December 2022 | Legislative Council Staff
Economic & Revenue Forecast

Presentation to the Joint Budget Committee
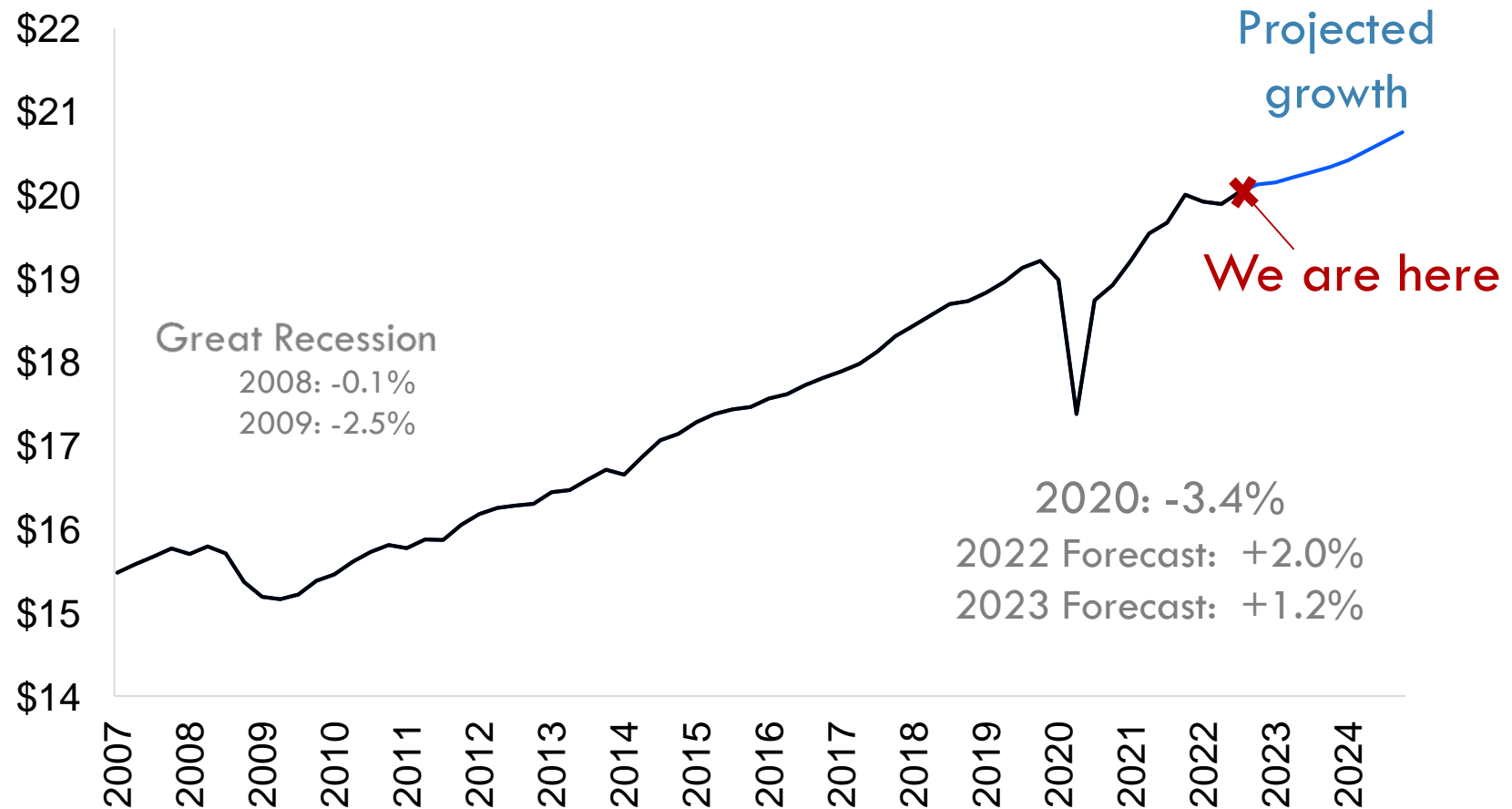December 20, 2022

Economic Outlook

Positive, but slower, economic growth anticipated through forecast period

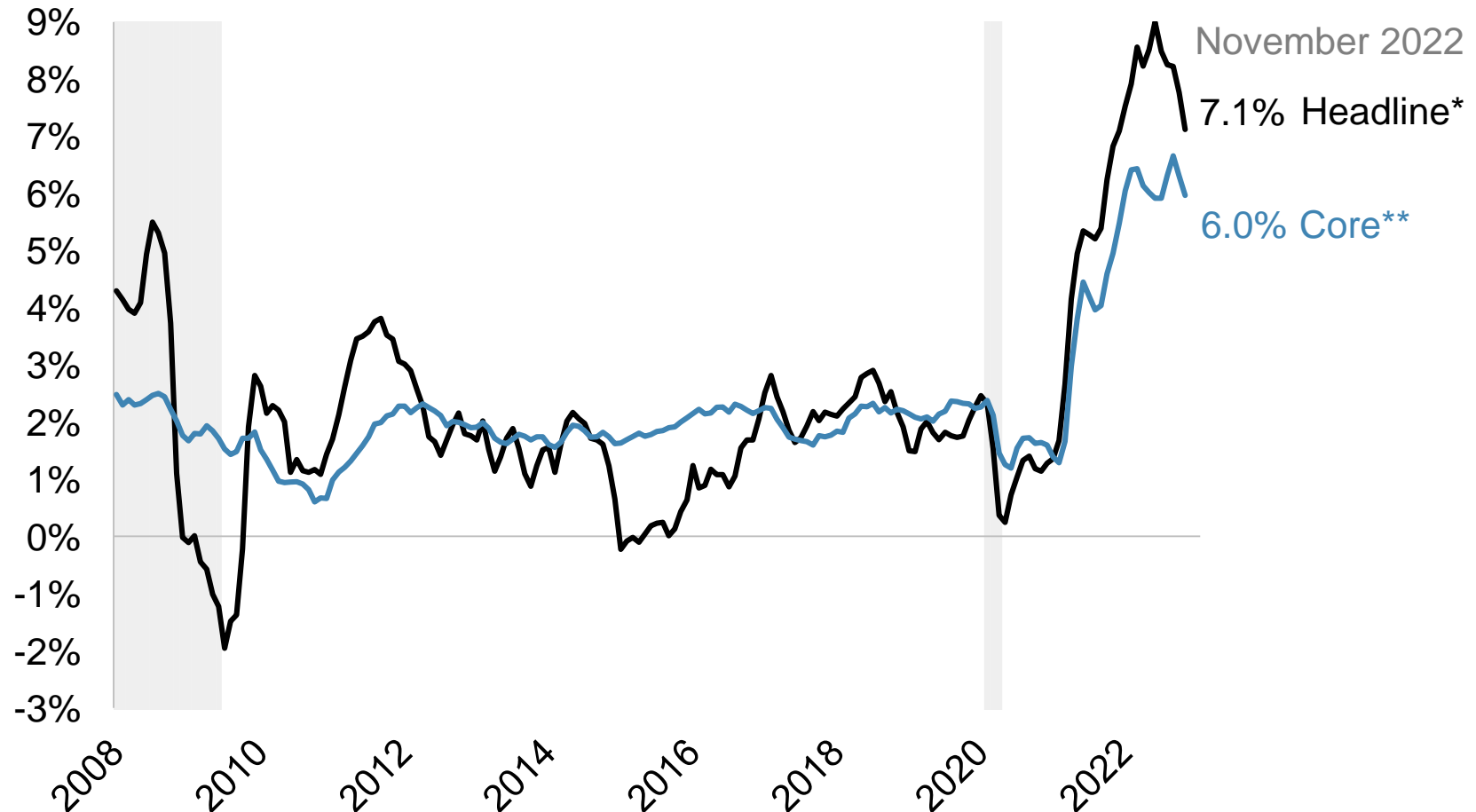## Real U.S. Gross Domestic Product
Dollars in Trillions

