2018-19 will change this amount. Revenue is expected to exceed the Referendum C cap by $189.0 million, resulting in a FY 2020-21 TABOR refund of the same amount.

Elevated forecast uncertainty. Forecast estimates are subject to a higher margin of error than usual due to recent changes in federal tax law. Unusual shifts in taxpayer behavior occurred as a result of the passage of the federal Tax Cuts and Jobs Act. Income tax collections were boosted in FY 2017-18 as taxpayers rushed to claim deductions set to expire and business activity increased on the fiscal stimulus of federal tax cuts. Ongoing shifts in taxpayer behavior are expected in the current and next fiscal year as taxpayers continue to adjust to the changes. While risks for the current fiscal year forecast are skewed to the upside, the longer-term impacts of these federal tax policy changes are yet to be seen with risks skewed to the downside.

The recent U.S. Supreme Court ruling in *South Dakota* v. *Wayfair, Inc.* poses an upside risk to the sales tax revenue forecast, as the ruling may allow states to require that out-of-state (including online) retailers collect and remit sales taxes. The ruling and subsequent state administrative rule changes are expected to result in an estimated $90 million in additional sales tax collections per year when fully implemented. This would amount to about a 3 percent boost to existing sales tax collections, or 0.7 percent boost to General Fund revenue. In the current FY 2018-19, additional collections resulting from the rule changes are expected to generate $20 million in additional sales tax revenue.

Cash Fund Revenue

Cash fund revenue subject to TABOR totaled $2.30 billion in FY 2017-18, a decline of $471.4 million or 17.0 percent from the prior fiscal year. The drop in revenue is attributable to the elimination of the Hospital Provider Fee and the 2.9 percent sales tax on retail marijuana. Total cash fund revenue subject to TABOR will rebound from this lower level by 8.0 percent to $2.49 billion in FY 2018-19, and will increase 0.7 percent to $2.51 billion in FY 2019-20, as most major revenue sources are projected to rise. By FY 2020-21, total cash fund revenue is expected to decline slightly relative to the prior year. This decline is attributable to lower severance tax revenue on the expectation that oil and gas producers will claim a large amount of ad valorem property tax credits based on the current expansion of oil and gas activity.

Economic Outlook

Over the next two years, the U.S. and Colorado economies will continue to expand, albeit at a slower pace than in 2018. The slowdown in growth is consistent with a maturing U.S. economic expansion and will coincide with slower global economic activity. As the stimulative impacts of federal tax cuts wear off, growth in business investment and consumer activity are expected to moderate. Higher interest rates and an increasingly tight labor market will pose stronger headwinds to private sector growth. International trade policy uncertainty continues to cloud the outlook for businesses, and will contribute to upward pressure on prices for consumers and businesses alike until tensions ease.

Relatively high housing costs and rising interest rates have cooled housing markets in many regions of the U.S. In Colorado, rapid home price appreciation along the northern Front Range has spread to surrounding areas. The higher cost of living is expected to continue to influence population migration to and within the state, while also putting downward pressure on consumer activity unless wage growth can keep pace with rising housing costs.

Discussion of the economic outlook begins on page 75, and summaries of expectations for the U.S. and Colorado economies are respectively presented in Tables 23 and 24 on pages 108 and 109.

School Finance Outlook

FY 2018-19. Lower than expected enrollment and increased expectations for local tax collections are expected to provide $79 million more in flexibility for school finance funding than previously expected.

FY 2019-20. Based on revised inflation expectations and the 2018 K-12 enrollment forecast, total program requirements for FY 2019-20 are expected to increase by $249 million on a year-over-year basis. The 2018 assessed valuation forecast, however, implies that the local share will increase in FY 2019-20 by $252 million year-over-year. This means that the increase in the local share will more than offset the total program increase, resulting in a $3 million decline in required state aid.

K-12 Enrollment

Relative to last year, Colorado's public school enrollment slowed to 0.1 percent growth in the current school year (2018-19). The enrollment count totaled 838,079 FTE students across Colorado's public schools, up 530 FTE students from the prior school year. Colorado schools are expected to continue to add students through the forecast period, though at a very modest pace. Public schools are expected to add another 904 FTE students, a 0.1 percent increase, in the upcoming 2019-20 school year. Growth is expected across all regions of the state except for the metro Denver and Pueblo regions, which are expected to decline slightly relative to the current school year. In 2020-21, K-12 public school enrollment is expected to grow again by 0.1 percent from the prior year.

Assessed Valuation and Residential Assessment Rate

Total assessed values will increase by 10.1 percent between 2018 and 2019, as residential and most nonresidential classes of property are reassessed. Residential actual values will increase 16.3 percent, which will be offset by a reduction in the residential assessment rate from 7.20 percent to 6.78 percent; residential assessed values will increase 9.5 percent between 2018 and 2019. Nonresidential assessed values will increase by 10.5 percent. Growth in assessed values in each region of the state will vary, based on the unique mix of properties and economic forces specific to each region and school district.

Prison and Parole Populations

The state's **adult prison population** is expected to increase from 20,136 inmates in June 2018 to 20,432 inmates in June 2019 and 20,940 inmates in June 2020. The prison population will increase through the forecast period as a result of growth in new prison commitments from the state criminal courts; however, new court commitments are now expected to accelerate more slowly than was projected in the December 2017 forecast. Offender releases have increased thus far in FY 2018-19 as a result of policy changes. Releases are expected to regress somewhat but remain elevated above recent trend levels.

As more offenders are admitted to and released from prison, the in-state **adult parole population** is expected to increase from 8,752 offenders in June 2018 to 9,297 offenders in June 2019 and 9,687 offenders in June 2020.

All three estimated **juvenile corrections populations** are expected to continue to decline as the state increasingly utilizes diversion programs and alternative sentencing in lieu of incarceration. The average daily population at commitment facilities in the Division of Youth Services is expected to fall from 647 youths in FY 2017-18 to 626 youths in FY 2018-19 and 609 youths in FY 2019-20. Fewer commitments will drive attendant decreases in the parole population, which will fall from an average of 210 youths in FY 2017-18 to 206 youths in FY 2018-19 and 198 youths in FY 2019-20. Finally, the juvenile detention population is also expected to decrease, from an average of 263 youths in FY 2017-18 to 253 youths in FY 2018-19 and 247 youths in FY 2019-20.

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General Fund Budget Overview

This section presents the General Fund overview based on current law. A summary of the General Fund overview is shown in Table 1. This section also presents expectations for the following:

- statutory transfers to transportation and capital construction funds (Table 2);
- the availability of tax policies dependent on revenue collections (Table 3);
- General Fund rebates and expenditures (Table 4); and
- cash fund transfers to and from the General Fund (Table 5).

FY 2017-18

Based on preliminary collections data, the General Fund ended the year with a 13.1 percent reserve, $691.1 million above the required 6.5 percent statutory reserve, as shown in Table 1 (line 20). Revenue subject to TABOR exceeded the Referendum C cap by $18.5 million, requiring a $39.8 million TABOR refund in FY 2018-19. This amount includes $21.3 million carried over from the FY 2014-15 refund obligation and will be refunded in FY 2018-19 via reimbursements to local governments for the senior homestead and disabled veterans property tax exemptions.

FY 2018-19

The General Fund is expected to end the year with a 9.9 percent reserve, $296.7 million higher than the budgeted 7.25 percent reserve. Revenue is expected to exceed the Referendum C cap by $380.4 million, resulting in a TABOR refund for tax year 2019. The TABOR refund obligation will be refunded in FY 2019-20 via local government reimbursements for the senior homestead and disabled veteran property tax exemptions, and the remaining balance above the required reimbursements will be refunded via the six-tier sales tax refund mechanism to taxpayers for the 2019 tax year.

Relative to the September 2018 forecast, expectations were increased $151.2 million on higher than expected individual income tax collections to date in FY 2018-19.

FY 2019-20 (Unbudgeted)

Because a budget has not yet been enacted for FY 2019-20, Table 1 (lines 22 and 23) shows the amount of revenue available in FY 2019-20 relative to the amount budgeted to be spent or saved in FY 2018-19. Based on this forecast, the General Assembly will have $1.22 billion, or 9.6 percent, more to spend or save in the General Fund than what is budgeted for FY 2018-19. This amount assumes current law, and is largely attributable to the FY 2017-18 and FY 2018-19 excess reserves carrying into subsequent years, and increased General Fund revenue expectations. This amount will change when the General Assembly enacts changes that impact revenue or expenditures in FY 2018-19 and with changes in revenue expectations through FY 2019-20.

Table 1
General Fund Overview
Dollars in Millions

Funds Available		FY 2017-18 Preliminary	FY 2018-19 Estimate	FY 2019-20 Estimate	FY 2020-21 Estimate
1	Beginning Reserve	$614.5	$1,366.0	$1,109.9	*
2	General Fund Revenue	$11,723.0	$12,447.5	$12,890.7	$13,159.9
3	Transfers from Other Funds *(Table 5)*	$98.5	$38.7	$18.0	$18.6
4	**Total Funds Available**	**$12,435.9**	**$13,852.2**	**$14,018.7**	*
5	Percent Change	14.8%	11.4%	1.2%	*
Expenditures		Preliminary	Budgeted	Estimate	Estimate
6	General Fund Appropriations Subject to Limit[1]	$10,430.9	$11,217.7	*	*
7	Adjustments to Appropriations[2]	$29.0	*	*	*
8	TABOR Refund Obligation Under Art. X, §20, (7)(d)[3]	$39.8	$380.4	$189.0	$0.0
9	Rebates and Expenditures *(Table 4)*	$290.7	$244.9	$143.5	$143.9
10	Transfers to Other Funds *(Table 5)*	$208.2	$198.7	$172.5	$187.1
11	Transfers to the State Education Fund Pursuant to SB 13-234	$25.3	$25.0	NA	NA
12	Transfers to Transportation Fund *(Table 2)*	$79.0	$495.0	$200.0	$50.0
13	Transfers to Capital Construction Funds *(Table 2)*	$112.1	$180.5	$60.0	$0.0
14	**Total Expenditures**	**$11,215.0**	**$12,742.2**	*	*
15	Percent Change	7.6%	13.6%	*	*
16	Accounting Adjustments[4]	145.1	*	*	*
Reserve		Preliminary	Budgeted	Estimate	Estimate
17	Year-End General Fund Reserve	$1,366.0	$1,109.9	*	*
18	Year-End Reserve as a Percent of Appropriations	13.1%	9.9%	*	*
19	Statutorily Required Reserve[5]	$674.9	$813.3	*	*
20	**Amount in Excess or (Deficit) of Statutory Reserve**	**$691.1**	**$296.7**	*	*
21	Excess Reserve as a Percent of Expenditures	6.2%	2.3%	*	*
Perspective on FY 2019-20 (Unbudgeted Year)					Estimate
	Amount Available in FY 2019-20 Relative to FY 2018-19 Expenditures[6]				
22	Amount in Excess or (Deficit) of 7.25% Statutory Reserve			$1,222.7	*
23	As a Percent of Prior-Year Expenditures			9.6%	*
Addendum		Preliminary	Estimate	Estimate	Estimate
24	Percent Change in General Fund Appropriations	6.9%	7.2%	*	*
25	5% of Colorado Personal Income Appropriations Limit	$14,207.1	$14,481.0	$15,320.6	$16,209.1
26	Transfers to State Education Fund Per Amendment 23	$617.0	$670.8	$692.6	$702.9

*Totals may not sum due to rounding. *Not estimated.*

[1]Includes the FY 2017-18 supplemental budget package and FY 2018-19 budget package adopted during the 2018 legislative session. FY 2018-19 includes $225 million in PERA disbursements pursuant to SB 18-200.

[2]Includes $29.0 million in overexpenditures primarily from allowable Medicaid overexpnditures pursuant to Section 24-75-109 (1), C.R.S.

[3]Pursuant to Section 24-75-201 (2), C.R.S., the TABOR refund obligation is required to be set aside during the year it is collected to be refunded in the following fiscal year.

[4]This includes a $21.3 million adjustment in FY 2017-18, which represents the FY 2017-18 TABOR refund obligation that is carried forward from the FY 2014-15 refund obligation; this amount is already restricted in the fund balance.

[5]The required reserve is calculated as a percent of operating appropriations, and is required to equal 6.5 percent in FY 2017-18 and 7.25 percent in FY 2018-19 and each year thereafter. Pursuant to SB 18-276, certificates of participation are included in the statutory reserve requirement calculation beginning in FY 2018-19.

[6]This scenario holds appropriations in FY 2019-20 equal to appropriations in FY 2018-19 (line 6) to determine the total amount of money available relative to FY 2018-19 expenditures, net of the obligations in lines 7 through 13.

Higher than Usual Forecast Uncertainty

Significant shifts in taxpayer behavior occurred in anticipation of and following the passage of the federal Tax Cuts and Jobs Act, resulting in unusual income tax collection patterns at the end of calendar year 2017 and start of 2018 that cannot easily be isolated from underlying economic conditions. The federal tax bill enacts changes starting in the 2018 tax year, data for which will not be available until next year. Even with collections data, the revenue impact of the federal tax changes cannot be isolated from economic processes or underlying taxpayer behavior. Considering these factors, revenue estimates in this forecast are subject to a higher than usual margin of error.

The recent U.S. Supreme Court ruling in *South Dakota* v. *Wayfair, Inc.* and subsequent administrative rule changes adopted by the Colorado Department of Revenue pose a modest upside risk to the sales tax revenue forecast. These changes require out-of-state (including online) retailers to collect and remit state sales taxes and are expected to increase state collections by an estimated $90 million per year when fully implemented. The changes are expected to boost collections by $20 million in the current FY 2018-19, based on the Department of Revenue's requirement that retailers comply with rule changes by May 31, 2019.

General Fund Transfers to Transportation and Capital Construction

Table 2 shows statutory transfers from the General Fund to transportation and capital construction funds. Transfers in Table 2 are also shown in lines 12 and 13 of Table 1. Other non-infrastructure-related transfers to and from the General Fund are summarized in Table 5.

Table 2
Infrastructure Transfers from the General Fund
Dollars in Millions

Capital Construction Funds	2017-18	2018-19	2019-20	2020-21
SB 17-263	$109.2			
SB 17-262		$60.0	$60.0	
HB 18-1006		$0.7		
HB 18-1173	$2.9			
HB 18-1340		$119.8		
Total	**$112.1**	**$180.5**	**$60.0**	**$0.0**

Transportation Funds	2017-18	2018-19	2019-20	2020-21
SB 17-262	$79.0			
SB 18-001*		$495.0	$200.0	$50.0
Total	**$79.0**	**$495.0**	**$200.0**	**$50.0**

**Pursuant to SB 18-001, transfers for FY 2019-20 and subsequent years depend on ballot measure outcomes during the 2019 elections. The amounts shown assume current law and exclude provisions under the adoption of ballot measures.*

Transportation transfers. Senate Bill 17-267, which authorized up to $1.88 billion in certificates of participation (COPs) for transportation projects, repealed transfers from the General Fund to the Highway Users Tax Fund previously specified by Senate Bill 17-262 and requires General Fund appropriations for COP-related lease payments beginning in FY 2018-19. Under current law, these General Fund appropriations are expected to total $100 million annually by FY 2021-22. These appropriations are included in line 6 of Table 1, and not included in Table 2.

Senate Bill 18-001 created one-time General Fund transfers for transportation of $495 million in FY 2018-19 and $150 million in FY 2019-20. These amounts are apportioned to the State Highway Fund, a new Multimodal Transportation Options Fund, and county and municipal governments. Beginning in FY 2018-19, Senate Bill 18-001 authorizes 20 years of additional transfers to the State Highway Fund. The amount of the transfers is set at $50 million per year. Table 2 assumes a transportation transfer amount of $200 million for FY 2019-20, including the $150 million one-time transfer and a $50 million ongoing annual transfer.

Tax Policies Dependent on Revenue Conditions

Two state tax expenditures are "triggered" by certain state revenue conditions. Table 3 summarizes the availability of these tax policies, each of which is described in greater detail below.

- **Historic preservation income tax credit available in tax year 2018.** The historic preservation income tax credit will be triggered in tax year 2018 based on the December 2017 forecast, which expected sufficient revenue to grow appropriations by more than 6.0 percent in FY 2017-18. Based on this forecast, the credit will also expected to be available in tax year 2019.

- **Partial refundability of the conservation easement tax credit will be available in tax year 2018 and is expected to be available in tax years 2019 and 2020.** The conservation easement income tax credit is available as a nonrefundable credit in most years. In tax years when the state refunds a TABOR surplus, taxpayers may claim an amount up to $50,000, less their income tax liability, as a refundable credit. Because a TABOR surplus was collected in FY 2017-18, the credit will be partially refundable in tax year 2018. This forecast expects a TABOR surplus in FY 2018-19 and FY 2019-20. If a surplus occurs in these fiscal years, partial refundablility of the credit will be available in tax years 2019 and 2020.

Table 3
Availability of Tax Policies Dependent on Revenue Conditions

Tax Policy	Availability Criteria	Availability
Historic Property Preservation Income Tax Credit (Section 39-22-514, C.R.S.) *Revenue reduction of less than $1.0 million per tax year**	December forecast immediately before the tax year when the credit becomes available that predicts sufficient General Fund to grow General Fund appropriations by 6 percent.	Available in tax year 2018 and expected to be available in tax year 2019. Repealed in tax year 2020.
Conservation Easement Tax Credit Partial Refundability (Section 39-22-522 (5)(b)(II), C.R.S.) *Revenue reduction of at least $5.0 million per tax year**	TABOR surplus.	Available in tax year 2018 due to the FY 2017-18 TABOR surplus. Expected to be available in tax years 2019 and 2020, and unavailable in 2021.

**Estimates may differ in future analyses.*

Table 4
General Fund Rebates and Expenditures
Dollars in Millions

Category	Preliminary FY 2017-18	Percent Change	Estimate FY 2018-19	Percent Change	Estimate FY 2019-20	Percent Change	Estimate FY 2020-21	Percent Change
Senior and Veterans Property Tax Exemptions	$132.3	-3.0%	$140.7	6.4%	$140.8	0.1%	$149.5	6.2%
TABOR Refund Mechanism[1]	NA		-$39.8		-$140.8		-$149.5	
Cigarette Rebate	$9.7	-5.6%	$10.0	2.5%	$9.8	-1.9%	$9.6	-1.9%
Old-Age Pension Fund	$91.3	-5.4%	$86.4	-5.4%	$84.1	-2.7%	$82.7	-1.6%
Aged Property Tax and Heating Credit	$4.9	-43.3%	$5.5	11.8%	$5.3	-3.0%	$5.2	-2.0%
Older Coloradans Fund[2]	$25.0	150.0%	$10.0	-60.0%	$10.0	0.0%	$10.0	0.0%
Interest Payments for School Loans	$5.0	47.7%	$7.4	48.7%	$7.4	0.2%	$7.4	0.0%
Firefighter Pensions	$4.4	3.5%	$4.4	0.9%	$4.4	1.1%	$4.5	0.9%
Amendment 35 Distributions	$0.8	-3.8%	$0.8	-0.5%	$0.8	-0.8%	$0.8	-0.8%
Marijuana Sales Tax Transfer to Local Governments	$17.3	17.2%	$19.6	13.3%	$21.7	10.8%	$23.6	8.9%
Total Rebates and Expenditures	**$290.7**	**2.0%**	**$244.9**	**-15.7%**	**$143.5**	**-41.4%**	**$143.9**	**0.2%**

Totals may not sum due to rounding. NA = Not applicable.

[1]Pursuant to SB 17-267, local government reimbursements for these property tax exemptions are the first TABOR refund mechanism used to meet the prior year's refund obligation.

[2]Pursuant to HB 16-1161, 95 percent of excess General Fund allocations for local government reimbursements for property tax exemptions are transferred to the senior services account in the Older Coloradans Fund. The amount for FY 2017-18 includes $15.0 million pursuant to this requirement.

Table 5
Cash Fund Transfers
Dollars in Millions

Transfers to the General Fund		**2017-18**	**2018-19**	**2019-20**	**2020-21**
HB 05-1262	Amendment 35 Tobacco Tax	$0.8	$0.8	$0.8	$0.8
SB 13-133 & SB 18-191	Limited Gaming Fund	$16.9	$17.1	$17.2	$17.8
SB 15-249 & HB 16-1418	Marijuana Tax Cash Fund	$0.04			
HB 16-1413	Water Quality Improvement Fund				
SB 17-260	Severance Tax Funds	$34.3			
SB 17-265	State Employee Reserve Fund	$26.3			
HB 18-1338	Reduced Revenue Severance Tax Transfers	$20.2	$20.78		
Total Transfers to the General Fund		**$98.5**	**$38.7**	**$18.0**	**$18.6**

Transfers from the General Fund		**2017-18**	**2018-19**	**2019-20**	**2020-21**
SB 11-047	Bioscience Income Tax Transfer to OEDIT	$4.4	$4.7	$4.9	$5.0
HB 13-1193	Advanced Industries Export Acceleration Fund	$0.3			
SB 14-215	Marijuana Tax Cash Fund	$108.4	$126.6	$140.2	$152.7
HB 14-1016[1]	Procurement Technical Assistance Cash Fund	$0.2	$0.2	$0.2	
SB 15-244 & SB 17-267	State Public School Fund	$37.8	$22.2	$24.6	$26.8
SB 15-245	Natural Hazard Mapping Fund	$0.7			
HB 16-1161[2]	Veterans Grant Program Fund *(conditional)*	$0.8			
HB 16-1288	Industry Infrastructure Fund	$0.3	$0.3		
HB 17-1282	Veterinary Loan Education Repayment Fund	$0.1			
SB 17-255	Technology Advancement and Emergency Fund	$2.0	$2.0		
SB 17-259	Severance Tax Tier-2 Natural Resource Funds	$10.0			
SB 17-261	2013 Flood Recovery Account	$12.5			
HB 18-1171	School Finance Mid-Year Adjustment	$30.7			
HB 18-1323	Pay For Success Contracts Pilot Program Funding		$0.4	$0.5	$0.5
HB 18-1338	Reduced Revenue Severance Tax Transfers		$20.0		
HB 18-1363	Recommendations Of Child Support Commission		$0.04	$0.04	$0.04
HB 18-1357	Behavioral Health Care Ombudsperson Parity Reports		$0.01		
HB 18-1423	Rural Fire Protection District Equipment Grants		$0.3		
SB 18-016	Transitioning from Criminal & Juvenile Justice System		$2.0	$2.0	$2.0
SB 18-132	1332 State Waiver Catastrophic Health Plans		$0.01		
SB 18-280	Tobacco Litigation Settlement Cash Fund		$20.0		
Total Transfers from the General Fund		**$208.2**	**$198.7**	**$172.5**	**$187.1**
Net General Fund Impact		**($109.7)**	**($160.0)**	**($154.5)**	**($168.5)**

[1]The transfer is contingent upon the receipt of at least $200,000 in gifts, grants, and donations by the relevant contractor.
[2]HB 16-1161 requires transfers to the Older Coloradans Fund of any excess General Fund moneys set aside for reimbursements to local governments for the Senior Homestead and Disabled Veteran property tax exemptions.

School Finance Outlook

This section presents information on the outlook for school finance from a state budgetary perspective, both in the current (FY 2018-19) and subsequent (FY 2019-20) fiscal years. This outlook incorporates information from the K-12 enrollment and assessed value projections, located on page 37 and page 45, respectively, of the forecast document. Enrollment changes are a major determinant of overall required formula funding (total program), since funding is allocated on a per pupil basis. Similarly, assessed values on real property determine a school district's property tax base, which, along with a school district's total program mill levy, determine a school district's available property tax revenue.

This revenue, supplemented by specific ownership tax revenue from vehicle registrations, constitutes the local share of school district funding. Subject to available budgetary resources, the difference between total program funding requirements and the local share is the amount the state must cover through state equalization payments, or state aid.

Relative to last year's appropriation, the **FY 2018-19** requirement for state aid has decreased by $79 million. This is because:

- total program requirements have decreased by $22 million; and
- revenue available for the local share increased by $57 million.

For **FY 2019-20**, the state aid requirement is expected to decrease by $3 million on a year-over-year basis because:

- total program requirements will increase by $249 million; and
- revenue available for the local share will increase by $252 million.

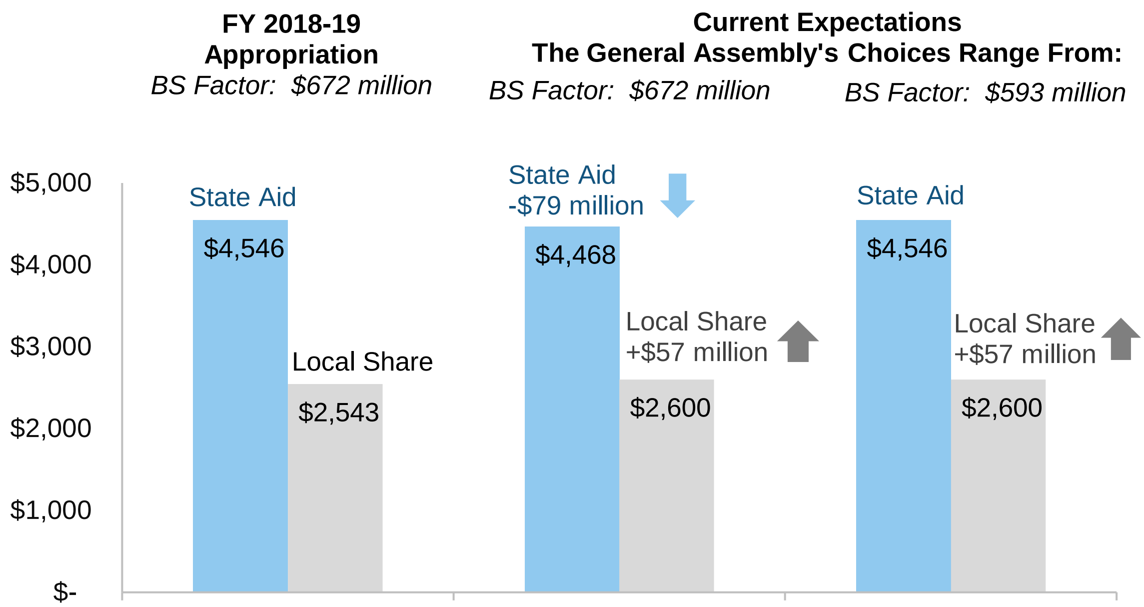
The available contribution for school finance from the State Education Fund for FY 2019-20 will increase by $137 million and the General Fund requirement will fall by $75 million on a year-over-year basis under the following assumptions:

- a $100 million ending balance for the State Education Fund in FY 2019-20;
- the budget stabilization factor is maintained at its current level; and
- the $79 million from the FY 2018-19 state aid reduction is deposited in the State Education Fund.

Funding Status for the Current Fiscal Year (FY 2018-19)

Lower than expected enrollment and increased expectations for property tax revenue collections are expected to provide $79 million in increased budgetary flexibility for the current fiscal year relative to the initial appropriation enacted in 2018. Preliminary funded pupil counts and funded at-risk pupil counts are lower than were expected last year. Specifically, the funded pupil count dropped by just over 1,000 students, while funded at-risk totals dropped by nearly 10,000 students. This decreases the overall total program cost by about $22 million relative to the initial appropriation. At the same time, the preliminary estimate for the local share is $57 million, or 2.2 percent, higher than expected during the 2018 legislative session. This includes an increase of just over $36 million in property taxes and about $21 million in specific ownership taxes. As shown in Figure 1, the combination of these changes means that the state's obligation for school finance is $79 million lower than the appropriation for state aid made in the 2018 legislative session. The General Assembly could choose to reduce either the General Fund or the State Education Fund appropriation by $79 million, use the savings to reduce the budget stabilization factor by $79 million, or anything in between.

Figure 1
Change in Expectations for School Finance Funding, FY 2018-19
Millions of Dollars



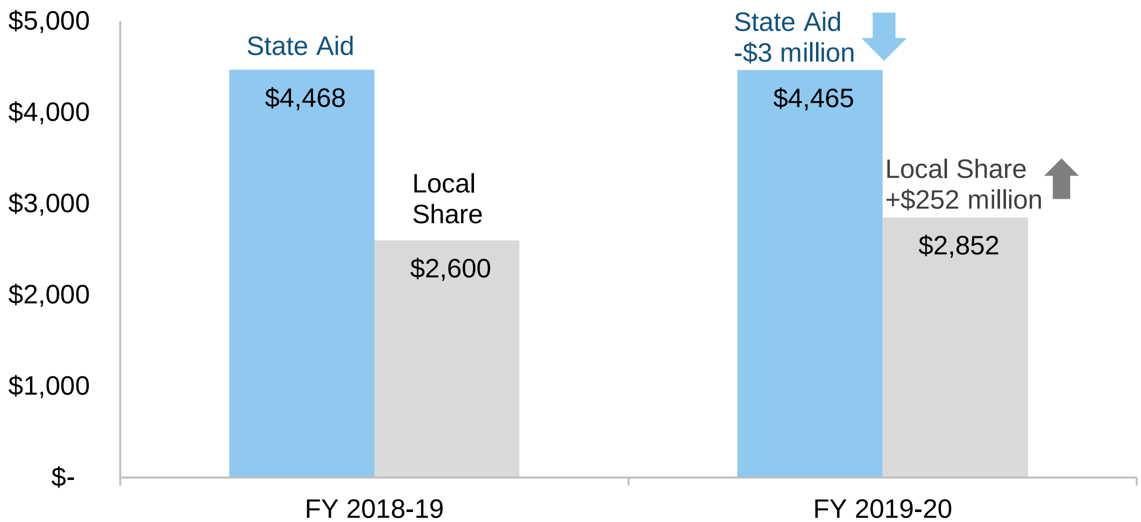
Source: Legislative Council Staff estimates.

Funding Outlook for Next Fiscal Year (FY 2019-20)

Total program funding requirements are expected to increase by $249 million between FY 2018-19 and FY 2019-20. The estimated funded pupil count is expected to increase by about 2,100 pupils on a year-over-year basis. However, inflation expectations for 2018 have decreased since the September forecast from 3.2 percent to 3.0 percent. As shown in Figure 2, the combination of these two factors increases the overall required cost of total program by about $249 million on a year-over-year basis. This total includes a decrease of $3 million in required state aid, as assessed values are projected to grow by 10.5 percent in FY 2019-20 on a year-over-year basis, leading to an increase of $252 million in the local share.

Assuming maintenance of a $100 million ending balance in the State Education Fund, the budget stabilization factor is held constant, and the $79 million from the FY 2018-19 appropriation reduction is deposited in the State Education Fund, the available contribution from that fund for FY 2019-20 is projected to increase by $137 million on a year-over-year basis. This implies that the corresponding General Fund requirement for school finance will decrease by $75 million relative to FY 2018-19.

Figure 2
Change in Expectations for School Finance Funding, FY 2018-19 to FY 2019-20
Millions of Dollars



Source: Legislative Council Staff estimates.

Summary of Updated Information Incorporated into the School Finance Model

Each fall, school districts collect enrollment information from all 178 school districts and the Charter School Institute (CSI). Districts report preliminary totals to the Colorado Department of Education (CDE), which in turn provides this information to Legislative Council Staff to assist in the development of its K-12 enrollment projections. Preliminary pupil counts are also incorporated into the Legislative Council Staff school finance model. All district-level pupil counts are provided on a full-time equivalent (FTE) basis. Enrollment components include the overall pupil count for grades 1-12 as well as total kindergarten, online, ASCENT, and CSI students. This information is used to determine a school district's funded pupil count. CDE also provides information on the number of funded at-risk students and the K-12 membership, which is used to determine a school district's funding for at-risk pupils, which for many districts can be a significant component of district total program. The school finance model will be updated in January when preliminary counts are finalized.

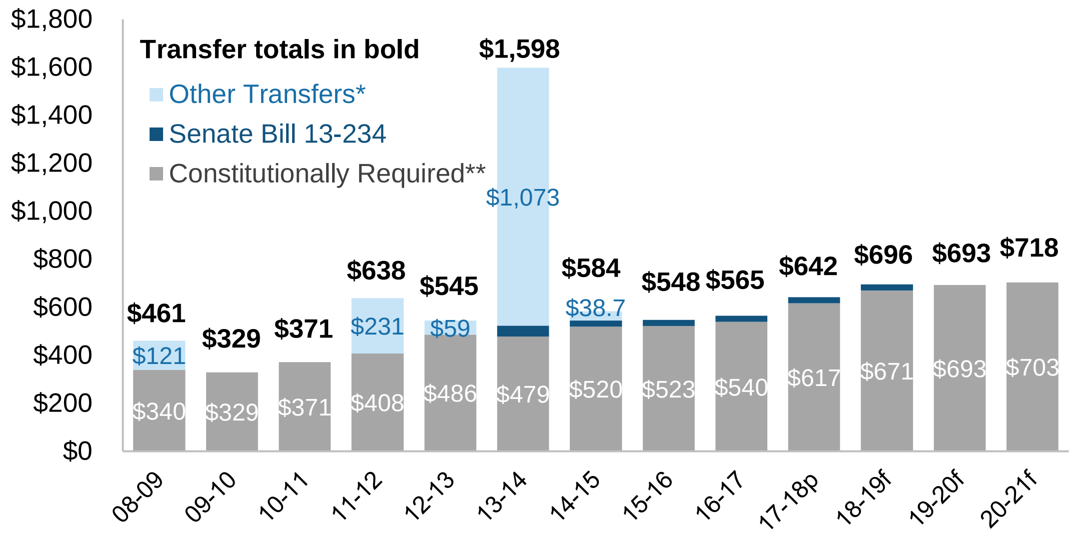
In addition, CDE also obtains district-level information on assessed values and specific ownership tax revenue. This information is combined with certified mill levies for each district, to obtain estimates for the amount of funding school districts will receive from local revenue sources. Updated enrollment and local share estimates thus combine to provide the best estimate for the state's obligation for state equalization payments for both the current and subsequent fiscal years. Final true-up for the FY 2018-19 appropriation for state aid will occur through passage of a mid-year supplemental bill for CDE. The appropriation for state aid in FY 2019-20 will be made through passage of the 2019 Long Bill and the 2019 School Finance Act.

State Education Fund

The Colorado Constitution requires the State Education Fund to receive one-third of one percent of taxable income (see Table 1, line 26). In addition, the General Assembly has at different times authorized the transfer of additional moneys from the General Fund to the State Education Fund. Money in the State Education Fund is required to be used to fund kindergarten through twelfth grade public education. Figure 3 shows a history and forecast for revenue sources to the State Education Fund through the end of the forecast period.

General Fund transfers to the State Education Fund pursuant to Senate Bill 13-234, which have occurred annually since FY 2013-14, are scheduled to end after FY 2018-19. In FY 2018-19, the State Education Fund is expected to receive $695.8 million, with higher amounts in the following year resulting from growth in taxable income among Colorado taxpayers.

Figure 3
Revenue to the State Education Fund
Dollars in Millions

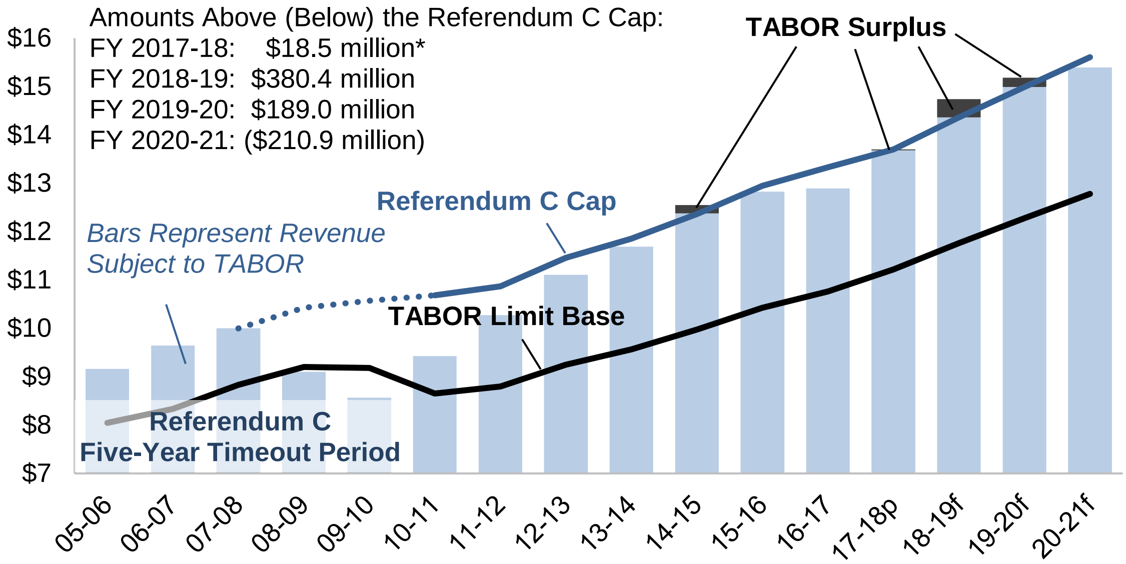


Source: Colorado State Controller's Office and Legislative Council Staff forecast (f).
** Includes transfers under SB 09-260 for FY 2008-09, SB 11-183 and SB 11-156 for FY 2011-12, HB 12-1338 for FY 2012-13 and FY 2013-14, and HB 14-1342 for FY 2014-15.*
***One-third of one percent of federal taxable income is required be dedicated to the State Education Fund under Article IX, Section 17 of the Colorado Constitution.*

TABOR Outlook

This section presents the outlook for the state's TABOR situation through FY 2020-21. Forecasts for TABOR revenue are summarized in Table 8 on page 21 and illustrated in Figure 4, which also provides a 13-year history of the TABOR limit base and the Referendum C cap.

Figure 4
TABOR Revenue, TABOR Limit Base, and the Referendum C Cap
Dollars in Billions



Source: Office of the State Controller and Legislative Council Staff. p = Preliminary. f = Forecast.
**The refund amount for FY 2017-18 differs from the surplus amount because it includes underrefunds and other adjustments to previous TABOR surpluses.*

FY 2017-18. Preliminary, unaudited figures indicate that state revenue subject to TABOR **exceeded the Referendum C cap** by $18.5 million in FY 2017-18. The surplus triggers a **TABOR refund in the current FY 2018-19.** The state is required to refund a total of **$39.8 million**, including the $18.5 million surplus and an outstanding $21.3 million from the FY 2014-15 refund obligation. These amounts have been set aside in the General Fund and do not require the expenditure of new revenue collected in the current fiscal year. Pursuant to state law enacted in Senate Bill 17-267, the TABOR obligation will be refunded to taxpayers via reimbursements paid to county governments for property tax exemptions allowed to seniors and disabled veterans.

FY 2018-19. State revenue subject to TABOR is expected to exceed the Referendum C cap by **$380.4 million**, triggering an equivalent TABOR refund obligation in FY 2019-20. Expectations for the TABOR surplus amount have increased relative to the September forecast because of upward revisions to the General Fund revenue forecast. As discussed below, the FY 2018-19 surplus is expected to exceed the amount that can be refunded via FY 2019-20 reimbursements for property tax expenditures, triggering a **six-tier sales tax refund** on 2019 tax forms filed in early 2020.

FY 2019-20. State revenue subject to TABOR is expected to exceed the Referendum C cap by **$189.0 million**, triggering an equivalent TABOR refund obligation in FY 2020-21. The surplus amount is projected to be smaller than that estimated for FY 2018-19 because state revenue subject to TABOR is expected to grow less quickly than the Referendum C cap. Like the estimated FY 2018-19 surplus, this surplus would be refunded via both property tax exemption reimbursements and a sales tax refund to all full-year resident Colorado taxpayers.

FY 2020-21. State revenue subject to TABOR is expected to fall short of the Referendum C cap by $210.9 million in FY 2020-21 as the economy slows. If no TABOR surplus is collected, the state will not be required to issue TABOR refunds in FY 2021-22. Table 6 compares forecast expectations for revenue subject to TABOR between the September 2018 and this December 2018 forecast.

Table 6
Change in TABOR Estimates, September 2018 to December 2018
Dollars in Millions

FY 2018-19	December	September	Change
TABOR Revenue	**$14,740.4**	**$14,569.5**	**$170.9**
General Fund[1]	$12,251.7	$12,105.2	$146.5
Cash Funds[1]	$2,488.8	$2,464.3	$24.5
Referendum C Cap	**$14,360.1**	**$14,360.1**	**$0.0**
Revenue Above (Below) Ref C Cap	**$380.4**	**$209.4**	**$171.0**

FY 2019-20	December	September	Change
TABOR Revenue	**$15,180.9**	**$15,181.1**	**($0.2)**
General Fund[1]	$12,673.9	$12,663.7	$10.2
Cash Funds[1]	$2,507.0	$2,517.3	($10.3)
Referendum C Cap	**$14,991.9**	**$15,006.3**	**($14.4)**
Revenue Above (Below) Ref C Cap	**$189.0**	**$174.8**	**$14.2**

FY 2020-21	December	September	Change
TABOR Revenue	**$15,395.7**	**$15,473.3**	**($77.6)**
General Fund[1]	$12,923.7	$13,008.3	($84.6)
Cash Funds[1]	$2,472.0	$2,465.0	$7.0
Referendum C Cap	**$15,606.6**	**$15,636.6**	**($30.0)**
Revenue Above (Below) Ref C Cap	**($210.9)**	**($163.3)**	**($47.6)**

[1]These figures may differ from the revenues reported in the General Fund and cash fund revenue summary tables because of accounting adjustments across TABOR boundaries.

TABOR surplus. Article X, Section 20 of the Colorado Constitution (TABOR) limits *state fiscal year spending*, the amount of revenue the state may retain and either spend or save each year. The limit is equal to the previous year's limit or revenue, whichever is lower, adjusted for inflation, population growth, and any revenue changes approved by voters. Referendum C, approved by voters in 2005, is a permanent voter-approved revenue change that raises the amount of revenue the state may spend or save.

Referendum C allowed the state to spend all revenue collected above the limit during a five-year timeout period covering FY 2005-06 through FY 2009-10. Beginning in FY 2010-11, Referendum C allows the state to retain revenue collected above the TABOR limit base up to a capped amount. The cap is based on the amount of state revenue collected in FY 2007-08, adjusted annually for inflation and population growth. It is grown from the prior year's cap regardless of the level of revenue collected. Senate Bill 17-267 applied a $200.0 million one-time downward adjustment to the Referendum C cap in FY 2017-18 and requires that the cap for FY 2018-19 and subsequent years be grown from this reduced level.

Fiscal Year Spending

The legal term used by TABOR to denote the amount of revenue TABOR allows the state to keep and either spend or save.

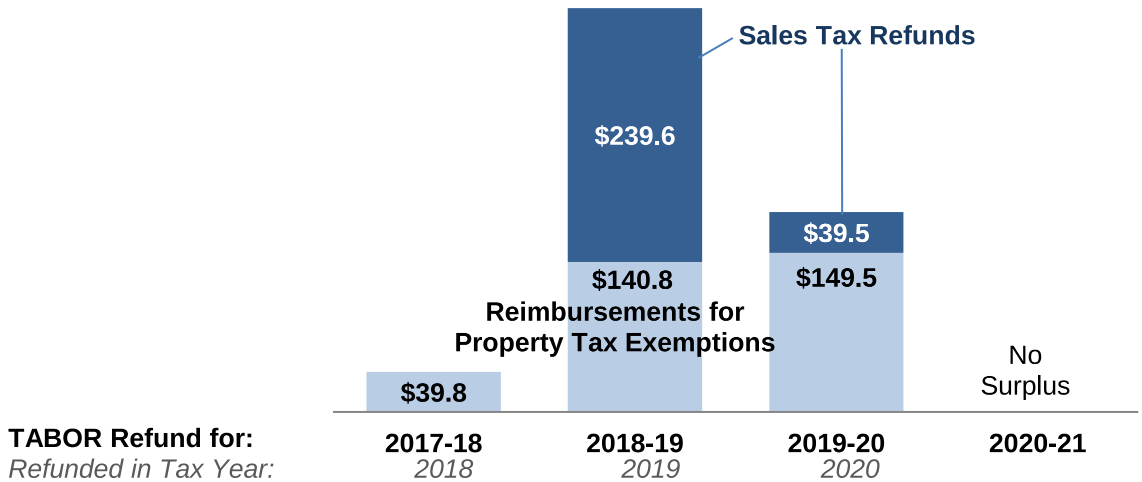
State law requires adjustments to the refund amount based on over-refunds or under-refunds of previous TABOR surpluses. Most recently, revenue exceeded the Referendum C cap in FY 2014-15, prompting TABOR refunds on returns for tax year 2015. The amount of the FY 2014-15 refund obligation is now estimated to have been $159.1 million, adjusting for accounting errors discovered after refunds were issued. To date, the state has refunded $137.8 million of this obligation. The remaining $21.3 million is required to be refunded with the FY 2017-18 TABOR surplus.

For more information about the TABOR revenue limit, see the Legislative Council Staff memorandum at this link: http://leg.colorado.gov/sites/default/files/the_tabor_revenue_limit.pdf

TABOR refund mechanisms. Figure 5 shows the mechanisms that will be used to issue TABOR refunds during the forecast period. The FY 2017-18 TABOR refund obligation will be administered via the **property tax reimbursement TABOR refund mechanism**. Pursuant to Senate Bill 17-267, state law requires that any TABOR surplus first be refunded via this mechanism. The exemption disburses state funds to cities, counties, school districts, and special districts to offset these governments' property tax loss associated with the senior homestead and disabled veteran property tax exemptions. Amounts required to be refunded are encumbered in the General Fund in the year in which a surplus is collected and paid to local governments in the following fiscal year. Table 1, line 7, shows the General Fund encumbrance for TABOR refunds in the year when a surplus is collected. Table 4 shows the portion of the property tax exemption reimbursements to be paid from the prior year TABOR surplus as a subtraction from the new General Fund obligation that would otherwise exist for these reimbursements. The reduction in new obligations is also reflected on Table 1, line 8.

Because the FY 2018-19 and FY 2019-20 TABOR surpluses are expected to exceed the respective amounts of FY 2019-20 and FY 2020-21 property tax reimbursements, the amount by which the surplus exceeds the reimbursement in each year will be refunded via the **sales tax refund mechanism**. The amounts that will be disbursed to taxpayers of different incomes via the sales tax mechanism are shown in Table 7. In tax year 2019, the amount refunded via the sales tax refund mechanism is expected to exceed $15 per full-year resident taxpayer. In this case, statute requires that revenue be distributed in six tiers according to a taxpayer's adjusted gross income. In tax year 2020, the amount refunded via the sales tax refund mechanism is expected to be less than $15 per taxpayer, requiring equal refunds to all taxpayers. In either case, taxpayers filing jointly receive twice the amount refunded to single tax filers.

Figure 5
TABOR Refund Mechanisms
Dollars in Millions



Current law contains a third TABOR refund mechanism, which refunds revenue by temporarily reducing the state income tax rate from 4.63 percent to 4.50 percent. This mechanism is triggered when the TABOR surplus amount is sufficient to cover the expected cost of the rate reduction in addition to fully funding reimbursements for property tax exemptions. This mechanism is not expected to be triggered during the current forecast period; however, the TABOR surplus expected for FY 2018-19 is currently estimated to fall short of the trigger threshold by $16.5 million. If actual TABOR revenue collected exceeds forecast expectations by at least this amount, then the income tax rate reduction would be triggered on for tax year 2019. The income tax rate would return to 4.63 percent for tax year 2020 unless the rate reduction remains in effect because of a greater-than-expected FY 2019-20 TABOR surplus.