Projected growth

We are here

Great Recession
2008: -0.1%
2009: -2.5%

2020: -3.4%
2022 Forecast: +2.0%
2023 Forecast: +1.2%

Nation's inflationary pressures continue, forecast to average 8.1 percent in 2022 and 4.6 percent in 2023

U.S. City Average CPI-U Inflation

Year-over-Year Change in Prices

November 2022

7.1% Headline*

6.0% Core**

Energy and transportation prices easing, housing continues to exert upward pressure

U.S. CPI-U, Selected Components, November 2022
Year-over-Year Change in Prices

Percentage Point Contribution

Component	YoY Change
Headline	7.1%
Core	6.0%
Energy	13.0%
Food	10.7%
Housing	7.8%
Apparel	3.6%
Transportation	7.8%
Medical Care	4.2%
Recreation	4.8%
Education	3.1%
Other	7.0%

Percentage Point Contribution chart:
- Housing: 3.3%
- Food: 1.6%
- Transportation: 1.2%
- Medical Care: 0.4%
- Recreation: 0.3%
- Other: 0.2%
- Apparel: 0.1%
- Education: 0.0%
- Headline: 7.1%

Source: U.S. Bureau of Labor Statistics.
Inflation is calculated as the growth in urban area prices in a given period relative to the same period in the prior year.
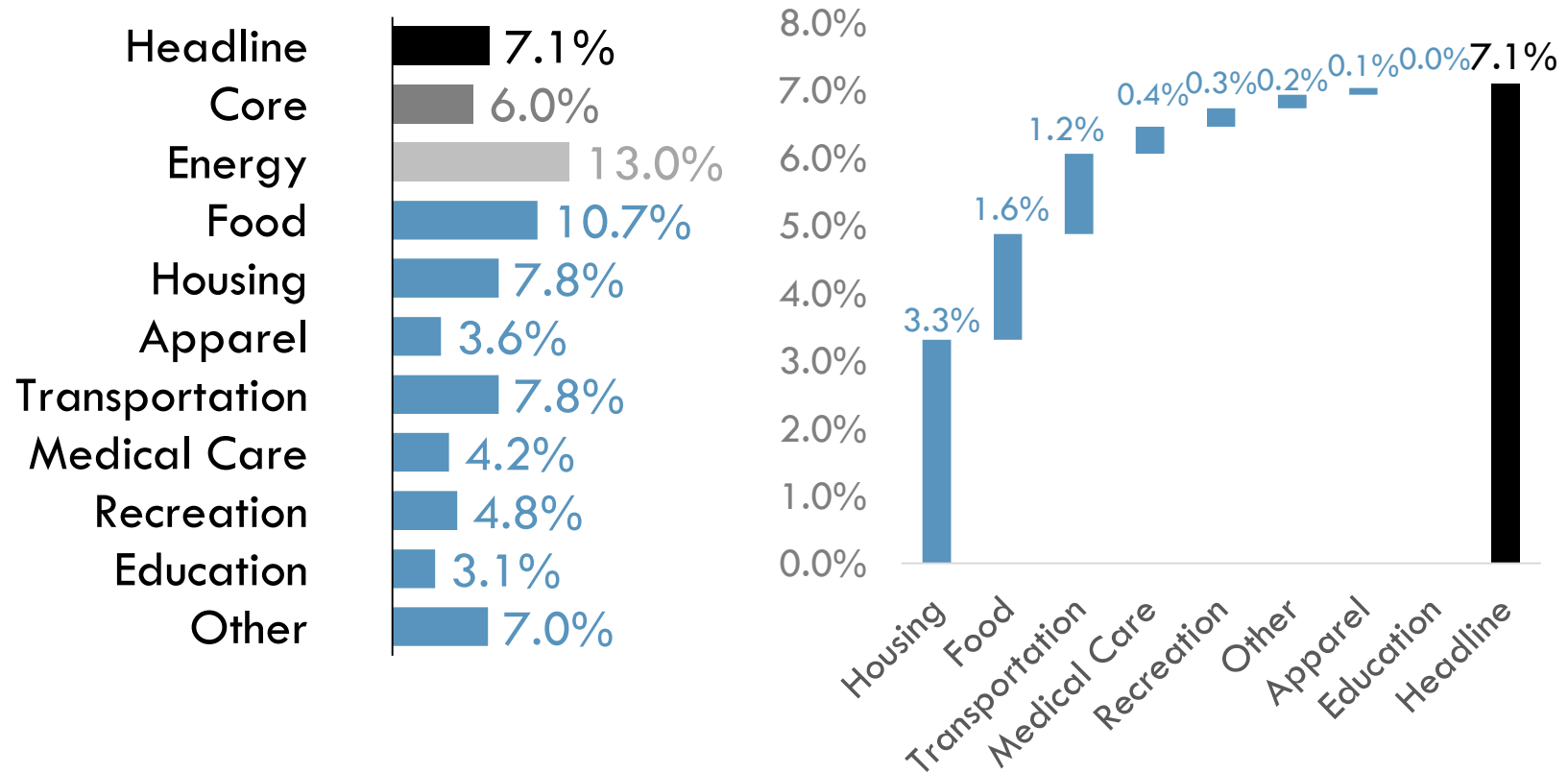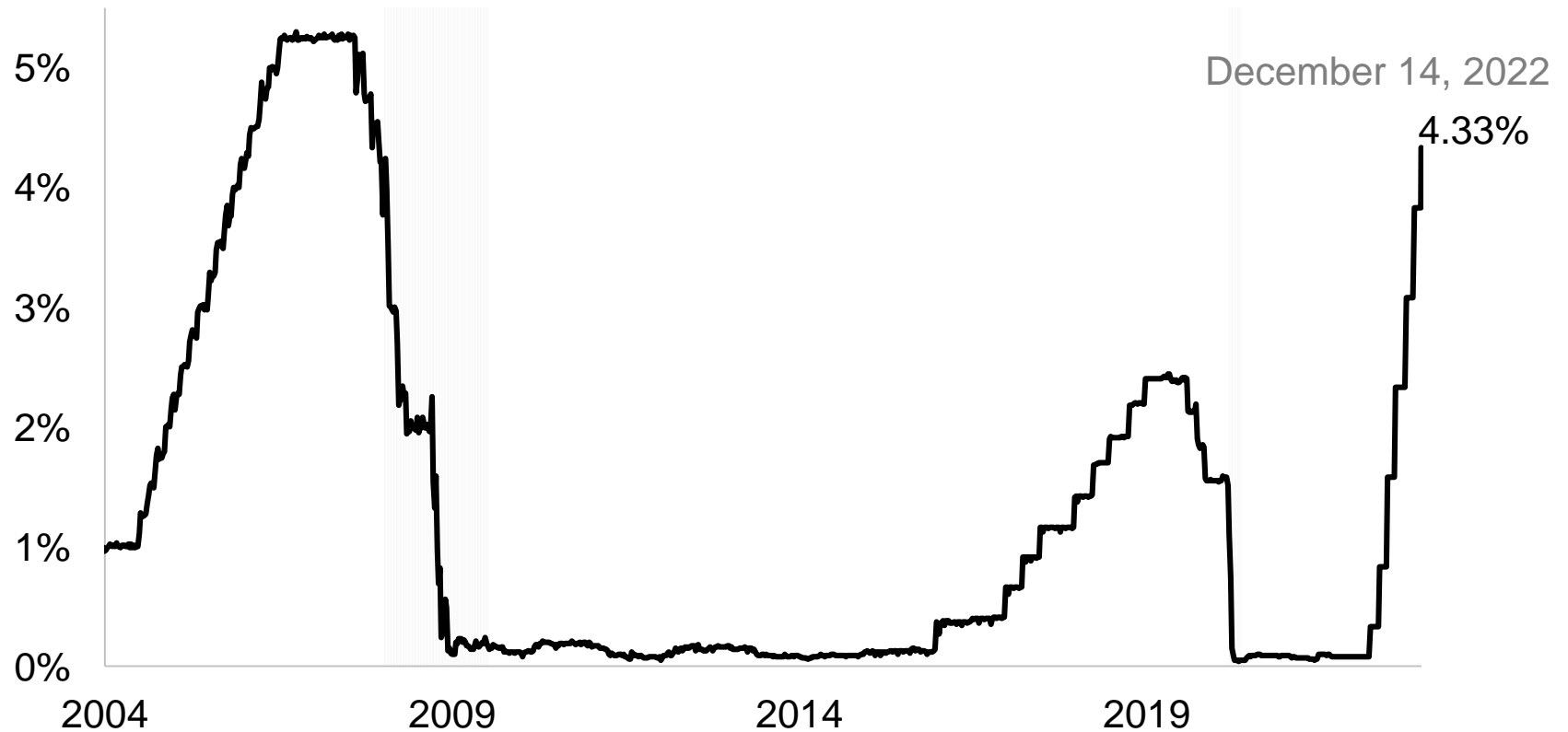
Smaller rate increases ahead, with higher terminal peak

Effective Federal Funds Rate

December 14, 2022

4.33%

Home prices falling nationally, Denver homes down 4.5% from peak

Case-Shiller Home Price Indices
Index 100 = July 2012

September YoY
9.3%
10.5%
9.7%
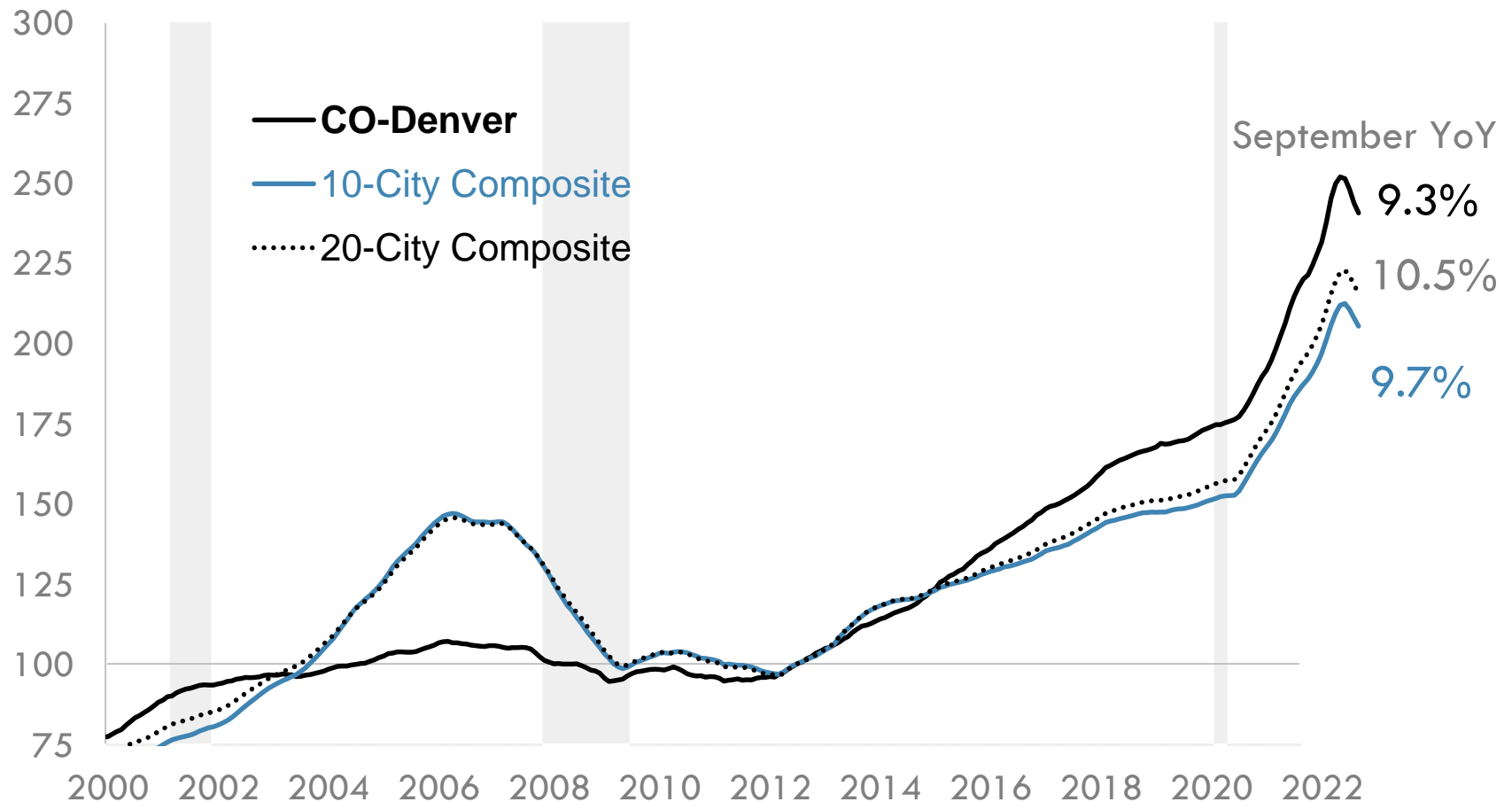
Colorado's unemployment rate ticked down to 3.5 percent in November

Unemployment rates

Source: U.S. Bureau of Labor Statistics. Data are seasonally adjusted.