Table 7
Forecast Average Taxpayer TABOR Refunds
Via Sales Tax Refund Mechanism
Tax Years 2019 and 2020

FY 2018-19 Refund Obligation, Tax Year 2019

Adjusted Gross Income			Single Filers	Joint Filers
	up to	$40,300	$43	$86
$40,300	to	$86,200	58	116
$86,200	to	$134,300	67	134
$134,300	to	$182,400	76	152
$182,400	to	$228,200	82	164
$228,200	and up		131	262

FY 2019-20 Refund Obligation, Tax Year 2020

Adjusted Gross Income			Single Filers	Joint Filers
	up to	$41,500	$11	$22
$41,500	to	$88,700	11	22
$88,700	to	$138,200	11	22
$138,200	to	$187,700	11	22
$187,700	to	$235,000	11	22
$235,000	and up		11	22

Table 8
TABOR Limit and Retained Revenue
Dollars in Millions

		Preliminary FY 2017-18	Estimate FY 2018-19	Estimate FY 2019-20	Estimate FY 2020-21
	TABOR Revenue				
1	General Fund[1]	$11,416.6	$12,251.7	$12,673.9	$12,923.7
2	Cash Funds[1]	$2,304.2	$2,488.8	$2,507.0	$2,472.0
3	**Total TABOR Revenue**	**$13,720.9**	**$14,740.4**	**$15,180.9**	**$15,395.7**
	Revenue Limit				
4	Allowable TABOR Growth Rate	4.5%	4.8%	4.4%	4.1%
5	Inflation (*from Prior Calendar Year*)	2.8%	3.4%	3.0%	2.8%
6	Population Growth (*from Prior Calendar Year*)	1.7%	1.4%	1.4%	1.3%
7	TABOR Limit Base	$11,220.7	$11,759.3	$12,276.8	$12,780.1
8	Voter Approved Revenue Change (Referendum C)	$2,481.6	$2,600.7	$2,715.2	$2,615.6
9	Total TABOR Limit / Referendum C Cap	$13,702.4	$14,360.1	$14,991.9	$15,606.6
10	**TABOR Revenue Above (Below) Referendum C Cap**	**$18.5**	**$380.4**	**$189.0**	**($210.9)**
	Retained/Refunded Revenue				
11	Revenue Retained under Referendum C[2]	$2,481.6	$2,600.7	$2,715.2	$2,615.6
12	Fiscal Year Spending *(revenue available to be spent or saved)*	$13,702.4	$14,360.1	$14,991.9	$15,395.7
13	Outstanding Underrefund Amount[3]	$21.3			
14	**Revenue Refunded to Taxpayers[4]**	**$39.8**	**$380.4**	**$189.0**	**$0.0**
15	TABOR Reserve Requirement	$411.1	$430.8	$449.8	$461.9

Totals may not sum due to rounding.

[1]These figures may differ from the revenues reported in General Fund and cash fund revenue summary tables because of accounting adjustments across TABOR boundaries.

[2]Revenue retained under Referendum C is referred to as "General Fund Exempt" in the budget.

[3]This amount is restricted in the General Fund as part of the TABOR refund obligation for FY 2014-15. It will be refunded when the state refunds the FY 2017-18 TABOR surplus.

[4]Pursuant to Section 24-75-201 (2), C.R.S., revenue above the Referendum C cap is required to be set aside during the year it is collected to be refunded in the following fiscal year. For example, excess revenue collected in FY 2014-15 was set aside in the budget for FY 2014-15 and refunded in FY 2015-16 on income tax returns for tax year 2015.

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General Fund Revenue

This section presents the Legislative Council Staff outlook for General Fund revenue, the state's main source of funding for operating appropriations. Table 9 on page 27 summarizes preliminary, unaudited General Fund revenue collections for FY 2017-18 and projections for FY 2018-19 through FY 2020-21.

FY 2017-18. Net of the diversion of the State Education Fund required under Amendment 23, General Fund revenue totaled $11.7 billion according to preliminary figures published for FY 2017-18. Revenue increased $1.4 billion, or 14.1 percent, relative to FY 2016-17, the fastest rate since FY 1997-98.

Forecast for FY 2018-19 through FY 2020-21. Both economic performance and tax policy are expected to drive above-trend revenue growth in FY 2018-19, with deceleration in FY 2019-20 and especially FY 2020-21 as the economic expansion wanes. Revenue is expected to increase 6.2 percent in the current FY 2018-19, or 7.2 percent netting out the effects of the one-time Tobacco MSA contribution. The pace of General Fund revenue growth is expected to slow to 3.6 percent in FY 2019-20 and 2.1 percent in FY 2020-21. Relative to the September forecast, expectations were revised upward moderately for FY 2018-19 (increased $151.2 million, or 1.2 percent). Expectations for FY 2019-20 were essentially unchanged (increased $18.7 million, or 0.1 percent), and expectations for FY 2020-21 were revised downward modestly (decreased $72.3 million, or 0.5 percent).

The forecast for General Fund revenue is consistent with the economic outlook presented beginning on page 75, including expectations for continued employment growth and moderate increases in consumer spending. Largely as a result of the temporary distortions caused by the Tax Cuts and Jobs Act (TCJA), General Fund revenue growth is increasingly unlikely to outpace its FY 2017-18 rate during the current business cycle.

Risks to the forecast. This forecast contains both upside and downside risk due to the late stage of the economic expansion and uncertainty surrounding taxpayer behavior in response to the TCJA. Significant shifts in taxpayer behavior occurred in anticipation of and following the passage of the TCJA, resulting in unusual income tax collection patterns that cannot easily be isolated from underlying economic conditions. Considering these factors, revenue estimates in this forecast carry a higher-than-usual margin of error. Risks are weighted to the upside in the near term and to the downside toward the end of the forecast period.

Expiring tax expenditures. This forecast estimates state revenue under current state and federal law. Under current state law, certain tax expenditures available now are scheduled to expire within the forecast period. The forecast includes upward adjustments to revenue projections to account for the expiration of these tax expenditures.

Individual income tax. The individual income tax is assessed at a rate of 4.63 percent and applies to Colorado taxable income earned by households, non-corporate businesses, fiduciaries, estates, and trusts. Most revenue from the tax is credited to the General Fund, though an amount of revenue representing one-third of one percent of taxable income is diverted to the State Education Fund (SEF) and used for school finance purposes. Payers of the tax are the most significant contributors to the

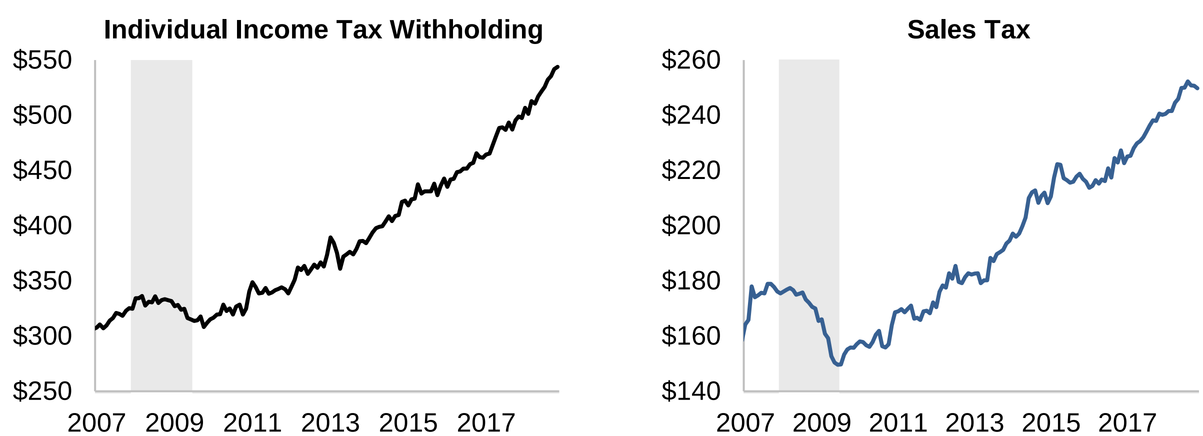
General Fund. The tax accounted for just less than 60 percent of FY 2017-18 General Fund revenue, net of the SEF diversion.

After surging up 12.1 percent during FY 2017-18, individual income tax revenue is expected to grow through the forecast period at slower rates. The individual income tax projection for the current fiscal year has been increased to $8.2 billion, representing 7.6 percent growth over the prior year and a $131.4 million upward revision relative to the September forecast. Revised current year expectations reflect the pattern of tax collections observed this fall. Following stronger than expected receipts thus far this fiscal year, estimated income tax payments by investors and business owners are now expected to be sufficient to drive a year-over-year increase. Increased expectations for estimated payments dwarf a modest upward revision to expectations for cash with returns, and more than offset a modest reduction in expectations for wage withholding (Figure 6, left).

Individual income tax growth expectations are more restrained for FY 2019-20, when collections are expected to increase 4.1 percent. In FY 2020-21, growth is projected to slow to 2.4 percent. The forecasts for these two years have been revised modestly upward and modestly downward, respectively. Wage withholding expectations remain moderate-to-strong based on the outlook for wage and salary income growth, which lags most other economic conditions. However, restrictive monetary policy and an uncertain business income outlook pose headwinds for estimated payments, and tax refunds are expected to rise consistent with the late years of the business cycle.

Short-term risks to the forecast are skewed to the upside if the economy continues to excel and tax reform impacts continue to manifest in stronger collections. The forecast carries more downside risk toward the end of the forecast period as the economic outlook grows less certain.

Figure 6
Selected Sources of General Fund Revenue
Millions of Dollars Collected per Month



Source: Colorado Department of Revenue. Data seasonally adjusted by Legislative Council Staff using the Census x12 method. Data shown on a cash-accounting basis as three-month moving averages. Data are through November 2018. November 2018 data are preliminary.

Sales taxes. The 2.9 percent states sales tax is assessed on the purchase of goods, except those specifically exempted, and a relatively small collection of services. Sales tax receipts are expected to increase 6.3 percent to total $3.1 billion during the current FY 2018-19 before growing at a slower pace of 4.8 percent in FY 2019-20 and 3.3 percent in FY 2020-21. Sales tax collections grew quickly in 2018 (Figure 6, right), reflecting higher household incomes and strong consumer confidence. The TCJA, tight labor market, and rising wages have boosted consumers' after-tax income and thus consumption in both FY 2017-18 and FY 2018-19. Growth in sales collections is expected to moderate slightly, in part because prices for retail goods will inflate less quickly than those for other consumer goods and services.

E-commerce sales taxes. In June, the U.S. Supreme Court issued a decision in *South Dakota v. Wayfair* that changes how out-of-state (including online) retail sales are taxed. This case challenged 1992 precedent related to out-of-state retailer nexus, which said a retailer must have physical presence in a state in order to be required to collect and remit sales tax in that state. This physical presence requirement was overturned in the *Wayfair* decision, and the Supreme Court identified features of South Dakota's sales tax system as reasons why complying with its tax is not overly burdensome to out-of-state retailers.

On September 11, 2018, the Colorado Department of Revenue (DOR) announced that it would start to require out-of-state retailers to collect and remit sales tax on online purchases beginning on December 1, 2018. The deadline was recently extended to May 31, 2019. Based on its changes to administrative rule, the DOR will collect sales tax for the state, as well as for counties, special districts, and statutory cities for whom it already administers sales tax. Home rule municipalities may choose to opt-in to these state-administered collections.

Many of the largest businesses that sell online already collect sales tax in Colorado. As a result of the DOR's changes to administrative rule following the *Wayfair* decision, the state is expected to collect an additional $20 million during FY 2018-19 and an additional $90 million during FY 2019-20 in sales taxes on online transactions. Relative to the September forecast, the estimate for the current fiscal year was revised downward to reflect the later deadline to comply with collections, although some retailers are voluntarily complying already. Estimates are preliminary and subject to change as data are limited on e-commerce sales in Colorado and on out-of-state retailers doing business in Colorado that currently do not collect sales tax. These estimates assume that online marketplaces, such as third-party vendors selling through Amazon Marketplace, Ebay, and Etsy will not collect sales tax. If and when these marketplace vendors are required to collect and remit sales tax, total sales tax collections in Colorado will increase as well.

Use taxes. The 2.9 percent state use tax is due when sales tax is owed but is not collected at the point of sale. Use tax revenue is largely driven by capital investment among manufacturing, energy, and mining firms. Use tax collections surged during FY 2017-18, rising 19.4 percent over the year prior, on the strength of a recovering energy industry. Revenue is expected to continue to grow during FY 2018-19 by 13.9 percent, before declining by 5.2 percent in FY 2019-20 and 0.9 percent in FY 2020-21. Oil prices have fallen since the start of the fiscal year and are expected to remain lower due to increased production levels, which will curb oil industry capital expenditures in the state.

Corporate income taxes. Corporate tax collections accelerated at the end of the year and totaled $781.9 million in FY 2017-18, an increase of 53.5 percent. Corporate profits will remain strong through FY 2018-19 and corporate income tax revenue will increase 4.7 percent to reach $818.6 million. As the stimulus from the federal tax law recedes, corporate income tax revenue will decline 4.8 percent in FY 2019-20 to $779.4 million and fall an additional 7.3 percent in FY 2020-21 to $722.8 million.

Strong year-to-date collections in the current fiscal year reflect strong corporate earnings and one-time tax filing activity following the passage of the TCJA. For these reasons, corporate income tax revenue is expected to peak during FY 2018-19. Moving into FY 2019-20, corporate income tax revenue will decline as one-time tax filing activity recedes and corporate profits decline due to higher costs for business inputs and a weaker global economy.

Expectations for corporate income tax revenue were increased by $15.2 million in FY 2018-19 compared with the September forecast because year-to-date collections have exceeded expectations. Compared with September expectations, projections for corporate income taxes were increased $0.7 million in FY 2019-20 and decreased $29.5 million in FY 2020-21.

Tobacco Master Settlement Agreement. For FY 2017-18 only, Table 9 includes $113.3 million in General Fund revenue attributable to the Tobacco Master Settlement Agreement (Tobacco MSA). Colorado receives annual TABOR-exempt Tobacco MSA payments that are generally credited to the Tobacco Litigation Settlement Cash Fund. This spring, the Attorney General signed a supplementary agreement under the Tobacco MSA to resolve a backlog of disputes between tobacco manufacturers and the state. The supplementary agreement resulted in a one-time release of previously disputed payments from a privately managed escrow account. Under a preexisting state law, the released payments were credited to the General Fund and not to the Tobacco Litigation Settlement Cash Fund. These funds are exempt from TABOR as a damage award.

No such payments are anticipated to contribute to General Fund revenue in the future.

Table 9
General Fund Revenue Estimates
Dollars in Millions

	Category	Preliminary FY 2017-18	Percent Change	Estimate FY 2018-19	Percent Change	Estimate FY 2019-20	Percent Change	Estimate FY 2020-21	Percent Change
	Excise Taxes								
1	Sales	$2,926.0	7.3	$3,110.1	6.3	$3,258.4	4.8	$3,366.0	3.3
2	Use	$309.9	19.4	$352.9	13.9	$334.5	-5.2	$331.3	-0.9
3	Retail Marijuana Sales	$167.6	70.5	$195.8	16.8	$216.9	10.8	$236.2	8.9
4	Cigarette	$34.6	-5.5	$34.1	-1.4	$33.4	-1.9	$32.8	-1.9
5	Tobacco Products	$16.4	-22.7	$23.0	40.4	$24.2	5.2	$25.4	4.8
6	Liquor	$46.5	3.3	$49.1	5.6	$51.1	4.0	$52.6	3.0
7	**Total Excise**	$3,501.0	9.8	$3,765.0	7.5	$3,918.5	4.1	$4,044.3	3.2
	Income Taxes								
8	Net Individual Income	$7,577.2	12.1	$8,153.2	7.6	$8,489.5	4.1	$8,689.3	2.4
9	Net Corporate Income	$781.9	53.5	$818.6	4.7	$779.4	-4.8	$722.8	-7.3
10	Total Income Taxes	$8,359.1	15.0	$8,971.8	7.3	$9,268.9	3.3	$9,412.1	1.5
11	Less: Portion Diverted to the SEF	-$617.0	14.3	-$670.8	8.7	-$692.6	3.2	-$702.9	1.5
12	**Income Taxes to the General Fund**	$7,742.1	15.0	$8,301.0	7.2	$8,576.3	3.3	$8,709.2	1.6
	Other Sources								
13	Estate	$0.0	NA	$0.0	NA	$0.0	NA	$0.0	NA
14	Insurance	$303.6	4.5	$315.6	3.9	$325.1	3.0	$333.5	2.6
15	Pari-Mutuel	$0.5	-10.7	$0.5	-9.1	$0.4	-7.1	$0.4	-5.7
16	Investment Income	$19.5	32.4	$23.7	21.4	$28.8	21.3	$29.8	3.7
17	Court Receipts	$4.4	7.6	$4.5	2.5	$4.5	0.8	$4.6	0.6
18	Tobacco Master Settlement Agreement[1]	$113.3	NA	$0.0	NA	$0.0	NA	$0.0	NA
19	Other Income	$38.6	-18.5	$37.2	-3.6	$37.1	-0.2	$38.1	2.7
20	**Total Other**	$479.9	34.4	$381.5	-20.5	$396.0	3.8	$406.4	2.6
21	**Gross General Fund Revenue**	**$11,723.0**	**14.1**	**$12,447.5**	**6.2**	**$12,890.7**	**3.6**	**$13,159.9**	**2.1**

Totals may not sum due to rounding. NA = Not applicable. SEF = State Education Fund.

[1]The state received $113.3 million in April 2018 as part of a supplementary legal agreement signed within the framework of the Tobacco Master Settlement Agreement. This amount represents a release of previously disputed payments and, per statute, is credited to the General Fund. No such revenue is expected in the future. This money is exempt from TABOR as a damage award.

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Cash Fund Revenue

Table 10 summarizes the forecast for cash fund revenue subject to TABOR. The largest revenue sources are motor fuel taxes and other transportation-related revenue, gaming taxes, and severance taxes. The end of this section also presents the forecasts for marijuana sales and excise tax, Federal Mineral Lease, and unemployment insurance revenue. These forecasts are presented separately because they are not subject to TABOR limitations.

Cash fund revenue subject to TABOR totaled $2.30 billion in FY 2017-18, a decline of $471.2 million or 17.0 percent from the prior fiscal year. The drop in revenue is attributable to the elimination of the Hospital Provider Fee and the 2.9 percent sales tax on retail marijuana. Under Senate Bill 17-267, the Hospital Provider Fee was repealed after FY 2016-17, and hospitals now remit a Healthcare Affordability and Sustainability Fee, which is not subject to TABOR limitations and therefore is not shown in Table 10. In addition, the bill also exempted retail marijuana from the 2.9 percent state sales tax beginning in FY 2017-18. These reductions more than offset expected increases in transportation-related and severance tax revenue. Year-over-year changes in other cash fund categories are relatively minimal.

Total cash fund revenue subject to TABOR will rebound from this lower level by 8.2 percent to $2.49 billion in FY 2018-19, and will increase 0.7 percent to $2.51 billion in FY 2019-20, as most major revenue sources are projected to rise. By 2020-21, total cash fund revenue is expected to decline slightly relative to the prior year. This decline is attributable to lower severance tax revenue on the expectation that oil and gas producers will claim a large amount of ad valorem property tax credits based on the current expansion of oil and gas activity.

Transportation-related revenue subject to TABOR totaled $1,275.4 million in FY 2017-18. As the state's population and economy continue to expand, transportation funding will increase 2.1 percent in FY 2018-19 and will grow an additional 1.9 percent in FY 2019-20. The forecast for TABOR revenue to transportation-related cash funds is shown in Table 11.

The largest source of revenue into the **Highway Users Tax Fund** (HUTF) is motor fuel excise tax (22¢ per gallon of gasoline and 20.5¢ per gallon of diesel fuel). Preliminary data suggest that fuel excise tax collections increased 4.1 percent in FY 2017-18 to $654.9 million. Growth in fuel excise tax collections is expected to moderate over the remainder of the forecast period, growing 2.7 percent in FY 2018-19, and 2.5 percent in FY 2019-20. The HUTF also receives revenue from other sources, including registration fees. In FY 2017-18 total registration fees equaled $381.1 million and they are expected to increase 3.1 percent in FY 2018-19 before slowing to 1.1 percent in FY 2019-20 on a slowdown in new vehicles. Total HUTF revenue is expected to increase 2.6 percent to $1,134.6 million in FY 2018-19 and 2.0 percent to $1,157.7 million in FY 2019-20.

The **State Highway Fund** (SHF) is the primary fund for the state Department of Transportation to meet state transportation needs. The SHF receives money from HUTF allocations, local government matching grants, and interest earnings. The HUTF revenue is subject to TABOR when it is originally collected by the state but the allocations are not. The two largest sources of TABOR revenue into the fund are local government grants and interest earnings. Local government revenue into the SHF fluctuates based on local budgeting decisions and large annual fluctuations are common. SHF revenue subject to TABOR is expected to decline 5.6 percent to $38.3 million in FY 2018-19 and decline by 1.0 percent in FY 2019-20.

Other transportation cash fund revenue subject to TABOR is expected to total $129 million in FY 2018-19, relatively flat from the previous year, and grow at a slower pace through the remainder of the forecast period. Other transportation revenue is from the sale of aviation and jet fuel, certain registration fees, and driving fines.

Revenue to the **Statewide Bridge Enterprise** is not subject to TABOR and is shown as an addendum to Table 11. Revenue to this enterprise is expected to grow at 1.9 percent to $111.2 million in FY 2018-19 and 1.1 percent to $113.1 million in FY 2019-20. The bridge safety surcharge fee collections typically grow at the same rate as vehicle registrations.

Table 10
Cash Fund Revenue Subject to TABOR
Dollars in Millions

	Preliminary FY 2017-18	Estimate FY 2018-19	Estimate FY 2019-20	Estimate FY 2020-21	CAAGR*
Transportation-Related	$1,275.4	$1,301.7	$1,326.1	$1,337.3	
Percent Change	4.5%	2.1%	1.9%	0.8%	1.6%
Severance Tax	$143.0	$242.1	$184.4	$90.5	
Percent Change	634.3%	69.3%	-23.9%	-50.9%	-14.2%
Gaming Revenue[1]	$106.8	$108.1	$108.6	$110.0	
Percent Change	3.0%	1.2%	0.5%	1.3%	1.0%
Insurance-Related	$17.8	$20.6	$17.6	$16.9	
Percent Change	72.5%	15.6%	-14.4%	-4.0%	-1.7%
Regulatory Agencies	$80.5	$77.4	$78.8	$79.9	
Percent Change	6.5%	-3.8%	1.8%	1.4%	-0.2%
Capital Construction Related – Interest[2]	$4.7	$7.3	$7.9	$7.1	
Percent Change	1.4%	56.5%	8.1%	-10.0%	15.0%
2.9% Sales Tax on Marijuana[3]	$16.1	$12.3	$12.6	$12.8	
Percent Change	-60.6%	-23.6%	2.5%	1.2%	-7.5%
Other Cash Funds	$660.0	$719.3	$771.0	$817.5	
Percent Change	2.1%	9.0%	7.2%	6.0%	7.4%
Total Cash Fund Revenue	**2,304.24**	**$2,488.8**	**$2,507.0**	**$2,472.0**	
Subject to the TABOR Limit	-17.0%	8.0%	0.7%	-1.4%	2.4%

Totals may not sum due to rounding. NA = Not applicable.

**CAAGR: Compound average annual growth rate for FY 2017-18 to FY 2020-21.*

[1]*Gaming revenue in this table does not include Amendment 50 revenue, because it is not subject to TABOR.*

[2]*Includes interest earnings to the Capital Construction Fund, the Controlled Maintenance Trust Fund, and transfers from certain enterprises.*

[3]*Includes revenue from the 2.9 percent sales tax collected from the sale of medical and retail marijuana. This revenue is subject to TABOR.*

Table 11
Transportation Revenue by Source
Dollars in Millions

	Preliminary FY 2017-18	Estimate FY 2018-19	Estimate FY 2019-20	Estimate FY 2020-21	CAAGR*
Highway Users Tax Fund (HUTF)					
Motor and Special Fuel Taxes	$654.9	$672.6	$689.4	$699.7	2.2%
Percent Change	4.1%	2.7%	2.5%	1.5%	
Total Registrations	$381.1	$391.9	$396.4	$399.5	1.6%
Percent Change	3.3%	2.8%	1.1%	0.8%	
Registrations	*$227.4*	*$233.4*	*$237.2*	*$239.1*	
Road Safety Surcharge	*$132.9*	*$137.0*	*$137.2*	*$138.3*	
Late Registration Fees	*$20.8*	*$21.5*	*$22.0*	*$22.2*	
Other HUTF Receipts[1]	$69.9	$70.1	$72.0	$72.0	1.0%
Percent Change	4.3%	0.2%	2.7%	0.1%	
Total HUTF	$654.9	$672.6	$689.4	$699.7	2.2%
Percent Change	4.1%	2.7%	2.5%	1.5%	
State Highway Fund (SHF)[2]	$40.6	$38.3	$37.9	$37.1	-2.9%
Percent Change	1.5%	-5.6%	-1.0%	-2.1%	
Other Transportation Funds	$128.9	$128.8	$130.4	$128.8	0.0%
Percent Change	12.2%	-0.1%	1.2%	-1.2%	
Aviation Fund[3]	*$29.2*	*$33.1*	*$34.5*	*$33.3*	
Law Enforcement-Related[4]	*$8.8*	*$8.7*	*$8.5*	*$8.6*	
Registration-Related[5]	*$90.9*	*$86.6*	*$87.3*	*$87.9*	
Total Transportation Funds	**$1,275.4**	**$1,301.7**	**$1,326.1**	**$1,337.3**	2.0%
Percent Change	4.5%	2.1%	1.9%	0.8%	

Totals may not sum due to rounding.
**CAAGR: Compound average annual growth rate for FY 2016-17 to FY 2019-20.*

[1]Includes daily rental fee, oversized overweight vehicle surcharge, interest receipts, judicial receipts, drivers' license fees, and other miscellaneous receipts in the HUTF.

[2]Includes only SHF revenue subject to Article X, Section 20, of the Colorado Constitution (TABOR).

[3]Includes revenue from aviation fuel excise taxes and the 2.9 percent sales tax on the retail cost of jet fuel.

[4]Includes revenue from driving under the influence (DUI) and driving while ability impaired (DWAI) fines.

[5]Includes revenue from Emergency Medical Services registration fees, emissions registration and inspection fees, motorcycle and motor vehicle license fees, and P.O.S.T. Board registration fees.

Addendum: TABOR-Exempt FASTER Revenue

	Preliminary FY 2017-18	Estimate FY 2018-19	Estimate FY 2019-20	Estimate FY 2020-21	CAAGR*
Bridge Safety Surcharge	$109.1	$111.2	$113.1	$115.0	1.4%
Percent Change	1.7%	1.9%	1.7%	1.7%	

Note: Revenue to the Statewide Bridge Enterprise from the bridge safety surcharge is TABOR-exempt and therefore not included in the table above. It is included as an addendum for informational purposes.

Severance tax revenue including interest earnings totaled $143.0 million in FY 2017-18 (Table 12). Severance tax revenue is expected to total $242.1 million in FY 2018-19 and $184.4 million in FY 2020-21. Severance tax revenue is more unstable than other revenue sources because it is based on a volatile industry and most of the severance tax revenue is paid on newly producing wells.

Severance taxes from **oil and natural gas** are forecast to increase 81.3 percent in FY 2018-19 to $228.8 million before declining 25.8 percent to $169.9 million in FY 2019-20. This forecast is consistent with gradual increases in oil and gas production values throughout the forecast period and an accompanying decline in severance tax revenue due to the ad valorem tax credit. Severance taxes are based on the prior year's oil and gas production, so there is about a one-year lag between production and gross severance tax liability. The ad valorem tax credit equals 87.5 percent of property taxes paid, which have a two to three-year lag depending on whether the taxpayer files on a cash or accrual accounting basis.

Oil prices in Colorado averaged $65.78 per barrel in August 2018, which is expected to be near the peak oil prices in the forecast period. Three rare and large price declines in the middle of November caused oil prices to decline by more than 33 percent due to increased production in Russia, Saudi Arabia, and the United States and fears of a weakening global economy. Based on recent prices and the global oil outlook, the price of oil received by Colorado producers will average $60.93 per barrel in 2018, $57.29 per barrel in 2019, and $57.59 per barrel in 2020.

Natural gas producers in Colorado received an average price of $2.66 per thousand cubic feet (Mcf) in November 2018 and are expected to average $2.74 per Mcf in 2018 following several large price increases in the Henry Hub price of natural gas in November due to a spike in demand for household use following several winter storms. Natural gas producers are able to quickly place natural gas on the market due to new technologies and existing infrastructure, which will keep natural gas prices below $3.30 throughout the forecast period. Prices are expected to average $2.83 per Mcf in 2019 and rise to $3.01 per Mcf in 2020.

Coal has historically been the second largest mineral source of severance taxes in Colorado after oil and natural gas. Coal severance tax revenue totaled $3.7 million FY 2017-18. Power plants are slowly transitioning away from coal to cleaner and cheaper natural gas, which is reflected in the revenue forecast. Coal severance taxes are expected to decline 5.1 percent in FY 2018-19 to $3.6 million and 6.7 percent to $3.3 million in FY 2019-20.

Metal and molybdenum mines will pay $2.4 million in severance taxes on the value of minerals produced in FY 2018-19. International demand for steel has increased mining activity at the two molybdenum mines in Colorado, the Climax Mine outside Leadville and the Henderson Mine outside Empire. Based on constant demand, metal and molybdenum severance taxes are expected to be $2.4 million in each year of the forecast period.

Finally, interest earnings are expected be $7.4 million in FY 2018-19 and $8.8 million in FY 2019-20. The forecast for interest earnings has increased due to higher interest rates on deposits and the repayment of loans following the completion of water projects.

Table 12
Severance Tax Revenue Forecast by Source
Dollars in Millions

	Preliminary 2017-18	Estimate 2018-19	Estimate 2019-20	Estimate 2020-21	CAAGR*
Oil and Gas	$126.2	$228.8	$169.9	$73.4	-16.5%
Percent Change	3035.0%	81.3%	-25.8%	-56.8%	
Coal	$3.7	$3.6	$3.3	$3.1	-6.0%
Percent Change	-10.0%	-5.1%	-6.7%	-6.2%	
Molybdenum and Metallics	$2.9	$2.4	$2.4	$2.4	-5.5%
Percent Change	-2.2%	-16.2%	0.4%	0.4%	
Total Severance Tax Revenue	$132.8	$234.7	$175.6	$79.0	-15.9%
Percent Change	1094.5%	76.7%	-25.2%	-55.0%	
Interest Earnings	$10.2	$7.4	$8.8	$11.5	4.1%
Percent Change	22.1%	-27.5%	18.7%	31.1%	
Total Severance Tax Fund Revenue	$143.0	$242.1	$184.4	$90.5	-14.2%
Percent Change	634.3%	69.3%	-23.9%	-50.9%	

**CAAGR: Compound average annual growth rate for FY 2017-18 to FY 2020-21.*

Limited gaming revenue includes taxes, fees, and interest earnings collected in the Limited Gaming Fund and the State Historical Fund. Most of this revenue is subject to TABOR. Revenue attributable to Amendment 50, which expanded gaming beginning in FY 2009-10, is TABOR exempt. The state limited gaming tax is a graduated tax assessed on casino adjusted gross proceeds, the amount of wagers collected less the amount paid to players in winnings, in the three state sanctioned gaming municipalities: Black Hawk, Central City, and Cripple Creek. Casinos on tribal lands in southwestern Colorado are not subject to the state tax.

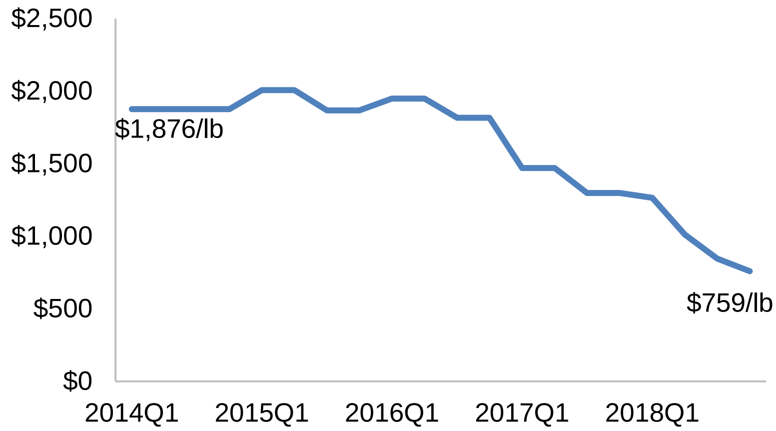
Limited gaming revenue subject to TABOR totaled $106.8 million in FY 2017-18 and is expected to grow 1.2 percent to $108.1 million in FY 2018-19. Increased tax revenue can be attributed to strong consumer spending, rising wages, and ongoing consolidation in the gaming industry, placing more casinos in the highest tax bracket. By statutory formula, gaming tax revenue subject to TABOR cannot grow faster than 3.0 percent annually, but growth in tax revenue is expected to be supplemented by higher fee and interest earnings. Gaming revenue is expected to grow at slower rates through the remainder of the forecast period.

Under state law, annual growth in gaming tax revenue that exceeds 3.0 percent is attributed to Amendment 50 and exempt from TABOR. Years when total gaming tax revenue grows by more than 3.0 percent therefore result in disproportionately higher distributions of Amendment 50 revenue. This revenue primarily supports the state community college system. In FY 2017-18, gaming tax revenue grew by almost 7 percent, resulting in an approximate $5 million increase in Amendment 50 revenue—a 30 percent jump relative to FY 2016-17.

M**arijuana tax revenue** totaled $251.4 million in FY 2017-18 and is expected to increase throughout the forecast period. Marijuana tax revenue will total $270.5 million in FY 2018-19 and $287.4 million in FY 2019-20. The majority of the revenue from the marijuana industry is voter approved revenue exempt from TABOR. However, the 2.9 percent state sales tax is included in the state's revenue limit. Tax revenue from marijuana sales is shown in Table 13.

The special sales tax is the largest marijuana revenue source and equals 15 percent of the retail price of marijuana. The state share of special sales tax is expected to reach $195.8 million in FY 2018-19 and $216.9 million in FY 2019-20. The state distributes 10 percent of the special sales tax to local government and retains the rest to be used in the Marijuana Tax Cash Fund, the General Fund, and the State Public School Fund. The excise tax is the second largest source of marijuana revenue with the greater of 90 percent or $40 million per year dedicated to the BEST Fund for school construction. The excise tax is expected to generate $62.4 million in FY 2018-19 and $57.9 million in FY 2019-20. The decline in the revenue forecast of the marijuana excise tax is due to a falling wholesale price of marijuana, the basis for the tax. According to the Department of Revenue, the calculated wholesale rate for a pound of marijuana flower has declined from $1,876 per pound in January 2014 to $759 per pound in October 2018 as shown in Figure 7.

Figure 7
Calculated Wholesale Rate of Marijuana Flower



Source: Colorado Department of Revenue.

The 2.9 percent state sales tax rate applies to medical marijuana and marijuana accessories purchased at a retail marijuana store. Medical marijuana sales tax revenue is expected to remain flat through the forecast period, generating between $10.6 and $11.0 million per year through FY 2020-21. Retail marijuana dispensaries will remit the state sales tax on marijuana accessories and are expected to remit between $1.3 million and $1.4 million in sales taxes in the next three fiscal years. Revenue from the 2.9 percent sales tax is deposited in the Marijuana Tax Cash Fund and is subject to TABOR.

Federal Mineral Lease (FML) revenue is the state's portion of the money the federal government collects from mineral production on federal lands. Collections are mostly determined by the value of mineral production. Since FML revenue is not deposited into the General Fund and is exempt from TABOR, the forecast is presented separately from other sources of state revenue.

FML revenue totaled $86.5 million in FY 2017-18. FML revenue is forecast to increase 16.8 percent in FY 2018-19 to $101.1 million as the state fulfills its obligations for previous payments associated with canceled leases on the Roan Plateau. FML revenue will increase 1.2 percent in FY 2019-20 to $102.3 million and 2.0 percent to $104.4 million in FY 2020-21.

Table 13
Tax Revenue from the Marijuana Industry
Dollars in Millions

	Preliminary 2017-18	Estimate 2018-19	Estimate 2019-20	Estimate 2020-21	CAAGR*
Proposition AA Taxes					
Special Sales Tax	$167.6	$195.8	$216.9	$236.2	12.1%
State Share of Sales Tax	$150.5	$176.2	$195.2	$212.6	
Local Share of Sales Tax	$16.7	$19.6	$21.7	$23.6	
15% Excise Tax	$68.2	$62.4	$57.9	$56.4	-6.1%
Total Proposition AA Taxes	**$235.3**	**$258.2**	**$274.8**	**$292.6**	**7.5%**
2.9 Sales Tax (Subject to TABOR)					
2.9% Sales Tax on Medical Marijuana	$10.6	$10.6	$10.8	$11.0	1.1%
2.9% Sales Tax on Retail Marijuana	$5.2	$1.3	$1.4	$1.4	
TABOR Interest	$0.3	$0.4	$0.4	$0.4	
Total 2.9% Sales Tax	**$16.1**	**$12.3**	**$12.6**	**$12.8**	-7.5%
Total Taxes on Marijuana	**$251.4**	**$270.5**	**$287.4**	**$305.3**	**6.7%**

**CAAGR: Compound average annual growth rate for FY 2016-17 to FY 2019-20.*

Forecasts for **Unemployment Insurance (UI) Trust Fund** revenue, benefit payments, and year-end balance are shown in Table 14. Revenue to the UI Trust Fund has not been subject to TABOR since FY 2009-10 and is therefore excluded from Table 10. Revenue to the Employment Support Fund, which receives a portion of the UI premium surcharge, is still subject to TABOR and is included in the revenue estimates for other cash funds in Table 10.

The ending balance for the state's UI Trust Fund was $922.3 million in FY 2017-18, up 24.7 percent from the previous fiscal year. The fund has benefited from the state's healthy labor market and historically low unemployment rates. In FY 2017-18, the total amount of benefits paid from the fund dropped to $398.2 million, the seventh consecutive year the amount has declined and the lowest level in ten years. Premium contributions continued to tick down slightly in FY 2017-18. Employers shift to a lower premium rate schedule when the trust fund ending balance reaches certain solvency levels, which reduces the amount of UI contributions they are required to pay for each employee.

The UI Trust Fund balance is expected to continue to improve throughout the forecast period. The amount of benefits paid from the fund is expected to continue to gradually fall through the forecast period as a strong labor market continues to absorb the number of people actively seeking employment. In addition, an increasing higher employee chargeable wage base will support the fund. The chargeable wage is indexed annually to the average weekly wage growth. Since 2011, the chargeable wage base has increased by $2,600 per employee.

Table 14
Unemployment Insurance Trust Fund
Revenues, Benefits Paid, and Fund Balance
Dollars in Millions

	Actual FY 2017-18	Estimate FY 2018-19	Estimate FY 2019-20	Estimate FY 2020-21	CAAGR*
Beginning Balance	$739.4	$922.3	$1,112.8	$1,334.8	
Plus Income Received					
UI Premium	$562.8	$537.8	$556.3	$574.2	0.67%
Interest	$18.3	$23.3	$25.3	$27.3	
Total Revenues	$581.1	$561.1	$581.5	$601.5	1.16%
Percent Change	-6.8%	-3.4%	3.6%	3.4%	
Less Benefits Paid	$398.2	$370.7	$359.5	$333.2	-5.76%
Percent Change	-14.5%	-6.9%	-3.0%	-7.3%	
Ending Balance	$922.3	$1,112.8	$1,334.8	$1,603.0	20.23%
Solvency Ratio					
Fund Balance as a Percent of Total Annual Private Wages	0.77%	0.87%	0.98%	1.10%	

Totals may not sum due to rounding.
**CAAGR: Compound average annual growth rate for FY 2017-18 to FY 2020-21.*

K-12 Enrollment Forecast

This section of the forecast presents projections for kindergarten through twelfth grade (K-12) enrollment in Colorado's public schools. Projections are presented in full-time equivalent (FTE) terms, and are an important factor in determining funding levels for Colorado's 178 school districts. Table 15 summarizes current and projected enrollment for the 2018-19 through 2020-21 school years by forecast region. Figures 10 and 11 on pages 42 and 43 show enrollment growth projections by forecast region and school district, respectively, for the 2019-20 school year.

- The enrollment count for the current (2018-19) school year totaled 838,079 student FTE across Colorado's public schools, up 530 student FTE, or less than 0.1 percent, from the previous school year.

- Statewide K-12 enrollment is projected to increase by 904 student FTE, or 0.1 percent, in the 2019-20 school year. Enrollment in the 2020-21 school year is expected to increase another 0.1 percent, or by 1,167 student FTE.

- Slower birth rates will continue to constrain growth throughout the forecast period. Growth will be strongest in the northern, eastern, and Colorado Springs regions, where strong job growth, and new and relatively more affordable housing options will continue to attract young families. Enrollment in the metro Denver region is expected to decline, as smaller age cohorts replace larger grades and the lack of affordable housing slows the number of new families moving into the region.

Table 15
K-12 Public School Enrollment
*Full-Time Equivalent (FTE) Students**

Region	Actual 2018-19	Percent Change	Estimated 2019-20	Percent Change	Estimated 2020-21	Percent Change	Average Growth**
Metro Denver	478,836	-0.3%	477,174	-0.3%	475,612	-0.3%	-0.3%
Northern	87,551	1.4%	88,737	1.4%	89,812	1.2%	1.3%
Colorado Springs	118,462	0.6%	119,616	1.0%	120,806	1.0%	1.0%
Pueblo	32,099	-1.5%	31,746	-1.1%	31,625	-0.4%	-0.7%
Eastern Plains	25,754	2.9%	26,124	1.4%	36,325	0.8%	1.1%
San Luis Valley	7,215	0.6%	7,244	0.4%	7,277	0.5%	0.4%
Mountain	24,837	-0.7%	24,953	0.5%	25,050	0.4%	0.4%
Southwest Mountain	13,054	1.0%	13,103	0.4%	13,159	0.4%	0.4%
Western	50,271	-0.1%	50,286	0.0%	50,483	0.4%	0.2%
Statewide Total	**838,079**	**0.1%**	**838,983**	**0.1%**	**840,150**	**0.1%**	**0.1%**

Source: Colorado Department of Education and Legislative Council Staff.
**Kindergarten students are counted as 0.5 FTE.*
***Compound average annual growth rate between 2018-19 and 2020-21.*

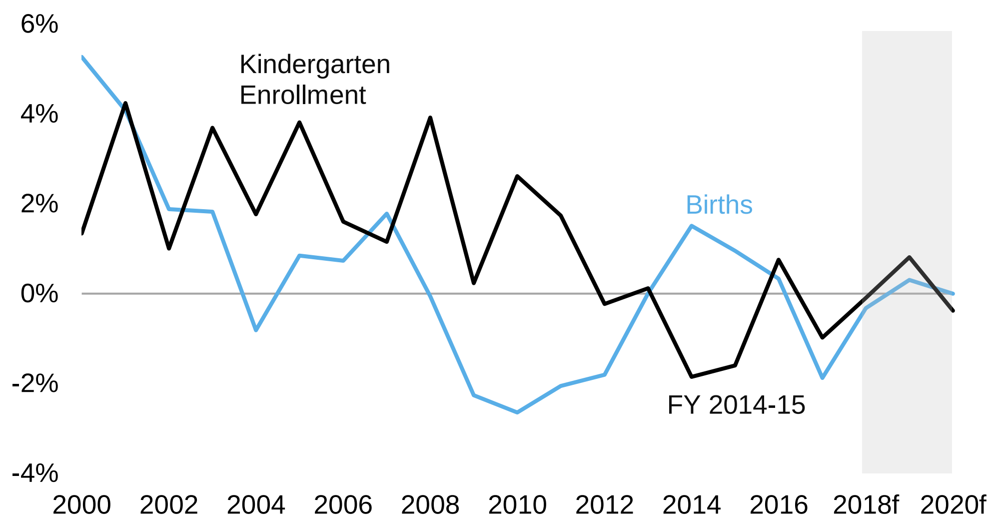
Statewide Enrollment Trends

Colorado's public school enrollment in the current school year was relatively flat, adding a modest 530 FTE, or 0.1 percent, from the previous year. Statewide, enrollment growth has been steadily slowing in recent years as smaller age cohorts enter the public school system. In 2018-19, the metro Denver, Pueblo, mountain, and western regions of the state all reported lower enrollment from the previous year. Relative to the Legislative Council Staff forecast published last December, actual enrollment in 2018-19 fell short of expectations by 5,300 FTE, or 0.6 percent. Enrollment was lower than expected across all regions of the state except the eastern region.

Colorado schools are expected to continue to add students throughout the forecast period, albeit at a much slower rate than recent years. In the 2019-20 school year, public schools are expected to add about 904 FTE students statewide, representing a 0.1 percent increase. Growth is expected across all regions of the state except for the metro Denver and Pueblo regions, which are expected to decline slightly. In 2020-21, K-12 public school enrollment is expected to grow again by 0.1 percent from the previous year.

Lower birthrates are muting enrollment growth. A decline in the number of births during the Great Recession continues to constrain enrollment growth in Colorado. As shown in Figure 8, birth rates in Colorado fell each year between 2008 and 2012 following healthy gains over most of the ten prior years. As a result, smaller student cohorts began entering into the K-12 school system in the 2014-15 school year.

Figure 8
Colorado Kindergarten Enrollment and Resident Births
Percent Change, Year-over-Year

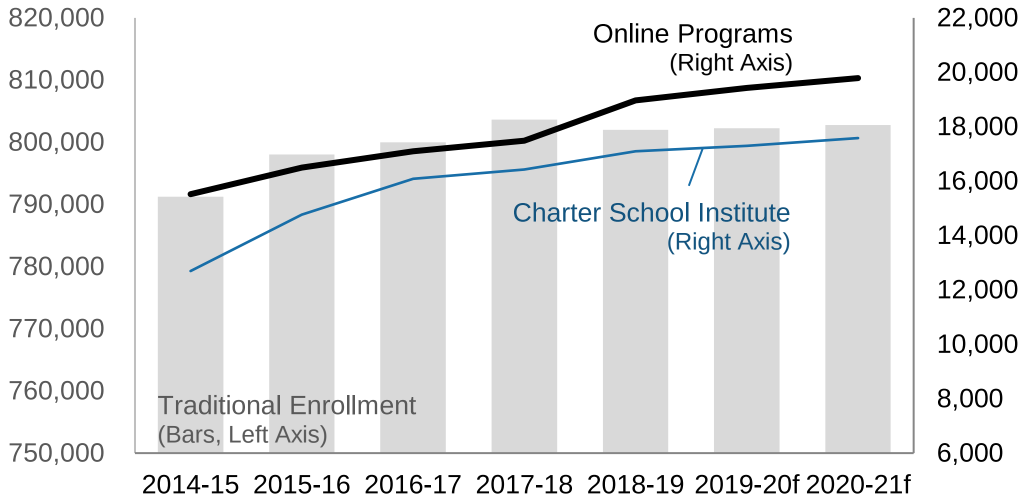


Source: Colorado Department of Local Affairs, State Demography Office, Colorado Department of Education and Legislative Council Staff.

Housing affordability is influencing enrollment across regions in the state. Rising housing costs are influencing the distribution of enrollment across the state. In particular, high housing costs in the metro Denver area are causing families with school age children to relocate to less expensive areas of Colorado or, in some cases, to leave the state altogether. In the City and County of Denver, more families are expected to move out than to move into the area. Conversely, relatively more affordable regions of the state, such as the Colorado Springs and northern regions, will experience stronger enrollment growth.

Online and CSI enrollment. Enrollment in online programs and Charter School Institute (CSI) schools continued to grow in the 2018-19 school year. These options now represent 2.3 percent and 2.0 percent of total statewide enrollment, respectively (Figure 9). Online enrollment picked up in the 2019-20 school year, adding almost 1,500 student FTE. Much of the growth is attributable to the online programs based in the Falcon and Las Animas school districts. These programs have recently expanded their online portfolios, which has increased enrollment. Both online and CSI enrollment is expected to continue to grow through the forecast period, but at a slower pace than in the current school year.

Figure 9
Online, CSI, and Traditional Enrollment
*Full-Time Equivalent (FTE) Students**



Source: Colorado Department of Education and Legislative Council Staff.
**Kindergarten students are counted as 0.5 FTE.*

Enrollment by Region

The following briefly summarizes enrollment trends for school districts in the nine forecast regions of the state.

The **metro Denver region**, which includes Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, and Jefferson counties, accounted for 57.1 percent of total Colorado enrollment in the 2018-19 school year. However, enrollment growth in the region has tapered off since FY 2013-14. In the current school year, enrollment was down slightly, by 0.3 percent or 239 FTE. Smaller age cohorts are gradually replacing larger, older cohorts, while a lack of affordable housing has been slowing enrollment growth in many areas of the region.