8

Majority of sectors have recovered jobs lost in the recession

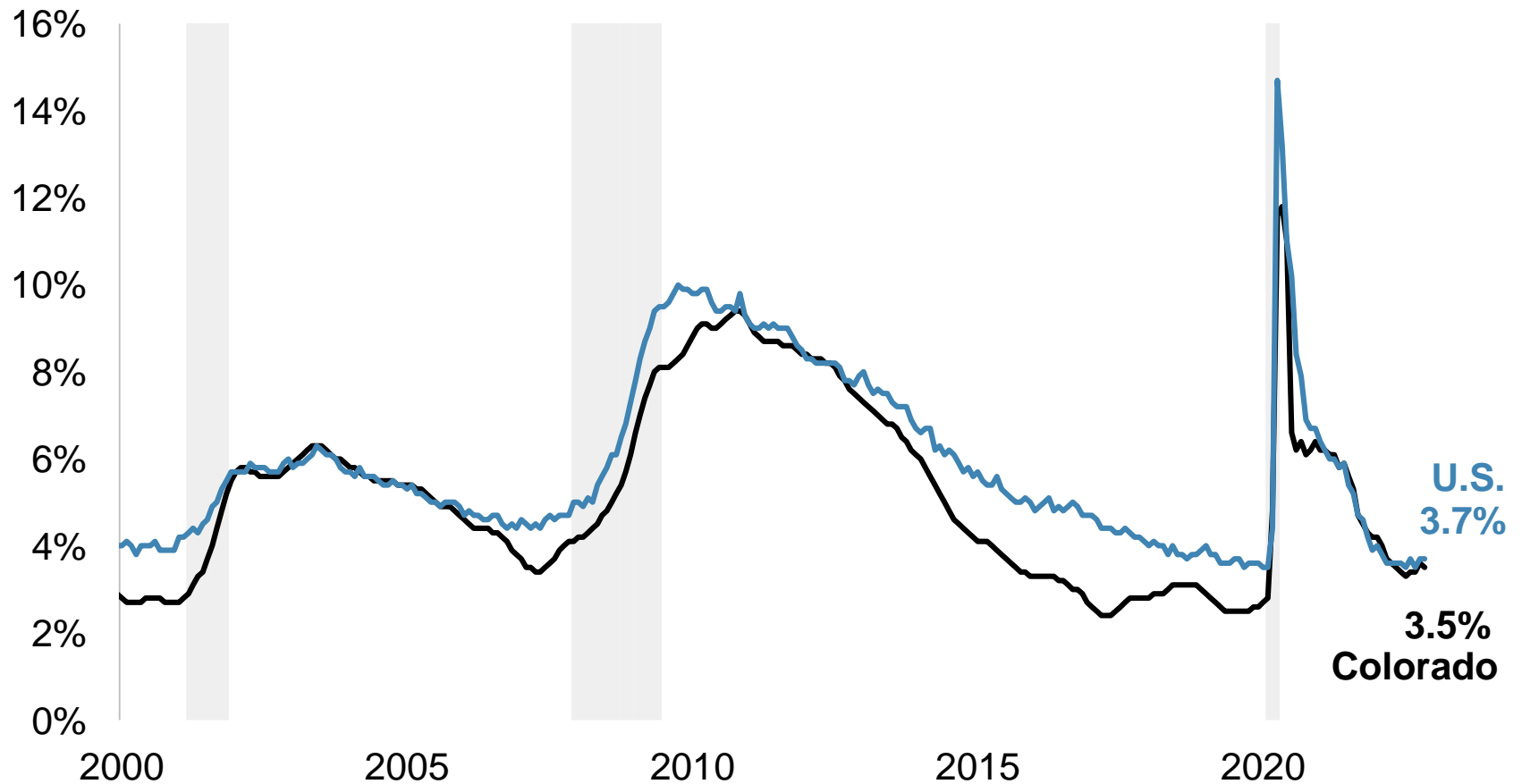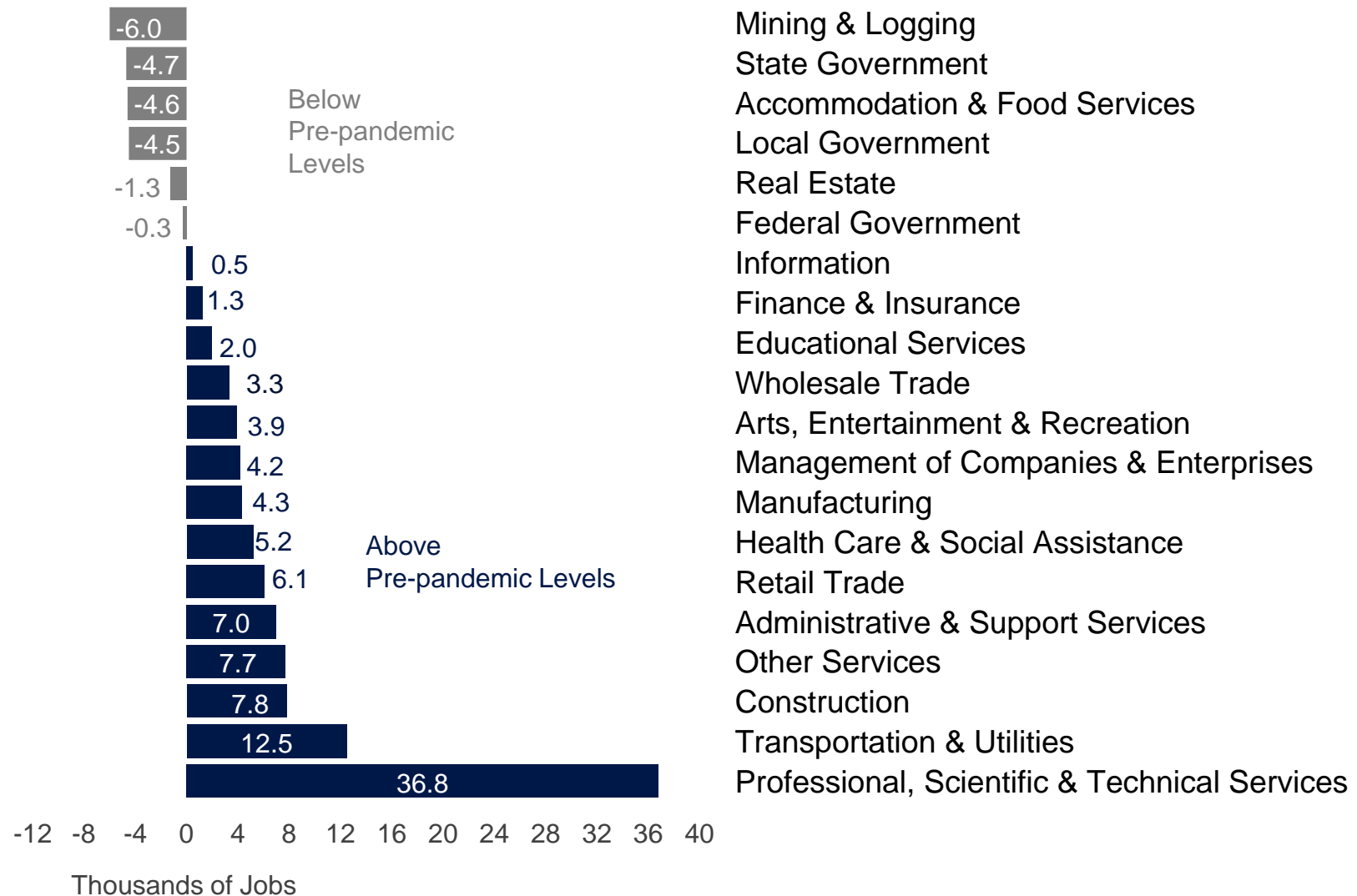| Value	Sector
-6.0	Mining & Logging
-4.7	State Government
-4.6	Accommodation & Food Services
-4.5	Local Government
-1.3	Real Estate
-0.3	Federal Government
0.5	Information
1.3	Finance & Insurance
2.0	Educational Services
3.3	Wholesale Trade
3.9	Arts, Entertainment & Recreation
4.2	Management of Companies & Enterprises
4.3	Manufacturing
5.2	Health Care & Social Assistance
6.1	Retail Trade
7.0	Administrative & Support Services
7.7	Other Services
7.8	Construction
12.5	Transportation & Utilities
36.8	Professional, Scientific & Technical Services

Below Pre-pandemic Levels

Above Pre-pandemic Levels

-12 -8 -4 0 4 8 12 16 20 24 28 32 36 40

Thousands of Jobs

Source: U.S. Bureau of Labor Statistics. Data are seasonally adjusted and through October 2022.

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Competition for workers remains high with job openings well above pre-pandemic levels

Job Openings

Index 100 = February 2020
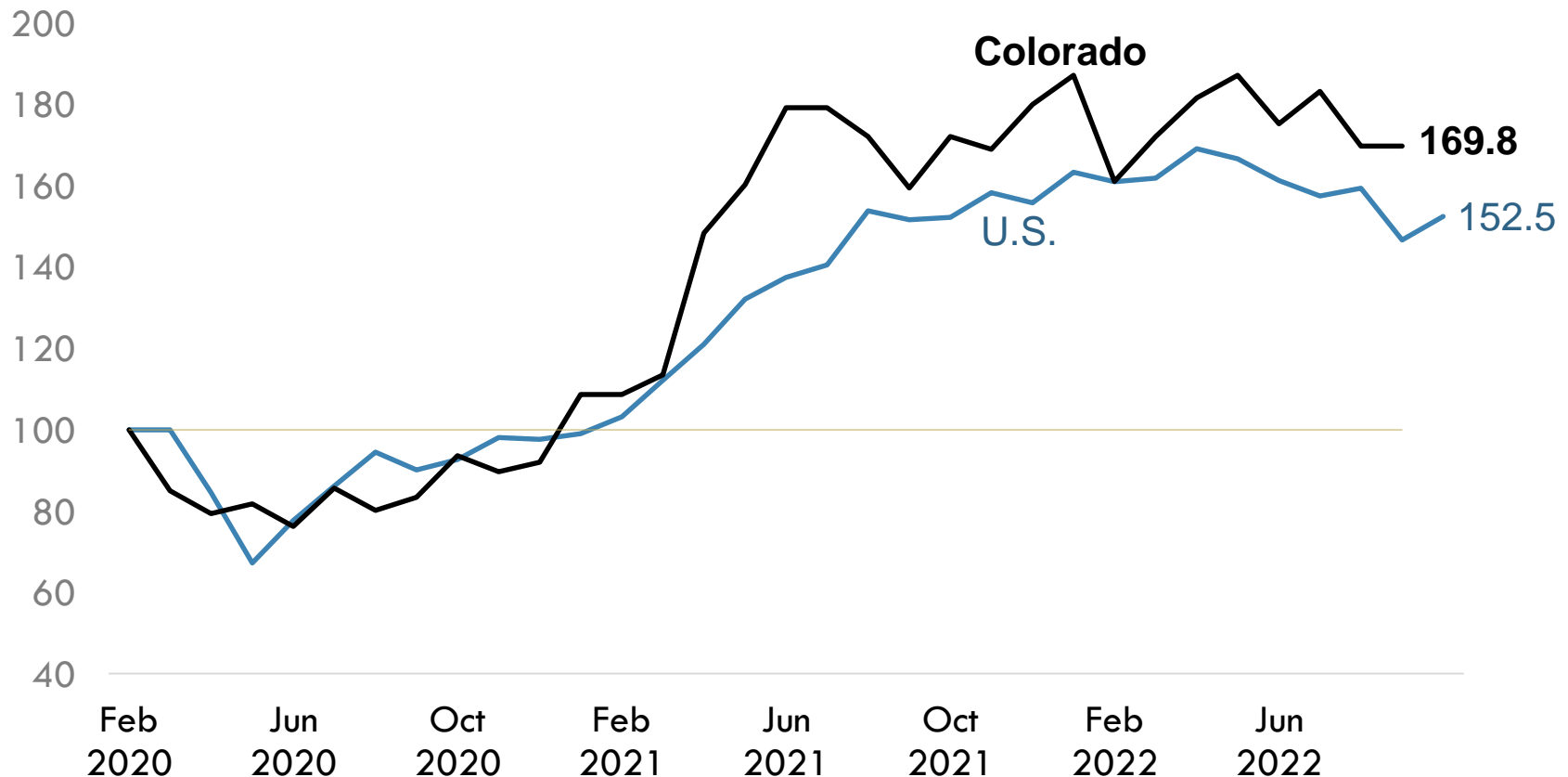
Source: U.S. Bureau of Labor Statistics, Job Openings and Labor Turnover Survey (JOLTS). Seasonally adjusted. Data through September 2022.
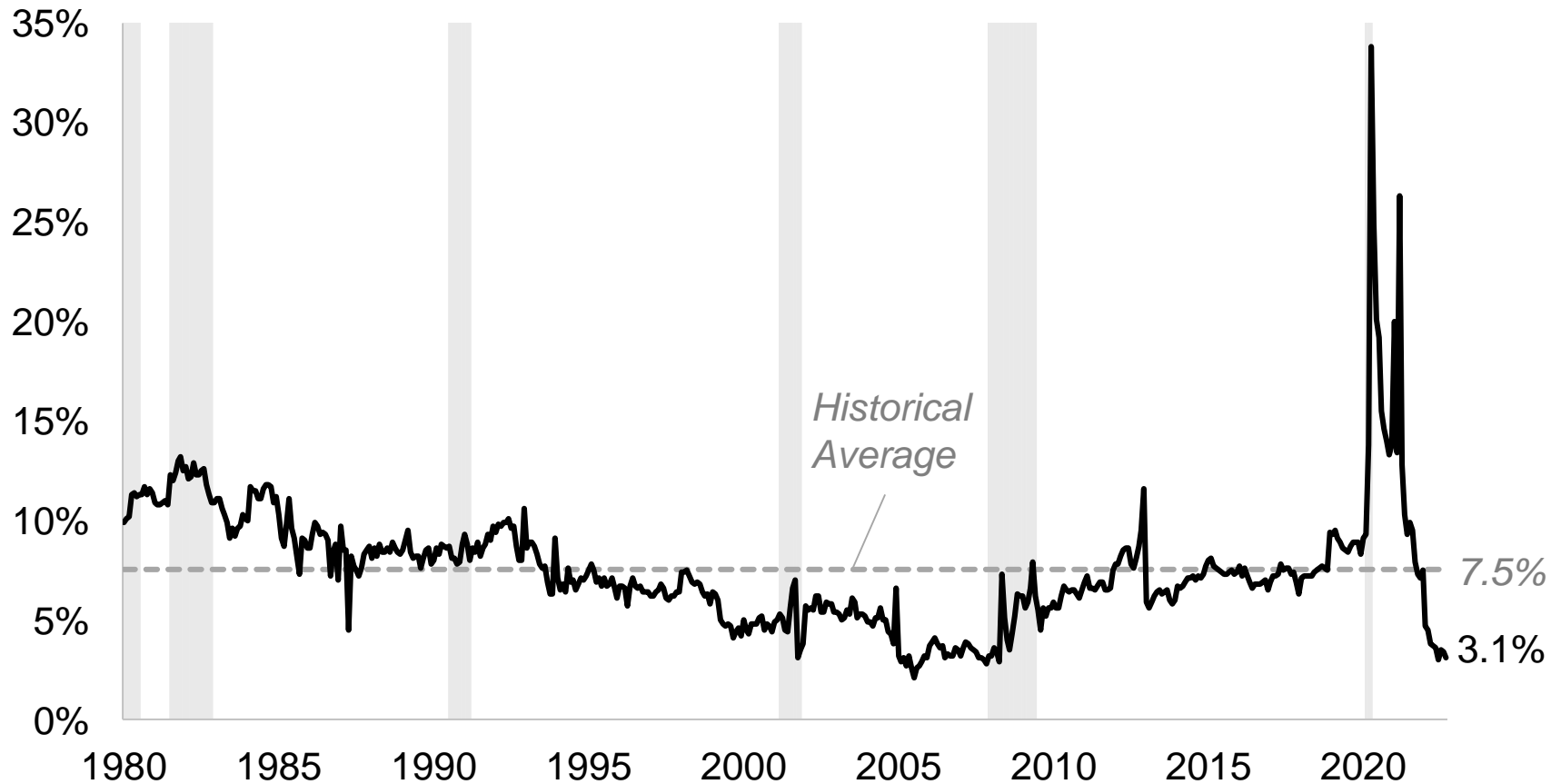
Colorado's wage gains outperforming the nation