Denver Public School District remains the largest school district in the state, with just over 82,000 FTE. Enrollment in this district has been steadily falling since FY 2014-15. The district added 270 FTE, or an increase of 0.3 percent in the current school year. In-migration to the metro Denver area remains strong, but has been dominated by young professionals without children. Total enrollment in Denver Public Schools is expected to drop by 1.1 percent in the 2019-20 school year.

The Brighton school district continues to experience some of the largest student enrollment growth in the state. In the current 2018-19 school year, Brighton's enrollment grew 4.4 percent. The district opened Riverdale Ridge High School this school year with 1,200 students, and the school is expected to have 1,850 students once fully phased in. Robust growth in the Brighton school district is expected to continue with strong growth in residential construction and more affordable housing options. In addition, the district is experiencing higher birth rates than the statewide average.

Enrollment growth in the **northern region**, including Larimer and Weld counties, remains among the strongest in the state, growing by 1.4 percent in the 2018-19 school year with an additional 1,220 student FTE. Enrollment in the region has outpaced statewide growth since the 2010-11 school year, reflecting stronger job growth and new residential developments. Regional enrollment is expected to grow 1.4 percent and 1.2 percent in the 2019-20 and 2020-21 school years, respectively. New residential development, lower housing costs relative to the metro Denver region, and strong employment opportunities are expected to drive growth.

Enrollment in the **Colorado Springs region**, including El Paso County, increased 0.6 percent, or by 712 student FTE, in the 2018-19 school year. The regional economy is experiencing strong job growth and relatively affordable housing is attracting families to the area. Total enrollment growth in the region is expected to accelerate to 1.0 percent in the 2019-20 school year.

Total enrollment in the **Pueblo region,** including Fremont, Custer, Huerfano, Las Animas, and Pueblo counties, declined by 484 FTE, or 1.5 percent, in the 2018-19 school year and is expected to continue to fall through the forecast period. The regional economy has picked up momentum, but slow or declining population growth in the region continues to constrain enrollment.

Enrollment in the **eastern plains region** continued to grow at a healthy rate in the 2018-19 school year. School districts closer to the metro Denver and northern regions, such as several in Morgan and Logan counties, are seeing the fastest growth with new residential construction. The region is expected to add about 368 FTE in the 2019-20 school year and another 201 FTE in 2020-21.

The **San Luis Valley region**, consisting of Alamosa, Conejos, Costilla, Mineral, Rio Grande, and Saguache counties, is the smallest in the state in terms of K-12 enrollment. Regional enrollment increased by 0.6 percent, or 44 student FTE in the 2018-19 school year. Regional population growth has been relatively flat since 2010, and the regional economy is highly dependent on agriculture, an industry that has suffered from low commodity prices over the past several years. Enrollment is expected to increase modestly, with projected growth rates of 0.4 percent in the 2019-20 school year and 0.5 percent in the 2020-21 school year.

Enrollment in the **mountain region**, consisting of Chaffee, Clear Creek, Eagle, Gilpin, Grand, Jackson, Lake, Park, Pitkin, Routt, Summit, and Teller counties, declined 0.7 percent in the 2018-19 school year and is expected to remain relatively flat, adding about 200 student FTE over the forecast period. Enrollment growth is dependent on the ski and gambling industries in mountain resort communities. In addition, the existence of affordable housing for workers in this region has a strong influence on regional enrollment. Employment trends in the Eagle and Steamboat Springs school districts continue to drive regional enrollment growth.

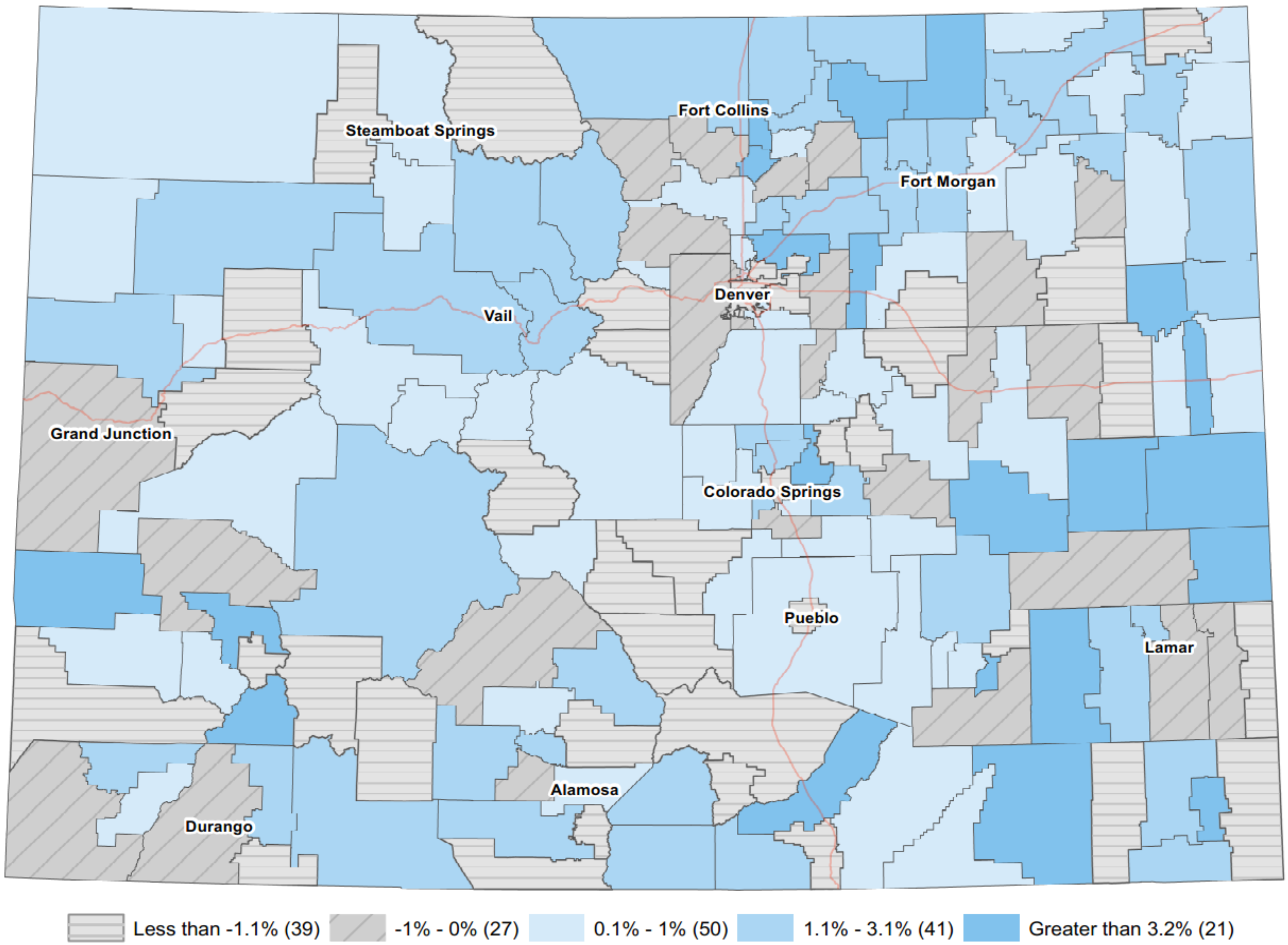
Enrollment in the **western region**, including Delta, Garfield, Gunnison, Hinsdale, Mesa, Moffat, Montrose, Ouray, Rio Blanco, and San Miguel counties, fell by 0.1 percent in the current school year. Regional enrollment is expected to be relatively flat in 2019-20 and modestly increase in the 2020-21 school year, growing by 0.4 percent. A lower cost of living compared with other regions of the state and an improving labor market are attracting people from other areas of the state and country.

The **southwest mountain region**, including Archuleta, Dolores, La Plata, Montezuma, and San Juan counties, saw enrollment growth of 1.0 percent in the 2018-19 school year. Relatively affordable housing and growing industry opportunities have attracted families to the area in recent years. Enrollment growth rates of 0.4 percent are expected for both the 2019-20 and 2020-21 school years.

Risks to the Forecast

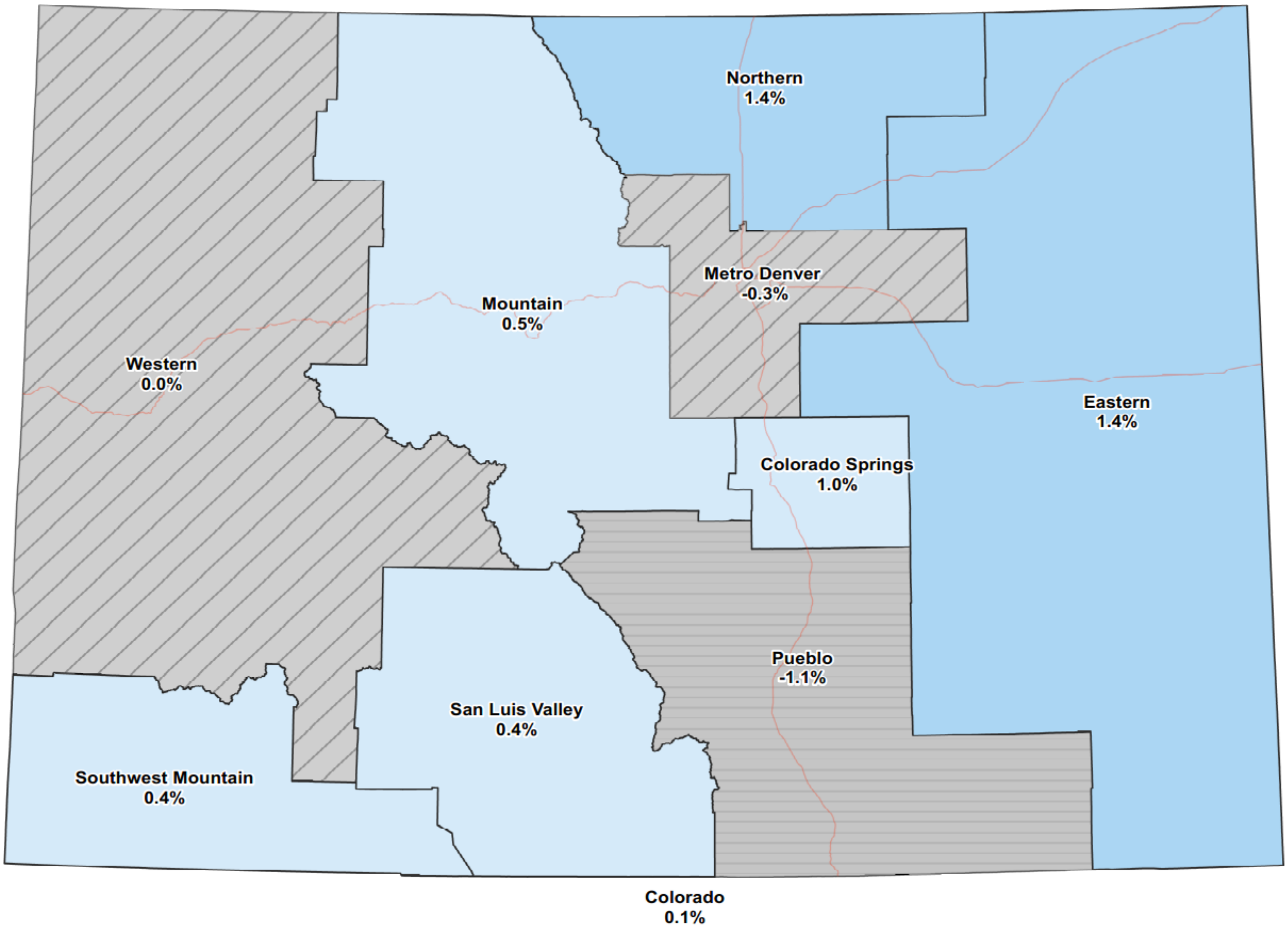
A strong labor market across most regions in the state remains a strong driver of enrollment growth. To the degree that the number of employment opportunities exceeds the current outlook, some regions may experience stronger growth. Conversely, if the state's economy performs more poorly than anticipated, school districts may see greater enrollment declines than projected. Stronger than expected rates of in-migration or an expansion of affordable housing options could result in higher enrollment forecasts, particularly in the northern, southwest, and western regions. Additionally, energy industry volatility poses a risk to enrollment in many regions of the state. Rising (or falling) oil and gas natural prices could increase (or decrease) enrollment in districts in the western, southwest mountain, and northern regions of the state to a greater extent than expected.

Figure 10
Forecast Percent Change in Enrollment by School District
2019-20 School Year



Map Prepared by Legislative Council Staff.

Figure 11
Forecast Percent Change in Enrollment by Economic Region
2019-20 School Year



Map Prepared by Legislative Council Staff.

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Assessed Value Projections

This section provides projections of assessed values for residential and nonresidential property in Colorado and the residential assessment rate through 2021. Assessed values are an important factor in determining property taxes, which are the largest source of local government tax revenue in Colorado. Counties, cities, and special districts all receive property tax revenue. Local property tax revenue is also the first source of funding for local public school districts. Assessed property values within a school district are thus an important determinant of the amount of state aid provided to each school district. Districts then receive state equalization payments in an amount equal to the difference between formula funding and their local share. More information on school finance can be found starting on page 37.

Summary

Statewide assessed (taxable) values increased 3.8 percent between 2017 and 2018. This change reflects new residential and nonresidential construction and new assessments for natural resources, personal property, and state assessed utilities. Every two years, county assessors determine new values for residential, commercial, industrial, and vacant properties, based on the previous 18 months of sales as part of the reassessment process. Statewide assessed values are expected to increase 10.1 percent in 2019, a reassessment year. Statewide, a strong economy and rebound in oil and gas development will increase the nonresidential tax base, relieving some downward pressure on the residential assessment rate in 2019. However, assessed values in each region of the state are determined by the unique mix of properties and economic forces specific to that region.

After residential properties have been reassessed, the General Assembly sets the Residential Assessment Rate (RAR) to maintain the ratio between residential and nonresidential assessed values. In order to maintain the constitutionally required Gallagher Amendment ratio, the RAR is expected to decrease from **7.20 percent to 6.78 percent** for 2019 and 2020. The rate is forecast to fall further to 6.41 percent in 2021.

Determining the Residential Assessment Rate

The Gallagher Amendment in the Colorado Constitution requires an adjustment to the RAR in order to maintain a consistent relationship between the statewide share of residential taxable value and the statewide share of nonresidential taxable value between reassessment years. The amendment prevents the share of residential property from increasing relative to the share from other classes of property due to an increase in home values.

Target percentage. The first step in determining the RAR is updating the existing target percentages of residential property and nonresidential property for the prior assessment cycle. The new target percentage is based on economic activity that occurred since the last reassessment cycle. For the 2017 assessment cycle, the Division of Property Taxation, within the Department of Local Affairs, estimated the target for residential property was 45.76 percent. Based on growth in residential and nonresidential property in this forecast, the target percentage for residential property is expected to decrease to 45.74 percent in 2019.

Residential assessment rate. Once the target percentage has been determined, the RAR is adjusted so that 2019 residential taxable values meet the target percentage. Based on the projected market values of 2019 residential and nonresidential properties, the RAR for 2019 and 2020 is expected to be 6.78 percent. In the spring of 2019, the Division of Property Taxation will estimate the RAR for 2019 and 2020 with updated data provided by each county assessor. In the past, the General Assembly has used the division's estimate to set the RAR and comply with the Gallagher Amendment. Therefore, the actual RAR for 2019 and subsequent years may differ from the estimates published here.

Assessed Values

Total statewide assessed (taxable) values reached $115.9 billion in 2018 and are expected to increase 10.1 percent to $127.6 billion in 2019. The RAR calculation allows residential values to grow at the same rate as nonresidential assessed values. Another aspect of the calculation is that if residential assessed values grow faster than nonresidential values, the RAR declines. Nonresidential values are expected to grow during the next two years due to a strong economy and increased oil and gas production in the state. This growth in nonresidential values relieves some downward pressure on the RAR.

In 2020, total assessed values are expected to increase 2.5 percent due to new construction and increased oil and natural gas production. Residential and nonresidential assessed values are shown in Table 16 and in Figure 12. Maps with assessed values by region and school district are shown in Figures 15 and 16 on pages 52 and 53.

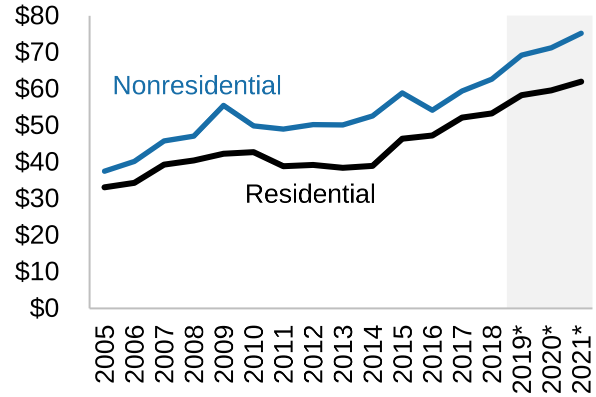
Table 16
Residential and Nonresidential Assessed Values
Millions of Dollars

	Residential		Nonresidential		Total	
Year	Assessed Value	Percent Change	Assessed Value	Percent Change	Assessed Value	Percent Change
2007	$39,331	14.5%	$45,816	14.0%	$85,147	14.2%
2008	$40,410	2.7%	$47,140	2.9%	$87,550	2.8%
2009	$42,298	4.7%	$55,487	17.7%	$97,785	11.7%
2010	$42,727	1.0%	$49,917	-10.0%	$92,644	-5.3%
2011	$38,908	-8.9%	$48,986	-1.9%	$87,894	-5.1%
2012	$39,198	0.7%	$50,211	2.5%	$89,409	1.7%
2013	$38,456	-1.9%	$50,153	-0.1%	$88,609	-0.9%
2014	$38,997	1.4%	$52,578	4.8%	$91,575	3.3%
2015	$46,378	18.9%	$58,899	12.0%	$105,277	15.0%
2016	$47,261	1.9%	$54,157	-8.1%	$101,419	-3.7%
2017	$52,162	10.4%	$59,468	9.8%	$111,630	10.1%
2018	$53,279	2.1%	$62,636	5.3%	$115,915	3.8%
2019*	$58,337	9.5%	$69,229	10.5%	$127,566	10.1%
2020*	$59,586	2.1%	$71,210	2.9%	$130,796	2.5%
2021*	$61,998	4.0%	$75,223	5.6%	$137,221	4.9%

Source: Colorado Department of Local Affairs, Division of Property Taxation.
**Legislative Council Staff forecast.*

Residential assessed values. In 2019, statewide residential *market* values are expected to increase 16.3 percent as county assessors revalue property for the reassessment year. Home sales that occurred in 2017 and the first half of 2018 will determine the 2019 market values. The housing market is expected to remain strong along the northern Front Range, with double-digit price increases forecast in the Denver metro area, northern Colorado, Colorado Springs, Western Slope, and rural areas within commuting range of the Denver metro area. Other rural parts of the state are expected to see slower home price appreciation.

Figure 12
Statewide Assessed Values
Billions of Dollars



Source: Colorado Department of Local Affairs, Division of Property Taxation.
**Legislative Council Staff forecast.*

The growth in residential *market* values will be offset by the reduction in the RAR. *Assessed* values for residential property will increase 9.5 percent in 2019 compared with 2018 values after accounting for the drop in the RAR from 7.20 percent to 6.78 percent.

In 2020, residential assessed values will increase 2.1 percent due to new construction across the state. County assessors will value 2020 new construction at 2018 market values and then apply the new RAR to determine the assessed value for new construction in that year.

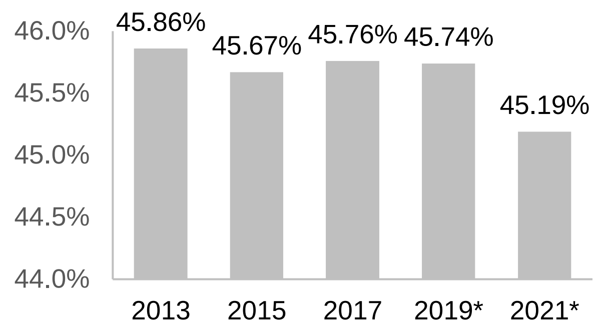
Nonresidential assessed values. The assessment rate for nonresidential property is fixed in the constitution and in law, so changes in actual value are proportionally reflected in the assessed (taxable) value. Statewide assessed nonresidential property values are expected to increase 10.5 percent in 2019. This increase is attributable to the reassessment of commercial, industrial, and vacant land, and booming production of oil and natural gas in 2018.

Nonresidential assessed values are expected to increase moderately throughout the forecast period as oil and gas prices increase modestly and a growing economy continues to increase rents for business properties and maintain low vacancy rates for office buildings and retail spaces.

2021 reassessment cycle. In 2021, growth in residential and nonresidential assessed values will diverge, in part due to the projected reduction in the RAR from 6.78 percent to 6.41 percent. While residential actual values are projected to continue to outpace nonresidential actual values, the residential target percentage is projected to decline from 45.74 percent to 45.19 percent due primarily to new oil and gas production.

As Figure 13 shows, this represents a much larger drop in the residential target percentage compared to recent reassessment cycles. A declining target percentage places downward pressure on the RAR, and a decline this significant will more than offset the growth differential in residential and nonresidential actual values. Residential assessed values will increase 4.0 percent during the 2021 reassessment year, while nonresidential assessed values will increase 5.6 percent.

Figure 13
Residential Target Percentages



Source: Colorado Department of Local Affairs, Division of Property Taxation.
**Legislative Council Staff forecast.*

Regional Impacts and Variations

Assessed values in each region of the state are determined by the unique mix of properties and economic forces specific to that region. Table 17 shows the 2018 assessed value by region and the expected change throughout the forecast period.

Table 17
2018 Assessed Value and Forecast Changes
Billions of Dollars

Region	Assessed Value 2018p	Forecast Changes Year-Over-Year 2019	2020	2021	3-Year Annual Average
Colorado Springs	$7,587	9.5%	1.8%	7.4%	6.0%
Eastern Plains	$2,880	3.2%	1.6%	2.9%	2.6%
Metro Denver	$62,625	11.8%	2.1%	5.5%	6.2%
Mountain	$12,074	3.1%	1.5%	2.7%	2.4%
Northern	$15,909	16.0%	6.5%	5.5%	8.8%
Pueblo	$2,785	2.3%	1.3%	2.1%	1.9%
San Luis Valley	$686	1.7%	2.1%	1.0%	1.6%
Southwest Mountain	$2,971	2.9%	1.7%	2.4%	2.3%
Western	$8,399	4.3%	1.3%	2.2%	2.6%
Statewide Total	$115,915	10.1%	2.5%	4.9%	5.6%

p = Preliminary data from the Colorado Department of Local Affairs, Division of Property Taxation.

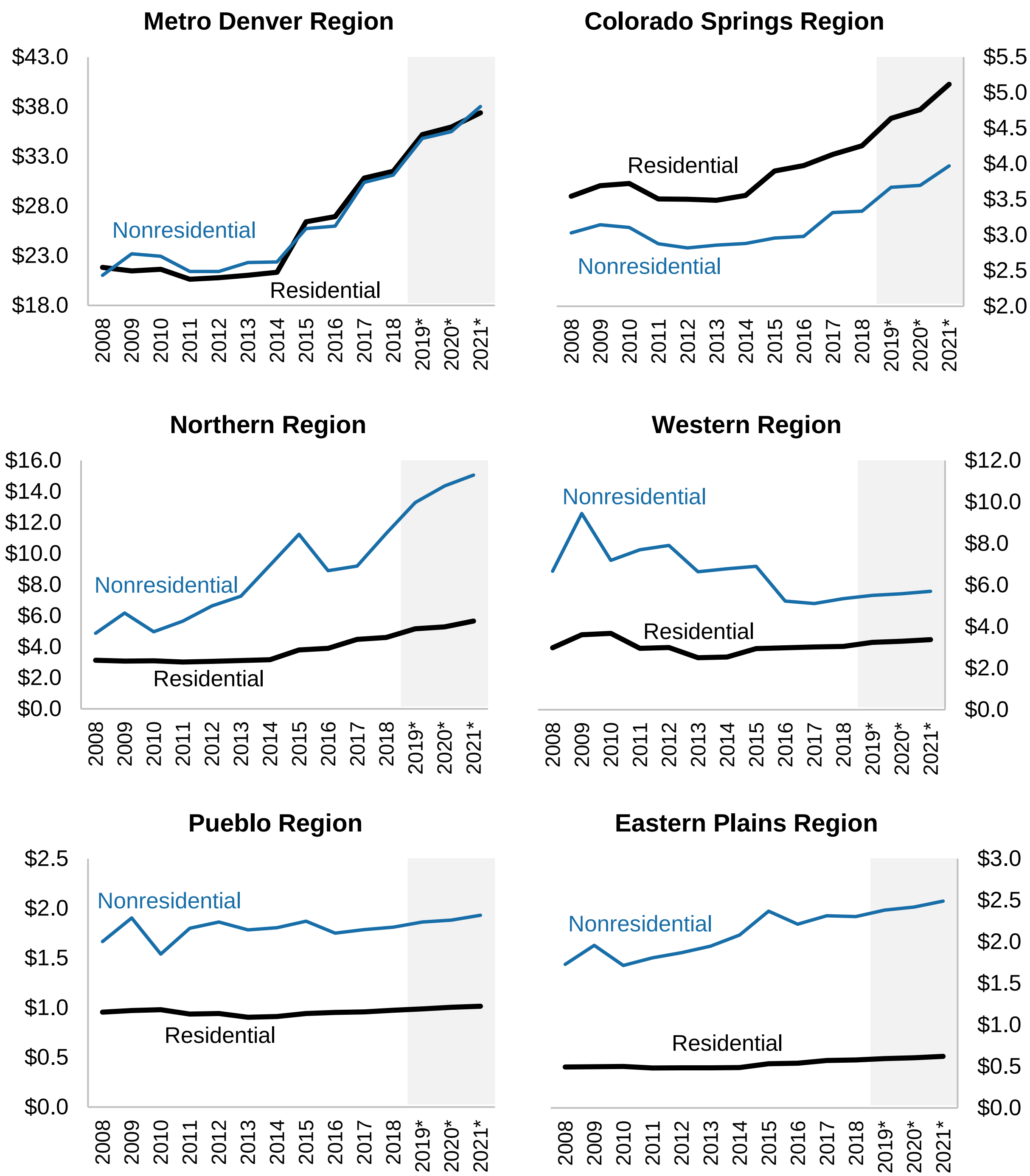
All regions of the state are expected to increase in total assessed value between 2018 and 2019. The Colorado Springs, Denver metro, and the northern regions will have the fastest growth between 2018 and 2019 due to strong demand for housing and increased demand for commercial property to support a growing economy. The northern region had robust home price appreciation since the 2017 reassessment cycle and the oil and gas sector has rebounded since 2016, contributing to a projected 16.0 percent increase in total regional assessed values. The Denver metro region experienced significant home price appreciation over the past two years and a growing economy helped to lower vacancy rates and increase rents for commercial, industrial, and retail space that dominate the region's nonresidential tax base. Home prices in Colorado Springs picked up in the past several years as high prices in the Denver metro area forced home buyers to look to other areas of the state.

The remaining six regions of the state are forecast to have more modest growth, ranging between 1.7 percent and 4.3 percent between 2018 and 2019. These less populated regions of the state have experienced less home price appreciation, which will be somewhat offset by the reduction in the RAR. In addition, the values of nonresidential property that dominate the rest of the state will see gradual increases through the forecast period. State assessed utilities will grow slowly and agricultural land values are expected to be relatively stable. Vacant land values generally follow the local housing market. Additionally, natural gas development in the western region and southwest mountain region has migrated to the Denver-Julesburg Basin in the Front Range, subduing growth in nonresidential assessed values. Trends for each region are summarized in Table 18 and shown in Figure 14. Table 18 reports the growth in total *assessed* values and growth in residential *actual* values before the RAR is applied.

Table 18
Summary of Projected Changes in Values by Region between 2018 and 2019

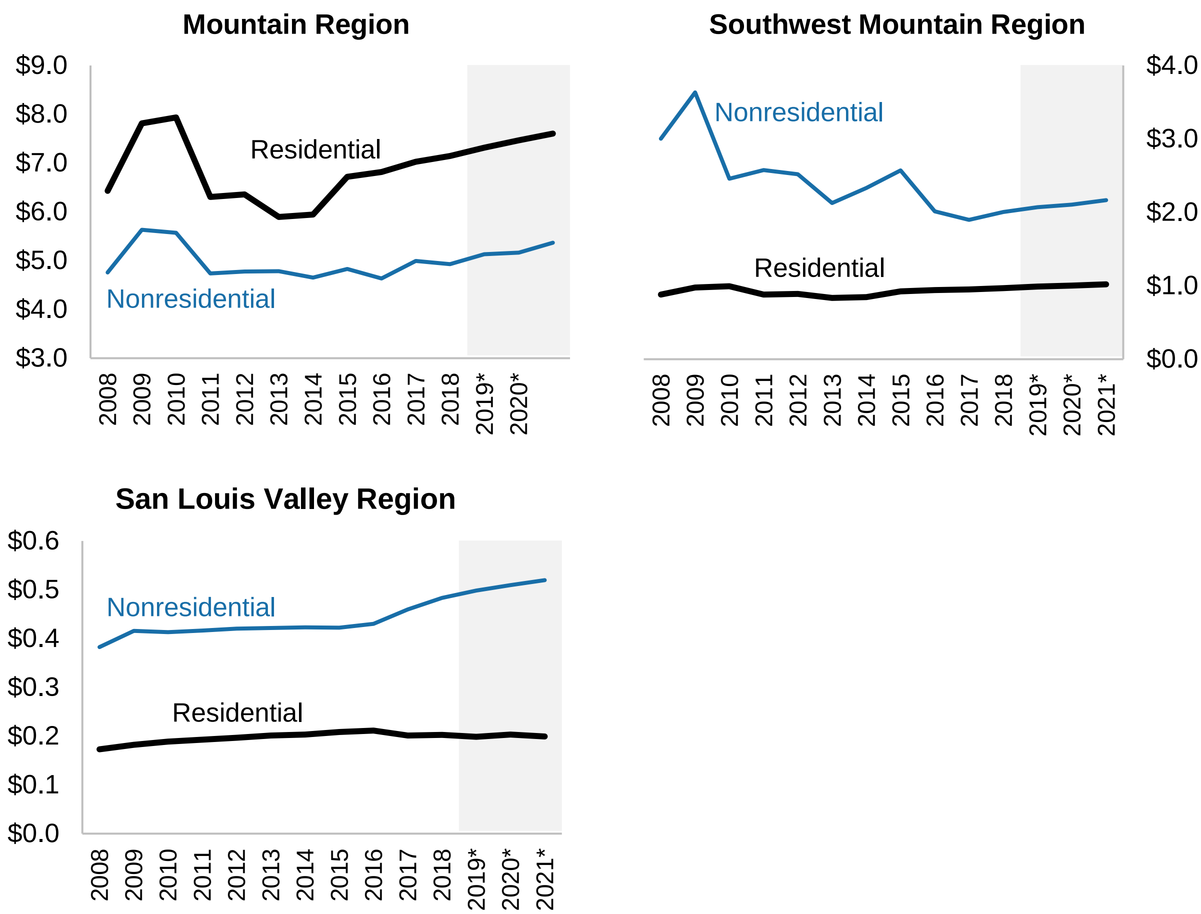
Region	Total Assessed Value Growth	Residential Actual Value Growth	Nonresidential Trends
Metro Denver	11.8%	18.7%	Reassessment of commercial, industrial, and retail buildings with higher rents and lower vacancy rates. Additional flights into DIA help boost state assessed value.
Colorado Springs	9.5%	15.9%	Reassessment of commercial, industrial, and retail buildings with higher rents and lower vacancy rates
Northern	16.0%	18.9%	Reassessment of commercial, industrial, and retail buildings with higher rents and lower vacancy rates. Increased oil and gas development.
Western	4.3%	13.2%	Reassessment of commercial, industrial, and retail buildings with higher rents and lower vacancy rates. Less natural resource activity in some counties.
Pueblo	2.3%	7.6%	Reassessment of commercial, industrial, and retail buildings with higher rents and lower vacancy rates. Lower state assessed values as the Comanche Power Plant winds down.
Eastern Plains	3.2%	9.0%	Stable value for agricultural property.
Mountain	3.1%	8.7%	Reassessment of commercial, industrial, and retail buildings with higher rents and lower vacancy rates.
Southwest Mountains	2.9%	8.7%	Reassessment of commercial, industrial, and retail buildings with higher rents and lower vacancy rates.
San Luis Valley	1.7%	4.2%	Stable value for agricultural property.

Figure 14
Assessed Values by Region
Billions of Dollars



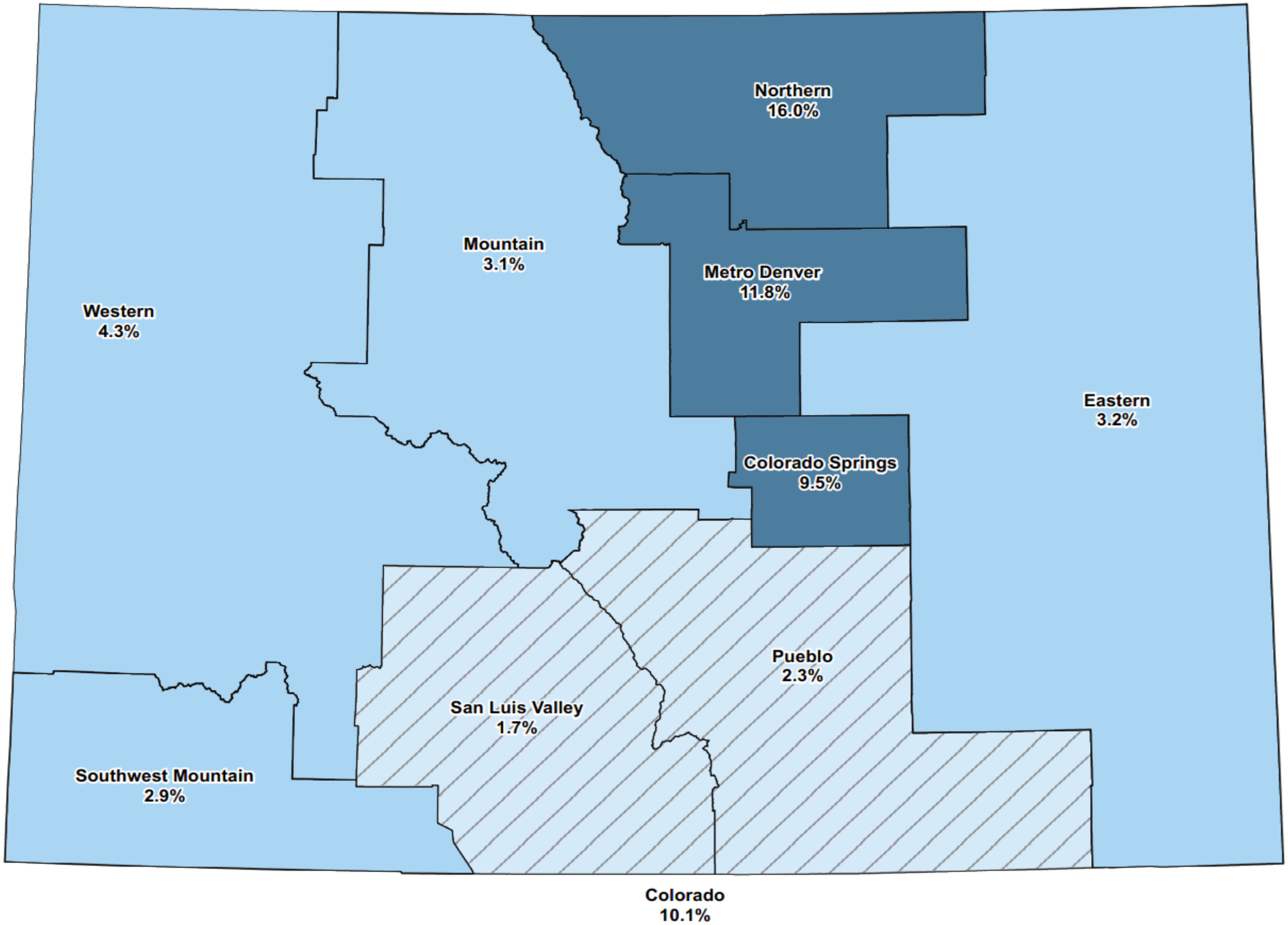
Source: Department of Local Affairs, Division of Property Taxation.
**Legislative Council Staff forecast.*

Figure 14
Assessed Values by Region (Continued)
Billions of Dollars



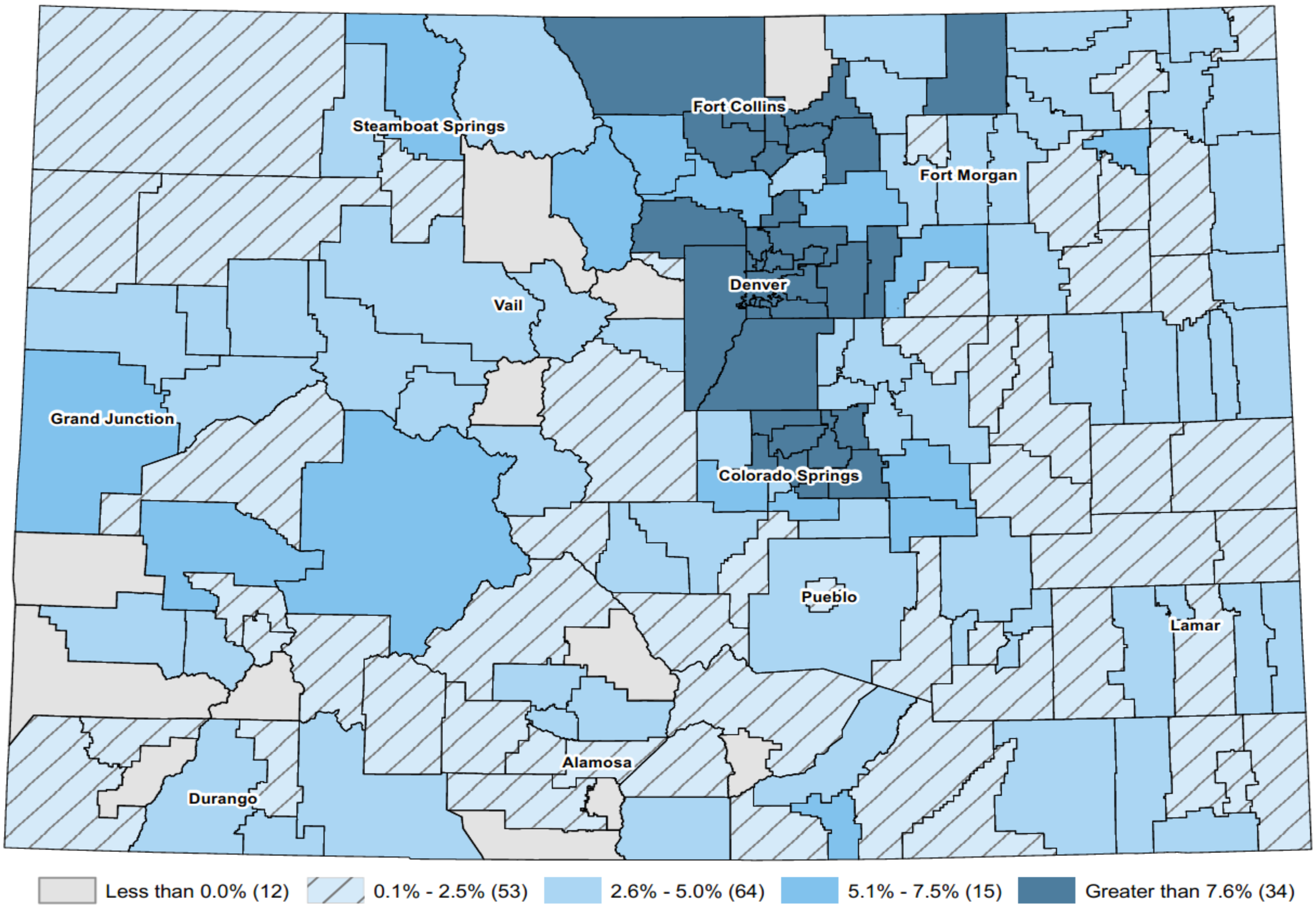
Source: Department of Local Affairs, Division of Property Taxation.
**Legislative Council Staff forecast.*

Figure 15
Forecast Percent Change in Total Assessed Valuation by Economic Region
2019 Assessment Year (Budget Year 2018-19)



Map Prepared by Legislative Council Staff.

Figure 16
Forecast Percent Change in Total Assessed Valuation by School District
2019 Assessment Year (Budget Year 2018-19)



Map Prepared by Legislative Council Staff.

Adult Prison Population and Parole Caseload Projections

This section presents forecasts of the state's adult prison population and parole caseload for FY 2018-19 through FY 2020-21. The section includes a discussion of the historical and current trends affecting these populations, the adjustments made since the December 2017 forecast, and relevant recent legislation. It concludes with an analysis of risks to the forecast.

Key Findings

The June 2018 inmate population was higher than expected. The December 2017 forecast predicted that the state adult inmate population would total 19,962 persons at the end of FY 2017-18, decreasing 0.7 percent from the end of the prior year. Last year's forecast expected new court commitments to drive an increase in the prison population over the latter half of the fiscal year, but anticipated that growth would be insufficient to offset a surge in releases during the fall of 2017 following the implementation of House Bill 17-1326. The population actually increased more quickly than forecast during early 2018, growing 0.2 percent to 20,136 inmates over the full fiscal year. The June 30, 2018, population was 174 offenders above forecast, representing forecast error of 0.9 percent.

The forecast underestimated the increase in admissions during the first six months of 2018. For the six-month period between January and June 2018, admissions to the Department of Corrections (DOC) were 6.6 percent higher than during the six-month period between July and December 2017. As expected, releases fell off over the same period, decreasing by 6.6 percent. Increased admissions reflect factors that are difficult to forecast, including criminal behavior, prosecutorial decisions, sentencing practice, and revocations of parolees by the Parole Board.

Prison population:
The number of inmates committed to the custody of the Department of Corrections (DOC), including those in state and private prisons.

Parole caseload:
The average daily population of parolees – offenders who have been released from prison but remain under DOC supervision. Depending on context, this term may refer only to parolees located in Colorado.

New court commitment:
Admission to DOC custody of an offender who has been convicted of a felony and sentenced to a period of incarceration.

Release:
Departure of an offender from prison to parole or via discharge from DOC supervision.

Revocation:
Return to DOC custody of an offender who has violated his or her terms of parole.

FY 2017-18 ended with a higher parole caseload than forecast. There were 8,752 parolees in Colorado at the end of FY 2017-18, 150 more than forecast last year.

Expectations for the June 2019 prison population have been revised downward relative to those published in the December 2017 forecast. The prison population is now expected to reach 20,432 inmates at the end of FY 2018-19, a reduction of nearly 300 inmates relative to the projection published last year. Year-to-date through November 2018, the prison population has fallen by 0.3 percent as a result of elevated releases associated with 2018 legislation. The stabilizing population also reflects deceleration in the growth of new court commitments. Felony case filings, a predictive indicator for new court commitments, suggest that the latter trend will continue through the first half of 2019, which is expected to slow the pace of population growth during FY 2018-19 relative to prior year expectations. Extrapolating this trend further, expectations for the June 30, 2020, population have been correspondingly revised downward from 21,159 inmates to 20,940 inmates.

As summarized in Table 19 on page 60 (prison population) and Table 20 on page 62 (parole caseload), the following outcomes are anticipated over the forecast period:

- **Overall population.** Assuming the continuation of current prosecution and sentencing trends, the prison population is expected to continue to increase consistent with rising felony caseload. The prison population is expected to increase 1.5 percent over the whole of FY 2018-19 and to grow by an additional 2.5 percent in FY 2019-20 and 2.6 percent in FY 2020-21.

- **Male population.** The male population is expected to increase from 18,125 inmates in June 2018 to 18,328 inmates in June 2019, representing an increase of 1.1 percent, before growing 2.2 percent to 18,737 inmates in June 2020. Trends driving growth in the male population are similar to those for the aggregate state inmate population.

- **Female population.** The state's women's prisons account for an increasing share of the state inmate population. This population is expected to increase 4.6 percent to total 2,104 inmates by the end of FY 2018-19, before growing 4.7 percent to 2,203 inmates in June 2020.

- **Parole caseload.** In-state parole caseload is expected to increase from 8,752 offenders in June 2018 to 9,297 offenders in June 2019 and 9,687 offenders in June 2020. The parole population will rise as the number of released offenders outstrips these offenders' falling parole durations.

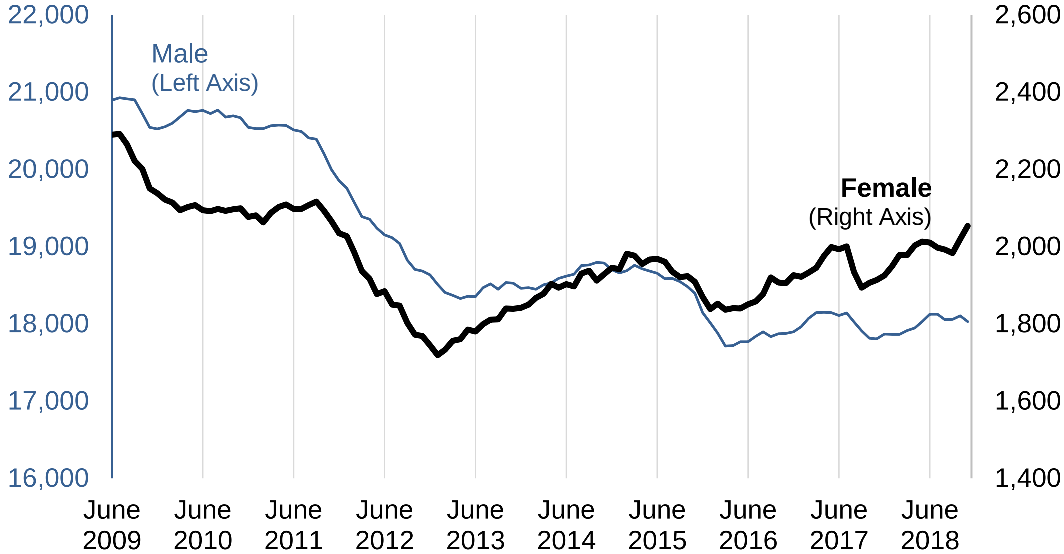
Population Forecast

Historical and recent trends. The state's prison population rose through the 1990s and 2000s, reaching its peak at 23,220 inmates in July 2009. Since 2009, changes in the population have been less consistent. The inmate population fell significantly between August 2010 and April 2013, dropping 12.1 percent. Then, after roughly two years of growth, the population again began to decline quickly in July 2015 following the adoption of Senate Bill 15-124. Over the last two years, the inmate population is once again increasing on the strength of new court commitments. A history of the male and female prison populations is shown in Figure 17.

Admissions. An offender who is admitted to a DOC facility is generally recorded as having been admitted for one of three reasons. Most admissions are attributable to *new court commitments*, i.e., felony criminal cases in which a defendant is convicted and sentenced to a period of incarceration. The two other principal types of admissions are actually readmissions of parolees, either because the parolee *committed a new crime* while on parole or because the parolee incurred a *technical parole violation* – a violation of his or her conditions of parole that did not independently constitute a new crime.