Nominal wage growth

Source: Federal Reserve Bank of Atlanta. Data are 12-month moving averages of median wage growth, hourly data.

Excess savings from pandemic-related programs spent down quickly

Personal Savings Rate

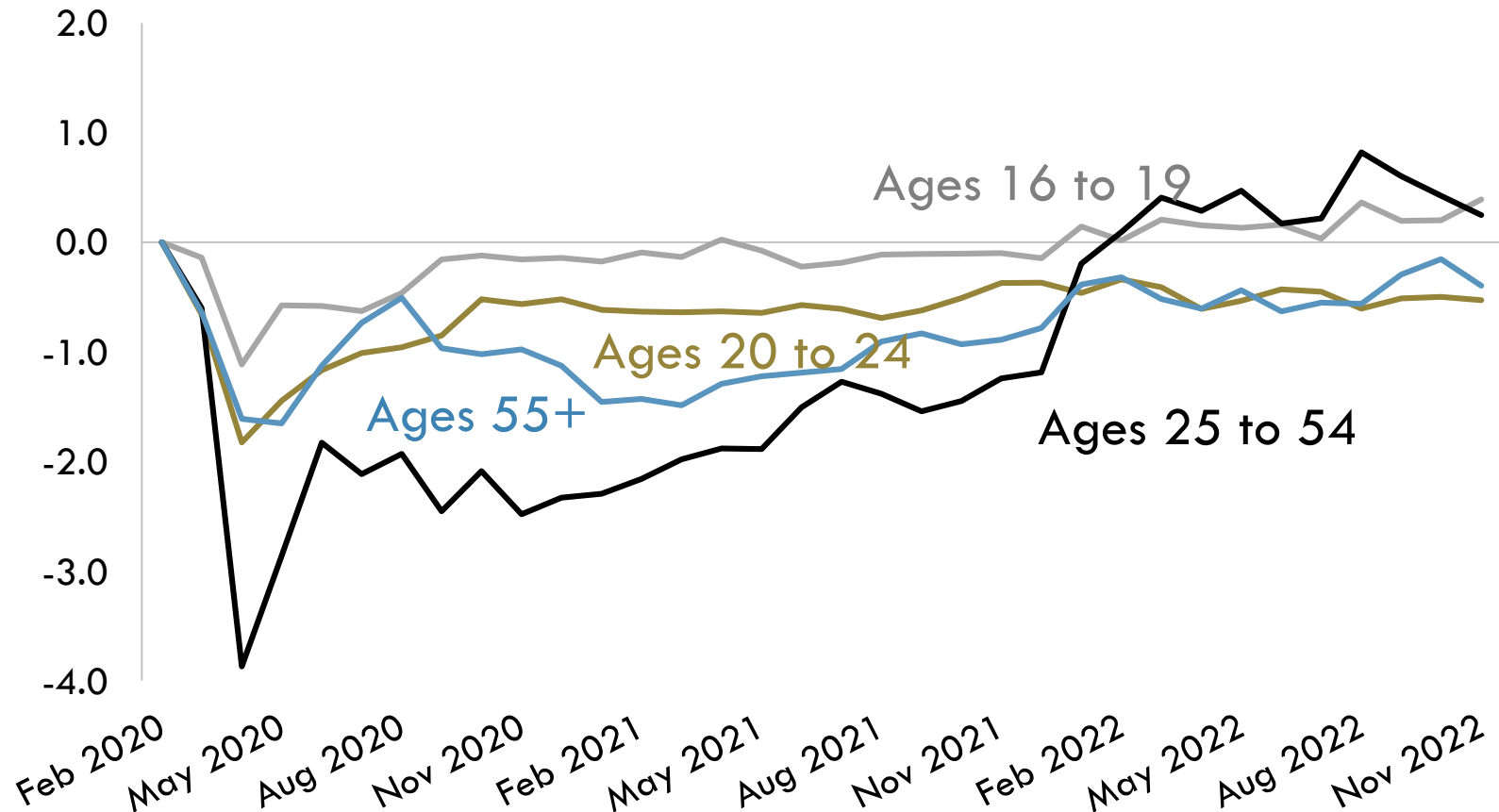# Risks to the forecast remain weighted to the downside

- Risks to the forecast remain elevated amid rapid monetary tightening, a housing market correction, and declining household balance sheets

- **Downside:** inflation and more aggressive monetary policy response, steeper housing market correction, geopolitical uncertainty and trade disruptions

- **Upside:** sustained drop in energy prices and faster resolution to inflationary pressures, resolution to war in Ukraine, and stabilized supply chains

- Risk of near-term recession remains elevated but the forecast anticipates a continued, yet slowing expansion

Supplemental
Economic Outlook Slides

Workers ages 25 to 54 lead labor force recovery, followed by teens

U.S. Labor Force by Age

Index 0.0 = January 2020

Ages 16 to 19

Ages 20 to 24

Ages 55+

Ages 25 to 54

U.S. wage growth varies by wage quartile

12 month moving averages of monthly median wage growth, lowest 25 percent (1st quartile) to highest 25 percent (4th quartile)
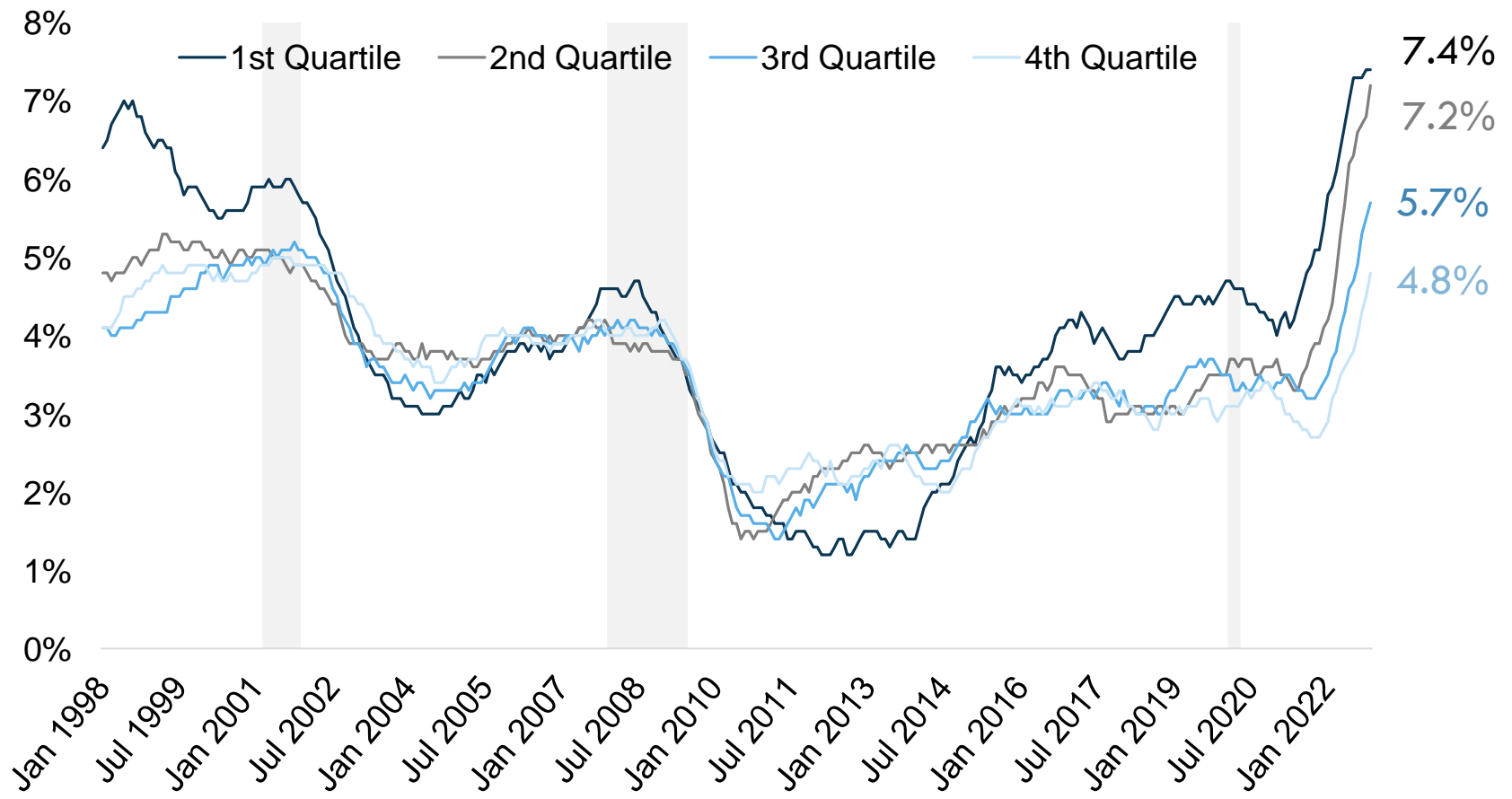
Source: Federal Reserve Bank of Atlanta Wage Growth Tracker. Data through November 2022.