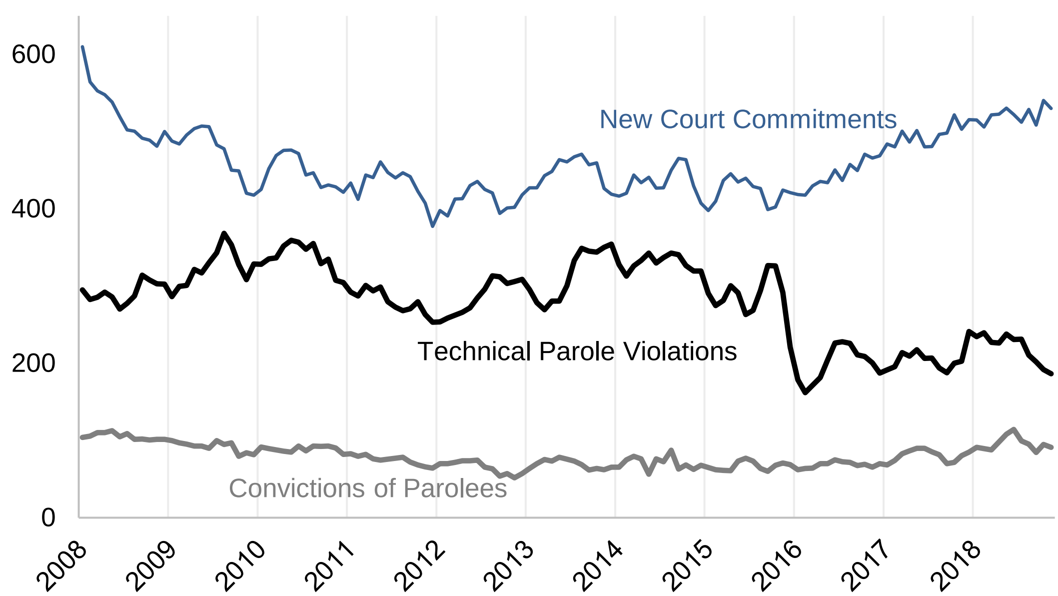
Prison admissions fell 9.7 percent during FY 2015-16 as a result of reduced parolee returns for technical parole violations. **Senate Bill 15-124**, which took effect in the fall of 2015, required DOC's Division of Adult Parole not to recommend that parolees who had incurred violations be revoked unless and until all other intermediate sanctions (non-revocation punishments or interventions) had been exhausted. As shown in Figure 18, this policy change caused a permanent downward rebasing in the number of admissions attributable to technical parole violations.

Figure 17
Prison Population by Gender
June 2009 to November 2018



Source: Colorado Department of Corrections.

Figure 18
State Prison Admissions by Source*
Three-Month Moving Average



Source: Colorado Department of Corrections.
**Omits admissions for returns from prior releases to probation, court order discharge or appeal bond, interstate compact, and youthful offender system terminations. These streams produced a combined average of nine admissions per month over the sample period.*

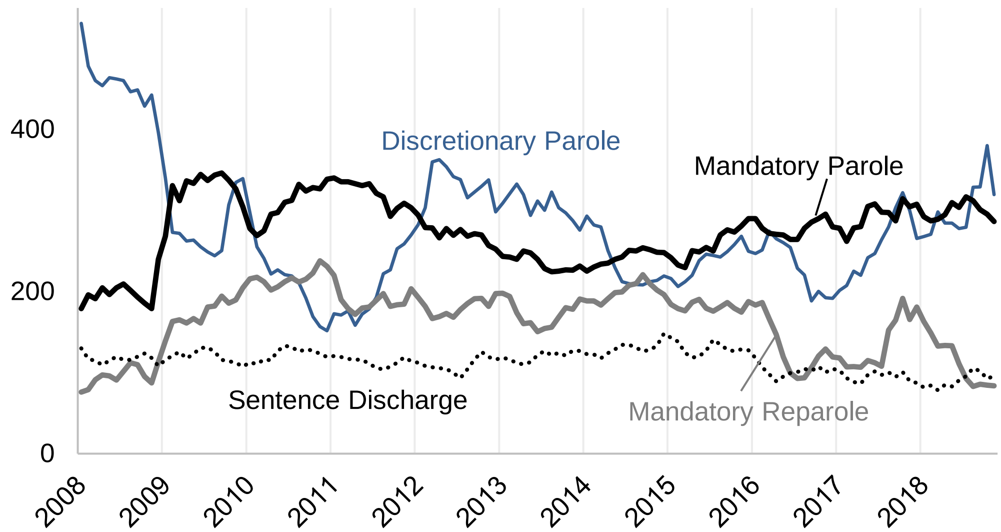
Prison admissions increased in each of the three fiscal years since. During FY 2017-18, admissions increased 9.0 percent, mostly on the strength of new court commitments, which increased 8.3 percent over the same period. However, recent data suggest that the rapid growth in prison admissions may be tapering off. New court commitments grew by just 4.5 percent in July through November 2018 relative to the same period last year. Further, the Judicial Branch reports that growth in felony district court case filings, which are a predictive indicator of new court commitments, have slowed to 4.5 percent during the current fiscal year, versus 12.8 percent in FY 2015-16, 12.0 percent in FY 2016-17, and 5.4 percent during FY 2017-18. The share of terminated felony cases resulting in a new court commitment to DOC appears to have stabilized at about 12.0 percent, with an additional 2.1 percent of terminated felony cases resulting in a parolee's revocation upon conviction for a new crime.

Releases. Releases from prison are more volatile than admissions. Figure 19 presents state prison releases in each of the four most significant categories. The two largest categories, discretionary parole and mandatory parole, represent the conditions under which an inmate may first be released onto parole. *Discretionary* parole releases indicate that the State Board of Parole chose to release an offender on or after his or her parole eligibility date, while *mandatory* parole releases indicate that the offender was not granted early parole and instead was allowed to leave a DOC facility only after having reached his or her mandatory release date. As shown in Figure 19, discretionary and mandatory parole releases are not strongly correlated and depend upon the population of parole-eligible inmates as well as Parole Board behavior.

The two other major release categories pertain to offenders who previously have been released on parole and who were subsequently revoked to a DOC facility. The Parole Board may require that a revoked offender remain in prison for a determinate period of time, after which period they are granted *mandatory reparole*. Alternatively, the Parole Board may require that a revoked offender be incarcerated for the remainder of his or her sentence, after which point the offender is *discharged* and is not subject to additional parole supervision. The board does not have the authority to extend an offender's period of custody beyond that to which he or she was initially sentenced by a judge.

Total prison releases increased by 15.0 percent during FY 2017-18 after falling by 11.8 percent during FY 2016-17. As shown in Figure 19, growth in releases was attributable to surging numbers of discretionary releases to parole and mandatory reparole of revoked offenders over the second half of calendar year 2017. This forecast attributes last year's boom in releases to **House Bill 17-1326**, which made three significant changes to parole practice. First, it requires the Parole Board to implement a file review system, allowing offenders who are eligible for parole and meet certain risk and crime criteria to be ordered released upon a successful file review without undergoing a parole application hearing. The file review system increased the number of discretionary releases authorized by the board. Second, the bill reduced the amount of time for which a revoked parolee is required to remain in prison before being rereleased, reducing the length of stay for revoked parolees and accelerating mandatory reparoles. Third, the bill repealed DOC's authority to operate community return-to-custody facilities. Implementation of this provision required that offenders revoked to community corrections custody be reclassified in August 2017 as parolees occupying condition of parole beds, shown as a spike in mandatory reparoles in Figure 19.

Figure 19
State Prison Releases by Source*
Three-Month Moving Average



Source: Colorado Department of Corrections.
**Omits releases to probation, court-ordered discharges, releases on appeal bonds and inmate deaths. These categories averaged a combined 21 offenders per month over the sample period.*

Since last year, mandatory reparoles have returned to their prior level, while discretionary paroles leveled out and then increased further after the commencement of FY 2018-19. Additional increases in the number of discretionary parole releases are attributable, at least in part, to two additional policy changes enacted during the 2018 legislative session. **House Bill 18-1251** attempts to motivate additional placements of incarcerated offenders in community corrections transitions programs, which would move the offender from prison to a locally- or privately-operated community corrections facility in advance of parole. The bill also expedites the release of offenders who have completed transitions programs. **House Bill 18-1410** empowers DOC to make certain requests when the prison bed vacancy rate falls below 2 percent, including ordering a report on vacant community corrections beds or ordering Parole Board review of parole applications by offenders meeting certain eligibility and risk criteria.

While the effects of these bills are impossible to disentangle from discretionary releases that would have occurred otherwise, their implementation coincides with an uptick in discretionary releases to parole. Discretionary releases increased 11.4 percent between July and November 2018 over the same period last fiscal year.

Forecast assumptions. New court commitments are expected to increase through the forecast period, though at a decelerating rate. Revocations of parolees for technical parole violations are expected to continue at their current, reduced level. Discretionary parole releases will fall from their elevated level, but are expected to remain at or above early 2018 levels through the forecast period. Mandatory reparole releases are expected to maintain their present reduced level, but shorter length of stay for revoked parolees under House Bill 17-1326 will continue to apply downward pressure to the prison population. Table 19 shows historical and projected prison populations by gender from FY 2009-10 through FY 2020-21.

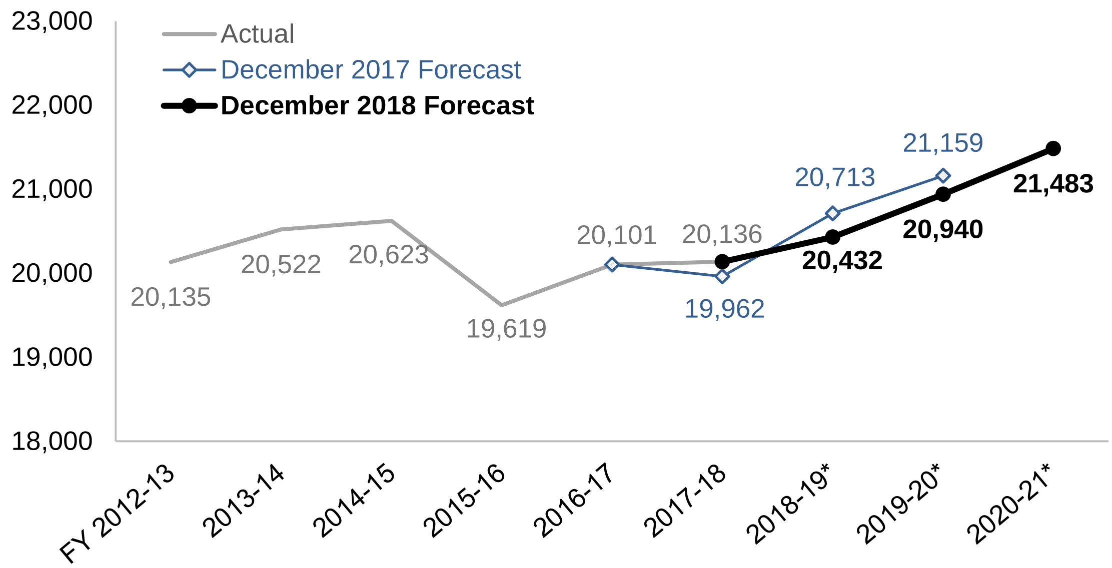
Adjustments to the forecast for total population. Figure 20 illustrates the inmate population forecasts published in December 2017 and December 2018. The 2018 forecast makes downward revisions to population expectations for both June 2019 and June 2020. Revisions are attributable to additional data following the implementation of 2017 policy changes, new 2018 policy changes, and case filings and court commitment figures that have fallen short of the expectations underpinning last year's forecast.

Table 19
Adult Prison Population by Gender
As of June 30 each Fiscal Year

Fiscal Year	Males	Percent Change	Females	Percent Change	Total	Percent Change
FY 2009-10	20,766	-0.6%	2,094	-8.6%	22,860	-1.4%
FY 2010-11	20,512	-1.2%	2,098	0.2%	22,610	-1.1%
FY 2011-12	19,152	-6.6%	1,885	-10.2%	21,037	-7.0%
FY 2012-13	18,355	-4.2%	1,780	-5.6%	20,135	-4.3%
FY 2013-14	18,619	1.4%	1,903	6.9%	20,522	1.9%
FY 2014-15	18,655	0.2%	1,968	3.4%	20,623	0.5%
FY 2015-16	17,768	-4.8%	1,851	-5.9%	19,619	-4.9%
FY 2016-17	18,108	1.9%	1,993	7.7%	20,101	2.5%
FY 2017-18	18,125	0.1%	2,011	0.9%	20,136	0.2%
FY 2018-19*	18,328	1.1%	2,104	4.6%	20,432	1.5%
FY 2019-20*	18,737	2.2%	2,203	4.7%	20,940	2.5%
FY 2020-21*	19,211	2.5%	2,272	3.1%	21,483	2.6%

*Source: Colorado Department of Corrections. *Legislative Council Staff projections.*

Figure 20
Adult Inmate Population, Forecast-to-Forecast Comparison
December 2017 to December 2018 Forecast



*Source: Colorado Department of Corrections and Legislative Council Staff. Actual totals shown for FY 2012-13 through FY 2017-18. *Current forecast period.*

Parole Forecast

Colorado's parole population encompasses offenders who have been released from prison but have not yet been discharged from DOC supervision. These offenders may live with family or friends in the community, they may be housed in residential transition programs, or they may be detained in county jails for violating parole terms. Offenders who reside in Colorado are generally supervised by DOC's Division of Adult Parole. With authorization, offenders may be supervised by parole officers in another U.S. state, and some offenders from other states are paroled to Colorado. Offenders who stop reporting to their parole officers, or who illegally leave the state without authorization, are counted as absconders.

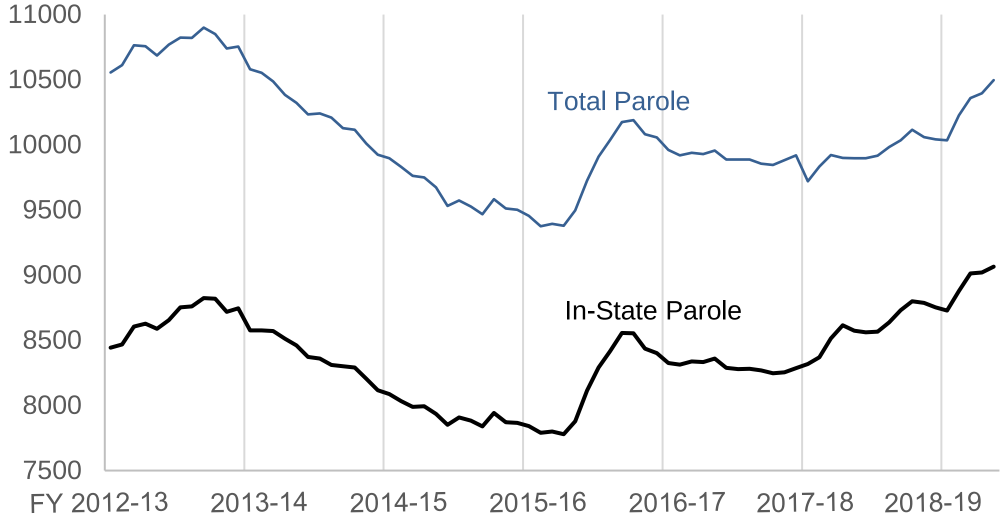
Offenders may be released to parole on or after their parole eligibility date at the discretion of the Parole Board (discretionary parole). Offenders who are not granted mandatory parole are released at their mandatory release date (mandatory parole). An offender's parole period is dictated by statute according to his or her initial sentence. Offenders who violate parole terms may be revoked to DOC following a Parole Board revocation hearing. Revoked offenders may be reparoled at a later date or incarcerated until their statutory discharge date, after which they are discharged from DOC supervision entirely. Alternatively, parolees who commit crimes may be convicted and returned to DOC custody to begin a new sentence.

For these reasons, the prison and parole populations are intertwined. This forecast uses the assumptions already identified for the prison population as determinants in its parole caseload projections. For example, an inmate for whom the Parole Board grants discretionary or mandatory parole is assumed to add to the parole population, and an offender revoked to DOC is assumed to subtract from the parole population.

Historical and recent trends. The parole population declined significantly between early 2013 and the fall of 2015, dropping by 11.8 percent over a 31-month period. That decline was attributable to reduced parole durations, particularly as offenders were sentenced under drug felony crime classifications carrying shorter parole periods than other felonies. Beginning in late 2015, the parole population climbed at an unprecedented speed following the implementation of Senate Bill 15-124 as the number of parolees readmitted to prison for technical parole violations plummeted. Between November 2015 and March 2016, the number of parolees located in the state increased by 10.0 percent.

The parole population fell during the summer of 2016, then stabilized over the next two years. However, caseload increased moderately during FY 2017-18 following the implementation of House Bill 17-1326, and has grown significantly thus far in FY 2018-19 following the implementation of House Bill 18-1251 and House Bill 18-1410. Year-to-date through November 2018, the state parole population, omitting absconders, has increased by 4.5 percent, which would represent an increase nearly as large as that realized in FY 2015-16. A history of total and in-state parole caseload is presented in Figure 21.

Figure 21
Colorado Parole Caseload



Source: Colorado Department of Corrections. Omits absconders.

Forecast assumptions. The outlook for parole caseload depends on the implementation of recent legislation to expedite discretionary releases over the remainder of FY 2018-19 and into FY 2019-20. Consistent with expectations for elevated releases relative to prior years, this forecast projects increasing parole caseload through the forecast period. Because parole durations are short relative to prison sentences for more serious felonies, parole caseload is more volatile than the prison population. Accordingly, this forecast contains more uncertainty than the population forecast and is more sensitive to future changes in policy and practice. Table 20 shows historical and projected adult parole projections, by location, from FY 2009-10 through FY 2020-21.

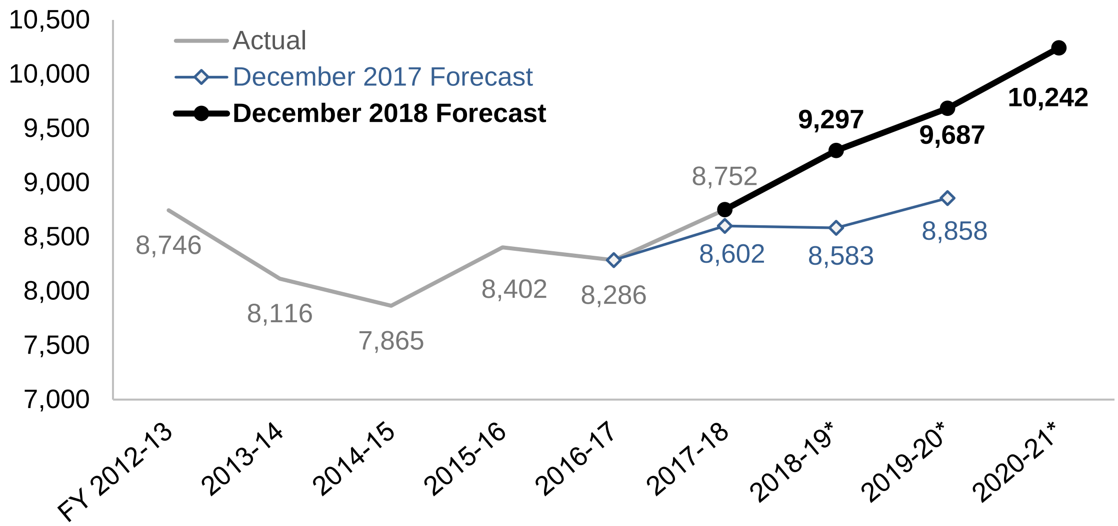
Table 20
Parole Population
As of June 30 each Fiscal Year

Fiscal Year	In-State Parole	Percent Change	Out-of-State Parole	Percent Change	Total	Percent Change
FY 2009-10	8,535	-5.3%	2,100	3.5%	10,635	-3.7%
FY 2010-11	8,181	-4.1%	1,922	-8.5%	10,103	-5.0%
FY 2011-12	8,445	3.2%	2,066	7.5%	10,511	4.0%
FY 2012-13	8,746	3.6%	2,008	-2.8%	10,754	2.3%
FY 2013-14	8,116	-7.2%	1,808	-10.0%	9,924	-7.7%
FY 2014-15	7,865	-3.1%	1,636	-9.5%	9,501	-4.3%
FY 2015-16	8,402	6.8%	1,656	1.2%	10,058	5.9%
FY 2016-17	8,286	-1.4%	1,633	-1.4%	9,919	-1.4%
FY 2017-18	8,752	5.6%	1,290	-21.0%	10,042	1.2%
FY 2018-19*	9,297	6.2%	1,471	14.0%	10,768	7.2%
FY 2019-20*	9,687	4.2%	1,538	4.6%	11,225	4.2%
FY 2020-21*	10,242	5.7%	1,630	6.0%	11,873	5.8%

*Source: Colorado Department of Corrections. *Legislative Council Staff projections.*

Adjustments to the forecast for parole. Figure 22 illustrates the in-state parole caseload forecasts published in December 2017 and December 2018. The 2017 forecast anticipated that June 2018 in-state caseload would be 8,602 parolees. Actual caseload was 8,752, a difference of 150 parolees. Last year's forecast underestimated the effects of House Bill 17-1326 over the duration of the fiscal year, anticipating an increase that was less than what actually occurred. Based on the assumption that this increase is base-building for the parole population, and based on similar impacts for legislation enacted since last year's forecast, this forecast includes significant upward revisions to parole population expectations for both June 30, 2019, and June 30, 2020.

Figure 22
Adult In-State Parole Population, Forecast-to-Forecast Comparison
December 2017 to December 2018 Forecast



Source: Colorado Department of Corrections and Legislative Council Staff.
*Actual totals shown for FY 2012-13 through FY 2017-18. *Current forecast period.*

Factors Affecting the Adult Prison Population and Parole Caseload

It can be difficult to isolate the factors that directly impact the adult prison population and parole caseload. The following paragraphs describe how external factors, including demographic and economic trends, changes within the criminal justice system, new legislation, and internal factors including departmental and Parole Board administration, can influence the growth or decline of the inmate population and parole caseload volume.

- **Population.** All other things being equal, a larger population may result in a greater number of criminal offenses, arrests, criminal felony filings, and prison commitments. Colorado's population is projected to grow about 4.0 percent through the forecast period, which may put mild upward pressure on the inmate population.

- **Economic factors.** Prison admissions exhibited essentially no correlation with economic conditions during the Great Recession and the subsequent recovery. Accordingly, this forecast assumes no correlation between economic conditions and the prison population.

- **Criminal justice system.** The actions of the state courts affect inmate population growth. In particular, commitment of offenders to prison is the most significant determinant of the inmate population. The mix of crimes sentenced also affects the prison population because more serious crimes entail longer durations of stay in correctional facilities.

- **Parole policy and Parole Board administration.** Statute defers the authority to grant discretionary inmate releases to the appointed members of the State Board of Parole. Subject to statutory requirements, the Board is autonomous, and any change in its pattern of releases would have a significant effect on the state prison population and parole caseload. House Bill 17-1326 limited the amount of time for which certain revoked offenders may remain in prison, decreasing the prison population while increasing parole caseload. House Bill 18-1251 requires the Board to hear parole applications for all offenders completing a community corrections transitions program, and allows these applications to be denied only by a majority vote of the entire board. House Bill 18-1410 allows DOC to request that certain offender parole applications be reviewed if the prison bed vacancy rate falls below 2 percent.

- **Departmental administration.** The DOC's Division of Adult Parole oversees the state's parole officers. Division leaders must decide in which cases to pursue revocation when an offender violates the conditions of his or her parole. Under Senate Bill 15-124, the Division is required to exhaust available intermediate sanctions before filing a complaint for revocation with the Parole Board. Statistics suggest that the Division's implementation of this policy has substantially decreased prison admission from parole revocations since 2015. A change in the implementation of this or another policy could have a significant effect on the state prison population and parole caseload.

- **Community Corrections Boards.** In addition to housing convicted offenders who are not committed to DOC custody, community corrections facilities are used to house DOC inmates in residential transitions programs. Admission of an offender to a community corrections facility occurs at the discretion of the local board that oversees that facility. These boards' willingness or unwillingness to accept offenders from DOC is a determinant of discretionary parole releases. For example, if boards were to accept more DOC offenders, the inmate population in DOC prisons would fall correspondingly.

- **Legislation.** Legislation enacted by the General Assembly may influence the state prison population and parole caseload. During the 2018 legislative session, the General Assembly enacted 14 bills that may impact the state prison population and/or parole caseload in the future. These are described below.

  House Bill 18-1029 reduces the mandatory parole period from five years to three years for offenders sentenced for class 3 felony crimes committed on and after July 1, 2018. The bill is expected to reduce the parole population in fiscal years beyond the current forecast period, beginning around FY 2026-27.

  House Bill 18-1040 requires DOC to incentivize mental health providers to migrate to geographic areas where prison inmates are not receiving the sex offender treatment specified in their rehabilitation report. The bill may expedite sex offender treatment in some cases, which could result in faster discretionary releases of these offenders to parole. The extent to which the bill will reduce the prison population depends on future Parole Board decision making.

House Bill 18-1041 adds cruelty to a certified police working horse to the crime of cruelty to a service animal or a certified police working dog. This crime is, by default, a class 1 misdemeanor. An aggravated crime is a class 6 felony, and a subsequent offense is a class 5 felony. To the extent that offenders are sentenced for the aggravated crime, this bill could increase admissions from new court commitments in future years. The impact on the prison population is assumed to be minimal.

House Bill 18-1077 enhances the sentence for second degree burglary from a class 4 felony to a class 3 felony if the objective of the burglary is the theft of firearms or ammunition. Under the bill, 18 offenders per year are expected to be sentenced to a class 3 felony rather than a class 4 felony, which will increase these offenders' length of stay in prison. The bill is expected to increase the prison population by three offenders in FY 2020-21 and by greater amounts in subsequent fiscal years.

House Bill 18-1109 reduces the existing eligibility requirements for special needs parole, and adds a third eligibility category for special needs parole consideration. Generally, special needs parole is available to offenders, especially but not exclusively older offenders, with a long-term or terminal physical, behavioral, or mental health condition that is incapacitating to the extent that it renders the offender unlikely to pose a risk to public safety. The bill is expected to minimally increase discretionary releases to parole. In calendar year 2017 under the old requirements, DOC received 33 applications for special needs parole, of which 4 applications were referred to the Parole Board and approved.

House Bill 18-1176 continues the offender reentry grant program created in House Bill 13-1335, which funds grants for community organizations that reduce offender recidivism. To the extent that these programs reduce recidivism, and to the extent that they cannot operate without state grants, the bill may prevent an increase in DOC admissions from new court commitments or readmission of parolees for new crimes that would otherwise have occurred at the grant program's sunset.

House Bill 18-1200 creates three new class 5 felony cybercrimes for soliciting or arranging prostitution of a minor using a computer; using a scanner to store credit or debit card information without authorization and with intent to commit fraud; and using an encoding machine to place credit or debit card information onto another card with the intent to commit fraud. The bill is expected to increase prison admissions from new court commitments by one offender per year, and to increase parole caseload correspondingly.

House Bill 18-1251 requires the Parole Board to submit to DOC a list of inmates that it is recommending for community corrections transitions placement. DOC is required to refer these inmates to community corrections, or to inform the Parole Board why a referral was not made. Upon completion of the transitions placement, the Parole Board is required to schedule a parole application hearing, after which the offender is to be released to parole unless denied by a majority vote of the full board. The impact of this bill on the prison population cannot be quantified because its effects are impossible to disentangle from releases that would otherwise have occurred. However, it explains at least part of the uptick of discretionary releases to parole at the beginning of FY 2018-19, and is expected to decrease the prison population and increase parole caseload through the forecast period.

House Bill 18-1410 requires that DOC track the bed vacancy rate at state and private prisons. If the vacancy rate falls below 2 percent for 30 consecutive days, DOC is required to notify other state government agencies and may request that other agencies take certain actions that can assist DOC to increase the vacancy rate. For example, DOC may request the location and nature of unused community corrections beds from the Department of Public Safety, or that the Parole Board review parole applications by inmates who meet certain offense, timing, and parole plan criteria. The impact of this bill on the prison population cannot be quantified because its effects are impossible to disentangle from releases that otherwise would have occurred. However, it explains at least part of the uptick in discretionary releases to parole at the beginning of FY 2018-19, and is expected to decrease the prison population and increase parole caseload through the forecast period.

Senate Bill 18-068 enhances the sentence for making a false report to public safety authorities, which had previously been a class 2 or class 3 misdemeanor. Under the bill, false reporting of an imminent threat by use of a deadly weapon is an extraordinary risk class 1 misdemeanor. This crime becomes a class 4 felony if the false report causes serious bodily harm to another person, or a class 3 felony if it results in death. This bill is expected to minimally increase admissions from new court commitments through the forecast period.

Senate Bill 18-119 enhances the sentence for false imprisonment from a class 2 misdemeanor to a class 5 felony if the offender falsely imprisons a minor under circumstances that cause bodily injury, serious emotional distress, or restrict the minor's freedom of movement. The bill is assumed to increase admissions from new court commitments by one offender per year.

Senate Bill 18-169 clarifies that the crimes of intimidating a victim or witness, a class 4 felony, and retaliating against a victim or witness, a class 3 felony, apply to civil cases as well as criminal cases. This bill may increase prison admissions from new court commitments during the forecast period.

Senate Bill 18-249 allows judicial districts to create pre-plea mental health pilot programs to divert individuals with mental health conditions into community treatment. By default, the diversion programs are to be made available to individuals charged with a misdemeanor or petty offense, but may be broadened to include crimes up to a class 4 felony or level 3 drug felony with the assent of the district attorney. The bill is expected to minimally reduce admissions from new court commitments during the forecast period.

Senate Bill 18-250 establishes a Jail-Based Behavioral Health Services Program to fund behavioral health services in county jails. As of November 30, 2018, about 16 percent of in-state parolees are housed in county jails. Increasing behavioral health services provided in jails potentially reduces readmission of parolees to prison for technical parole violations or new crimes. This forecast does not include an adjustment to admissions expectations for this potential outcome.

Risks to the Forecast

Among projections published in this document, the correctional population forecasts are unique in that the values they estimate do not move reliably in response to economic or demographic conditions. Instead, these forecasts are based on expectations for behavior by would-be offenders, prosecutors, juries and judges, inmates, parole board members, and DOC administrators. The forecast does not anticipate changes in current patterns of behavior beyond those that can be extrapolated from currently available data. For example, the forecast anticipates slowing new court commitments during the current fiscal year because of slowing felony case filings reported by state courts. However, the forecast does not account for any changes in the way in which current cases are tried and sentenced, and cannot account for future changes in case filings beyond currently observable patterns. Further, while criminal justice policy has often been changed by legislation and executive decision making, the forecast is based on current law and practice. All of these factors compound risks to this forecast beyond standard error for other forecasts published in this document.

The prison population forecast carries upside and downside risks. This forecast anticipates decelerating admissions from new court commitments. If the number of felony cases again begins to accelerate, or if an increasing percentage of case terminations result in a commitment to DOC, then admissions may increase faster than anticipated. Further, the forecast anticipates that the level of discretionary parole releases will remain elevated, dropping back to early 2018 levels rather than those recorded in early 2017. If discretionary releases decline more significantly than anticipated, for example because the population of offenders meeting release criteria is exhausted, then the prison population will be higher than estimated.

Alternatively, new court commitments might decelerate to a greater extent than extrapolated from current trends, which would cause the prison population to grow more slowly than forecast or to decrease outright. Discretionary releases could remain at or above present levels, which would move offenders from the prison population onto parole.

These risks are functions of behavior by offenders, participants in the criminal justice system, and members of the Parole Board.

The parole population forecast carries related risks. Fundamentally, a greater number of releases than assumed will result in parole caseload above this forecast, while a smaller number of releases than assumed will reduce parole caseload below this forecast. While there is an inverse relationship between the prison and parole populations, the two groups can move in the same direction as a function of the total number of commitments to DOC as a whole.

Youth Corrections Population Projections

This section presents the forecast for the population of juvenile offenders administered by the Division of Youth Services (DYS) in the Department of Human Services. The three major populations administered by the DYS are juveniles committed to custody, juveniles sentenced to a detention facility, and juveniles serving a period of parole.

Summary

All three DYS-administered populations are expected to fall modestly from last year's levels. The following outcomes are anticipated over the forecast period:

- The DYS **commitment population** will decrease over the forecast period from an average daily population of 647 youths in FY 2017-18 to 609 youths in FY 2020-21.

- The average daily **parole population** will correspondingly fall from 210 youths in FY 2017-18 to 194 youths in FY 2020-21.

- The DYS **detention population** will decrease from an average daily population of 263 youths in FY 2017-18 to 243 youths in FY 2020-21.

Juvenile Offender Sentencing Options

Juvenile offenders not prosecuted as adults are managed through the juvenile courts. If a court determines that a juvenile committed a crime, he or she is adjudicated as a delinquent. Upon determination of guilt, the court may sentence a juvenile to any one or a combination of the following:

Commitment. Depending on age and offense history, a juvenile may be committed to the custody of the DYS for a determinate period of between one and seven years for committing an offense that would be a felony or misdemeanor if committed by an adult.

Detention. The court may sentence a juvenile to a detention facility if he or she is found guilty of an offense that would constitute a class 3, 4, 5, or 6 felony or a misdemeanor if committed by an adult. Detention sentences may not exceed 45 days and are managed by the DYS.

County jail or community corrections. Juveniles between 18 and 21 who are adjudicated as delinquent prior to turning 18 may be sentenced to county jail for up to six months or to a community correctional facility or program for up to one year.

Probation or alternative legal custody. The court may order that a juvenile be placed under judicial district supervision and report to a probation officer. Conditions of probation may include participation in public service, behavior programs, restorative justice, or restitution. The court may also place the juvenile in the custody of a county department of social services, a foster care home, a hospital, or a child care center.

Influences on the Juvenile Offender Population

Court sentencing practices. Total juvenile delinquency filings increased consistently during the 1990s, peaking in 1998. Since then, filings have fallen, though the rate of decrease has recently flattened. Between FY 2013-14 and FY 2017-18, the number of juvenile case filings declined at an average annual rate of 1.5 percent, versus an average 6.4 percent drop in each of the three years prior. The decline in filings is expected to continue and will put downward pressure on admissions to DYS commitment and detention facilities, and the rate of decrease is expected to slow correspondingly. During FY 2017-18, 1.8 percent of terminated juvenile cases resulted in commitment of a youth to a DYS facility, an increase of 0.1 percentage points from the rate posted during FY 2016-17.

Legislative action. Policies affecting sentencing alternatives for juveniles affect the size of the detention and commitment populations. These include the creation of diversionary programs as alternatives to incarceration, mandated caps on sentence placements, and changes to parole terms. During the 2018 legislative session, two bills passed that may affect the juvenile detention, commitment, and parole populations through the current forecast period; these are described below. Additionally, page __ of this forecast document lists bills enacted that created new crimes. To the extent that juveniles are convicted for any of the listed new crimes, those bills may also affect the populations administered by DYS.

- **House Bill 18-1050** added factors for consideration in a juvenile defendant's competency to proceed to trial in the juvenile courts. The newly defined factors include evaluation for developmental disabilities, mental disabilities, and mental capacity. To the extent that the bill reduces the number of juveniles that are determined to be competent to proceed to trial, it may reduce the youth populations administered by DYS. At this time, the impact of the bill on DYS populations is assumed to be minimal and is not quantified in an adjustment to this forecast.

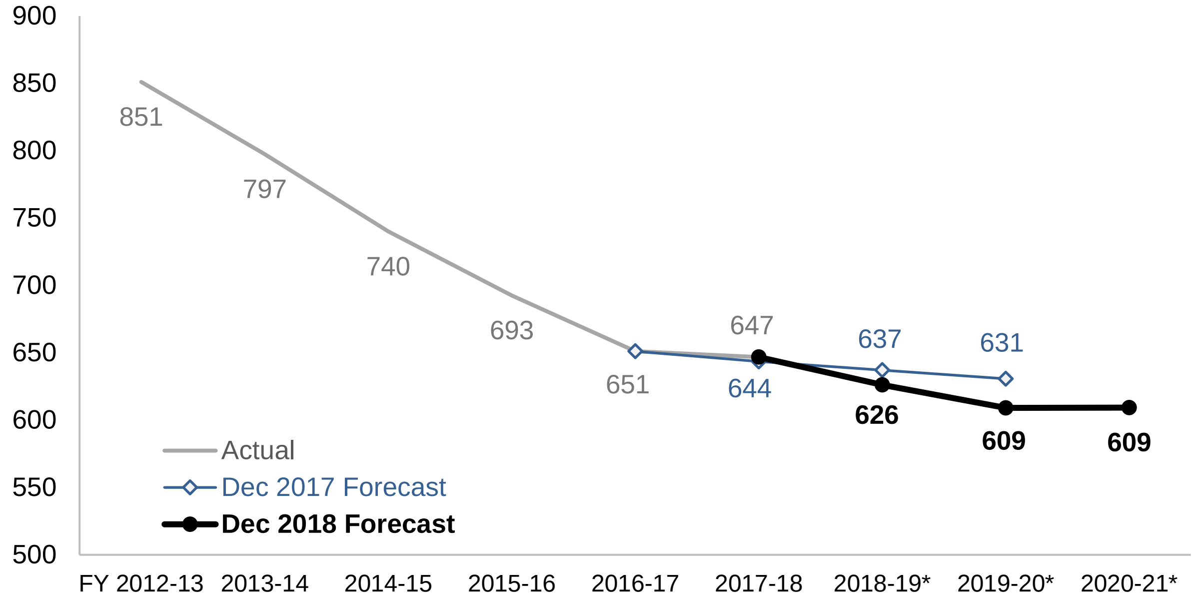
- **House Bill 18-1156** restricts juvenile courts from sentencing habitually truant youths to juvenile detention in most circumstances. Previously, about 15 youths per year were sentenced to detention for truancy. The bill is therefore expected to reduce the average daily juvenile detention population by about one youth per year.

Division of Youth Services Sentencing Placements and Population Forecast

Commitment. The commitment population consists of juveniles adjudicated for a crime and committed to DYS custody. In FY 2017-18, the average daily commitment population was 647 youths, representing a 0.7 percent decrease from the prior year. Between FY 2018-19 and FY 2020-21, the commitment population is expected to drop to 609 youths, representing a compound average annual decrease of about 2.0 percent per year.

The FY 2017-18 average daily commitment population exceeded the December 2017 forecast by 3 youths, or 0.5 percent. Expectations for the commitment population have been reduced relative to last year's forecast in response to falling numbers of new juvenile commitments to DYS. Over the period between July and September 2018, the Judicial Branch reports that 73 youths were committed to DYS custody, versus 91 youths during the same period in 2017. Due to the amount of time required to charge, try, and sentence an offender, the reduction in year-to-date commitments is assumed not to be attributable to recent policy changes. Instead, it could reflect earlier policy changes, shifting charging or sentencing behavior among prosecutors and judges, or merely a timing idiosyncrasy. A total of 396 youths were committed to DYS during FY 2017-18, an increase of 15 youths from FY 2016-17. In the wake of such an increase, this forecast acknowledges both upside and downside risk to the projections shown in Figure 23.

Figure 23
Comparison of DYS Average Daily Commitment Population Forecasts, December 2017 and December 2018

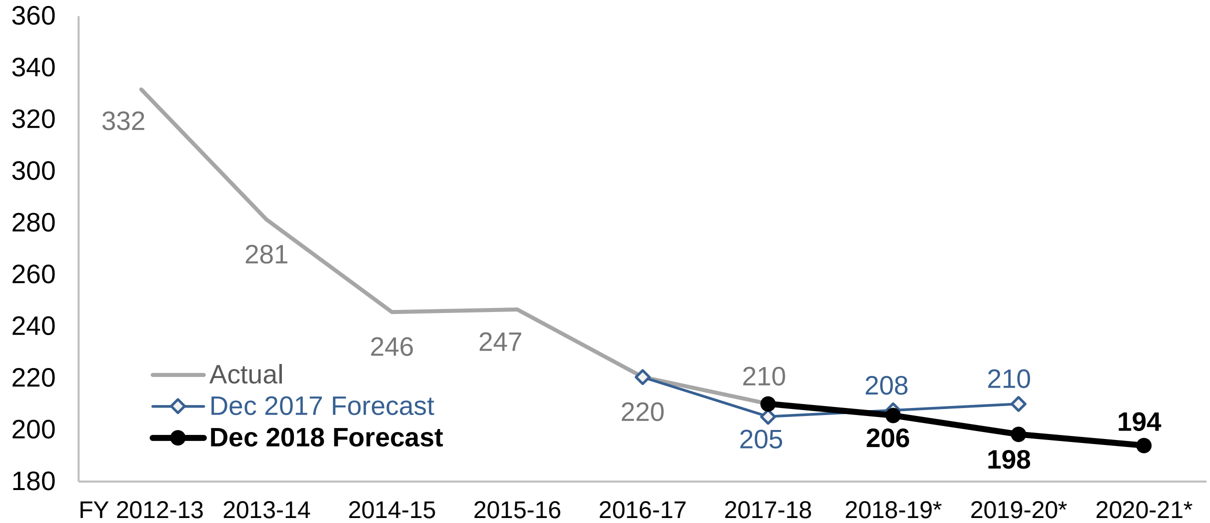


Source: Colorado Department of Human Services Division of Youth Services and Legislative Council Staff.
**Forecast.*

Parole. Juveniles who have served their commitment sentence and are approved by the Juvenile Parole Board are eligible for release to community parole. All youths serve a parole period of at least six months, though the board may extend the parole period up to 21 months for certain offenders. The DYS continues to be closely involved with parolees, preparing the parole plan for presentation to the board and monitoring each youth's progress while on parole.

The juvenile parole population averaged 210 youths in FY 2017-18, a decrease of 4.7 percent from the prior fiscal year. The parole population was five youths greater than anticipated in last year's forecast, as shown in Figure 24. The parole population is expected to fall modestly during the forecast period to 206 parolees during FY 2018-19, 198 parolees during FY 2019-20, and 194 parolees during FY 2020-21 as the number of releases from commitment facilities falls slightly. Expectations for the FY 2018-19 parole population are essentially unchanged from last year's forecast, while expectations for FY 2019-20 have been reduced modestly.

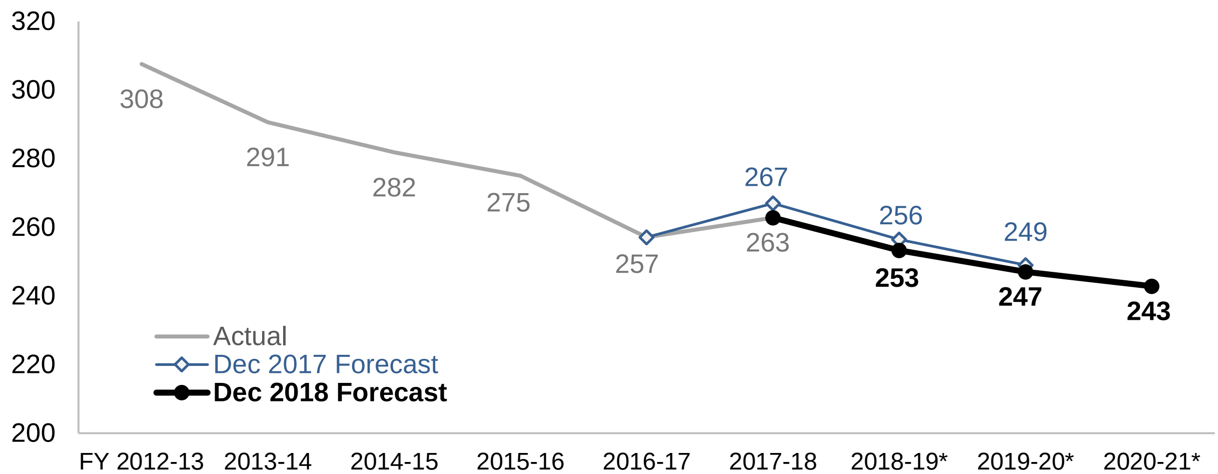
Figure 24
Comparison of DYS Average Daily Parole Population Forecasts, December 2017 and December 2018



Source: Colorado Department of Human Services Division of Youth Services and Legislative Council Staff.
**Forecast*

Detention. The DYS manages five secure facilities housing only detained youth and three multipurpose facilities housing both committed and detained youth. Under Senate Bill 13-177, the detention population is capped at 382 youths, though detention populations, over time, have fallen well below the statutory cap. Relative to the commitment and parole populations, the detention population is more volatile because of the short sentences served by detained youth.

Figure 25
Comparison of DYS Average Daily Detention Population Forecasts, December 2017 and December 2018



Source: Colorado Department of Human Services Division of Youth Services and Legislative Council Staff.
**Forecast.*

The detention population averaged 263 youths in FY 2017-18. As expected, the population increased modestly from FY 2016-17 levels because of a population spike early in the fiscal year; however, the magnitude of the increase was smaller than expected. Detentions are expected to fall through the forecast period as shown in Figure 25. Expectations for the detention population have not changed significantly from those published in December 2017.

Risks to the Forecast

Commitment and detention sentences are at the discretion of the courts. The population forecasts assume that sentencing patterns will remain consistent with current practices, which have resulted in a steady decline in juvenile filings and an increase in alternative sentencing options. To the extent that judges decide to place more offenders under DYS supervision, populations will be greater than forecast.

Additionally, the Juvenile Parole Board has a significant influence upon both the commitment and parole populations. Because the board has the discretion to extend parole beyond the six-month mandatory period in a majority of cases, the parole population could fluctuate depending on the decisions of the board.

Economic Outlook

Economic growth in the U.S. and Colorado remains strong, although it is projected to slow over the next two years consistent with a maturing economic expansion. The nation sits just a few months away from the longest economic expansion in U.S. history. Expansionary fiscal policy under the federal Tax Cuts and Jobs Act provided a boost to business investment and optimism at the start of 2018. Consumer confidence remains near historic highs on abundant employment opportunities and budding wage gains, which have lured workers back into the labor force and improved household balance sheets.

Following acceleration in the first half of the year, business activity has slowed in recent months on concerns over a global economic slowdown and international trade policy tensions. Growth is expected to moderate further in 2019 and 2020 as the near-term impacts of fiscal stimulus wear off, and labor shortages and rising interest rates become stronger headwinds.

In Colorado, the unemployment rate remains at historic lows and labor shortages are limiting growth in several sectors of the economy. Net migration has slowed as housing costs continue to climb in most areas of the state. Rapid home price appreciation along the northern Front Range has cooled with rising interest rates, while other, more affordable areas have seen housing costs accelerate. Tables 23 and 24 on pages 108 and 109 present histories and expectations for economic indicators for the U.S. and Colorado, respectively.

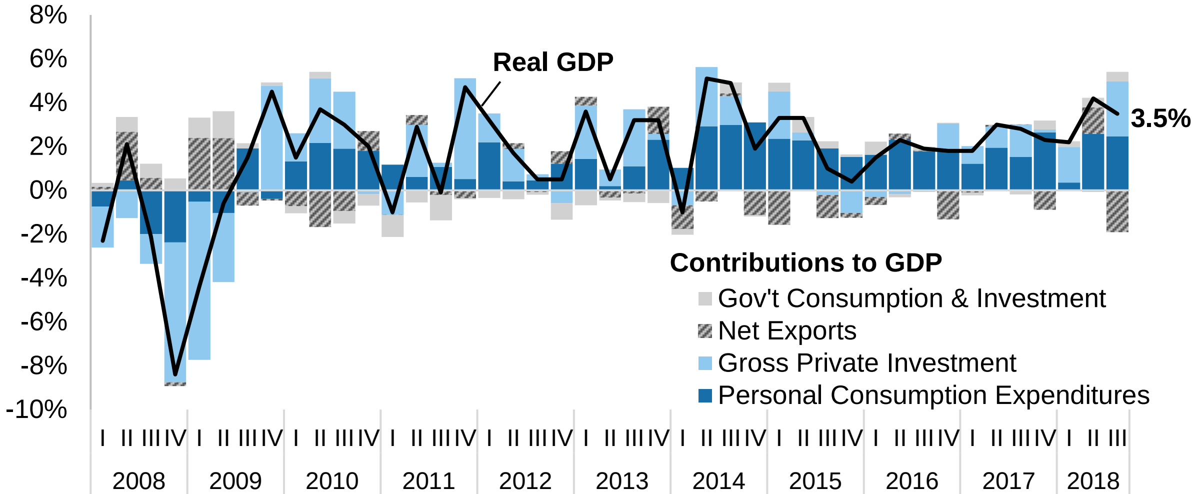
Gross Domestic Product

The U.S economy slowed in the third quarter, but strong consumer confidence and robust business spending has kept the nation's economy on track to record its longest expansion ever. Strong growth this year has been partially driven by the 2017 federal Tax Cuts and Jobs Act, which significantly reduced the corporate income tax rate and bolstered consumer spending. Growth in the Colorado economy continues to outpace the nation, with a strong labor market contributing to overall economic activity. The U.S. and Colorado economies are expected to continue to grow in 2018 and 2019; however, growth is expected to slow as the benefits from the tax cuts fade and trade uncertainty creates headwinds.

Real gross domestic product (GDP), an estimate of the inflation-adjusted value of final U.S. goods and services, grew at an annual rate of 3.5 percent, slightly slower than the robust 4.2 percent expansion in the second quarter (Figure 26). Consumer spending, which accounts for more than two-thirds of total economic output, grew at a solid 3.5 percent annualized rate during the same period. Household spending on health care and food services drove much of this growth.

After a slight drop in the second quarter, business investment in nonresidential construction projects bounced back and grew at an impressive 15.1 percent rate in the third quarter, offsetting a softening residential real estate market. Businesses also built up inventories at a faster pace and continued to spend on intellectual property products.

Figure 26
Contributions to Real Gross Domestic Product
Seasonally Adjusted Annual Rates



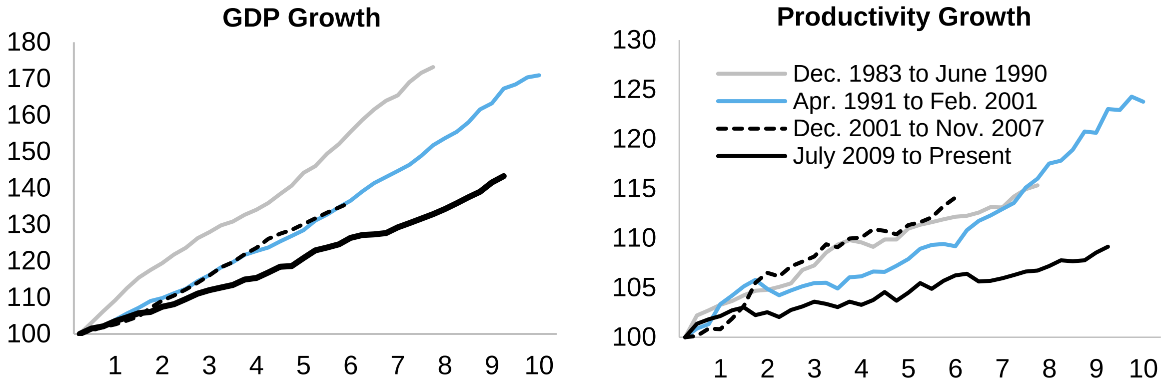
Source: U.S. Bureau of Economic Analysis.
Note: "Real" GDP is inflation-adjusted. Contributions to percent change and percent change in GDP reflect annualized quarter-over-quarter growth rates.

U.S exports were down 4.4 percent in the third quarter after a second quarter surge. Looming tariffs pushed U.S. export growth in the second quarter to its highest level in almost five years, increasing by 9.1 percent. Some U.S.-based businesses, particularly soybean producers, front-loaded their shipments to get ahead of Chinese tariffs that took effect in July. Likewise, U.S imports increased 9.2 percent in the third quarter as businesses stepped up their efforts to import more goods before January, when U.S. import tariffs were expected to jump from 10 percent to 25 percent. Government expenditures remained strong, growing 2.6 percent quarter over quarter.

The current expansion is weaker than prior expansions. The present-day economic expansion surpassed the 1960s expansion to become the second longest on record in U.S. history. Only the 1990s expansion endured longer, lasting 120 months relative to 115 months for the current expansion through December of this year. However, this expansion remains weaker than the 1990s expansion and other prior episodes of economic growth, as shown in Figure 27.

Several factors have contributed to slower growth. The most significant is demographic change, which has slowed population growth, weakened consumer activity, and modified spending patterns as a higher share of the population enters retirement. Structural changes in the economy, including technological change and shifts toward automation, have slowed growth in labor productivity and wages, causing negative downstream impacts on consumption and shifting business spending toward cost-saving, capital-intensive investments.

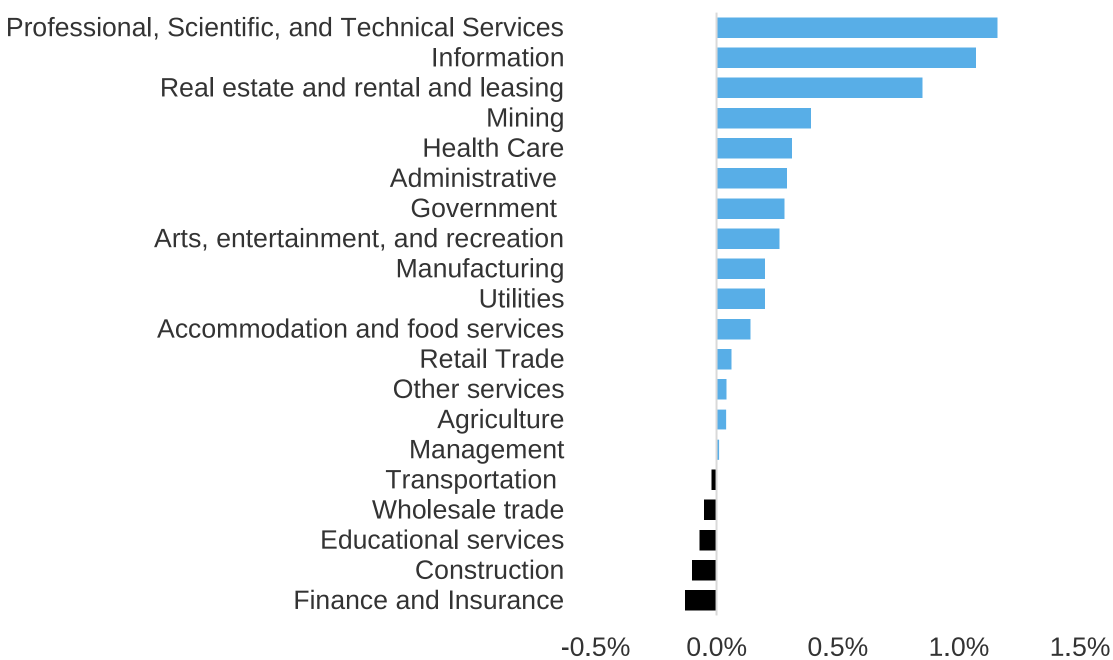
Figure 27
U.S. Economic Growth in Recovery and Expansion
Index of Quarterly Growth since the Start of the Past Four Recoveries



Source: U.S. Bureau of Economic Analysis
**Productivity growth is calculated as real GDP divided by the number of labor hours worked by all U.S. workers.*

Colorado's economy remains among the country's strongest. In the second quarter of 2018, the state's GDP expanded by a healthy 3.5 percent from the same quarter one year prior. Contributions to growth continue to be broad-based across most industries with information, and professional, scientific, and technical services posting the largest contributions to the increase in real GDP in the second quarter for Colorado (Figure 28). Colorado's strong information industry and workforce continues to attract new companies to the state and add new employees. Over 4,100 technology companies are located in the state, including Arrow Electronics, Home Advisor, and Google.

Figure 28
Contributions to Real Colorado Gross Domestic Product, 2018Q2
Seasonally Adjusted Annual Rates



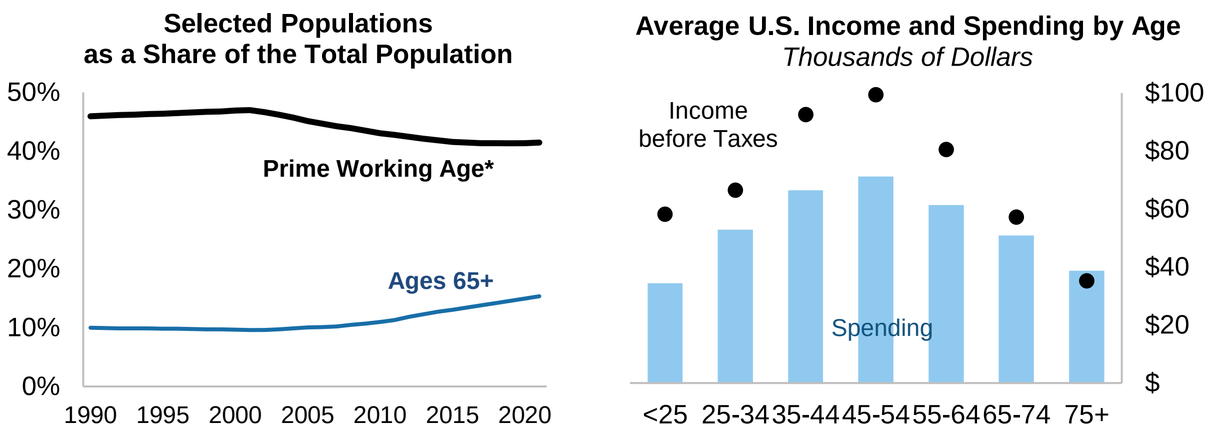
Source: U.S. Bureau of Economic Analysis. Real GDP is inflation adjusted. Contributions to percent change in GDP reflect annualized quarter-over-quarter growth.

Demographics

Population growth continues to slow. Decreasing net migration and lower birth rates are slowing population growth in Colorado and contributing to the state's tight labor market. Many would-be Coloradans and Colorado residents are choosing to reside in other states due to rising housing costs in Colorado. Additionally, international migration to Colorado has also slowed due to changes in federal immigration policy and improved economic prospects abroad. These factors are contributing to slower net migration.

The aging population is slowing economic activity. Demographic change actively affects economic performance across the U.S. and in Colorado, influencing the supply of labor, income, consumption, and inflation. An increasing share of the baby boomer generation — those born between 1946 and 1964 — is retiring, causing labor force participation to decline and slowing income and consumption growth over the long run. Based on projections released by the State Demography Office, Colorado's prime working age population, comprising persons between ages 25 and 54, is projected to fall from a high of 47 percent of the population in 2001 to 41 percent by 2020 (Figure 29, left). The share of those aged 65 and older is expected to rise from a historical average of about 10 percent to over 15 percent by 2020.

Figure 29
Selected Demographic Indicators



Source: Colorado State Demography Office.
**Ages 25 to 54 as a share of the total population.*

Source: U.S. Bureau of Labor Statistics, 2016 Consumer Expenditure Survey.

Income and consumption rise and fall with age (Figure 29, right). In particular, the average earning and consumption levels peak between ages 45 and 54 and decline steadily thereafter. As the baby boomer generation reached their 40s and 50s, the U.S. enjoyed a "demographic dividend," marked by strong economic growth in the 1990s and 2000s.

The current expansion has been less impressive than in previous business cycles in part because of the demographic drag on the U.S. and Colorado economies, which is expected to continue well into the future. The oldest baby boomers reached age 65 in 2010. The youngest will reach retirement age in 2029. The number of baby boomers leaving the labor force is expected to peak in Colorado in the early 2020s.

Evolving consumption patterns. Consumption patterns tend to evolve over time with changes in technology and economic activity. Anecdotal evidence and economic data suggest that members of the millennial generation — those born between 1980 and 1999 — spend more on experiences, such as travel and dining out, and less on things, such as apparel, books, and food consumed at home, than previous generations did at their age. Millennials are also making different decisions than prior generations with respect to household formation and family planning. National data from the Consumer Expenditure Survey suggest that relative to prior generations, millennials are less likely to own a home, more likely to rent or share housing, and less likely to move. The slowdown in birthrates also suggests that Millennials are choosing to postpone or have fewer children than prior generations.

- With the slowdown in net migration to the state, Colorado population growth is projected to grow 1.4 percent in 2018 and 1.3 percent in 2019 and 2020.

Business Income and Activity

Business activity remains robust, with some moderation in the second half of the year. Businesses experienced robust growth in income and profits in the first half of 2018 following the passage of the federal tax law. On strong consumer confidence, industrial production and orders have grown to meet rising demand for U.S. goods. Spurred by optimism and the fiscal stimulus of tax cuts, businesses have accelerated investment. However, a portion of the increased investment has been financed with corporate debt, which will be harder to service as interest rates rise.

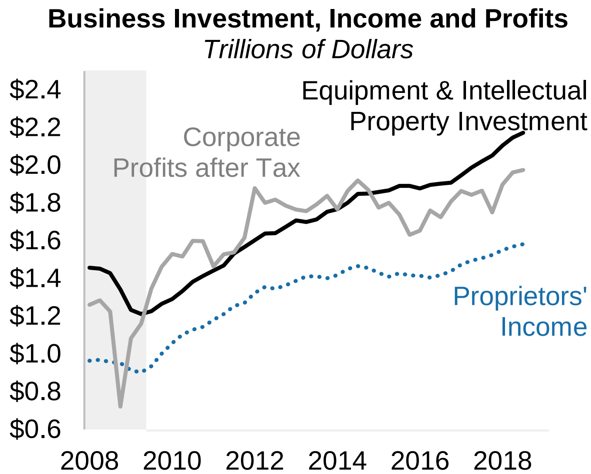
Figure 30 shows selected measures of business activity. Business investment in software and equipment increased 7.5 percent in the third quarter of 2018 compared with the same period in 2017, as firms continue to invest to fill orders and meet demand. Proprietors' income increased 5.1 percent in the first half of the year. On a quarter-over-quarter basis, corporate profits after taxes increased 38.4 percent in the first quarter of 2018 and 14.0 percent in the second quarter of 2018 immediately following the passage of the federal Tax Cuts and Jobs Act. Growth in corporate profits moderated in the third quarter to 2.7 percent growth, as stimulus from the federal tax cuts has receded.

Manufacturing activity continues to expand, though low energy prices cloud the outlook. Both the Institute for Supply Management's (ISM) manufacturing index and its non-manufacturing business activity index indicate expanding business activity as firms fill orders. The manufacturing index has been in expansionary territory (with values above 50) for the past 26 months, while the broader non-manufacturing business activity index has indicated expanding business activity since the end of the recession. While both indices show continued expansion, declines between September and October hint at deceleration in the rate of growth in business and industrial activity during the fourth quarter of 2018.

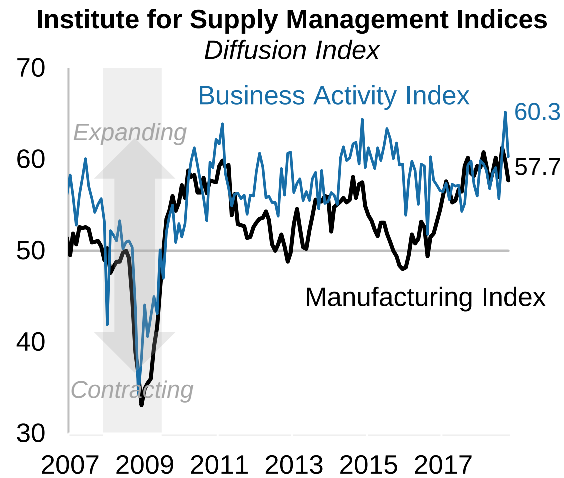
The Federal Reserve Bank of Kansas City produces a manufacturing index similar to the ISM index for businesses within its region, which includes Colorado in addition to six other states. The Kansas City Fed index registered 58.0 in October, indicating continued growth, but down from an all-time high of 79.0 in May (Figure 31). Firms suggested that a tight labor market and tariffs were signifigant but managable threats to future manufacturing activity.

As measured by the Federal Reserve, industrial production increased 3.9 percent in November over year-ago levels (Figure 30, bottom left). Production of energy materials was particularly strong over this period. If crude oil prices remain low, this activity is expected to moderate. New manufacturers' orders continued to rise through September 2018, reflecting strong business and consumer demand (Figure 30, bottom right). Orders declined between September and October, reflecting declines in non-defense aircraft orders and shipments, as well as other transportation products.

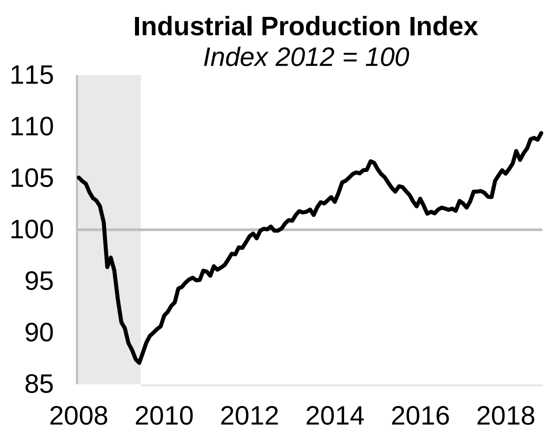
Figure 30
Selected Indicators of U.S. Business Activity



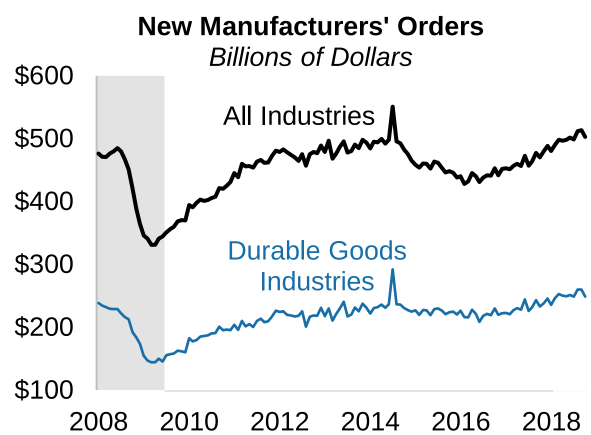
Source: U.S. Bureau of Economic Analysis. Data are not adjusted for inflation.



Source: Institute for Supply Management.

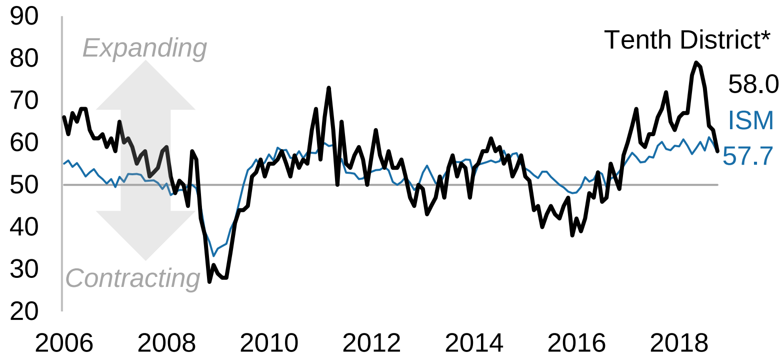


Source: Federal Reserve Board of Governors.



Source: U.S. Census Bureau. Data are not adjusted for inflation.

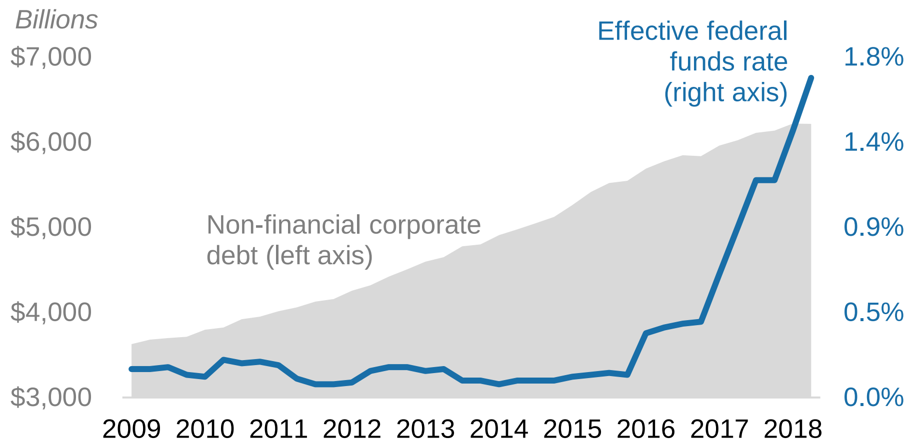
Figure 31
Business Activity in Tenth Federal Reserve District



Source: Institute for Supply Management (ISM) and Federal Reserve Bank of Kansas City.
**The Tenth District composite index is adjusted to the ISM scale. The Tenth district includes Colorado, Nebraska, Oklahoma, Kansas, Wyoming, and portions of New Mexico and Missouri.*

Some firms may be over-leveraged. Firms have been taking on more debt since the end of the recession. As shown in Figure 32, much of this debt was accumulated under historically low interest rates. Over the last ten years, non-financial corporate debt has nearly doubled. This growth has slowed over the past year with rising interest rates. However, the higher cost of borrowing and the cost of debt service payments are expected to slow business growth for heavily leveraged firms.

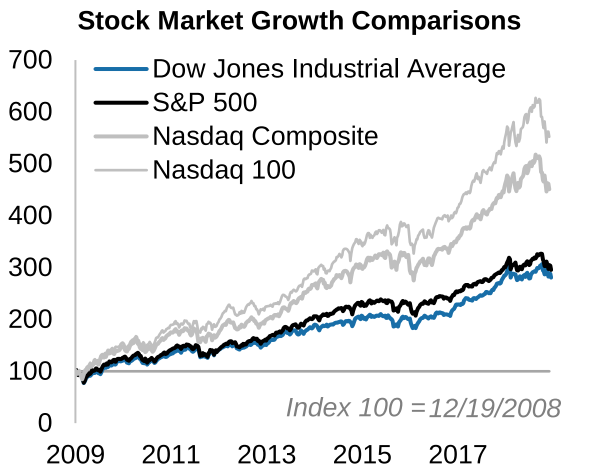
Figure 32
Non-financial Corporate Debt and Federal Funds Rate



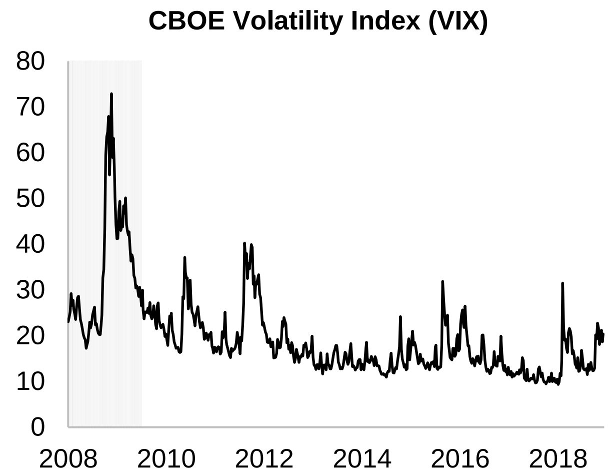
Source: Federal Reserve Board of Governors.

Equity markets reversed gains at the end of 2018. The stock market has lost the gains accumulated since the passage of the federal Tax Cuts and Jobs Act at the end of 2018 on fears of escalating trade tensions between the U.S. and China and concern about slower global growth (Figure 33, left). Volatility indicators continue to reflect heightened concern for future fluctuations. The Chicago Board Options Exchange (CBOE) Volatility Index is based on S&P 500 option prices. When the index goes up, it indicates near-term expectations for market volatility. As illustrated in Figure 33 (right), the index has increased since the start of October as fears about the global economy and monetary policy started to surface.

Figure 33
Selected Indicators of Stock Market Activity



Source: S&P Dow Jones Indices LLC and NASDAQ OMX Group.



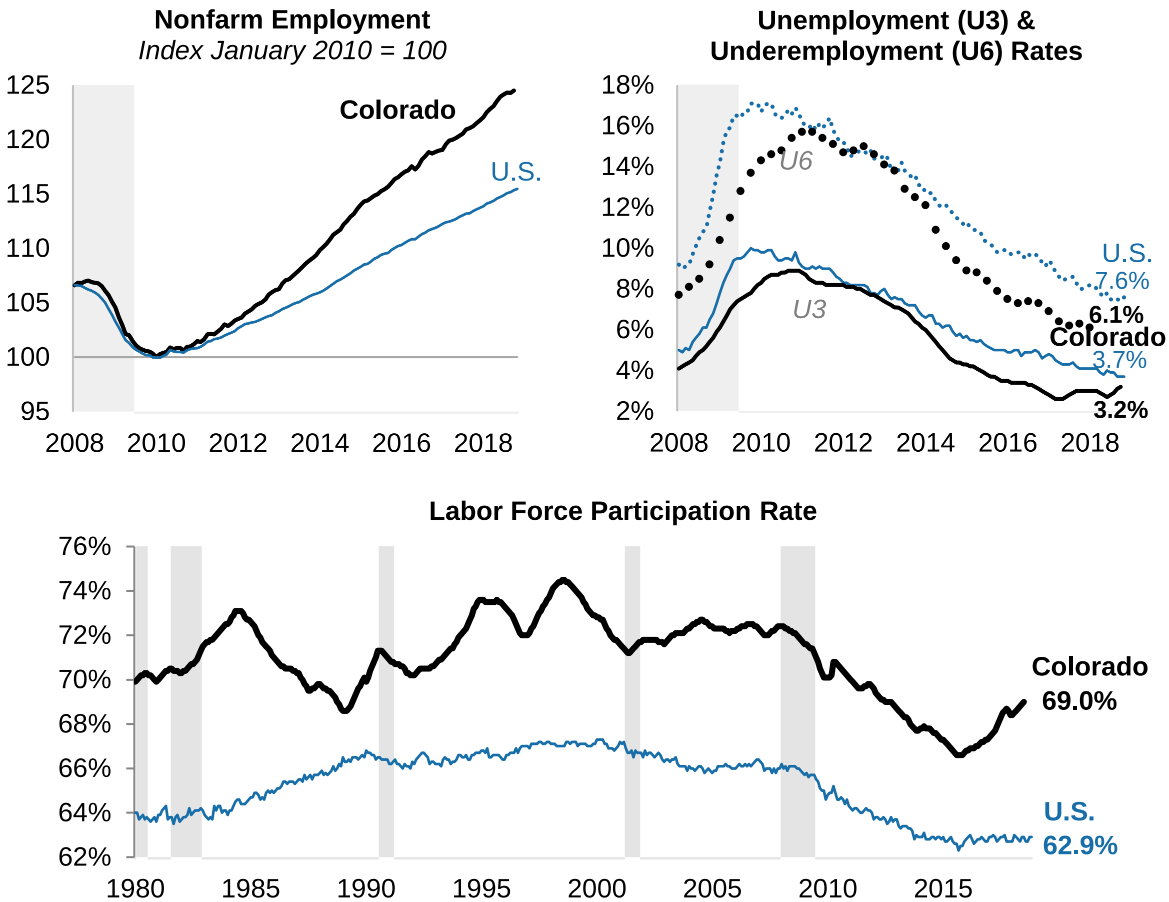
Source: Chicago Board Options Exchange (CBOE).

Labor Markets

Leading U.S. and Colorado labor market indicators remain strong as the year comes closer to an end. U.S. employers continue to add new employees to their payrolls at a heathy rate despite signs of growing worker shortages, including historically low unemployment rates. Colorado's labor market activity continues to outpace that of the nation as a whole, and the state unemployment rate remains among the lowest in the country. Figure 34 compares labor market activity for the U.S. and Colorado.

Strong labor markets are counteracting structural shifts. Colorado's labor force participation rate is climbing despite an accelerating number of annual retirements. As shown in the bottom panel of Figure 34, labor force participation fell during the first five years of the current expansion, a demographic idiosyncrasy that is inconsistent with the early years of all other recent expansions. Growing labor force participation since 2015 suggests that the tight labor market is now strong enough to counteract demographic and structural shifts toward automation, which have reduced demand for lower-skilled workers in many industries, including manufacturing and information services sectors. Positive trends in the labor force participation rate will sustain employment growth in the near term.

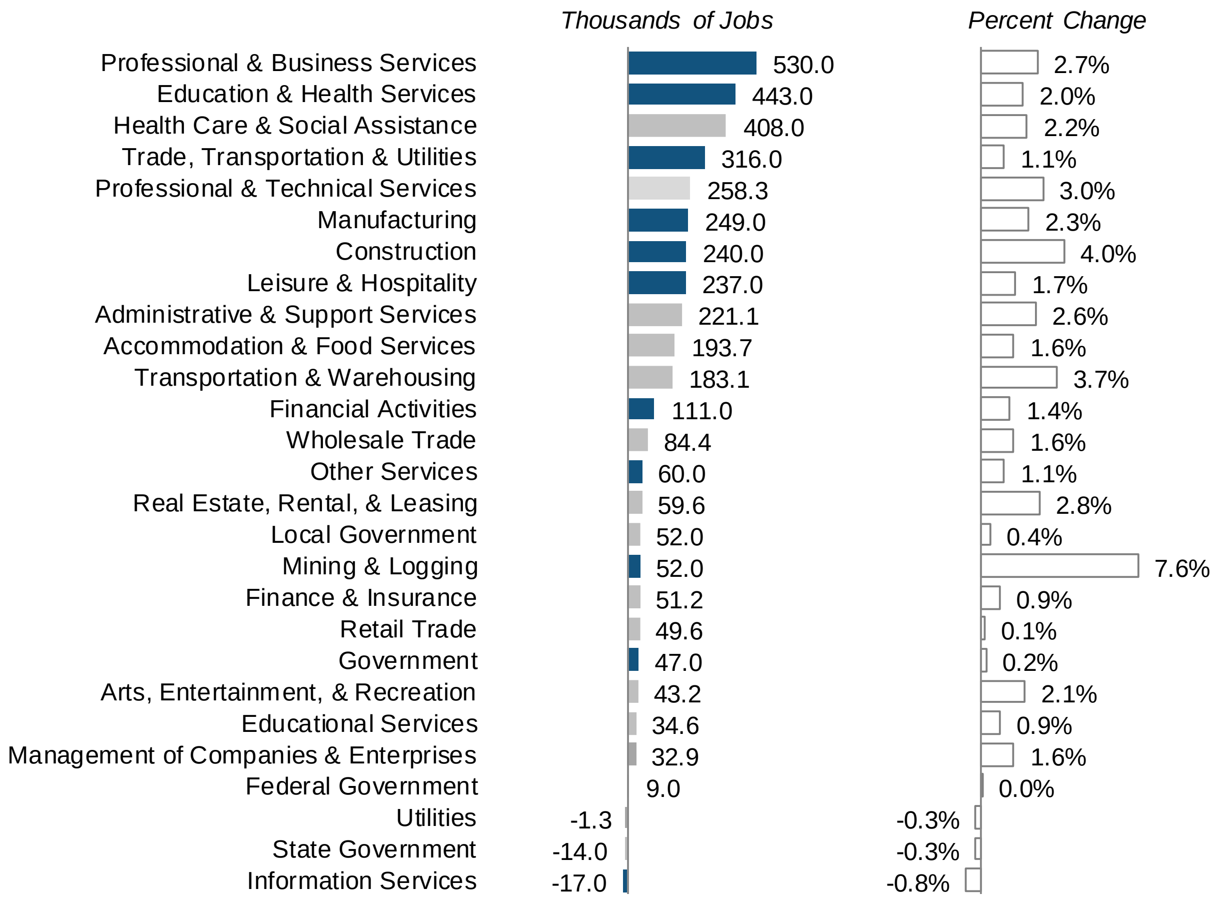
Figure 34
Selected U.S. and Colorado Labor Market Indicators



Source: U.S. Bureau of Labor Statistics. Data are seasonally adjusted and are through November 2018 for the U.S. and September 2018 for Colorado.
**Underemployment rates for Colorado are shown as four-quarter averages, while data for the U.S. are monthly.*
***Labor force participation is calculated as the percent of the civilian population, age 16 and older, who are working or seeking employment.*

U.S. job growth continues, with a slowdown in sight. U.S. employers continue to add employees to their payrolls at a healthy pace. Through November of this year, employers added about 206,000 new jobs each month on average, faster than the 182,000 monthly average last year. November 2018 marked the 97th consecutive month of growth since October 2010. Hiring has been broad-based, with the largest sectors—professional and business services and education and health services sectors—driving overall U.S. job growth (Figure 35). Construction and manufacturing industries continue to trend upward, adding 240,000 and 249,000 jobs, respectively, since November 2017. A contraction in federal and state government employment has slowed growth in the government sector from the same month one year prior.

Figure 35
U.S. Job Gains and Losses by Industry
Year-over-Year Change, November 2018 over November 2017

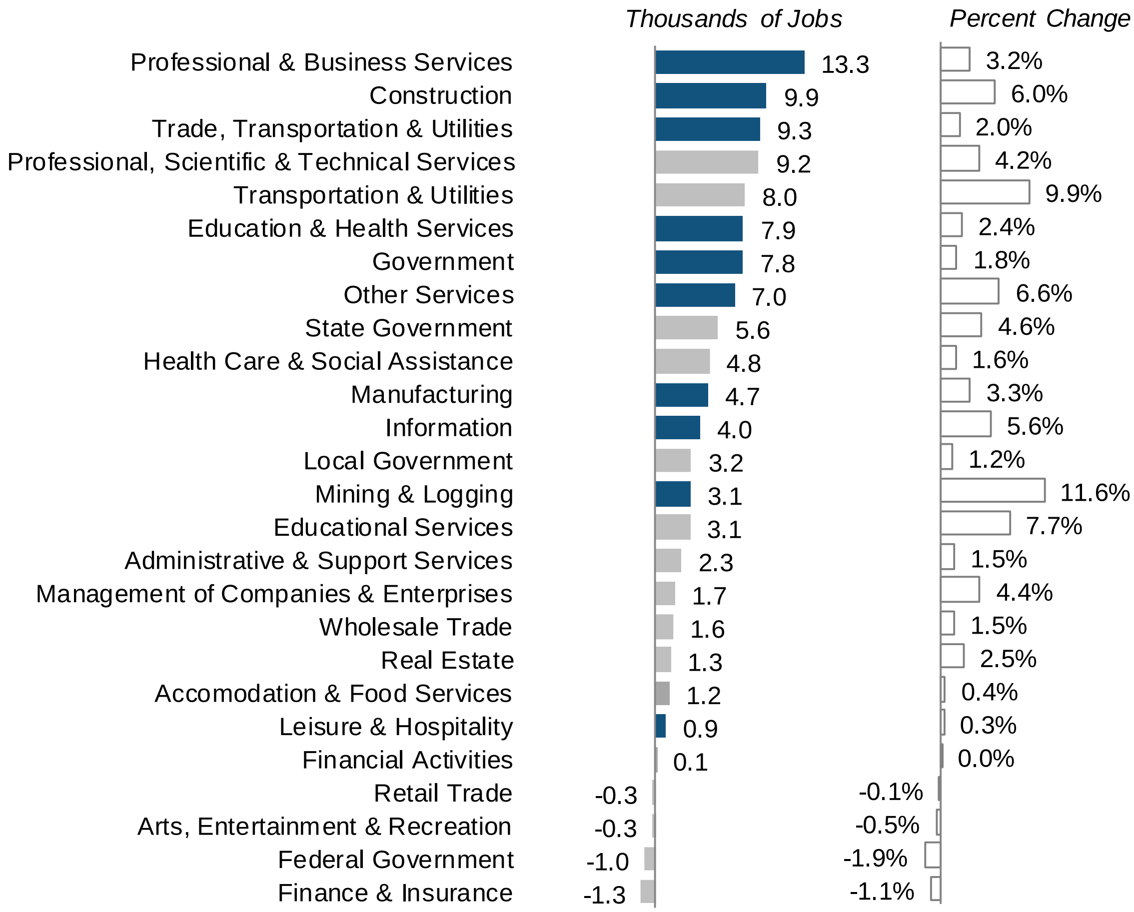


Source: U.S. Bureau of Labor Statistics. Data are seasonally adjusted. Blue (dark) shading indicates a supersector, while grey (light) shading indicates a subsector.

The U.S. unemployment rate has been hovering at historic lows since September 2018, falling to 3.7 percent. The nation's unemployment rate averaged 3.9 percent year-to-date, down from 4.4 percent from the same period a year ago. The "underemployment" (U6) rate, a broader measure that captures discouraged workers and those who work part-time but desire full-time work, ticked up slightly to 7.6 percent in November (Figure 34, top right).

Colorado's labor market remains tight. The Colorado labor market remains one of the strongest in the country. After slowing in 2017, employment indicators through the first ten months of the year show acceleration in growth. Colorado employment rose 2.5 percent through October over year-ago levels, and gains occurred across nearly all sectors (Figure 36). This estimate includes revisions expected by Legislative Council Staff during the Bureau of Labor Statistics' annual rebenchmarking process. Professional and business services, one of the largest sectors in the state, added 13,300 jobs from October 2017, a 3.7 percent increase. Employment in the mining and logging supersector continues to trend upward, although volatility in oil markets may put a drag on hiring in the coming year.

Figure 36
Colorado Job Gains and Losses by Industry
Year-over-Year Change, October 2018 over October 2017



Source: U.S. Bureau of Labor Statistics. Data are seasonally adjusted. Blue (dark) shading indicates a supersector, while grey (light) shading indicates a subsector. Nonfarm employment estimates include revisions expected by Legislative Council Staff during the Bureau of Labor Statistics' annual rebenchmarking process.

Colorado's unemployment rate is still among the lowest in the country, and the number of new and continued unemployment claims remain near historic lows. The state unemployment rate has averaged 2.9 percent year-to-date through October 2018. Many employers are reporting that it is becoming increasingly difficult to find the talent and skilled labor needed to grow their businesses.

- U.S. nonfarm employment is expected to add jobs at a pace of 1.6 percent in 2018, before moderating to 1.3 percent in 2019, and 0.3 percent in 2020 as labor markets grow tighter.
- In Colorado, nonfarm employment will grow 2.7 percent in 2018, before slowing to 1.7 percent growth in 2019, and 1.0 growth in 2020.

Monetary Policy and Inflation

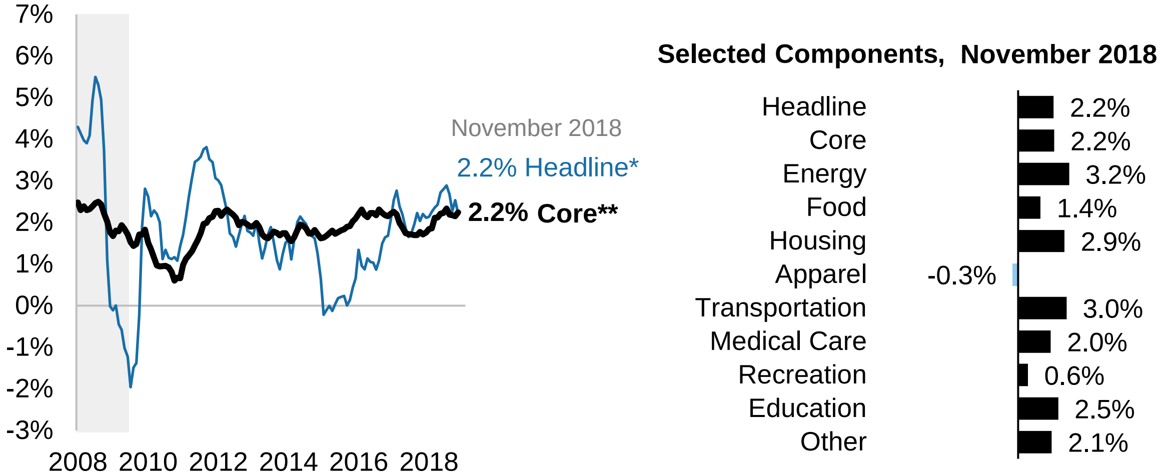
Interest rates are on the rise. The Federal Reserve is prioritizing the inflation side of its dual mandate, pursuing an agenda of interest rates hikes over 2018 and 2019. The Federal Open Market Committee's (FOMC's) December meeting raised the target rate to 2.25 to 2.50 percent, up 25 basis points from September. The Fed has increased interest rates for five straight quarters now and eight of the previous nine.

The hiking cycle is projected to slow to two hikes in 2019, down from three expected hikes in September. The Fed will weigh dollar appreciation, rising corporate debt, and slowing job growth against the inflation outlook when making decisions on interest rates next year. A survey of FOMC members at December's meeting revealed more of a consensus than September's meeting on rate hikes next year, with 11 of 17 FOMC members expecting no more than two rate increases. Of the 11 members not expecting more than two hikes, six believe one rate increase will suffice.

The consistent increase in interest rates represents a sea change for borrowers during the late chapters of the current business cycle. The federal funds rate sit at 2.50 percent in just a year and a half after lurking below 1.00 percent for the previous eight and a half years. Tighter monetary policy is acting to control inflation and stave off labor market overheating. Rising interest rates will encourage businesses and consumers to migrate a portion of their expenditures toward savings, and this forecast anticipates an attendant increase in interest income. In Colorado, higher rates appear to have imposed a new constraint on home sales, as the average interest rate for a 30-year mortgage has climbed by about one percentage point, from roughly 4 percent to 5 percent, this year.

Inflationary pressures are mounting, with downside risk from energy. U.S. consumer prices, as measured by the consumer price index for all urban areas, increased 2.2 percent in November relative to the same month a year prior (Figure 37). Core inflation, which excludes food and energy, also increased 2.2 percent over this period. As shown in Figure 37, U.S. consumer prices were driven by energy price increases, attendant transportation prices, and housing costs over the past year. International trade conditions, and rising wage growth are expected to continue to put upward pressure on prices, even as higher interest rates and slower home price appreciation moderate growth in the housing component. In December, energy prices dropped sharply on weakened global demand and strong production. If prices remain low, inflationary pressures are expected to moderate in 2019.

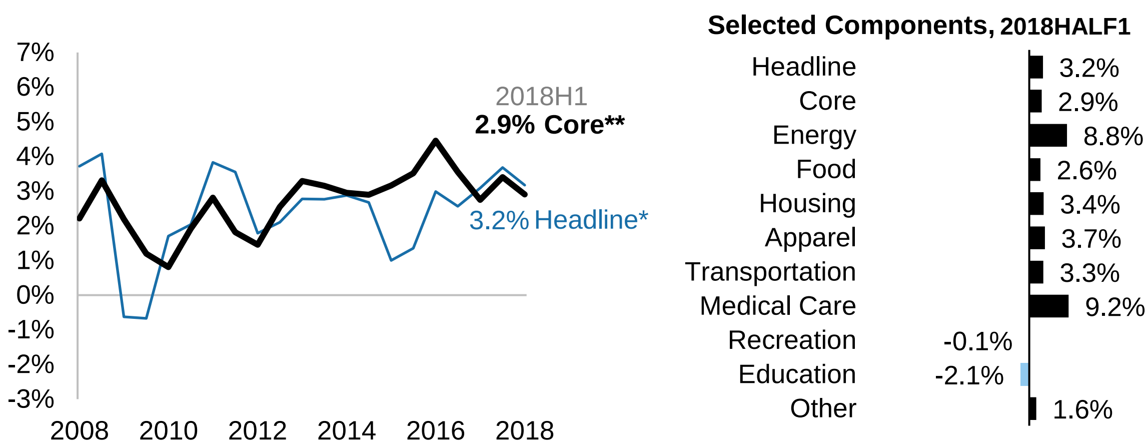
Figure 37
Consumer Price Index Inflation for All Urban Areas in the U.S.
Percent Change in Prices, Year-over-Year



Source: U.S. Bureau of Labor Statistics. Inflation is calculated as the percent change in prices.
**Headline inflation includes all products and services. **Core inflation excludes food and energy prices.*

Consumer prices in Colorado will continue to rise faster than national rates. In the first half of 2018, the headline Denver-Aurora-Lakewood consumer price index rose 3.2 percent over year-ago levels, while core prices rose 2.9 percent (Figure 38). Housing price inflation abated significantly relative to last year and measured 3.4 percent year-over-year. Rising energy costs accounted for a significant share of inflation, though these pressures are expected to ease in the second half of the year with the drop in crude oil prices.

Figure 38
Denver-Aurora-Lakewood Consumer Price Index (CPI-U) Inflation
Percent Change in Prices, Year-over-Year



Source: U.S. Bureau of Labor Statistics. Inflation is calculated as the percent change in prices.
**Headline inflation includes all products and services. **Core inflation excludes food and energy prices.*

- Consumer prices for the Denver-Aurora-Lakewood area are expected to increase 3.0 percent in 2018 and 2.8 percent in 2019. By comparison, the national measure for all urban areas is expected to rise 2.5 percent in 2018 and 2.3 percent in 2019.

Households and Consumers

Economic conditions for households have strengthened, with accelerating personal income and improved consumer confidence driving increased spending and healthy balance sheets. Both wage earners and investors are on track for two more years of higher incomes, outpacing expected inflationary pressures. Household conditions are uneven across geographies, with metropolitan areas generally outperforming small cities and rural economies at both the state and national levels.

Personal income is accelerating. As shown in the top half of Figure 39, U.S. personal income grew 4.6 percent in the third quarter of 2018 compared with the same quarter last year. After two disappointing years, a tight national labor market and the arrival of higher interest rates have put U.S. households on track for their best year of income growth since 2015. While personal income growth remains modest to moderate by the standards of past expansions, the outlook for both wage earners and investors has improved and remains on the upswing.

Wage and salary contributions are improving despite demographic drag. Wage and salary earnings are driving broader personal income growth. This increase in wages and salaries is now attributable to wage inflation rather than increasing employment, a sign that the tight labor market is finally delivering on its promise to wage earners. Through October, average hourly earnings increased at a rate of 3.1 percent year-over-year, their fastest increase during the current business cycle. Higher wages offer particularly high returns elsewhere in the economy, as they represent the largest component of household income and frequently magnify consumer spending.

While employee compensation has been rejuvenated over the past year, wage and salary growth is weighed down by demographic factors. On an inflation-adjusted, per-worker basis, wages and salaries fell during both 2016 and 2017. Many economists attribute this phenomenon to the retirement of long-tenured veteran employees, who earned relatively high wages and salaries, and their replacement by younger, less-experienced employees who earn less. This demographic skew may dissipate if remaining employees receive wage increases commensurate with the responsibility they assume as their retiring coworkers depart.

Investment income is poised to continue its rise. The contribution from dividends, interest, and rent is also on the upswing. This component of personal income grew 4.7 percent in 2017 but surged to 5.7 percent in the third quarter of 2018 compared with the same period last year. The increase is driven by higher dividend payments after corporate tax rates were cut and the uptick in interest rates. Interest income increased 7.7 percent in the third quarter of 2018 compared with last year's third quarter figure, and is poised to post further gains as monetary policy tightens.

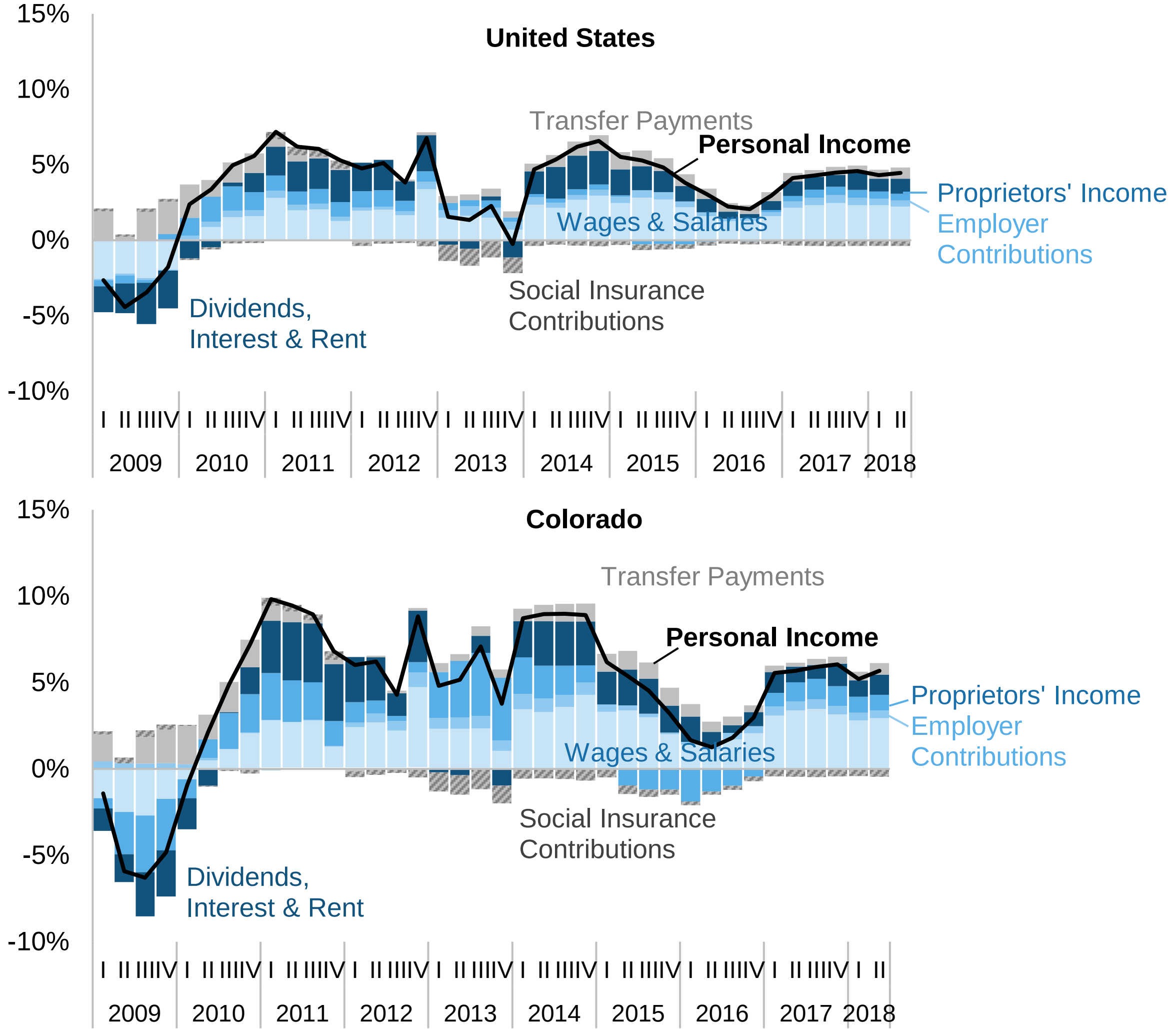
Colorado incomes are increasing in line with national trends. Personal income in Colorado increased 5.7 percent in the second quarter of 2018 compared with the second quarter last year, as shown in the bottom half of Figure 39. The rate of increase represents acceleration from the first quarter's 5.2 percent year-over-year rate. Colorado personal income growth has outpaced national figures for much of the current business cycle. Currently available data suggest that income growth may now be in line with the broader national economy, though future survey information may confirm or contradict this finding.

The composition of Colorado personal income growth is even more skewed towards wage and salary income than in the nation at large. While Colorado wage earners are outgaining their national counterparts, investors – particularly property lessors – are beset by a suddenly high-supply rental market and deflating rent pressure.

- U.S. personal income is projected to grow 4.5 percent in 2018, accelerate to 5.2 percent growth in 2019, and then moderate with slower economic activity in 2020.

- Similarly, personal income in Colorado will rise 5.8 percent in 2018, accelerate to 6.4 percent in 2019, and moderate to 5.0 percent growth in 2020. Wages and salaries will lead growth, with strong contributions from interest earnings, and rents.

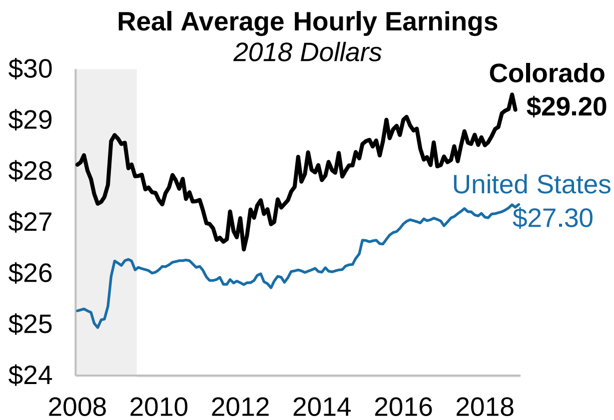
Figure 39
Personal Income and Its Components
Contributions to Percent Change, Year-over-Year

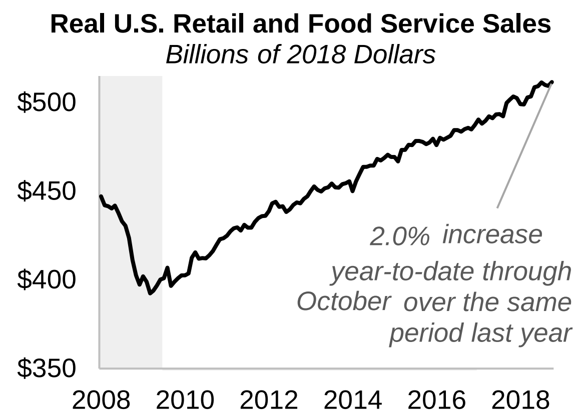


Source: U.S. Bureau of Economic Analysis with Legislative Council Staff calculations. Data are not adjusted for inflation.

Consumers continue to drive growth in the U.S. and Colorado economies. On a strong labor market and improving wage gains, consumer confidence remains near record highs. On an inflation adjusted basis, retail sales in October rose 2.0 percent relative to year-ago levels (Figure 40, right). The broader indicator of consumer spending, personal consumption expenditures, suggests that consumers continue to be the primary driver of economic activity in the U.S. Personal consumption expenditures rose 3.6 percent in the third quarter over the second on an inflation-adjusted seasonally adjusted annual rate.

Figure 40
Consumer Spending Drivers and Levels



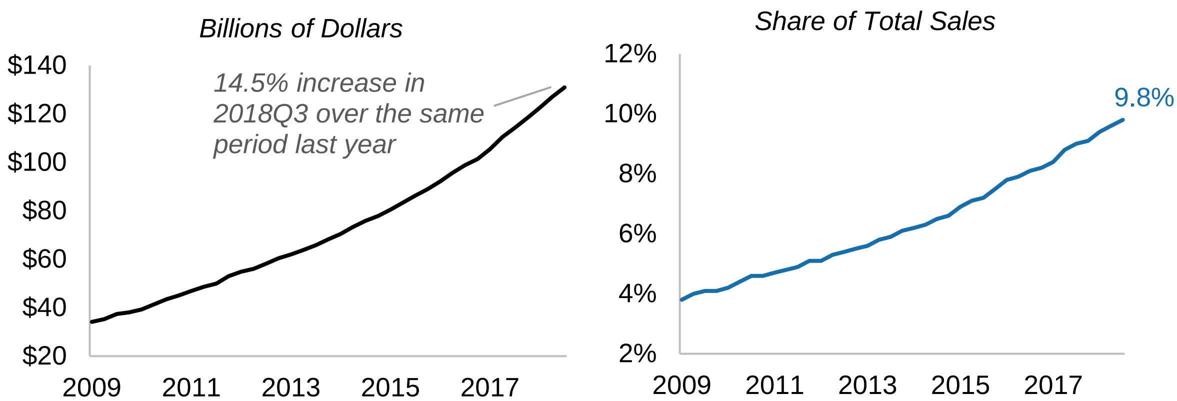


Sources: U.S. Bureau of Labor Statistics (left) and U.S. Census Bureau (right); adjusted for inflation using the consumer price index for all urban areas (CPI-U) to the dollar value of most recent month of data. Data are seasonally adjusted.

Retail trade activity continues to rise. U.S. retail and food service sales were up 5.3 percent year-to-date through October over the same period in 2017 when not adjusted for inflation. Both brick-and-mortar and online retailers experienced growth in sales, though online sales continue to increase at a faster pace. All categories of retail sales have increased year-to-date except for sporting goods and hobby retailers. Following strong auto sales in 2014 and 2015, motor vehicles and parts sales, which represent the largest share of retail sales, have barely kept pace with inflation. In Colorado, new passenger car sales are down 11.7 percent year-to-date through July, while light truck sales are up 2.8 percent. Used car and light truck sales are down 1.2 percent over the same period. Rising interest rates and higher input costs have put upward pressure on the cost of purchasing a vehicle.

Online sales continue to pick up market share. E-commerce sales were up 14.5 percent year-over-year in the third quarter of 2018, compared to a 5.3 percent increase in total retail sales during the same period (Figure 41, left). Online sales represented 9.8 percent of total retail sales during the third quarter this year, up from 9.0 percent during the same quarter last year (Figure 41, right).

Figure 41
E-commerce Sales

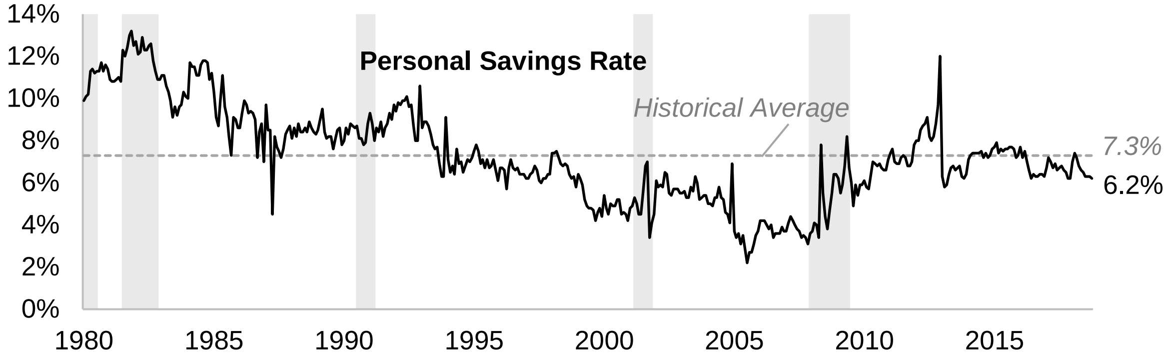


Source: U.S. Census Bureau. Data are seasonally adjusted.

Household savings rates are slightly below historical averages. The personal savings rate continues to hover slightly below the historical average, reaching 6.2 percent as of October 2018 (Figure 42, top). Data suggest that the savings rate has remained at or near the historical average dating back to 1985 through the majority of the economic recovery and expansion post-Great Recession. This suggests that growth in aggregate household consumption has roughly matched total income growth over the past nine years.

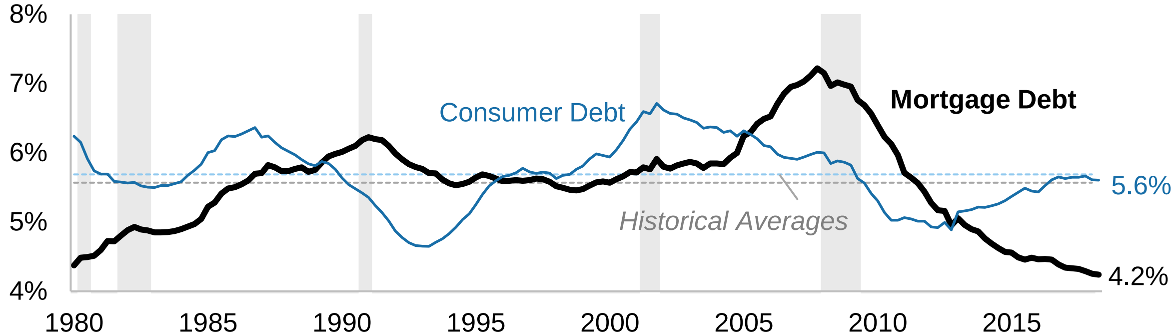
Growth in household debt has slowed. Consistent with prior economic expansions, consumer debt has expanded as a share of disposable household income over the past nine years. However, in late 2017 and year-to-date in 2018, the U.S. consumer debt service ratio has stabilized at the historical average rate of about 5.6 percent (Figure 42, bottom). Mortgage debt service ratios have also stabilized, but at historical lows, pulled down by low interest rates and mortgage refinancing, which have reduced the cost of borrowing to purchase a home over the past decade.

Figure 42
U.S. Household Savings Rate and Debt Ratios



Source: U.S. Bureau of Economic Analysis.
**The personal savings rate is calculated as the ratio of personal saving as a percentage of disposable personal income. Data are shown as seasonally adjusted annual rates and are through October 2018.*

Debt Service Ratios**

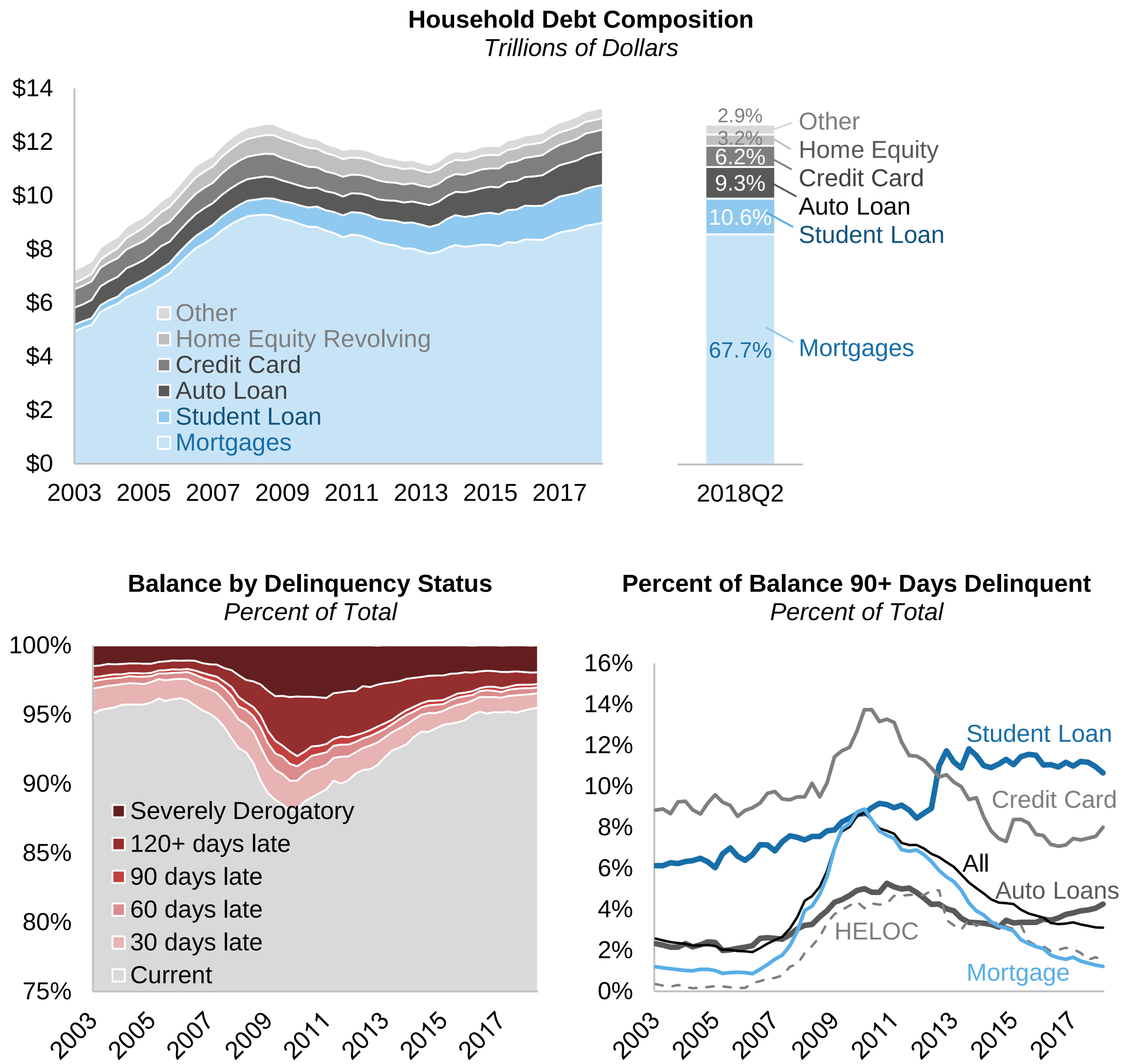


Source: Federal Reserve Board of Governors.
***Debt service ratios are calculated as the ratio of household mortgage and consumer credit (e.g. credit card) debt payments to disposable household income. Historical averages are calculated from 1980 to the most recent quarter of data (2018Q2). Data are seasonally adjusted.*

Total delinquencies remain stable, while auto and student loan delinquencies rise. Growth in household debt and student loan debt picked up in the third quarter of 2018 on rising interest rates, while growth in other forms of debt moderated or declined (Figure 43, top). Total household debt rose 4.3 percent in the second quarter over year-ago levels. Mortgage debt, which makes up the largest share of household debt, rose 4.5 percent. Growth in credit card debt slowed to 4.5 percent, growth in auto loan balances rose 4.3 percent, and growth in student loan debt accelerated in the third quarter, rising 6.3 percent over year-ago levels.

The share of debt that is delinquent remains stable (Figure 43, bottom left). As of the third quarter of the year, 4.7 percent of debt was 30 or more days delinquent, and 3.1 percent was severely delinquent (more than 90 days past due). Delinquency rates for total household debt have generally fallen since 2010, led primarily by improvements in mortgage debt payments. By contrast, delinquency rates for auto loans and credit card loans continue to rise, and student loan debt delinquencies remain elevated (Figure 43, bottom right).

Figure 43
U.S. Household Debt Composition and Delinquency Rates



Source: Federal Reserve Bank of New York/Equifax.

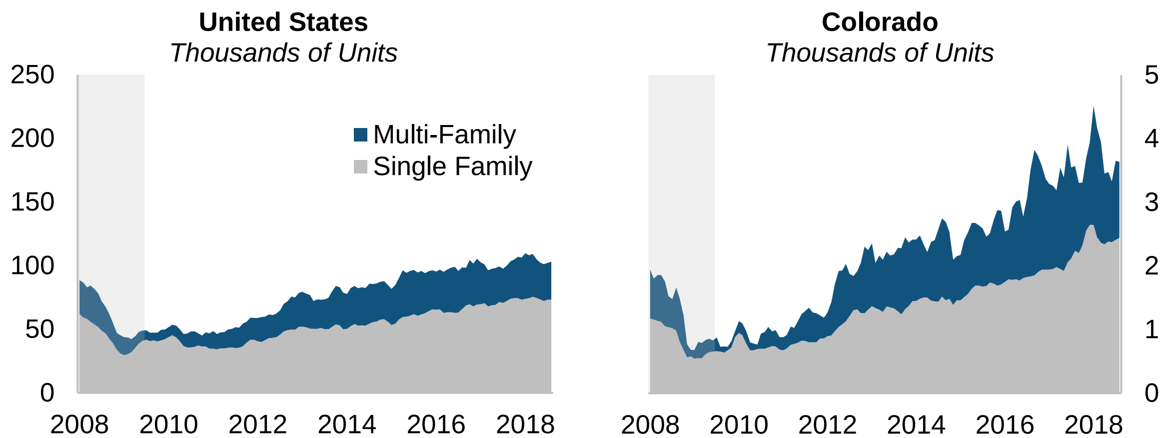
Consumer and mortgage debt in Colorado. Average consumer debt for Coloradans fell in the first quarter of 2018 relative to the same period a year prior, according to the biannual Consumer Credit Report published by the Federal Reserve Bank of Kansas City. The Kansas City Fed estimate of consumer credit excludes first mortgages, which typically are not used to fund consumer spending, but includes all other sources of household debt. Due to a higher cost of living, Coloradans carry higher average debt loads than U.S. residents as a whole. Yet, delinquency rates among Coloradans are lower than the national average across all major loan types, including mortgage, auto loan, student loan, and consumer finance debt.

Residential Real Estate

Real estate markets in many areas of the U.S. have softened with the rise in interest rates. National residential real estate market indicators have been pointing to a softening in the housing market in recent months. Growing affordability concerns, stemming from rising construction costs, a shortage of skilled labor, and rising interest rates have slowed residential fixed investment. Homebuilders continue to report strong demand for new housing fueled by a strong labor market and steady income growth, and thus are slowly ramping up production. Most of the building encompasses the move-up and high-end levels, not the entry level where demand is strongest since high construction costs are making it more difficult to profit on lower-priced homes. After years of robust price increases in the Metro Denver area, the regional housing market is finally showing signs of slowing. However, other areas in the state are experiencing solid housing growth as they benefit from the higher costs in the Metro Denver region.

Homebuilder confidence is waning. Despite strong demand, homebuilders are faced with higher building costs, rising mortgage rates, and a supply-demand mismatch, all of which are dampening homebuilder confidence. Lumber prices spiked this summer from tariffs on Canadian imports, while higher labor costs due to a shortage of construction workers both continue to hinder the industry. Mortgage rates have moderated after surging in September and October; however, the average 30-year fixed rate in November was 4.87 percent, up 24 percent from the same month last year. These rates strain affordability and sideline many potential homebuyers, specifically first-time purchasers. In November, the Housing Market Index, a monthly survey designed to take the pulse of residential builder confidence, reported a reading of 60, the lowest level in more than two years. A reading above 50 indicates a favorable outlook on home sales, while below 50 indicates a negative outlook. As shown in Figure 44, new permits for residential construction in the U.S. have moderated over the past year.

Figure 44
New Residential Construction Housing Starts

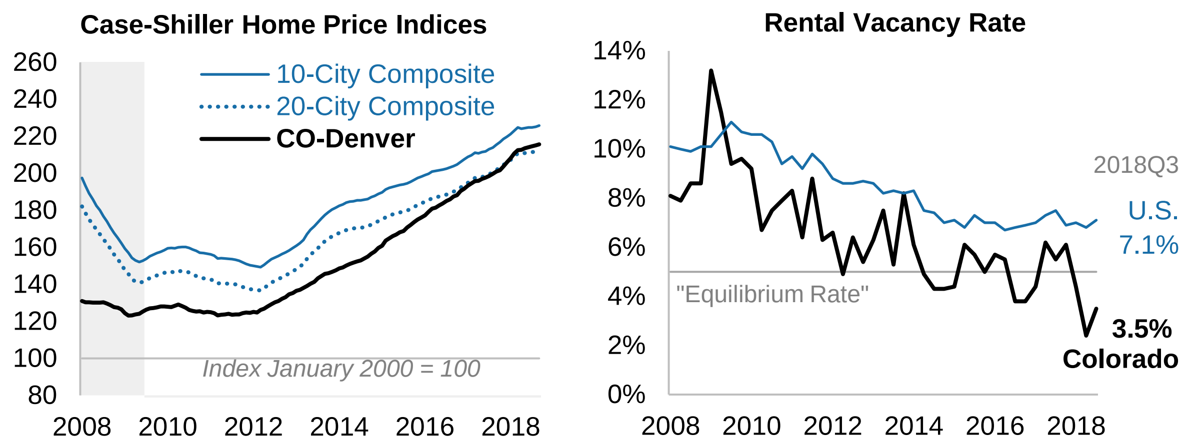


Source: U.S. Census Bureau. Data shown as three-month moving averages. Data are seasonally adjusted.

Evidence is mounting that the U.S. housing market is tilting towards buyers. Total U.S housing inventory has been steadily increasing throughout the year, slowing house price appreciation and providing buyers with more options. In October, the number of active listing counts was up by 4 percent from that same period last year. Real estate agents are reporting that fewer buyers are waiving contingencies and fewer homes are selling over their list price. The Case-Shiller 20-city composite home index (Figure 45, left) increased 5.2 percent through September 2018 relative to the same period last year, representing a deceleration from the 6.2 percent increase posted in 2017.

Colorado residential market indicators remain strong. Colorado's real estate market remains one of the hottest in the country, with the number of residential permits issued in the state outpacing the national market. Historically low rental vacancy rates (Figure 45, right) have kept demand for new residential construction at high levels. Through October 2018, total housing permits for the state were up 5 percent from the same period one year ago. Growth has been primarily driven by single family permits, increasing by almost 22 percent. In contrast, multi-family permit issuances were up 3 percent during the same period. Some homebuilders, specifically in the City and County of Denver, have recently transitioned from multi-family developments to single family structures, as an oversupply of attached homes has caused rent prices to decelerate.

Figure 45
U.S. and Colorado Shelter Price Indicators



Source: S&P Dow Jones Indices LLC. Seasonally adjusted. Data through September 2018.

Source: U.S. Census Bureau. Data through the third quarter of 2018.

Nonresidential Construction

Nonresidential construction remains elevated nationally. Nonresidential construction activity continues to pick up momentum in both the U.S and Colorado markets. Total U.S. nonresidential spending through October 2018 was $751.0 billion, up 5.0 percent from the same period last year. Investment has rebounded slightly from last quarter, as it took a hit over the summer months.

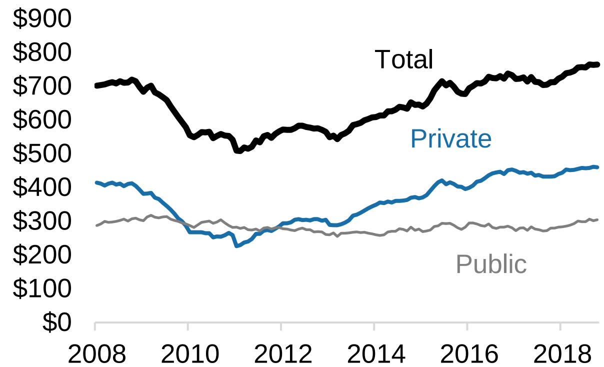
Nationally, both public and private investments have been contributing to the improvement, but spending on public projects has been primarily driving growth in the nonresidential construction market through most of 2018, with the largest year-over-year increases occurring in water supply, conservation and development, office, and commercial projects (Figure 46). Improving state and local government finances have allowed many government entities to spend more on infrastructure projects.

Nationally, investment in public nonresidential projects continued to pick up momentum through the first ten months of the year compared with year-ago levels, increasing by 3.6 percent. Spending is up in 12 of 13 public construction sectors, with large components such as sewage and waste disposal, transportation, and conservation development projects experiencing strong growth from one year prior totals. A strong U.S economy has given many states a budget surplus for the first time in years, allowing them to invest in more public projects.

Private nonresidential spending also continues to improve, but at slower rates compared to prior years. Investment on public projects has been recently constrained as private borrowing costs have increased and concerns that some areas in the country are overbuilt or approaching overbuilt status.

Activity in Colorado remains strong, though labor constraints are limiting some development. Colorado's nonresidential construction market is also performing well, and growth is becoming broader across the state, which has been mainly restricted to the Metro Denver and Northern regions. Several large projects in the state are scheduled to start in 2019 and continue to support the industry. However, both U.S. and Colorado construction contractors continue to cite labor constraints as the major impediment to growth in the industry.

Figure 46
U.S. Nonresidential Construction Spending
Billions of Dollars



Source: U.S. Census Bureau. Monthly data are seasonally adjusted, annualized, and through October 2018.

Through October 2018, almost 1,500 nonresidential projects broke ground in Colorado for a total value of nearly $7.0 billion, or an increase of 27.5 percent from the same period last year. Over half of these nonresidential projects commenced in El Paso, Larimer, and Arapahoe Counties. Manufacturing facility starts, especially in Weld County, continue to support the nonresidential construction market, accounting for almost 15 percent of total statewide spending through the year. In March 2018, DCP Midstream, an energy company headquartered in Denver, started construction on their second gas processing plant.

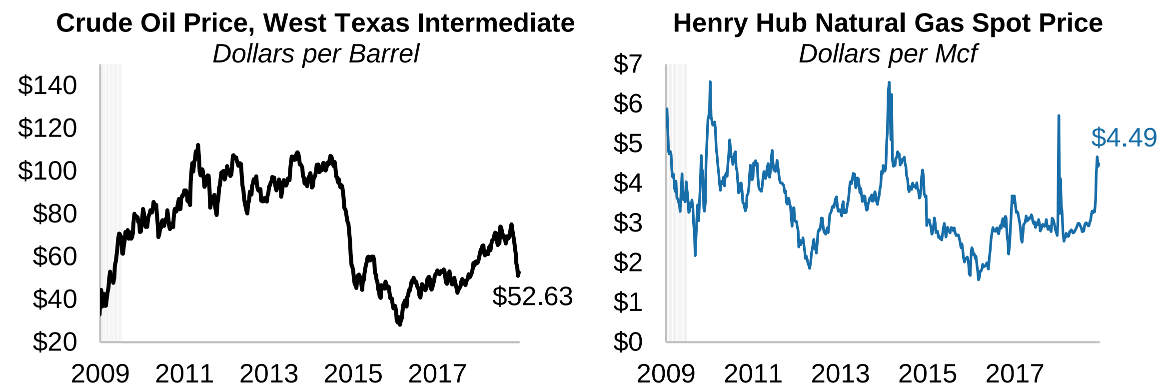
Price effects suggest downside risk. Players in the nonresidential construction market are monitoring recently imposed tariffs on steel and aluminum that are expected to inflate construction materials prices over the next several months. In addition, rising interest rates and wage pressures are putting upward pressure on the price of new construction projects. If these costs increase too quickly, momentum in the industry may significantly slow. U.S. and Colorado construction contractors continue to report that worker shortages are the main factor restricting growth in the industry. According to a recent survey from the Associated General Contractors of America, the overwhelming majority of construction firms are having a hard time finding qualified workers. Nearly 92 percent of the 88 construction firms surveyed reported that they needed to hire additional skilled craft workers, while 79 percent said they needed additional salaried office personnel, over the coming 12 months.

Energy Markets

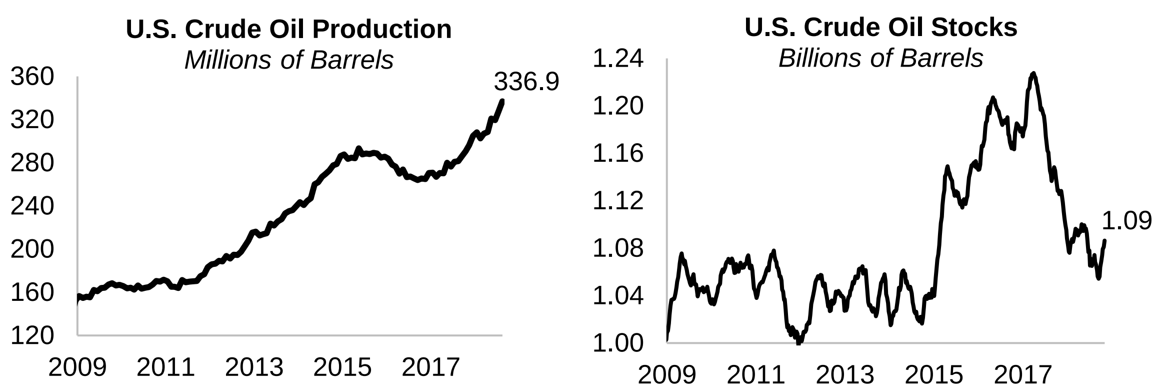
The oil and natural gas markets in Colorado and the nation continued to develop new wells in the third quarter of 2018, supported by slightly higher prices for oil and natural gas. New well construction has led to higher production levels, which have been absorbed by global demand for petroleum products until recent months. Coal production remains steady following the coal industry reorganization in 2016.

Crude oil prices dropped considerably in November. Crude oil prices experienced three separate, large, and historic price declines in the middle of November following reports of higher production in Russia, Saudi Arabia, and the United States, as well as fears about a weakening global economy. Crude oil prices were above $70 per barrel at the end of October and declined to $52.63 per barrel in the second week of December (Figure 47, top left). Production levels and prices may remain volatile into 2019.

Figure 47
Selected Indicators of Oil and Gas Industry Activity



Source: U.S. Energy Information Administration. Weekly average prices. Data are not seasonally adjusted.



Source: U.S. Energy Information Administration. Data are shown as a three-month moving average and are not seasonally adjusted.

Source: U.S. Energy Information Administration. Data are not seasonally adjusted.

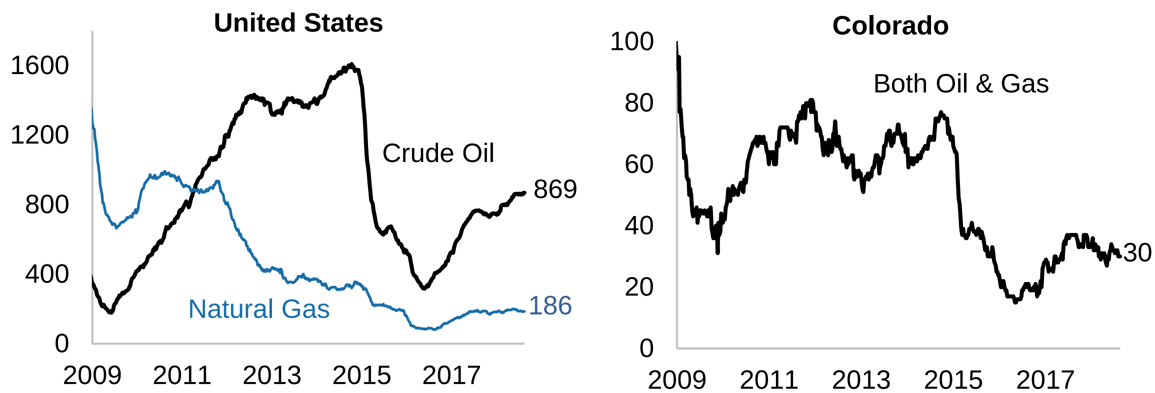
The Energy Information Administration expects the domestic crude oil production will average 10.9 million barrels per day in 2018 and 12.1 million barrels per day in 2019. This would surpass the previous record of 9.6 million barrels per day set in 1970. Much of this growth is due to new production in the Permian Basin in western Texas and eastern New Mexico. Growth may slow in the basin due to bottlenecks in the area's pipeline infrastructure, which is near full capacity. New pipelines require specialized steel, which is currently only available from Brazil; however, steel imports are subject to current U.S. tariffs. U.S. crude oil production increased through the summer to 336.9 million barrels in August 2018 (Figure 47, middle left), a 19.6 percent increase from August 2017.

Increased domestic production is being processed and hitting the market, rather than increasing crude oil stocks (Figure 47, middle right). Some of this oil is being exported and some of it is being refined for domestic uses. According the Energy Information Administration, oil refinery capacity increased by 862,000 barrels per day between 2011 and 2018, keeping oil refinery utilization below highs set in 1998 despite processing record amounts of crude oil.

Natural gas prices spiked in November. Natural gas prices averaged $4.49 per thousand cubic feet (Mcf) in the second week of December (Figure 47, top right). The increase in prices is due to several severe winter storms that caused household consumption of natural gas to spike 26 percent. In addition to household use, natural gas is increasingly used for electricity generation. The U.S. Energy Information Association estimates that natural gas consumption for power generation accounted for about 26 percent of electrical power in the U.S. in July and is expected to continue to grow as electricity generation companies continue to retire coal-fired power plants due to a cheap, reliable supply of domestic natural gas.

New drilling activity remains tentative. New drilling activity, as measured by active drilling rigs (Figure 48, left), increased throughout 2017 and into 2018, reaching a total of 869 oil rigs and 186 natural gas wells in the third week of August. New drilling activity is in response to stable prices for oil and natural gas and sustained demand for petroleum products from the expanding economy.

Figure 48
Active Rig Counts



Source: Baker Hughes. Data are not seasonally adjusted.

Colorado energy activity. In Colorado, stable energy prices have induced continued investment in new oil and natural gas development. A survey of oil producers in the Federal Reserve's Tenth District, which includes Colorado, reported acceleration of the oil and gas industry in the third quarter of 2018. Firms reported that a price of $55 per barrel of crude oil is needed to profitably extract crude oil, compared with firms, expected future price of above $70 per barrel. Firms reported a profitable price of natural gas of $3.23 per Mcf, while prices in the next two years are expected to be less than this level.

According to the survey, about 60 percent of firms plan to invest any additional financial capital in new oil and gas development, and about 40 percent planned to reduce investments. Regional oil and gas producers are well positioned to improve their balance sheets and are set up for future oil and gas development so long as crude oil prices gain ground.

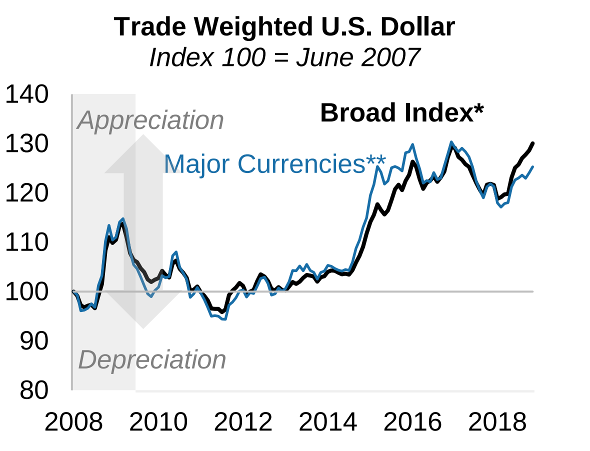
According to the Colorado Department of Natural Resources, coal production in Colorado decreased 4.5 percent in the first nine months of 2018 compared with the same period in 2017. This is similar to national data, where the Energy Information Administration estimates coal production will fall 4.0 percent between 2017 and 2018 to 691 million short tons, the lowest level of coal production since 1979. About 93 percent of domestic coal is used to generate electricity, but the electricity sector has been retiring coal-fired power plants in favor of natural gas fired plants and renewable energy.

Global Economy

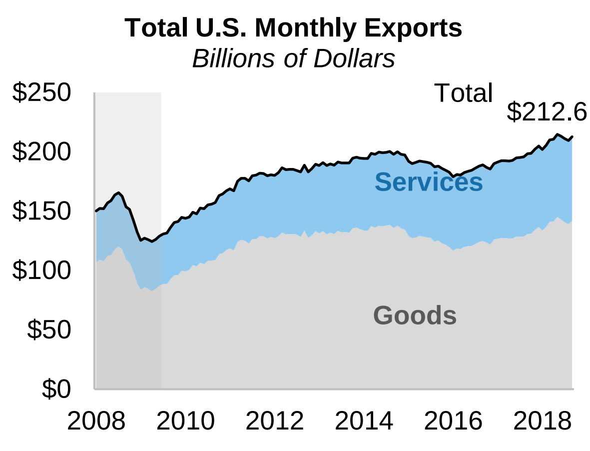
The global economy is showing signs of slowing. Strong U.S. economic growth and a tight labor market have spurred interest rate hikes, which in turn contributed to the strengthening of the U.S. dollar relative to foreign currencies. These trends have had adverse impacts on some emerging and developing economies, contributing to a slowdown in activity that is expected to persist well into 2019. Trade tensions continue to pose a downside risk to the global outlook, as do tighter financial conditions among advanced economies and ongoing geopolitical tensions.

The U.S. dollar continues to strengthen. The relative strength of the U.S. economy has boosted the strength of the dollar to its highest point since 2016 when compared to other major currencies (Figure 49, left). The trade-weighted U.S. dollar index is up over 9.5 percent since the beginning of the year. A strong dollar makes U.S. exports more expensive, threatening current export levels (Figure 49, right), while also making imports relatively cheaper, thus widening the trade deficit.

Figure 49
Selected Indicators of U.S. Trade Activity



Source: Federal Reserve Board of Governors. *A weighted average of the foreign exchange values of the U.S. dollar against currencies of major U.S. trading partners. **Includes a subset of broad index currencies that circulate widely in global exchanges.



Source: U.S. Bureau of Economic Analysis (balance of payments basis). Data are seasonally adjusted but not adjusted for inflation.

The International Monetary Fund (IMF) released an updated outlook for the global economy in October, revising the prior forecast of global economic output down for this year and next by 0.2 percent. Global growth is projected at 3.7 percent in both 2018 and 2019. However, more recent economic indicators point to a slowdown in global economic activity. The IMF forecast for advanced economy growth was revised upward by 0.1 percent in 2018 to 2.4 percent.

Growth is projected to slow among advanced economies. Growth among advanced economies is projected to slow from 2.4 percent in 2018 to 2.1 percent in 2019. Euro-area economic activity is projected to slow to 2.0 percent growth in 2018, down from 2.4 percent in 2017. Both Germany and France are forecast to see comparable growth in the coming year relative to the prior, while Italy's economic activity is projected to slow to 1.0 percent growth in 2019. These modest growth projections accompany the European Central Bank's plans to phase-out its bond-buying quantitative easing program at the beginning of 2019, which has been in place since March 2015. Interest rates in the euro zone hover around 0.0 percent, while inflation has crept up over 2.0 percent in recent months. Japan's economy contracted in the third quarter this year at an annualized rate of 1.2 percent, fueled in part by several natural disasters. Exports are also down in the country and are expected to face further headwinds, as the global economy cools down and trade tensions heat up.

Brexit negotiations pose downside risk to both the U.K. and continental Europe. As of the date of this publication, the agreement reached by leaders on both sides has not been palatable to either citizens or Parliament in the U.K. The IMF projects that a hard Brexit, one in which the EU and UK do not reach an agreement by their March 2019 deadline, could mean a loss of GDP of almost 4 percent in the UK and Ireland by 2030 and a 1.5 percent loss across the EU. Additionally, the ongoing economic crisis in Italy presents challenges for the entire EU area. Italy's debt is about 131 percent of its GDP, and third quarter GDP this year declined 0.5 percent from the second quarter. Ten-year bond yields have doubled since February when the new government took control, a clear signal of concern regarding the political and economic uncertainty in the country.

Growth is mixed among emerging and developing counties. The broad range of countries classified as "emerging" and "developing" is projected to grow at a 4.7 percent clip for 2019, a rate consistent with that projected for 2018. Latin America's two largest economies, Mexico and Brazil, show mixed signs under new reform-driven, populist presidents. Brazil's economy is forecast to grow 2.4 percent in 2019, up from 1.4 percent in 2018; however, fiscal challenges loom large. The country has benefitted from trade tensions between China and the U.S., since China looked to Brazil to fill the soy export void the U.S. left when China imposed retaliatory tariffs on U.S. soybeans. On the upside, strong growth is project in Asia's EMDEs, with India leading the way at over 7 percent growth for this year and next.

China's economy is starting to cool. Trade tensions, weaker industrial production, and faltering consumer confidence are putting downward pressure on China's economy. The yuan is down over 6 percent against the dollar since the start of the year in response to trade tensions. Infrastructure spending ticked back up, after growing at a slower pace at the beginning of the year, as the government attempts to offset slower consumer spending and an overall slowdown. According to the OECD confidence survey, consumer confidence in China has fallen each month since March to its lowest level in a year. The trade tensions with the U.S. has pulled forward U.S. orders of Chinese goods in an attempt to get ahead of tariff increases. Depending on the outcome of the ongoing negotiations between the two countries, the country may see lower exports at the beginning of next year as a result of the anticipatory orders.

International Trade

While trade tensions have started to cool off some, near-term risks from foreign trade remain high and skewed to the downside as trade agreements remain uncertain. The U.S. imposition of tariffs began almost a year ago in January 2018, and the effects continue to mount as shifting supply chains and the higher cost of imports have impacted U.S. businesses. Risks could turn to reward if the U.S. is able to negotiate more favorable trade conditions with China, Mexico, and Canada, thereby securing long-term gains.

NAFTA 2.0. The new North American Free Trade Agreement (NAFTA) agreement, known as the U.S.-Mexico-Canada Agreement (USMCA), was signed by the three member countries' heads of state on November 30. It still must be ratified by national legislatures in all countries to take effect. Although the agreement marks progress, the risks surrounding its final passage remain elevated. The major changes to the new deal include:

- country rules of origin for vehicles increased from 62.5 percent to 75 percent;
- improved worker protections and higher wages for automotive factory workers, particularly in Mexico;
- the opening of the Canadian market to U.S. dairy imports; and
- a 16-year sunset clause and reviews of the agreement every 6 years.

As a result of the vehicle rules of origin increase and higher auto worker wages, car prices are projected to increase on higher input costs. Additionally, if auto manufacturers do not comply with the new rules, a 2.5 percent tariff will be levied on the vehicle. The new agreement has had no effect on the retaliatory tariffs imposed by Canada and Mexico on U.S. exports. Canada and Mexico have signaled a lift in these retaliatory tariffs if the U.S. lifts its steel and aluminum tariffs.

The U.S. and China agreed to come back to the table to discuss rising tariffs. The last round of U.S. tariffs was imposed in September on $200 billion of Chinese imports, with rates originally set to rise in January 2019. A 90-day détente was agreed to by both the U.S. and China, giving both parties time to negotiate some of the stickier points: intellectual property theft; auto tariffs on U.S. imports; and narrowing the U.S. trade deficit. If these issues are not settled, additional retaliatory measures are on the table, including increasing the tariff rate from 10 percent to 25 percent on $200 billion worth of Chinese imports, tariffs on the remainder of Chinese imports (about another $200 billion), and non-tariff barriers, like licensing and inspection delays. Table 21 summarizes current and pending tariffs on imports of products to the U.S., while Table 22 summarizes retaliatory tariffs against select Colorado exports.

Table 21
Current and Pending Tariffs on Imports into the U.S.

Date Implemented	Country/Product	Tariff Rate	Total Value of Imports	Total Value of CO Imports
1/22/2018	Washing machines	20% on the first 1.2 million machines 50% for machines above 1.2 million	$1.8 billion	$7.6 million
1/22/2018	Solar panels	30% after the first 2.5 gigawatts, dropping to 15% over four years	$8.5 billion	$56 million
3/23/2018	Steel	25%	$10.2 billion	~$276 million
3/23/2018	Aluminum	10%	$7.7 billion	~$69 million
July, August, September 2018	China	10% or 25% on selected goods	$250 billion	~$1.6 billion

Source: Peterson Institute for International Economics and WiserTrade. Total value of CO imports does not consider country quotas for steel and aluminum. All figures are estimates.

Trade policy uncertainty is straining U.S. business activity. While inflationary pressures have been rising in the U.S., the impacts of tariffs are not readily apparent in available data. Industry reports, however, provide more insight on their impact on input prices. Many larger companies have been able to either negotiate down prices with suppliers abroad, absorb the additional cost, or pass the cost on to consumers. Conversely, smaller firms do not have as much leverage, and have been impacted by smaller profit margins or have increased prices on the goods they produce.

Many firms purchased excess goods in advance of tariffs to mitigate the impacts of higher prices. These efforts have staved off stronger price appreciation. However, the longer tariffs remain in effect, the more U.S. businesses and consumer will be impacted.

Table 22
Colorado Exports Subject to Retaliatory Tariffs*

Partner	Colorado Exports	Tariff	2017 Export Value
Mexico	Total Exports		$188 million
	Pork products	15% to 20%	$123.6 million
	Cheese	20%	$35.9 million
	Steel products	5% to 25%	$13.4 million
China	Total Exports		$554 million
	Metal waste and scrap (aluminum and copper)	25%	$50.8 million
	Medical instruments	25%	$35.6 million
	Steel articles and scrap	25%	$6.8 million
Canada	Total Exports		$51 million
	Aluminum articles	10%	$17.4 million
	Bread, pastries, cakes, etc.	10%	$13.5 million
	Surface-active products for washing the skin	10%	$5.5 million
EU	Total Exports		$8.2 million
	Articles of iron or steel	25%	$4.8 million
	Motorcycles, over 800cc	25%	$1.2 million
	Whiskey	25%	$625 thousand

Source: WiserTrade and U.S. Chamber of Commerce.
**Information in this table is not exhaustive.*

According to the U.S. Department of the Treasury, tariffs collected in November reached a historic $7 billion, double that of November 2017. More than half of the tariffs came from Chinese imports. To avoid paying higher prices, some companies have sought out different foreign supply chains; however many report that relocating production to the U.S. is not a viable near-term option. The Commerce Department's exemption request process has a growing backlog of requests from U.S. businesses, and many requests have been denied. Companies can apply for an exemption to the tariff when they can prove that U.S. suppliers cannot meet the demand for the product. In the case of the automotive industry, over 1,000 requests are awaiting a hearing, and only around 20 percent of requests made have been approved.

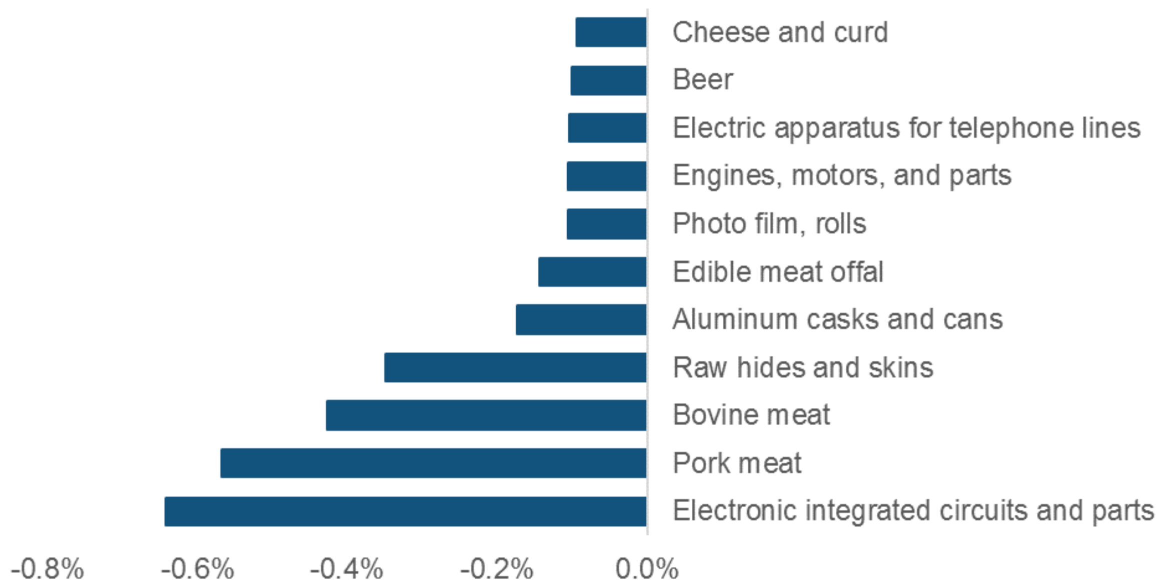
Impacts of tariffs in Colorado. Many companies in Colorado have voiced concerns over supply chain disruptions and price increases resulting from higher tariffs. Aluminum tariffs have increased expenditures on cans for the beer industry, a cost some are not passing on to consumers in an industry with heavy competition. The Beer Institute states that the cost of aluminum cans is the largest single line item for large beer producers, and costs for the industry may increase by $350 million over the next year. The Grand Junction Sentinel cited tariffs on Canadian newsprint imports as the reason to cut print editions two days a week.

Among industries, agricultural producers may be seeing the most direct impact of tariffs, as they directly influence the price of and demand for U.S. agricultural goods sold in foreign countries. Soybean exports to China decreased dramatically this year, which may affect the crops soy producers choose to plant next season. If they shift to corn and wheat, prices will drop from oversupply, which will hurt Colorado producers that are already receiving decades-low prices for their crops.

The tariffs imposed to date have not deterred total Colorado exports from growing. Total exports through October increased by 5.4 percent over the same period last year, while imports have grown by 5.9 percent, in line with last year's growth. That said, many businesses pulled their purchasing activity forward, contributing to growth in exports. The strength of the dollar has also helped to grow imports, especially in the second half of the year.

While overall Colorado exports are up, export data does suggest that products that carry tariffs have been a drag on export growth, as shown in Figure 50.

Figure 50
Contributions to Percent Change in the Value of Colorado Exports Impacted by Tariffs
January through October 2018 over the Same Period Last Year



Source: WiserTrade.

Agriculture

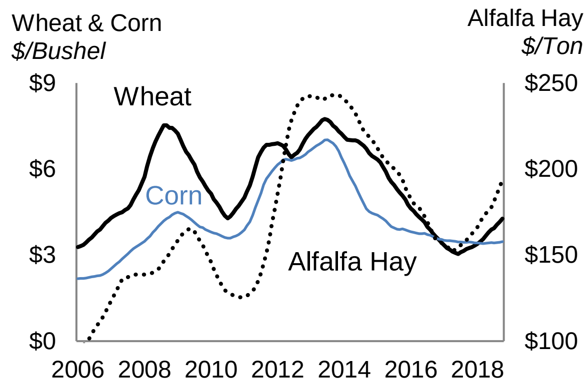
The agricultural sector in the U.S. and Colorado is taking hits from all sides. Drought, retaliatory tariffs on agricultural products, rising interest rates, higher input costs, a tight labor market with increasing wages, and lower agricultural commodity prices continue to put significant pressure on the industry. Despite these pressures, yields on this year's harvests in Colorado were high and prices for some crops have started to recover.

While exports are up, trade tensions continue to impact U.S. agricultural producers. Overall, the total value of U.S. agricultural exports increased 3.7 percent year-over-year through October, though several products hit by tariffs have seen a decline in the value of exports, such as hides and skins, wheat, and soybeans. In Colorado, pork and cheese exports, both subject to tariffs, declined 25.9 percent and 21.6 percent, respectively, through October compared to the same period last year. Hides and skins exports were down 21.0 percent over the same period. The U.S. Department of Agriculture (USDA) announced an aid package worth $12 billion for agricultural producers affected by the tariffs. As of the end of October, $356 million had been disbursed nationwide, with $1.76 million distributed in Colorado to about 1,200 producers. The top Colorado recipients of aid are in the dairy sector; however, the majority of the aid nationally has been allocated to soybean farmers.

If ratified, the most significant change to agriculture in the second iteration of NAFTA, the United States Mexico Canada Agreement (USMCA), includes the opening of Canada's dairy sector, which will allow the U.S. to export milk to the country. The agreement must still be ratified by the U.S. Congress, and may face some headwinds in the upcoming session. The retaliatory tariffs on agricultural exports imposed by Canada and Mexico will not be lifted until the U.S. lifts its tariffs on imported steel and aluminum, a sticking point for the U.S. administration.

Colorado crop prices are up slightly through October compared to year-ago levels, but still remain near historic lows. Relative to a year ago, wheat prices have increased as total acres planted this season were down (Figure 51). With Colorado drought conditions hurting pasture and range lands, demand for hay has increased. Corn prices are also on the upswing, reaching their highest levels in October since July 2017. Additionally, potato prices improved relative to the last two years, complementing the higher-yield potato harvest in the San Luis Valley.

Figure 51
Prices Received for Colorado Crops



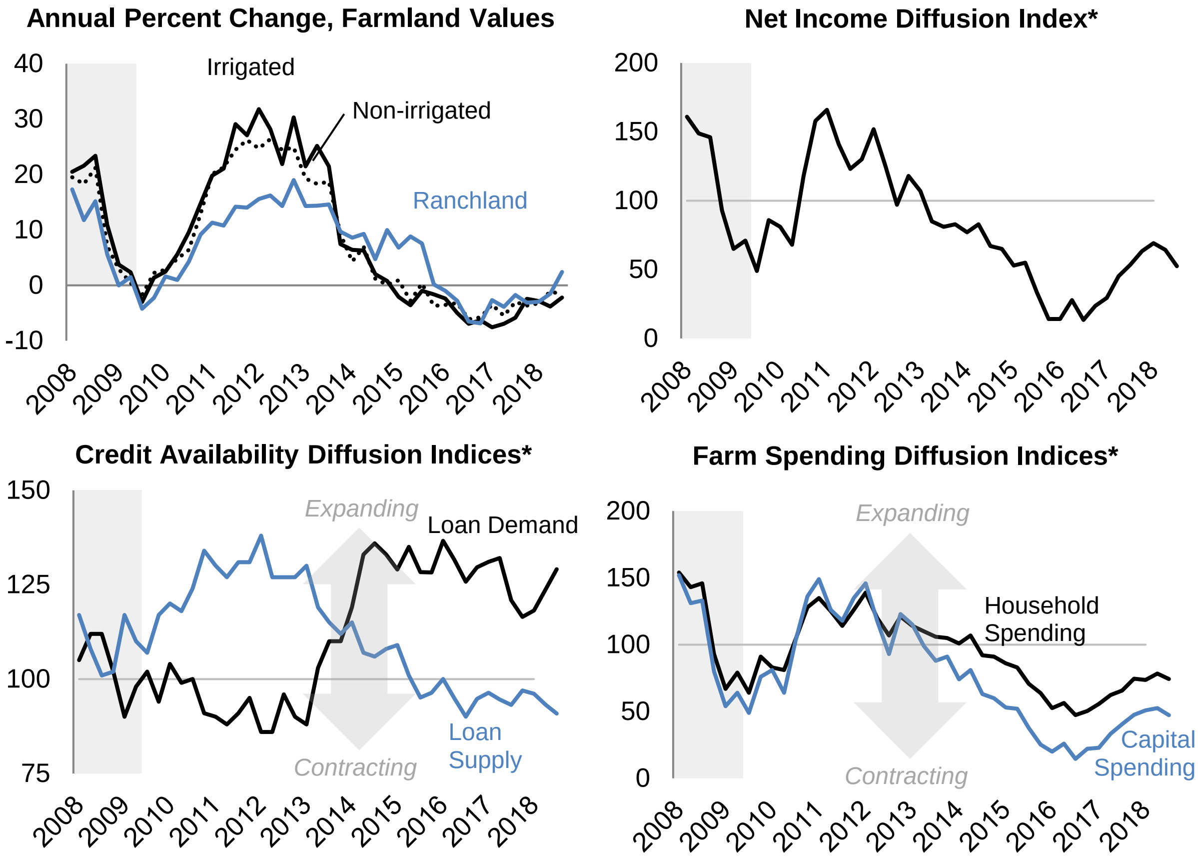
Source: USDA National Agriculture Statistics Service. Data shown as a 12-month moving average through October 2018.

Both milk prices and production are up this year despite tariffs on some dairy products. In the third quarter of 2018, milk production increased by 8.6 percent relative to year-ago levels.

The cost of inputs for agricultural producers continue to rise, pinching farm profits. The tight labor market has pushed wages up or, in some cases, created a shortage of workers altogether. Farmland values are up this year, creating higher rent payments for those who lease production land. Rising interest rates have not slowed demand for loans, since farm income declined further during the third quarter. With the combination of risks to the agricultural industry, producers are not investing in capital goods. Capital spending ticked down in recent months, after a partial recovery from the 2016-2017 agricultural economy downturn. Figure 52 presents selected indicators of agricultural conditions, based on the Federal Reserve Bank of Kansas City's survey of Agricultural Credit Conditions.

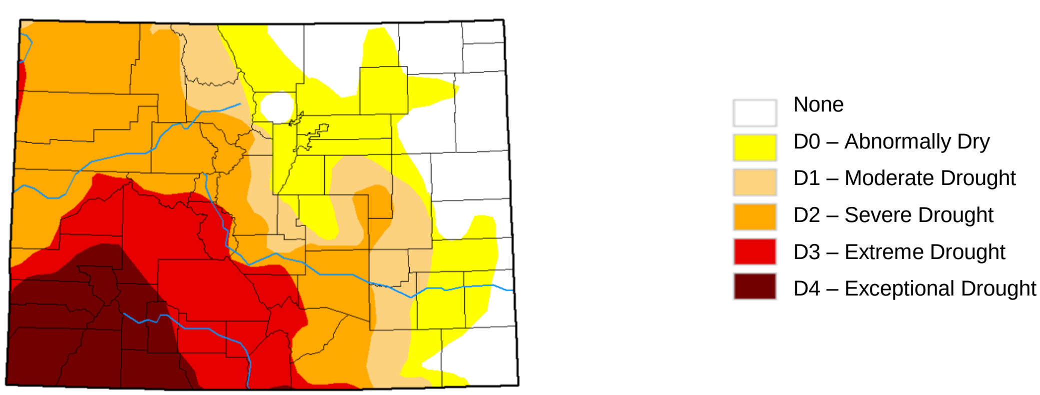
Drought conditions have yet to improve in much of the state, despite precipitation during the fall. As of the first week of December, 82.9 percent of the state is experiencing some dryness, while 66.3 percent of the state is in a drought, with the southwest corner of the state the hardest hit (Figure 53). The outlook through the end of February predicts persistent drought conditions in most of the western part of the state, while in the southeast and southcentral areas, precipitation is expected to improve drought conditions.

Figure 52
Selected Indicators of Agricultural Credit Conditions in the Tenth District



Source: Federal Reserve Bank of Kansas City, Quarterly Survey of Agricultural Credit Conditions. Data through the third quarter of 2018.
**Values above 100 indicate expansion; values below 100 indicate contraction.*

Figure 53
Colorado Drought Monitor Map



Source: The U.S. Drought Monitor is jointly produced by the national Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture, and the National Oceanic and Atmospheric Administration. Map courtesy of NDMC-UNL, current as of December 4, 2018.

Summary

Over the next two years, the U.S. and Colorado economies will continue to expand, albeit at a slower pace than in 2018. The slowdown in growth is consistent with a maturing U.S. economic expansion and will coincide with slower global economic activity. As the stimulative impacts of federal tax cuts wear off, growth in business investment and consumer activity are expected to moderate. Higher interest rates and an increasingly tight labor market will pose stronger headwinds to private sector growth. International trade policy uncertainty continues to cloud the outlook for businesses, and will contribute to upward pressure on prices for consumers and businesses alike until tensions ease.

Relatively high housing costs and rising interest rates have cooled housing markets in many regions of the U.S. In Colorado, rapid home price appreciation along the northern Front Range has spread to surrounding areas. The higher cost of living is expected to continue to influence population migration to and within the state, while also putting downward pressure on consumer activity unless wage growth can keep pace with rising housing costs.

Risks to the Forecast

Several factors could result in stronger or weaker economic activity than forecast. These risks are balanced during the first half of next year, and skewed to the downside for the remainder of the forecast period.

Downside. The stimulating impacts of the federal Tax Cuts and Jobs Act and purchasing decisions to avoid impending tariffs accelerated economic activity at the start of 2018. This robust growth may come at the cost of future growth. Relatedly, ongoing trade policy uncertainty could impact U.S. businesses more adversely than expected, and the pro-cyclical fiscal stimulus has contributed to a growing federal budget deficit, which could impact financial markets if not deterred by future increases in tax revenue or reductions in federal government spending.

With the end of the economic expansion in sight, the Federal Reserve walks a fine line between countering inflationary pressures and raising rates too quickly and prematurely putting the brakes on the economy.

If crude oil prices fall further or remain depressed, energy, manufacturing, and production activity could weaken by more than expected, posing a drag on business activity or industry-specific recession.

Upside. Over the last two years, consumer and business activity have surprised on the upside. The economy may be further from capacity than expected. A sustained virtuous cycle could continue to lure workers into the workforce, fueling business growth at a stronger pace than expected.

Near-term resolution to ongoing trade negotiations could put U.S. businesses in a stronger position with foreign trade partners. Improved trade relations could also result in stronger than expected global economic activity. Similarly, agreement in the Brexit negotiations would lift significant pressure from European economies that may in turn stimulate global economic activity.

Table 23
National Economic Indicators

Calendar Years	2013	2014	2015	2016	2017	Legislative Council Staff Forecast 2018	2019	2020
Real GDP (*Billions*)[1]	$16,495	$16,900	$17,387	$17,659	$18,051	$18,574	$19,020	$19,191
Percent Change	1.8%	2.5%	2.9%	1.6%	2.2%	2.9%	2.4%	0.9%
Nonfarm Employment (*Millions*)[2]	136.4	138.9	141.8	144.3	146.6	149.0	150.9	151.4
Percent Change	1.6%	1.9%	2.1%	1.8%	1.6%	1.6%	1.3%	0.3%
Unemployment Rate[2]	7.4%	6.2%	5.3%	4.9%	4.4%	3.9%	3.6%	3.8%
Personal Income (*Billions*)[1]	$14,181.1	$14,991.8	$15,719.5	$16,125.1	$16,830.9	$17,588	$18,503	$19,354
Percent Change	1.2%	5.7%	4.9%	2.6%	4.4%	4.5%	5.2%	4.6%
Wage and Salary Income (*Billions*)[1]	$7,113.2	$7,473.2	$7,854.4	$8,080.7	$8,453.8	$8,834	$9,285	$9,712
Percent Change	2.7%	5.1%	5.1%	2.9%	4.6%	4.5%	5.1%	4.6%
Inflation[2]	1.5%	1.6%	0.1%	1.3%	2.1%	2.5%	2.3%	2.0%

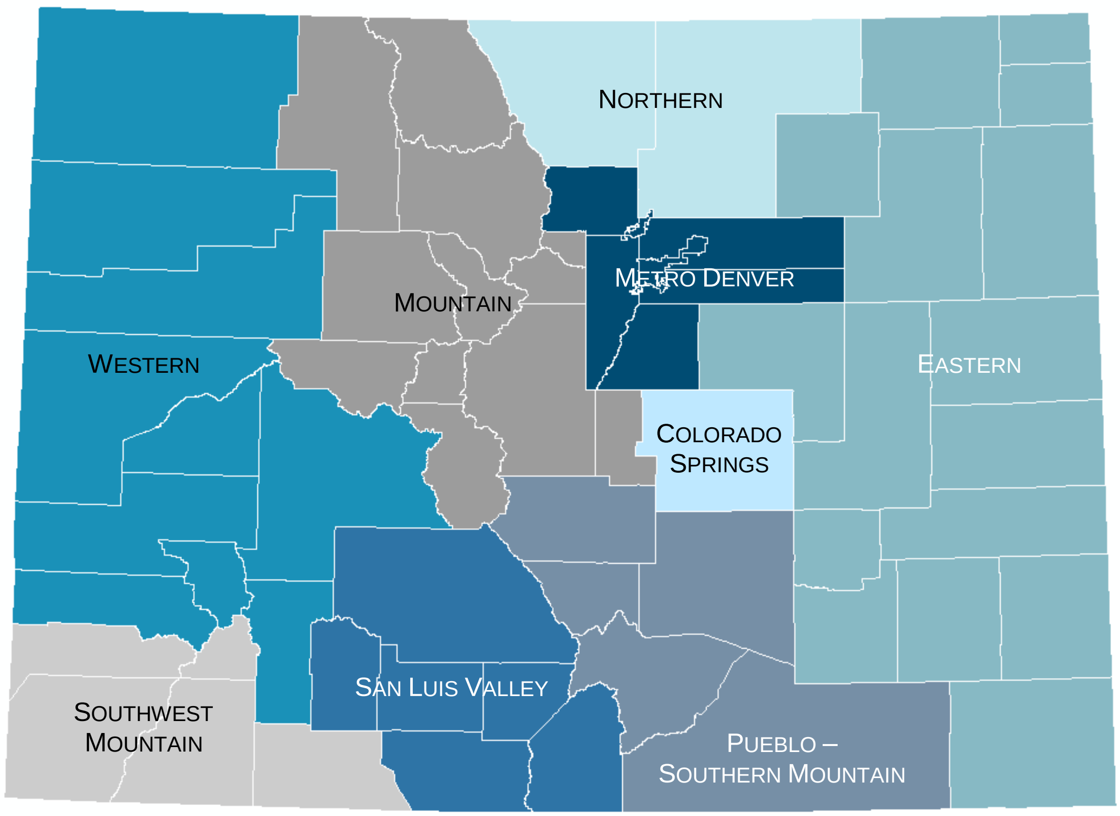
Sources
[1]*U.S. Bureau of Economic Analysis. Real gross domestic product (GDP) is adjusted for inflation. Personal income and wages and salaries not adjusted for inflation.*
[2]*U.S. Bureau of Labor Statistics. Inflation shown as the year-over-year change in the consumer price index for all urban areas (CPI-U).*

Table 24
Colorado Economic Indicators

Calendar Years	2013	2014	2015	2016	2017	Legislative Council Staff Forecast 2018	2019	2020
Population (*Thousands, as of July 1*)[1]	5,262.6	5,342.3	5,440.4	5,530.1	5,607.2	5,685.7	5,759.6	5,834.4
Percent Change	1.5%	1.5%	1.8%	1.6%	1.4%	1.4%	1.3%	1.3%
Nonfarm Employment (*Thousands*)[2]	2,380.8	2,464.0	2,541.7	2,602.6	2,658.7	2,730.5	2,776.9	2,804.7
Percent Change	3.0%	3.5%	3.2%	2.4%	2.2%	2.7%	1.7%	1.0%
Unemployment Rate[2]	6.9%	5.0%	3.9%	3.3%	2.8%	2.9%	3.2%	3.5%
Personal Income (*Millions*)[3]	$248,959	$271,101	$284,143	$289,621	$306,411	$324,183	$344,931	$362,177
Percent Change	5.2%	8.9%	4.8%	1.9%	5.8%	5.8%	6.4%	5.0%
Wage and Salary Income (*Millions*)[3]	$129,521	$138,585	$146,487	$150,977	$160,372	$169,353	$180,022	$188,663
Percent Change	3.7%	7.0%	5.7%	3.1%	6.2%	5.6%	6.3%	4.8%
Housing Permits (*Thousands*)[1]	27.3	29.3	30.5	37.1	41.1	45.6	45.9	47.1
Percent Change	27.9%	7.3%	4.2%	21.5%	10.9%	10.8%	0.8%	2.6%
Nonresidential Building (*Millions*)[4]	$3,624	$4,351	$4,988	$5,972	$6,062	$7,620	$7,300	$7,044
Percent Change	-1.9%	20.1%	14.6%	19.7%	1.5%	25.7%	-4.2%	-3.5%
Denver-Aurora-Lakewood Inflation[5]	2.8%	2.8%	1.2%	2.8%	3.4%	3.0%	2.8%	2.4%

Sources
[1]U.S. Census Bureau. Residential housing permits are the number of new single and multi-family housing units permitted for building.
[2]U.S. Bureau of Labor Statistics.
[3]U.S. Bureau of Economic Analysis. Personal income and wages and salaries not adjusted for inflation. The Legislative Council Staff forecast begins in 2017.
[4]F.W. Dodge.
[5]U.S. Bureau of Labor Statistics. Inflation shown as the year-over-year change in the consumer price index. Beginning in February, the Denver-Boulder-Greeley consumer price index will be replaced with the Denver-Aurora-Lakewood consumer price index.
Note: Legislative Council Staff has discontinued the Colorado retail trade forecast due to data limitations.

Colorado Economic Regions



A Note on Data Revisions

Economic indicators reported in this forecast document are often revised by the publisher of the data and are therefore subject to change. Employment data are based on survey data from a "sample" of individuals representative of the population as a whole. Monthly employment data are based on the surveys received at the time of data publication and data are revised over time as more surveys are collected to more accurately reflect actual employment conditions. Because of these revisions, the most recent months of employment data may reflect trends that are ultimately revised away. Additionally, employment data undergoes an annual revision, which is published in March of each year. This annual revision may affect one or more years of data values.

Like the employment data, residential housing permits and agriculture data are also based on surveys. These data are revised periodically. Nonresidential construction data in the current year reflects reported construction activity. These data are revised the following year to reflect actual construction activity. Retail trade sales data are no longer reported due to data limitations.

Metro Denver Region

Colorado's largest regional economy, the seven-county metro Denver region, continues to expand in spite of rising labor shortages and a slowdown in construction activity. The region is characterized by a strong, diversified economy, with growing sector concentrations in information technology and finance. Area employment growth accelerated in the first three quarters of the year, and residential construction activity remains elevated albeit slowing. Housing demand continues to overwhelm supply, maintaining upward pressure on both construction and prices. However, higher interest rates have given way to cooling in the real estate markets of some of Denver's hottest neighborhoods, as steep home prices and the higher cost of borrowing have prompted homebuyers to look elsewhere. Economic indicators for the region are summarized in Table 25.

Table 25
Metro Denver Region Economic Indicators
Adams, Arapahoe, Broomfield, Boulder, Denver, Douglas, and Jefferson Counties

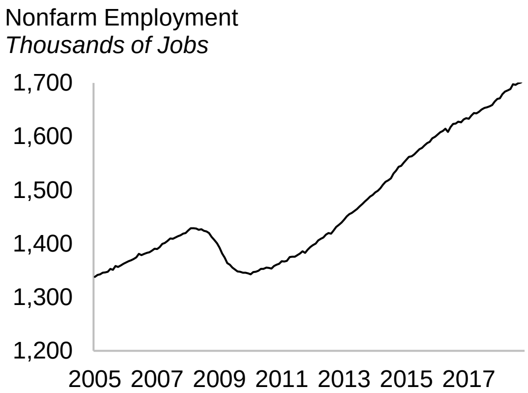
	2014	2015	2016	2017	YTD 2018
Employment Growth[1]	3.7%	3.6%	2.6%	1.9%	2.6%
Unemployment Rate[2]	4.7%	3.6%	3.0%	2.7%	2.8%
Housing Permit Growth[3]					
Denver-Aurora MSA Single Family	16.3%	17.8%	12.2%	3.8%	11.9%
Boulder MSA Single Family	17.7%	74.2%	10.2%	-4.3%	16.8%
Nonresidential Construction Growth[4]					
Value of Projects	10.5%	25.6%	27.3%	-10.3%	42.9%
Square Footage of Projects	3.9%	43.6%	6.6%	-13.7%	-30.0%
Level (*Millions*)	14,745	21,170	22,569	19,472	12,286
Number of Projects	25.1%	20.7%	9.5%	-24.0%	-23.4%
Level	936	1,130	1,237	940	611

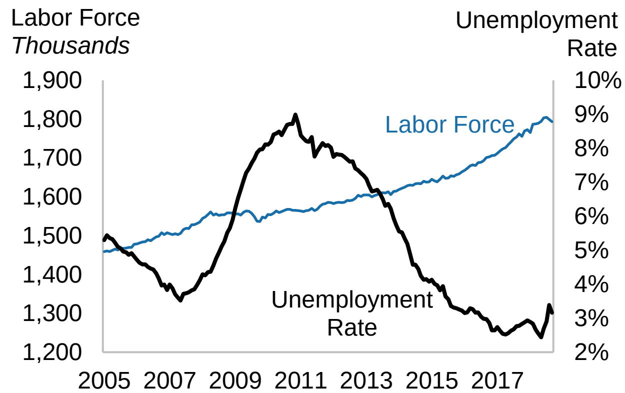
MSA = Metropolitan statistical area.
[1]U.S. Bureau of Labor Statistics, CES (establishment survey). Seasonally adjusted. Data through October 2018.
[2]U.S. Bureau of Labor Statistics, LAUS (household survey). Data prior to 2010 adjusted by Legislative Council Staff. Seasonally adjusted. Data through September 2018.
[3]U.S. Census. Growth in the number of residential building permits. Data through October 2018.
[4]F.W. Dodge. Data through October 2018.

Data for the first ten months of 2018 suggest that the metro Denver region added jobs at a faster pace than last year (Figure 54, left). Yet, the labor market continues to tighten on slowing net migration and a shortage of skilled labor. Early data suggest that growth in the area labor force has slowed (Figure 54, right). The area unemployment rate has ticked up slightly, averaging 2.8 percent in the first ten months of 2018, and remaining just below the statewide average of 2.9 percent.

Regional residential construction activity has cooled with rising interest rates (Figure 55, left). The relatively high cost of housing in the metro Denver region has dampened interest among possible buyers, leading to a higher inventory of homes for sale, homes spending a longer time on the market, and seller concessions becoming a common condition of a sale in more expensive neighborhoods.

Figure 54
Metro Denver Region Labor Market Activity



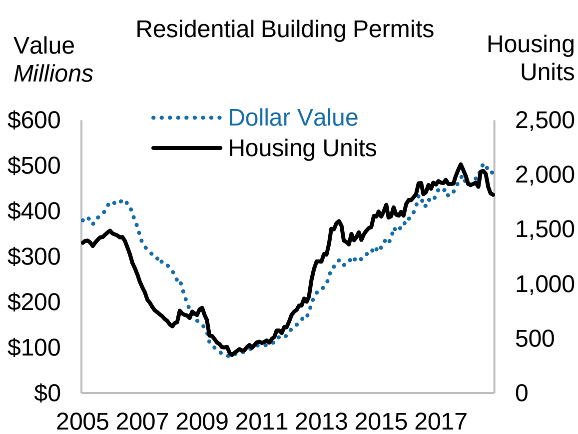


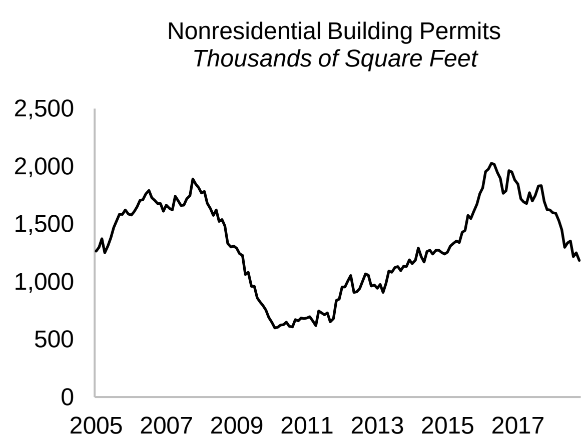
Source: U.S. Bureau of Labor Statistics; CES (left) through October 2018, and LAUS (right) through September 2018. Data prior to 2010 adjusted by Legislative Council Staff. Data are seasonally adjusted.

Following the boom in activity over the past several years, regional multi-family residential construction has slowed, while construction of single family homes continues to rise. The City and County of Denver dominated growth in multi-family construction in recent years. This activity spiked in 2017 with the ground breaking of several large projects. While activity has abated in the City and County of Denver, multi-family construction has picked up year-to-date in other surrounding metro Denver counties, including Adams, Douglas, and Boulder. Single family construction, meanwhile, continues to experience solid growth. Through the first ten months of the year, the number of single family home permits in the region rose 11.9 percent over year-ago levels, while permits issued for the Boulder metro area increased 16.8 percent.

After peaking in 2016, metro Denver nonresidential building activity continues to moderate. The square footage (Figure 55, right) and number of projects fell at double-digit rates in the first ten months of the year, while the value of construction reversed declines from the prior year. The rise in the value of construction is attributable to the Denver International Airport concourse expansion project.

Figure 55
Metro Denver Region Construction Activity



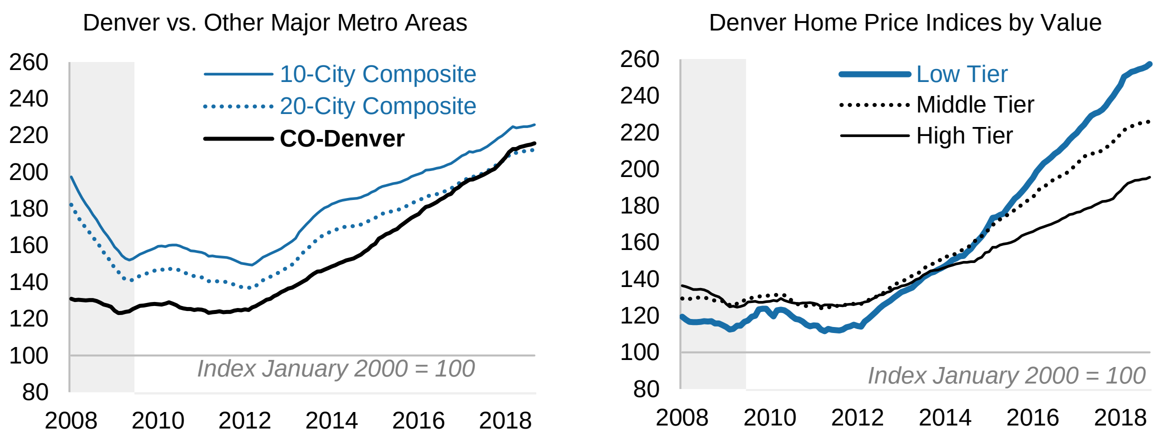


Source: F.W. Dodge. Data shown as twelve-month moving averages. Data are not seasonally adjusted and are through October 2018.

Home price appreciation has moderated in recent months in the metro Denver area as interest rates have cooled the appetite for a mortgage and buyers have established a price ceilings in walking away from potential purchases (Figure 56, top). While the metro Denver market is cooling, other areas of the state continue to heat up. Figure 56 compares growth in home price indices for Colorado, the U.S., and major Colorado metropolitan areas.

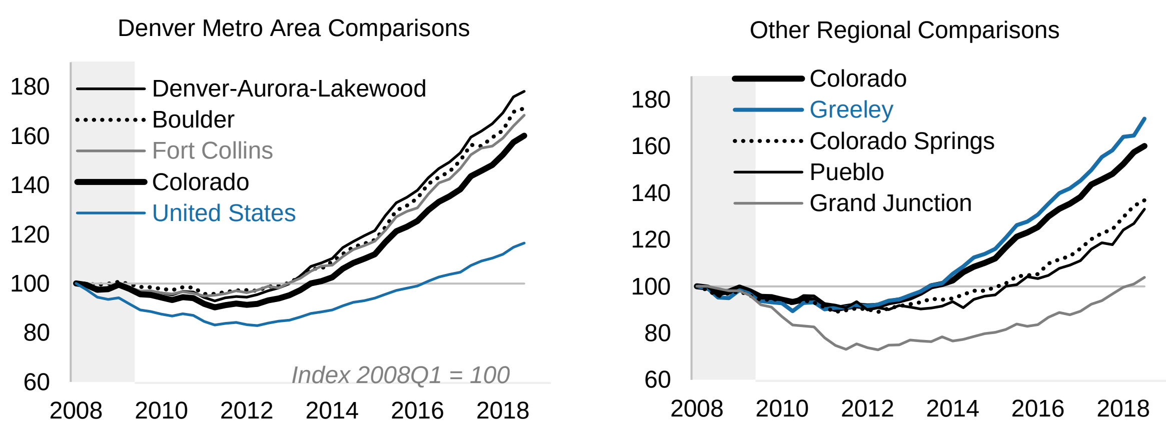
Figure 56
Metro Denver Region Home Price Indices

Case-Shiller Home Price Indices



Source: S&P Dow Jones Indices LLC (Case-Shiller Home Price Index). Data are seasonally adjusted and through September 2018.

FHFA Home Price Indices



Source: U.S. Federal Housing Finance Agency (FHFA). Data are through the third quarter of 2018.

Northern Region

The northern region continues to be one of the best performing areas economically in the state. The energy sector helped to boost growth in Weld County, while economic activity in Larimer County built on robust growth from recent years. The region continues to add jobs at a faster rate than the state, and the unemployment rate continues to hover near historic lows. Population growth and a strong labor market have boosted demand for housing and nonresidential real estate. Table 26 shows economic indicators for the northern region.

Table 26
Northern Region Economic Indicators
Weld and Larimer Counties

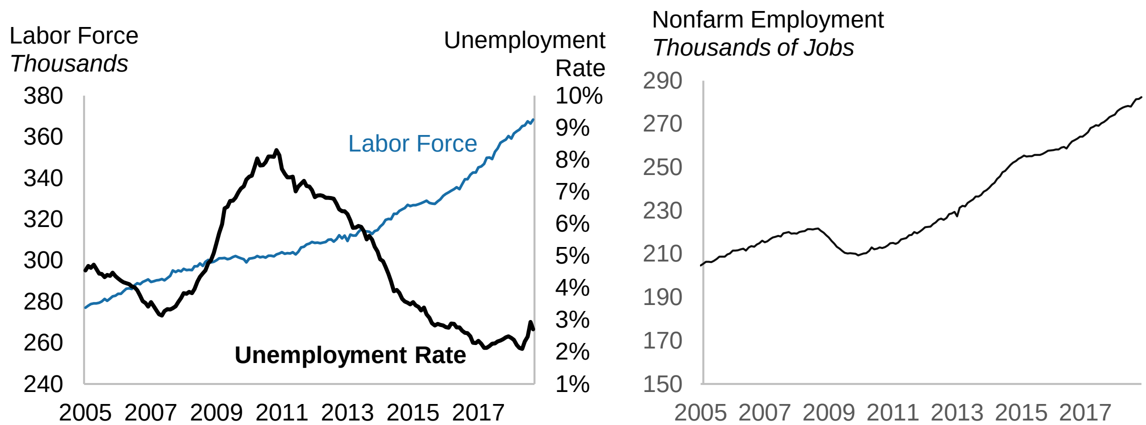
	2014	2015	2016	2017	YTD 2018
Employment Growth[1]					
Fort Collins-Loveland MSA	3.4%	4.0%	3.8%	3.7%	2.9%
Greeley MSA	9.0%	2.4%	-1.3%	3.3%	4.7%
Unemployment Rate[2]					
Fort Collins-Loveland MSA	4.2%	3.3%	2.8%	2.4%	2.5%
Greeley MSA	4.4%	3.8%	3.4%	2.7%	2.7%
State Cattle and Calf Inventory Growth[3]	-4.2%	-4.4%	1.0%	6.7%	2.9%
Natural Gas Production Growth[4]	27.0%	44.3%	14.6%	5.6%	13.7%
Oil Production Growth[4]	52.4%	39.4%	-7.3%	13.5%	35.2%
Housing Permit Growth[5]					
Fort Collins-Loveland MSA Total	8.7%	-8.1%	47.9%	-44.4%	-15.3%
Fort Collins-Loveland MSA Single Family	10.2%	1.3%	-2.9%	78.0%	0.5%
Greeley MSA Total	41.1%	-3.5%	-7.8%	-11.8%	32.2%
Greeley MSA Single Family	18.5%	3.8%	-9.9%	62.5%	21.8%
Nonresidential Construction Growth[6]					
Value of Projects	31.1%	32.7%	1.8%	29.4%	67.9%
Square Footage of Projects	45.5%	19.8%	-14.8%	17.8%	-39.4%
Level (*Thousands*)	3,326	3,983	3,393	3,996	2,169
Number of Projects	66.5%	-3.9%	11.7%	2.9%	7.9%
Level	258	248	277	285	258

MSA = Metropolitan statistical area.
[1]U.S. Bureau of Labor Statistics, CES (establishment survey). Seasonally adjusted. Data through October 2018.
[2]U.S. Bureau of Labor Statistics, LAUS (household survey). Seasonally adjusted. Data through September 2018.
[3]National Agricultural Statistics Service. Cattle and calves on feed through October 2018.
[4]Colorado Oil and Gas Conservation Commission. Data through July 2018.
[5]U.S. Census Bureau. Growth in the number of residential building permits. Data through October 2018.
[6]F.W. Dodge. Data through October 2018.

The labor market in the northern region is among the strongest in the state and continues to improve. The region's two metropolitan statistical areas (MSAs), Fort Collins-Loveland and Greeley, posted strong job growth over prior-year levels through the first ten months of 2018, increasing 2.9 percent and 4.7 percent, respectively. The Greeley MSA is the epicenter of the oil industry in Colorado, and employment growth has accelerated since 2016. Employment growth in the Fort Collins-Loveland MSA has been robust following the recession. While employment growth of

2.9 percent year-to-date is slower than in previous years, it is slightly higher than statewide employment growth. Area unemployment is stable as employment gains keep pace with growth in the labor force. The year-to-date Fort Collins-Loveland unemployment rate averaged 2.5 percent, while Greeley averaged 2.7 percent through September 2018. Figure 57 shows employment trends for the northern region metro areas.

Figure 57
Northern Region Labor Market Activity



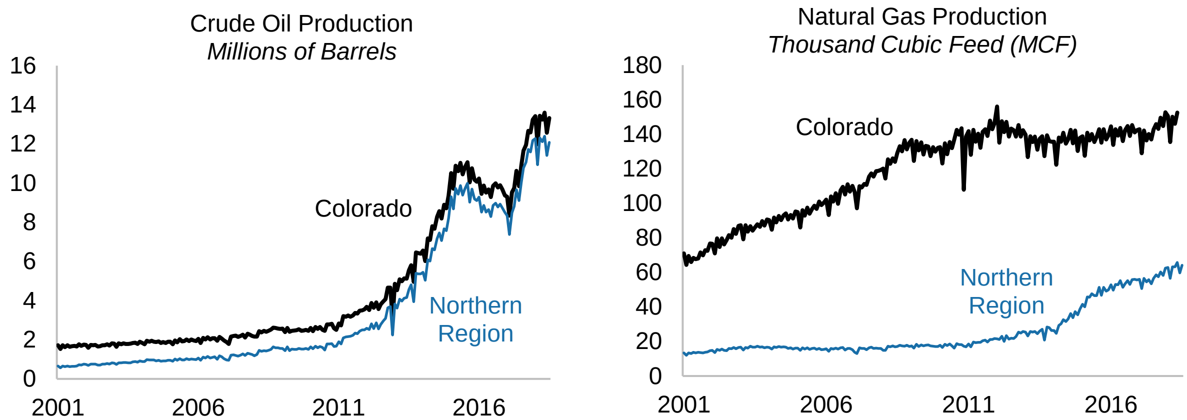
Source: U.S. Bureau of Labor Statistics; CES. Data are seasonally adjusted and are through October 2018.

The northern region produces about a quarter of the value of Colorado's agricultural products due in large part to the livestock industry in Weld County. Tariffs on agricultural commodities are causing concern for the industry, as the reshuffling of global supply chains cause uncertainty for farmers and ranchers. Low prices for corn have decreased the cost of feed for the cattle industry. However, prices for beef and milk are also depressed.

Oil production in the northern region, particularly in Weld County, has dominated statewide production for over a decade (Figure 58). Oil production increased 13.5 percent in 2017 and accelerated to 35.2 percent through the first seven months of 2018. Oil and gas production has increased because prices have risen since 2016, inducing the development of new wells. Year-to-date through August, there was an average of 31 active oil rigs operating in the state. Natural gas production in the northern region continues to increase as the natural gas produced in conjunction with oil wells is captured and sold on the market.

The northern region's residential real estate market is mixed between Larimer and Weld counties. A strong labor market, high net in-migration to the region, and the availability of land for development have supported strong growth in new residential construction activity in recent years (Figure 59, left). Yet, the Fort Collins-Loveland MSA is now experiencing fewer buildable lots and a scarcity of skilled construction labor. Strong growth in recent years has given way to a leveling off of new single family permits, which has slowed to 0.5 percent growth through October 2018. Multi-family permits are lower than in 2017 as the rental market catches up to additional units built in 2016. Residential construction in Weld County has recovered along with the oil industry, with total permits increasing 32.2 percent in the first ten months of 2018.

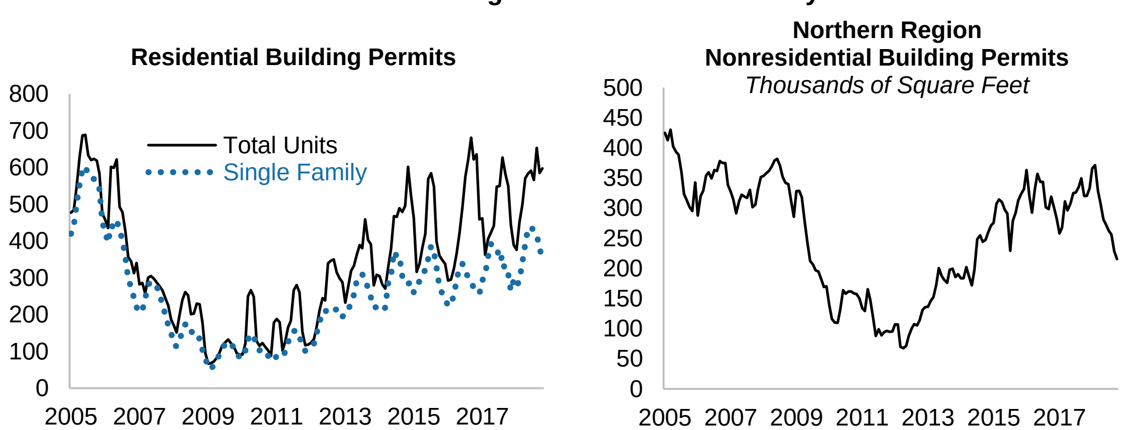
Figure 58
Colorado Energy Production



Source: Colorado Oil and Gas Conservation Commission. Monthly data through July 2018.

Activity in the nonresidential construction industry is also tied to the oil and gas industry. The value of nonresidential construction projects increased 67.9 percent in the first ten months of 2018, while the square footage of those projects declined 39.4 percent. The oil and gas industry has been developing new infrastructure for the transportation and processing of oil and natural gas, which has considerable value but does not result in additional square footage of retail or commercial property (Figure 59, right).

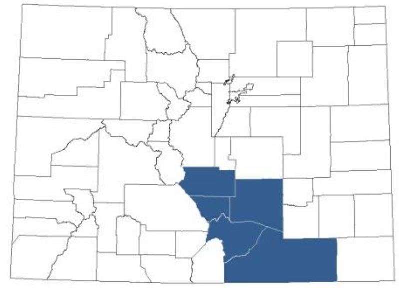
Figure 59
Northern Region Construction Activity



Source: U.S. Census Bureau. Data shown as three-month moving averages. Data are not seasonally adjusted and are through October 2018.

Source: F.W. Dodge. Data shown as twelve-month moving averages. Data are not seasonally adjusted and are through October 2018.

Pueblo – Southern Mountains Region



The Pueblo – Southern Mountains region includes five southern Front Range counties surrounding the City of Pueblo. Pueblo's convention center expansion has accelerated construction activity in the region, and strong demand and mild winter weather has allowed for a healthy expansion of the region's housing inventory. Labor market activity slowed at the start of 2018, only to pick up steam over the last three months. Recent tariffs imposed on steel imports offer the potential for rejuvenation of the Pueblo manufacturing industry. However, the longevity of tariffs remain in question, and industry investment is tentative. Indicators for the regional economy are presented in Table 27.

Table 27
Pueblo Region Economic Indicators
Custer, Fremont, Huerfano, Las Animas, and Pueblo Counties

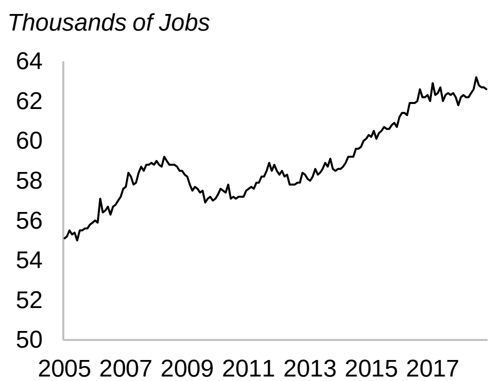
	2014	2015	2016	2017	YTD 2018
Employment Growth					
Pueblo Region[1]	1.0%	0.9%	2.8%	2.6%	1.4%
Pueblo MSA[2]	1.5%	2.0%	1.8%	1.1%	0.3%
Unemployment Rate[1]	7.4%	5.7%	4.8%	4.3%	4.5%
Housing Permit Growth[3]					
Pueblo MSA Total	-0.6%	69.4%	6.0%	9.2%	58.0%
Pueblo MSA Single Family	-0.6%	29.9%	29.9%	22.3%	48.7%
Nonresidential Construction Growth[4]					
Value of Projects	197.9%	2.6%	-22.6%	-64.3%	305.0%
Square Footage of Projects	192.7%	14.6%	-3.8%	-52.6%	245.6%
Level (*Thousands*)	309	355	341	162	459
Number of Projects	96.7%	-18.6%	50.0%	-70.8%	55.6%
Level	59	48	72	21	28

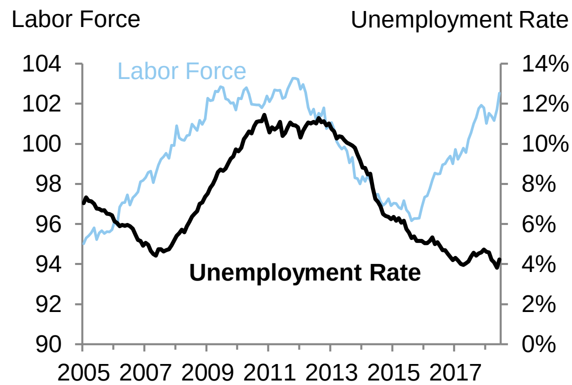
MSA = Metropolitan statistical area.
[1]U.S. Bureau of Labor Statistics, CES (establishment survey). Seasonally adjusted. Data through October 2018.
[2]U.S. Bureau of Labor Statistics, LAUS (household survey). Data prior to 2010 adjusted by Legislative Council Staff.
[3]U.S. Census. Growth in the number of residential building permits. Data through October 2018.
[4]F.W. Dodge. Data through October 2018.

The collapse of the Pueblo steel industry in the 1980s has left a long legacy for the region's economy. In the wake of industry collapse, the regional economy has diversified slowly, but a void remains unfilled. Public sector jobs comprise a significant share of area employment. Additionally, health care providers, institutions of higher education, and state correction facilities offer work for many area residents. The area economy has experienced steady improvements in labor market activity since 2014 (Figure 60). Yet, the area employment to population ratio remains low and the regional unemployment rate remains elevated relative to the statewide average. Through October, the unemployment rate averaged 4.5 percent, while the statewide rate averaged 2.9 percent over the same period.

Early data suggest that labor market activity accelerated over the past three months, marked by employment and labor force growth (Figure 60). Should the recent 25 percent tariffs on U.S. imports of steel remain in place, Pueblo may see a boost from steel industry hiring. Many expect the tariffs to spur domestic production with the tariffs making foreign steel untenable for purchase. However, at this time, the impact of steel tariffs on the Pueblo region remains speculative. Uncertainty over the longevity of the tariffs, the possibility for exemptions, and business responses to the tariffs remain unclear.

Figure 60
Pueblo Region Labor Market Trends

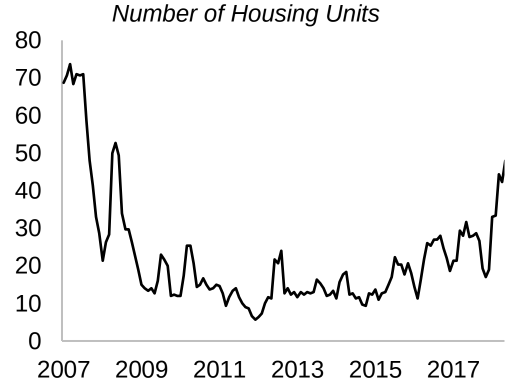




Source: U.S. Bureau of Labor Statistics; LAUS. Data prior to 2010 adjusted by Legislative Council Staff. Data are seasonally adjusted and are through September 2018.

A relatively affordable housing market compared with the northern and metro Denver regions and an improving labor market has boosted demand for housing permits in the region. As shown in Figure 61, residential construction activity continues to accelerate, supported by in-migration to the area. Both single and multi-family housing permits rose at a double-digit pace through October relative to the same period last year. Throughout the recovery and expansion from the 2007-09 recession, home price appreciation in the Pueblo metro area lagged other regions of the state. However, home prices have accelerated over the past two years, reflecting firmer demand for housing. The October single family median sales price in Pueblo County was $185,000, up 2.8 percent from the previous year. Townhouse and condo prices increased 14.3 percent to $171,350 during the same period.

Figure 61
Single Family Residential Permits
Number of Housing Units



Source: U.S. Census Bureau. Data shown as three-month moving averages. Data are not seasonally adjusted and are through October 2018.

Following two years of mixed data in 2016 and 2017, nonresidential construction activity is up considerably year-to-date through October 2018. Amusement and public improvement-related projects have provided most of the lift for the region. The City of Pueblo has started construction on convention center expansion along the Historic Arkansas Riverwalk. The city is adding a large exhibit hall and Professional Bull Riders-anchored sports performance center to the Pueblo Convention Center, a three-story parking garage across the street from the convention center and the Gateway Plaza outdoor space. The total cost for the improvements is projected to top $30 million. The bulk of the project will be paid for by state sales taxes under the state Regional Tourism Act program and state and federal grants.

Colorado Springs Region

The vibrant Colorado Springs economy continues to benefit from a virtuous cycle of economic activity and job growth. The attraction of a strong job market, outdoor recreation, and comparatively lower real estate prices than the northern Front Range continue to bring young professionals into the area labor force. The regional economy has a large public sector presence, supporting area defense operations, higher education institutions, and health care facilities. Increasingly diverse private sector growth also continues to support the area economy. Indicators for the regional economy are presented in Table 28.

Table 28
Colorado Springs Region Economic Indicators
El Paso County

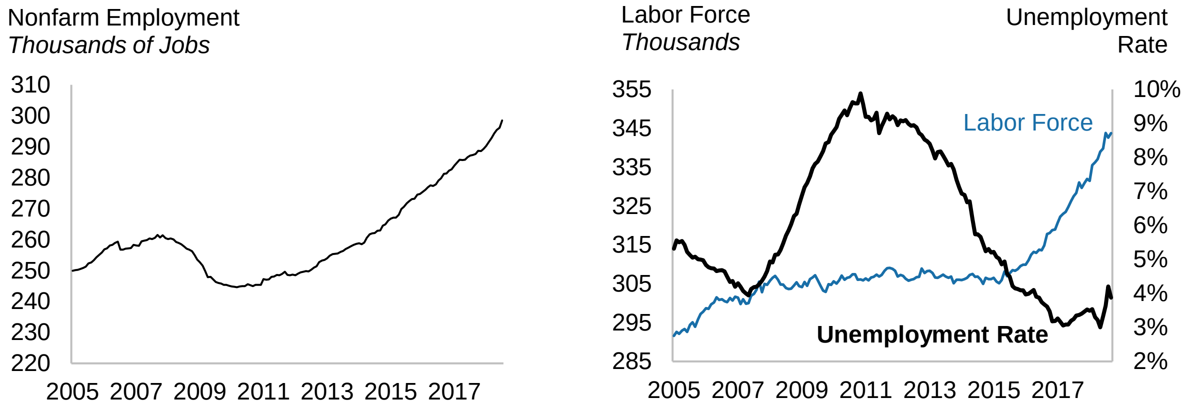
	2014	2015	2016	2017	YTD 2018
Employment Growth[1]					
Colorado Springs MSA	2.2%	3.3%	2.9%	1.8%	3.6%
Unemployment Rate[2]	6.0%	4.6%	3.7%	3.3%	3.5%
Housing Permit Growth[3]					
Total	3.8%	-0.4%	41.3%	-3.9%	27.7%
Single Family	-7.7%	13.3%	19.7%	6.7%	13.0%
Nonresidential Construction Growth[4]					
Value of Projects	-4.2%	-1.0%	48.9%	-22.9%	4.3%
Square Footage of Projects	-12.0%	-0.2%	26.1%	10.4%	-9.7%
Level (*Thousands*)	1,870	1,865	2,353	2,598	2,046
Number of Projects	-5.9%	13.5%	11.6%	30.0%	-7.4%
Level	334	379	423	550	428

MSA = Metropolitan statistical area.
[1]U.S. Bureau of Labor Statistics, CES (establishment survey). Seasonally adjusted. Data through October 2018.
[2]U.S. Bureau of Labor Statistics, LAUS (household survey). Seasonally adjusted. Data through September 2018.
[3]U.S. Census. Growth in the number of residential building permits. Data through October 2018.
[4]F.W. Dodge. Data through October 2018.

The Colorado Springs labor market continued to pick up strong momentum through October 2018 (Figure 62, left). Job growth has been broad-based across industries, with in-migration supporting demand for new construction, retail trade activity, and jobs in leisure and hospitality. Relatively affordable housing continues to boost in-migration to the region, which has brought new workers into the labor force over the past two years (Figure 62, right). The vast majority of new job seekers have found work, maintaining downward pressure on the unemployment rate. Year-to-date through October, the unemployment rate averaged 3.5 percent.

The strong labor market, in-migration, and tourism have supported growth in retail sales in the region. According to reports released by the City of Colorado Springs, revenue from the city's general sales and use tax increased 9.4 percent year-to-date through October over to the same period last year. Tax statistics point to strong contributions from auto sales and tourism-related activity, including hotel, retail, and restaurant sales.

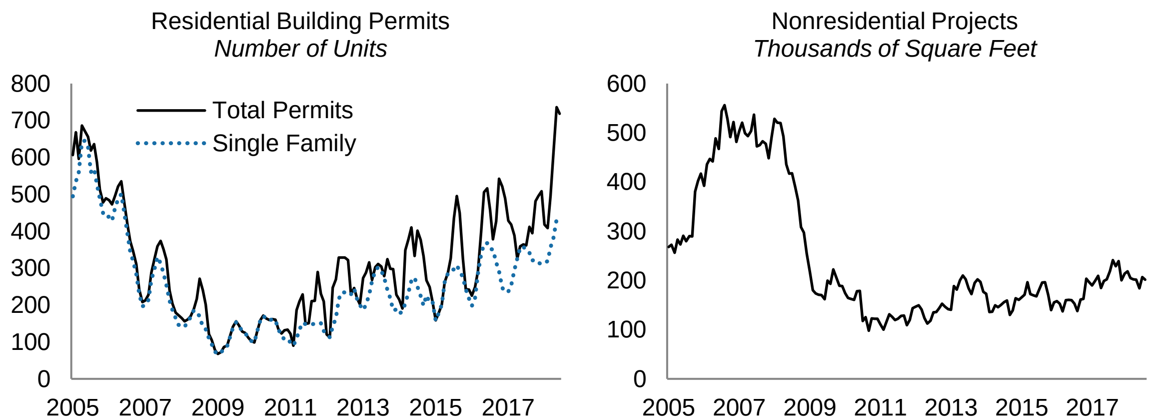
Figure 62
Colorado Springs Labor Market Activity



Source: U.S. Bureau of Labor Statistics; CES data (left) are through October, LAUS data (right) are through September. Data are seasonally adjusted.

Colorado Springs construction activity continued to improve through October. Year-to-date, single family permits increased 27.7 percent over year-ago levels (Figure 63, left), the largest county-level share of single family permit growth across the 64 counties in the state. Multi-family housing permits more than doubled over the same period. The number of permits for multi-family units was second only to the City and County of Denver. While still more affordable than real estate in the Denver metro region, Colorado Springs home prices continue to rise at double-digit rates as demand continues to outstrip supply. According to data published by the Federal Housing Finance Agency, home prices rose 11.4 percent in the third quarter of 2018 over the same period a year prior.

Figure 63
Colorado Springs Construction Activity



Source: U.S. Census Bureau. Data are shown as three-month moving averages. Data are not seasonally adjusted and are through October 2018.

Source: F.W. Dodge. Data shown as twelve-month moving averages. Data are not seasonally adjusted and are through October 2018.

Relative to pre-recessionary levels, demand for new nonresidential construction has remained subdued throughout the recovery and expansion, with a slow general upward trend (Figure 63, right). In-migration to the area and strong business activity, however, are expected to limit office and commercial vacancies, spurring additional development in coming years.

San Luis Valley Region

The San Luis Valley has the state's smallest and oldest population, as well as its lowest household incomes. The economy of the region's six counties is largely agricultural. Nonfarm employers include commercial, health, and government services, as well as a small but resilient tourism sector. Economic data for the region are sparse, but those available suggest that the regional housing market is growing and the nonfarm job market continues to improve. Economic indicators for the region are summarized in Table 29.

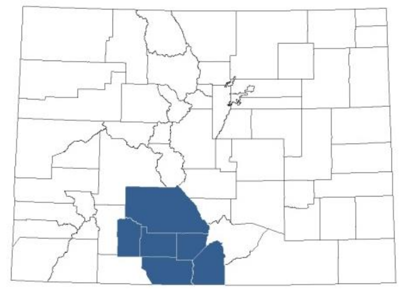


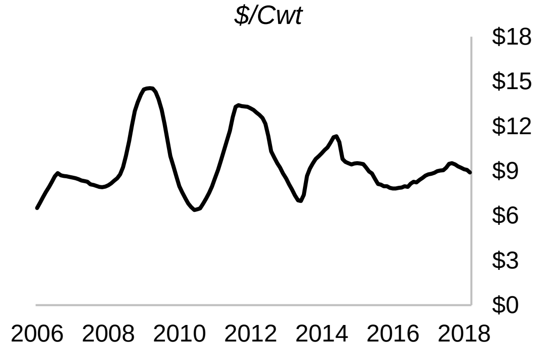
Table 29
San Luis Valley Region Economic Indicators
Alamosa, Conejos, Costilla, Mineral, Rio Grande, and Saguache Counties

	2014	2015	2016	2017	YTD 2018
Employment Growth[1]	2.5%	3.9%	6.2%	5.0%	4.7%
Unemployment Rate[1]	8.0%	5.7%	4.5%	3.9%	4.0%
San Luis Valley Agriculture District[2]					
Barley					
Acres Harvested	42,900	52,100	NA	NA	NA
Crop Value ($/Acre)	$730	$879	NA	NA	NA
Potatoes					
Acres Harvested	53,900	51,800	51,500	51,700	NA
Crop Value ($/Acre)	$3,218	$3,234	NA	NA	NA
Housing Permit Growth[3]	-25.0%	21.5%	-1.1%	16.8%	18.0%

NA = Not available.
[1]U.S. Bureau of Labor Statistics, LAUS (household survey). Seasonally adjusted. Data through September 2018.
[2]National Agricultural Statistics Service. Potato harvest data through 2017; others through 2015.
[3]F.W. Dodge. Data through October 2018.

The San Luis Valley's agricultural sector relies mostly on the production of potatoes, and secondarily on barley. Drought conditions in the region are some of the worst across the state; however, the lack of water did not significantly affect the potato harvest this year. The San Luis Valley's fall potato crop comprised over 92 percent of the state's crop, and the harvest was up about 3.3 percent over last year's. Average yield per acre was up over 2 percent, while total acres planted was down. Prices held relatively steady (Figure 64) Overall, barley production is down in 2018 by 16 percent relative to year-ago levels. Total acres planted decreased 17 percent, while yield per acre is up almost 10 percent. Barley prices are up slightly in 2018 and are projected to continue their upward trend in 2019.

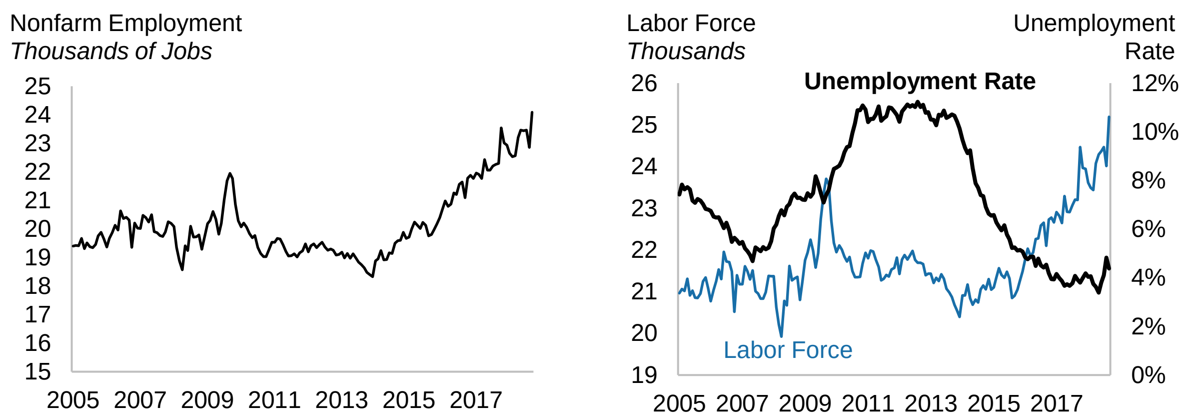
Figure 64
Prices Received for Colorado Potatoes
$/Cwt



Source: National Agricultural Statistics Service. Data shown as twelve-month moving averages. Data through June 2018.

In addition to the agricultural industry, tourism, a large retirement community, and government services, including Adams State University, support the San Luis Valley economy. Enrollment at the university is up 11 percent for first-time students and 12 percent for transfer students, although total undergraduate enrollment is down slightly from last year due to student retention issues. Employment conditions in the region have improved over last year, in line with both state and national trends; however, unemployment is up slightly over the last quarter. Through the first ten months of the year, the unemployment rate averaged 4.0 percent, down from the average annual rate of 5.0 percent in 2017 (Figure 65, right). Additionally, employment growth is up 4.7 percent through September, reflecting a strengthened labor market and rise in net migration to the region (Figure 65, left).

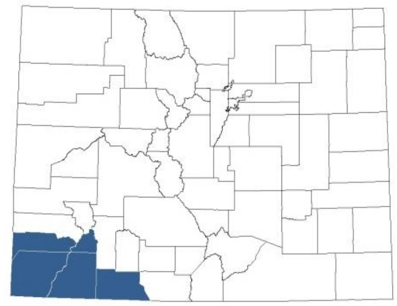
Figure 65
San Luis Valley Labor Market Activity



Source: U.S. Bureau of Labor Statistics; LAUS. Data prior to 2010 adjusted by Legislative Council Staff. Data are seasonally adjusted and are through September 2018.

The housing market in the San Luis Valley continues to expand. Growth in the number of housing permits issued rose 18.0 percent through October, compared to the same period last year, and marking the second consecutive year of double-digit growth. Home prices in Alamosa County increased by more than 7 percent to date in 2018, and are project to rise almost 6 percent during 2019. Population growth in the region is mixed, with Alamosa, Costilla, Mineral, and Saguache Counties projected to experience mostly positive net migration and natural population increase over the next few years, while Conejos and Rio Grande Counties will see declines in both, according to the Colorado State Demography Office.

Southwest Mountain Region



The southwest mountain region comprises five counties in the southwest corner of the state. This area boasts a diverse economy, with significant contributions from agriculture, tourism, and natural gas extraction as well as typical regional services like health care and education. This year, the region's diversity has been a valuable asset. While the tourism industry suffered as a result of forest fires and related land closures, the regional economy has shown resiliency in the face of these unexpected pressures. Economic indicators for the region are summarized in Table 30.

Table 30
Southwest Mountain Region Economic Indicators
Archuleta, Dolores, La Plata, Montezuma, and San Juan Counties

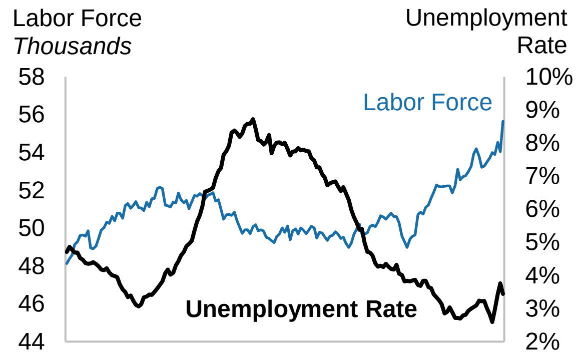
	2014	2015	2016	2017	YTD 2018
Employment Growth[1]	3.1%	0.7%	3.9%	3.2%	2.2%
Unemployment Rate[1]	4.9%	4.1%	3.4%	2.9%	3.2%
Housing Permit Growth[2]	14.2%	17.6%	-4.6%	29.8%	27.5%
National Park Recreation Visits[3]	8.9%	10.2%	7.5%	4.4%	-7.1%

[1]U.S. Bureau of Labor Statistics, LAUS (household survey). Seasonally adjusted. Data through September 2018.
[2]F.W. Dodge. Data through October 2018.
[3]National Park Service. Data through October 2018. Recreation visits for Mesa Verde National Park and Hovenweep National Monument.

The region endured a devastating summer fire season. The 416 Fire was among the region's largest on record, consuming some 55,000 acres in northwest La Plata County. Further west, the Plateau Fire burned nearly 20,000 acres in Montezuma and Dolores counties. Fire activity and associated land closures suppressed summer tourism activity, closing wide swaths of San Juan National Forest, U.S. Highway 550, and the Durango & Silverton Narrow Gauge Railroad. While not directly affected by the fires, visits to Mesa Verde National Park and Hovenweep National Monument fell 7.1 percent year-to-date through October despite elevated spring traffic.

Economic impacts from the troublesome fire season are not expected to endure. Neither of the large fires were reported to have burned structures, significantly limiting expected rebuilding costs. The City of Durango reported that municipal sales tax collections came in about 1 percent higher during January through October 2018 than during the first ten months last year, suggesting that retailers will not see a year-over-year reduction in sales. The regional tourism industry may benefit from elevated winter snowfall. The November seasonal forecast from the National Oceanic and Atmospheric Administration Climate Prediction Center estimates a 40 percent to 50 percent probability of above-normal winter precipitation in southwestern Colorado. Those figures represent the strongest snowfall forecast in the state and are among the strongest projections among winter tourism destinations nationwide. Agricultural producers would welcome relief from the drought conditions that plagued the, growing season.

Figure 66
Southwest Mountain Region Labor Market

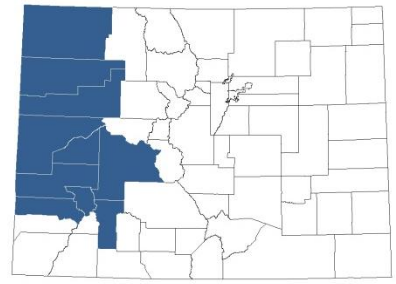


Source: U.S. Bureau of Labor Statistics; LAUS. Data prior to 2010 adjusted by Legislative Council Staff. Data are seasonally adjusted and are through September 2018.

Household surveys indicate a mature labor market (Figure 66). Through September, surveys of the five-county region report 2.2 percent job growth over the same period last year, modestly outpacing annual population growth in this part of the state. The unemployment rate was measured at 3.2 percent, 0.3 percentage points higher than the average rate measured last year.

Residential construction has continued its surge. Housing developers received permits for 700 residential units between January and October, an increase of 27.5 percent from the same period last year. The number of permits issued positions regional homebuilders for their highest level of construction activity since the mid-2000s, potentially alleviating some of the home price pressures in the Durango area.

Western Region



The western region has a diverse economy. Key industries in the northern counties of Mesa, Garfield, Moffat, Rio Blanco, and Routt include energy and agriculture, while the counties of Delta, Gunnison, Hinsdale, Montrose, Ouray, and San Miguel are more reliant on tourism, mining, and retiree-related spending. The region's economy accelerated in 2017 and growth has continued into 2018 as the area offers a more affordable option than the Front Range. Relatively affordable housing and an improving labor market are attracting people from Denver and other areas of the state and country. Economic indicators for the region are summarized in Table 31.

Table 31
Western Region Economic Indicators
Delta, Garfield, Gunnison, Hinsdale, Mesa, Moffat, Montrose, Ouray, Rio Blanco, and San Miguel Counties

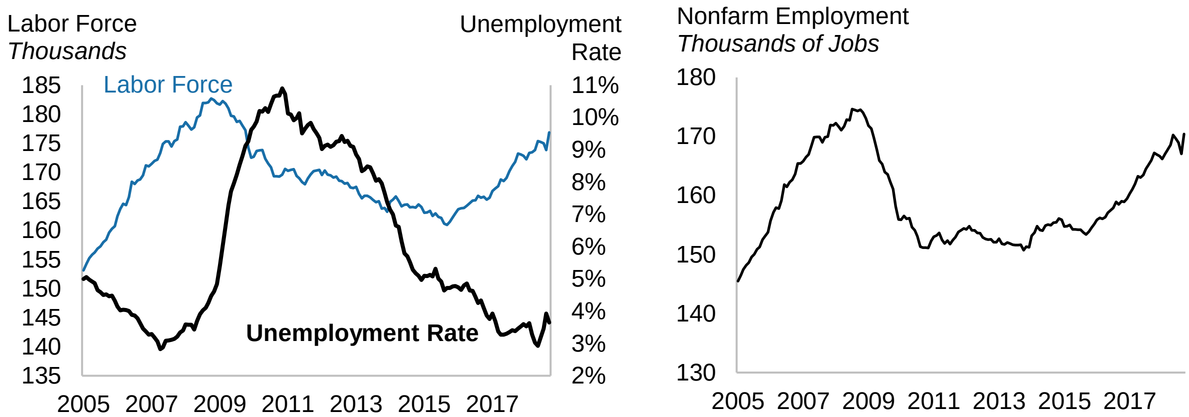
	2014	2015	2016	2017	YTD 2018
Employment Growth					
Western Region[1]	2.1%	-0.3%	2.1%	4.1%	3.2%
Grand Junction MSA[2]	2.5%	-0.2%	-0.3%	-0.4%	2.3%
Unemployment Rate[1]	5.9%	4.9%	4.4%	3.5%	3.4%
Natural Gas Production Growth[3]	-5.3%	-12.8%	-6.7%	-2.1%	4.1%
Housing Permit Growth[4]	7.9%	24.7%	6.7%	42.8%	19.2%
Nonresidential Construction Growth[4]					
Value of Projects	221.9%	-37.8%	16.4%	-34.7%	8.9%
Square Footage of Projects	157.9%	-41.0%	-3.9%	-18.2%	-2.1%
Level (*Thousands*)	1,021	602	579	474	464
Number of Projects	21.8%	-16.4%	39.3%	-39.7%	22.7%
Level	67	56	78	47	54

MSA = Metropolitan Statistical Area.
[1]U.S. Bureau of Labor Statistics, LAUS (household survey). Seasonally adjusted. Data through September 2018.
[2]U.S. Bureau of Labor Statistics, CES (establishment survey). Seasonally adjusted. Data through October 2018.
[3]Colorado Oil and Gas Conservation Commission. Data through July 2018.
[4]F.W. Dodge. Data through October 2018.

The region's labor market improved through 2017 and into 2018 despite slow natural gas production and a struggling coal industry. Employment increased 4.1 percent in 2017, and has increased 3.2 percent through the first nine months of 2018 compared with the same period last year. The region's unemployment rate declined for the seventh consecutive year in 2017, and has improved further in 2018 as employment gains have outpaced growth in the labor force. State and local governments and hospitals are some of the largest employers in the region. Employment in Grand Junction, the region's largest city, increased 2.3 percent in the first ten months of 2018 over year-ago levels, reversing modest employment declines over the past three years. Figure 67 shows labor market activity in the western region.

After years of subpar growth, the region's residential construction market has gained momentum as the western region offers good housing value compared to many other areas of the state. In 2017, the region's planning departments issued permits for almost 1,300 residential units, up 42.8 percent from the prior year. In 2018, the construction industry has increased activity above already high levels, growing 19.2 percent through the first ten months of the year. The region's nonresidential construction sector began picking up momentum in the summer. The total value of nonresidential construction projects increased 8.9 percent in the first ten months of 2018 relative to year-ago levels.

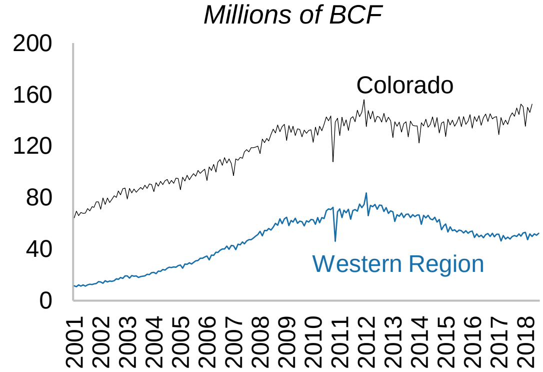
Figure 67
Western Region Labor Market Activity



Source: U.S. Bureau of Labor Statistics; LAUS. Data prior to 2010 adjusted by Legislative Council Staff. Data are seasonally adjusted and are through September 2018.

The Piceance Basin is located in the western region of Colorado and is the second largest potentially developable natural gas resource in the country. Natural gas production in the region has declined for five consecutive years between 2013 and 2017 due to persistently low natural gas prices and a lack of investment from energy firms in the western region of the state (Figure 68). There has been a slight increase in natural gas production in the first seven months of 2018, increasing 4.1 percent year-to-date. The recent uptick has gone to power plants as natural gas continues to be an attractive fuel to replace coal for electricity generation.

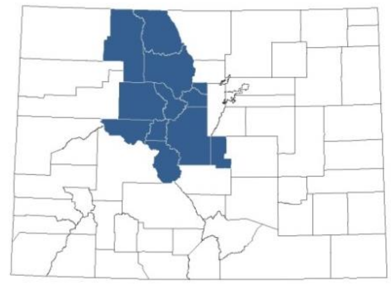
Figure 68
Natural Gas Production
Millions of BCF



Source: Colorado Oil and Gas Conservation Commission. Data through July 2018. BCF = Billion cubic feet.

The number of people that visited the Black Canyon of the Gunnison National Park deceased 0.4 percent in the first ten months of 2018 relative to the prior year. While visitation has declined slightly, 2018 visitation to the park is already the second highest on record only behind 2017 levels. While the Black Canyon of the Gunnison is not far from the struggling coal city of Somerset, most visitors to the park visit the south rim of the canyon and patronize businesses in the gateway communities of Montrose and Gunnison. Visitations to the Colorado National Monument near Grand Junction increased 0.3 percent year-to-date through October but remain 38.8 percent below the pace set in 2015 when visitation to the monument had a record 588,006 visitors.

Mountain Region



The mountain region comprises twelve counties stretching from Poncha Pass north to the Wyoming border. The region is dependent on a robust tourism industry, yet smaller economic contributors – including mining and forestry firms and agricultural producers – make important contributions as well. The mountains host one of the state's healthiest regional economies. Employers continue to add workers at a brisk pace, and homebuilders are responding with a significant expansion of regional housing stock. Economic indicators for the mountain region are presented in Table 32.

Table 32
Mountain Region Economic Indicators
Chaffee, Clear Creek, Eagle, Gilpin, Grand, Jackson, Lake, Park, Pitkin, Routt, Summit, and Teller Counties

	2014	2015	2016	2017	YTD 2018
Employment Growth[1]	3.3%	1.5%	3.5%	4.3%	3.4%
Unemployment Rate[1]	4.3%	3.3%	2.7%	2.4%	2.5%
Housing Permit Growth[2]	2.2%	-7.6%	29.0%	-10.7%	80.3%
Nonresidential Construction Growth[2]					
Value of Projects	84.8%	44.0%	-31.3%	315.9%	-81.8%
Square Footage of Projects	206.5%	-62.0%	18.7%	254.7%	-67.8%
Level (*Thousands*)	1,352	514	609	2,162	658
Number of Projects	20.0%	-33.3%	52.5%	1.6%	16.7%
Level	60	40	61	62	63

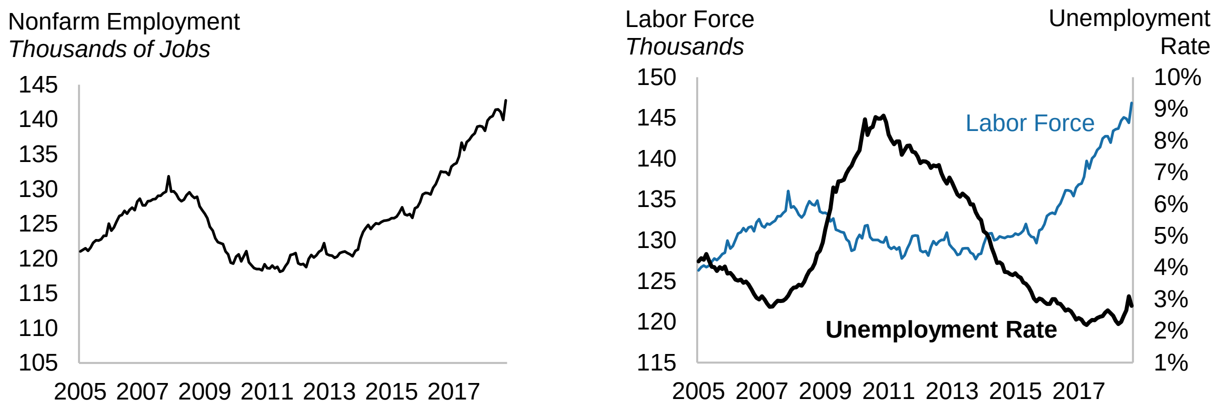
[1]U.S. Bureau of Labor Statistics. LAUS (household) survey. Seasonally adjusted. Data through September 2018.
[2]F.W. Dodge. Data through October 2018.

The tight job market is coaxing mountain residents into the labor force (Figure 69, right). The labor force continues to outstrip regional population growth, indicating that the increase is attributable to factors other than migration into the region. This may indicate that working-age adults are choosing employment over education or homemaking, or that older adults are delaying retirement or reentering the workforce. The pace of new regional job offerings has slowed in 2018 (Figure 69, left), but job growth remains stronger than for the state as a whole. Household surveys indicate that the regional unemployment rate ticked up in the third quarter, but the region's unemployment rate, year-to-date, remains the lowest in the state at 2.5 percent.

The regional housing market is hot, with robust demand supporting rising prices and abundant construction. Housing permit issuances are up 80.3 percent through October, and builders have clinched their peak year of homebuilding, both in unit and dollar terms, since the Great Recession (Figure 70, left). Workers in some communities have been priced out of their local market, pushed toward less expensive housing further from their workplace.

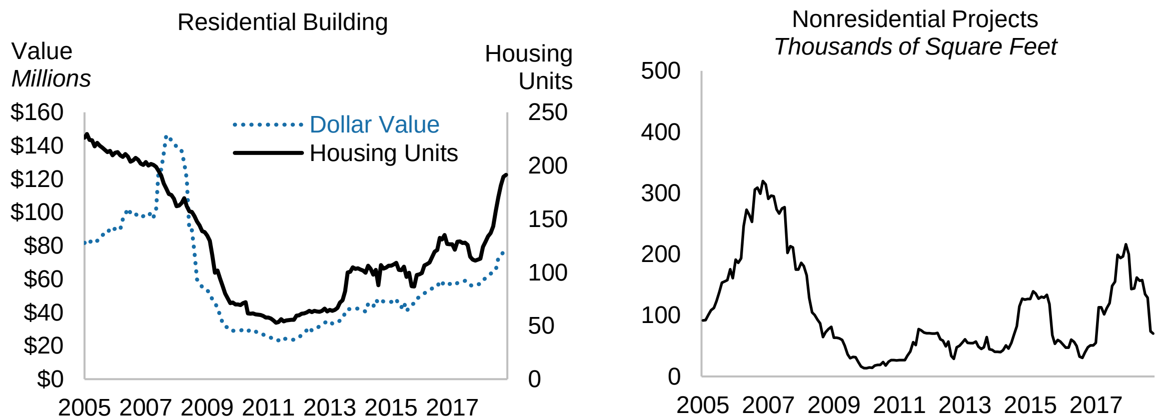
The large 2018 declines in nonresidential construction value and square footage are skewed by last year's approval of the Monarch Casino Black Hawk expansion project, the largest nonresidential project ever permitted in the region. Local authorities issued permits for 63 nonresidential projects between January and October (Figure 70, right), a healthy increase of 16.7 percent over year-ago levels for the same ten-month period.

Figure 69
Mountain Region Labor Market Activity



Source: U.S. Bureau of Labor Statistics; LAUS. Data prior to 2010 adjusted by Legislative Council Staff. Data are seasonally adjusted and are through September 2018.

Figure 70
Mountain Region Construction Activity



Source: F.W. Dodge. Data shown as twelve-month moving averages. Data are not seasonally adjusted and are through October 2018.

The November seasonal forecast from the National Oceanic and Atmospheric Administration Climate Prediction Center indicates an elevated probability of above-normal precipitation throughout Colorado this winter. In the northern mountains, the probability of above-normal precipitation is estimated between 33 percent and 40 percent. In the southern mountains, the probability is estimated between 40 percent and 50 percent. Since September, the snowfall forecast has weakened modestly for the southern mountains and improved for the northern mountains. Elevated snowfall would represent a welcome reversal from last year's dry winter conditions for winter tourism communities in the mountain region, particularly in resort-dependent areas of Eagle, Grand, Pitkin, Routt, and Summit counties. Snowfall projections are more favorable for Colorado than for competitor ski destinations in California, Utah, and the northern Rockies, particularly in February, March, and April.

Eastern Region

The eastern region comprises Colorado's 16 rural plains counties. Agriculture is the primary industry in the region with retailers, other locally-focused businesses, and government operations supporting area farming and ranching communities. Crop prices are on the upswing over the last few months; however, they are offset by rising labor costs, tariffs on agricultural exports, and increasing interest rates. Colorado's cattle and dairy sectors show mixed performance this year, with the same aforementioned pressures facing producers. Economic indicators for the region are presented in Table 33.

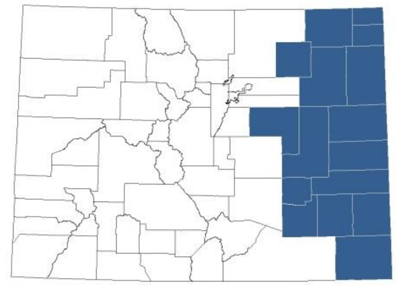


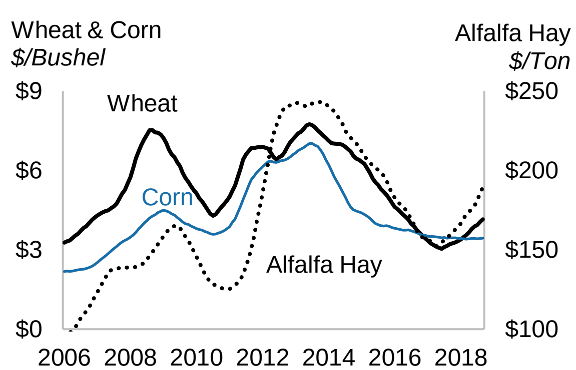
Table 33
Eastern Region Economic Indicators
Baca, Bent, Logan, Cheyenne, Crowley, Elbert, Kiowa, Kit Carson, Lincoln, Morgan, Otero, Phillips, Prowers, Sedgwick, Washington, and Yuma Counties

	2014	2015	2016	2017	YTD 2018
Employment Growth[1]	3.0%	2.1%	4.1%	4.2%	3.9%
Unemployment Rate[1]	4.4%	3.5%	2.9%	2.5%	2.7%
Crop Price Changes[2]					
Wheat ($/Bushel)	-11.5%	-25.6%	-27.9%	-2.9%	33.5%
Corn ($/Bushel)	-31.0%	-13.1%	-7.7%	-3.4%	1.4%
Alfalfa Hay (Baled, $/Ton)	-11.3%	-13.9%	-15.5%	4.8%	21.4%
Livestock[3]					
State Cattle and Calf Inventory Growth	-4.2%	-4.4%	1.0%	6.7%	2.9%
Milk Production	7.9%	3.9%	5.2%	6.7%	9.5%

[1]U.S. Bureau of Labor Statistics, LAUS (household survey. Data through September 2018.
[2]National Agricultural Statistics Service. Data through October 2018.
[3]National Agricultural Statistics Service. Data through October 2018.

The agricultural industry in the eastern region is performing relatively well when compared to other agricultural areas of the U.S. The drought afflicting much of the state has not been as severe on the eastern plains; however, summer hail storms caused some damage to this year's corn yield. Wheat prices are up 33.5 percent year-to-date, as last year's low prices induced producers to plant fewer acres this season, pushing prices up with a lower supply (Figure 71). Range and pasture conditions across the state have suffered from the drought, causing hay prices to rise from high demand. Cattle inventory growth is down year-over-year, likely due to high domestic and international demand for beef, and poor range and pasture conditions leading to higher feed costs. Colorado's dairy industry has enjoyed above-average prices for milk this year, and hence increased production. The potential opening of Canada's market to U.S. dairy imports with the renegotiation

Figure 71
Prices Received for Colorado Crops

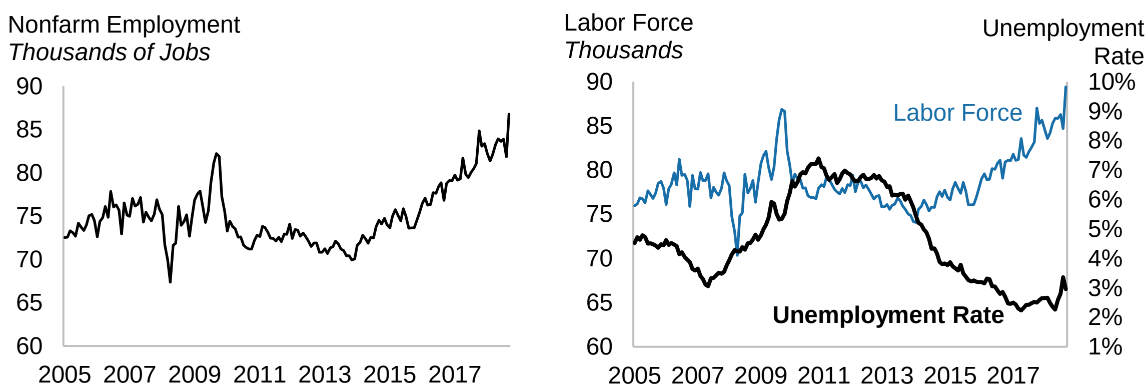


Source: National Agricultural Statistics Service. Data shown as twelve-month moving averages. Data through October 2018.

of the North America Free Trade Agreement (NAFTA) to the U.S.-Mexico-Canada Agreement (USMCA) may provide a brighter outlook for the coming year.

Over the last several years, much of the region has suffered from persistent out-migration and natural population decline, as younger families gravitate more towards urban areas, birth rates decline, and the remaining population ages. This has taken a toll on the labor force by squeezing an already tight labor market, putting upward pressure on wages, and leaving some agricultural producers without workers. In the first ten months of 2018, total employment has grown by 3.9 percent, while the unemployment rate averaged 2.7 percent through the same period, lower than the statewide rate. Labor market indicators for the region are summarized in Figure 72.

Figure 72
Eastern Region Labor Market Activity



Source: U.S. Bureau of Labor Statistics; LAUS. Data prior to 2010 adjusted by Legislative Council Staff. Data are seasonally adjusted and are through September 2018.

The construction of Colorado's largest wind farm on the eastern plains should give a boost to economic activity in the counties it touches. Xcel Energy's Rush Creek Wind Project occupies around 100,000 acres in the counties of Lincoln, Arapahoe, Elbert, Kit Carson, and Cheyenne. The wind farm began operations on October 31, and is projected to provide energy to 300,000 homes. Economically, the region will benefit through the life of the project. Many farm and land owners have leased their land to the project and are projected to collect about $180 million in lease payments over 25 years.

Despite the contraction of many rural community populations, Elbert County continues to see population growth, as former residents of the Denver Metro area leave in search of more affordable housing. A new housing development in the region with close to 1,000 homes will break ground in 2019. Home prices will be well below Metro Denver's average home price, starting in the $300,000 range. The Colorado State Demographer's Office projects that net migration to the county will double in 2018 relative to 2017 estimates before it tapers off slightly after 2020.

Appendix: Historical Data

National Economic Indicators

Calendar Years	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
GDP ($ *Billions*)[1]	$11,458.2	$12,213.7	$13,036.6	$13,814.6	$14,451.9	$14,712.8	$14,448.9	$14,992.1	$15,542.6	$16,197.0	$16,784.9	$17,521.7	$18,219.3	$18,707.2	$19,485.4
Percent Change	4.8%	6.6%	6.7%	6.0%	4.6%	1.8%	-1.8%	3.8%	3.7%	4.2%	3.6%	4.4%	4.0%	2.7%	4.2%
Real GDP ($ *Billions*)[1]	$13,879.1	$14,406.4	$14,912.5	$15,338.3	$15,626.0	$15,604.7	$15,208.8	$15,598.8	$15,840.7	$16,197.0	$16,495.4	$16,899.8	$17,386.7	$17,659.2	$18,050.7
Percent Change	2.9%	3.8%	3.5%	2.9%	1.9%	-0.1%	-2.5%	2.6%	1.6%	2.2%	1.8%	2.5%	2.9%	1.6%	2.2%
Unemployment Rate[2]	6.0%	5.5%	5.1%	4.6%	4.6%	5.8%	9.3%	9.6%	8.9%	8.1%	7.4%	6.2%	5.3%	4.9%	4.4%
Inflation[2]	2.3%	2.7%	3.4%	3.2%	2.9%	3.8%	-0.3%	1.6%	3.1%	2.1%	1.5%	1.6%	0.1%	1.3%	2.1%
10-Year Treasury Note[3]	4.0%	4.3%	4.3%	4.8%	4.6%	3.7%	3.3%	3.2%	2.8%	1.8%	2.4%	2.5%	2.1%	1.8%	2.3%
Personal Income ($ *Billions*)[1]	$9,487.5	$10,035.1	$10,598.2	$11,381.7	$12,007.8	$12,442.2	$12,059.1	$12,551.6	$13,326.8	$14,010.1	$14,181.1	$14,991.8	$15,719.5	$16,125.1	$16,830.9
Percent Change	3.6%	5.8%	5.6%	7.4%	5.5%	3.6%	-3.1%	4.1%	6.2%	5.1%	1.2%	5.7%	4.9%	2.6%	4.4%
Wage & Salaries ($ *Billions*)[1]	$5,138.7	$5,421.6	$5,691.9	$6,057.0	$6,396.8	$6,534.3	$6,248.6	$6,372.1	$6,625.9	$6,927.5	$7,113.2	$7,473.2	$7,854.4	$8,080.7	$8,453.8
Percent Change	2.9%	5.5%	5.0%	6.4%	5.6%	2.1%	-4.4%	2.0%	4.0%	4.6%	2.7%	5.1%	5.1%	2.9%	4.6%
Nonfarm Employment (*Millions*)[2]	130.3	131.8	134.0	136.5	138.0	137.2	131.3	130.4	131.9	134.2	136.4	138.9	141.8	144.3	146.6
Percent Change	-0.2%	1.1%	1.7%	1.8%	1.1%	-0.5%	-4.3%	-0.7%	1.2%	1.7%	1.6%	1.9%	2.1%	1.8%	1.6%

Sources
[1]U.S. Bureau of Economic Analysis. Real gross domestic product (GDP) is adjusted for inflation. Personal income and wages and salaries not adjusted for inflation.
[2]U.S. Bureau of Labor Statistics. Inflation shown as the year-over-year change in the consumer price index for all urban areas (CPI-U).
[3]Federal Reserve Board of Governors.

Colorado Economic Indicators

Calendar Years	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Nonfarm Employment (*Thousands*)[1]	2,179.0	2,225.5	2,279.0	2,330.6	2,350.0	2,244.7	2,221.4	2,258.1	2,312.3	2,380.8	2,464.0	2,541.7	2,602.6	2,658.7
Percent Change	1.2%	2.1%	2.4%	2.3%	0.8%	-4.5%	-1.0%	1.7%	2.4%	3.0%	3.5%	3.2%	2.4%	2.2%
Unemployment Rate[1]	5.5%	5.0%	4.3%	3.7%	4.9%	7.3%	8.7%	8.4%	7.9%	6.9%	5.0%	3.9%	3.3%	2.8%
Personal Income ($ *Millions*)[2]	$163,427	$174,772	$188,803	$201,227	$207,773	$198,147	$204,692	$222,572	$236,687	$248,959	$271,101	$284,143	$289,621	$306,411
Percent Change	3.7%	6.9%	8.0%	6.6%	3.3%	-4.6%	3.3%	8.7%	6.3%	5.2%	8.9%	4.8%	1.9%	5.8%
Per Capita Personal Income ($)[2]	35,722	37,732	39,997	41,889	42,492	39,851	40,549	43,502	45,637	47,308	50,746	52,228	52,372	54,646
Percent Change	2.7%	5.6%	6.0%	4.7%	1.4%	-6.2%	1.8%	7.3%	4.9%	3.7%	7.3%	2.9%	0.3%	4.3%
Wage & Salary Income ($ *Millions*)[2]	$93,550	$98,774	$105,649	$112,526	$116,710	$112,228	$113,670	$118,414	$124,947	$129,521	$138,585	$146,487	$150,977	$160,372
Percent Change	4.8%	5.6%	7.0%	6.5%	3.7%	-3.8%	1.3%	4.2%	5.5%	3.7%	7.0%	5.7%	3.1%	6.2%
Residential Housing Permits[3]	44,855	45,422	39,211	30,149	19,507	9,385	11,530	13,386	21,329	27,270	29,264	30,508	37,057	41,112
Percent Change	9.3%	1.3%	-13.7%	-23.1%	-35.3%	-51.9%	22.8%	16.1%	59.3%	27.9%	7.3%	4.2%	21.5%	10.9%
Nonresidential Construction (*Millions*)[4]	$3,245	$4,275	$4,641	$5,259	$4,114	$3,354	$3,147	$3,923	$3,695	$3,624	$4,351	$4,988	$5,972	$6,062
Percent Change	20.8%	31.7%	8.6%	13.3%	-21.8%	-18.5%	-6.2%	24.7%	-5.8%	-1.9%	20.1%	14.6%	19.7%	1.5%
Denver-Aurora-Lakewood Inflation[1]	0.1%	2.1%	3.6%	2.2%	3.9%	-0.6%	1.9%	3.7%	1.9%	2.8%	2.8%	1.2%	2.8%	3.4%
Population (*Thousands, July 1*)[3]	4,575	4,632	4,720	4,804	4,890	4,972	5,048	5,116	5,186	5,263	5,342	5,440	5,530	5,607
Percent Change	1.0%	1.2%	1.9%	1.8%	1.8%	1.7%	1.5%	1.4%	1.4%	1.5%	1.5%	1.8%	1.6%	1.4%

Sources
[1]U.S. Bureau of Labor Statistics. Inflation shown as the year-over-year change in the consumer price index for Denver-Aurora-Lakewood metro area.
[2]U.S. Bureau of Economic Analysis. Personal income and wages and salaries not adjusted for inflation.
[3]U.S. Census Bureau. Residential housing permits are the number of new single and multi-family housing units permitted for building.
[4]F.W. Dodge.