Energy market dynamics

Crude Oil Production
Millions of Barrels per Month

United States (Left)

Colorado (Right)

Crude Oil Price, West Texas Intermediate
Dollars per Barrel

$79.29

General Fund Budget Outlook

Adjustments for ballot measures

- **Proposition 121 – Income Tax Rate Cut**
  - -$670M for FY 2022-23 (1.5 year impact)
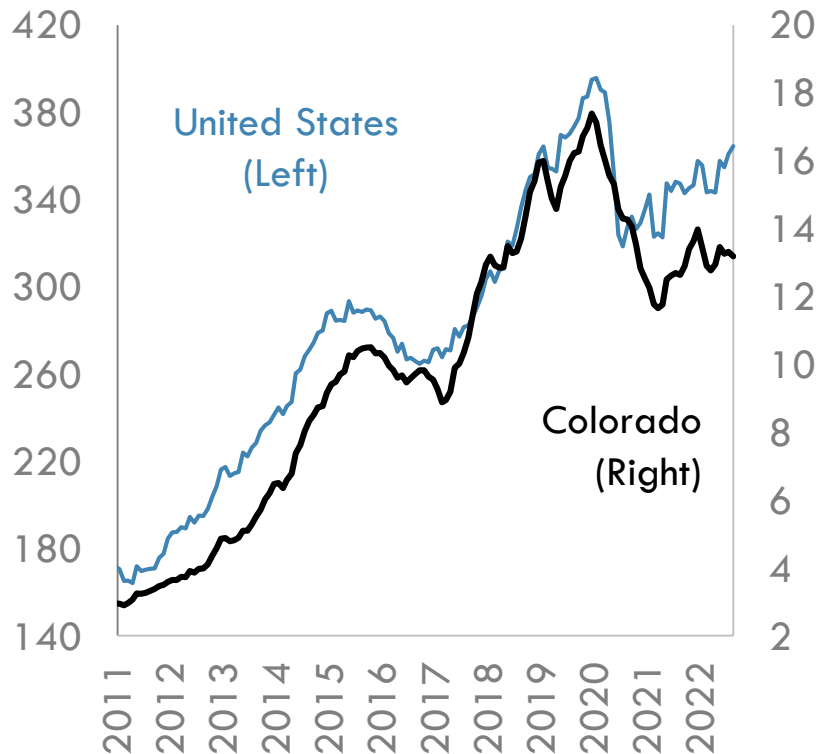 - -$440M for FY 2023-24, FY 2024-25
  - No impact on discretionary budget (reduces TABOR obligation)

- **Proposition 123 – Affordable Housing**
  - Diverts revenue from GF and exempts from TABOR
  - $150M in FY 2022-23 (0.5 year impact), $300M thereafter
  - No impact on discretionary budget (reduces TABOR obligation)

- **Proposition FF – Healthy School Meals**
  - Raises income tax revenue, exempts from TABOR, earmarks
  - $50M in FY 2022-23 (0.5 year impact), $100M thereafter
  - No impact on discretionary budget (rebates and expenditures)

- **Small adjustments for Amendment E, Proposition 125**

Revenue decrease expected in FY 2022-23 after accounting for ballot measures

Gross General Fund Revenue

Billions of Dollars

Percentages show year-over-year changes

Change Relative to September 2022

FY 2021-22: -$1.08 billion

FY 2022-23: -$707 million

FY 2023-24: -$559 million

December 2022 Expectations
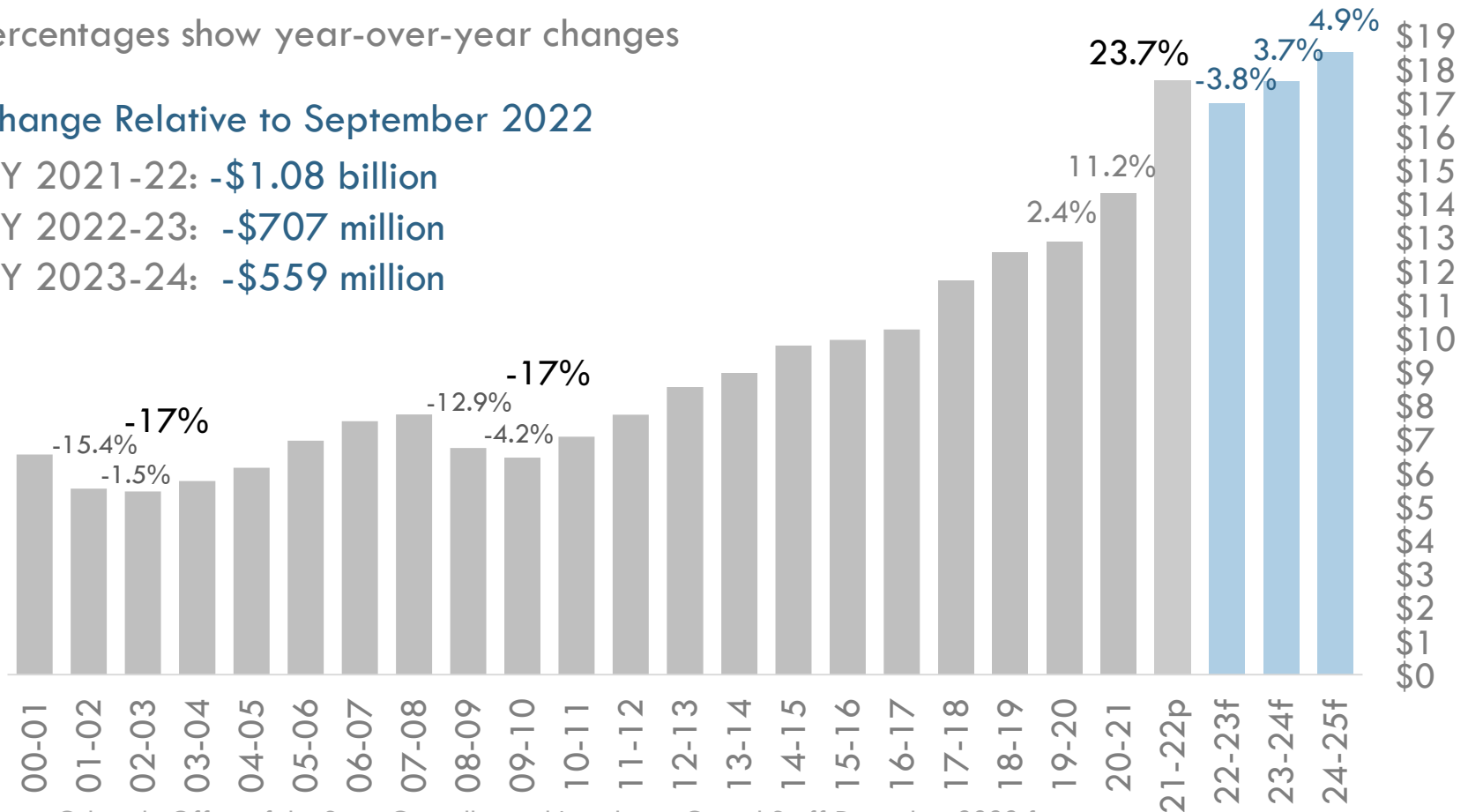
Source: Colorado Office of the State Controller and Legislative Council Staff December 2022 forecast.

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TABOR Outlook

Revenue Subject to TABOR
Billions of Dollars

Revenue Above the Ref C Cap

FY 2021-22 (still preliminary): $3.73 billion
FY 2022-23: $2.47 billion
FY 2023-24: $1.53 billion
FY 2024-25: $1.37 billion

CY 2022 inflation affects
FY 2023-24 limits

Referendum C Cap

TABOR Surpluses

TABOR Limit Base

Referendum C
Five-Year
Timeout Period

Source: Office of the State Controller, Office of the State Auditor, and Legislative Council Staff December 2022 forecast.

21
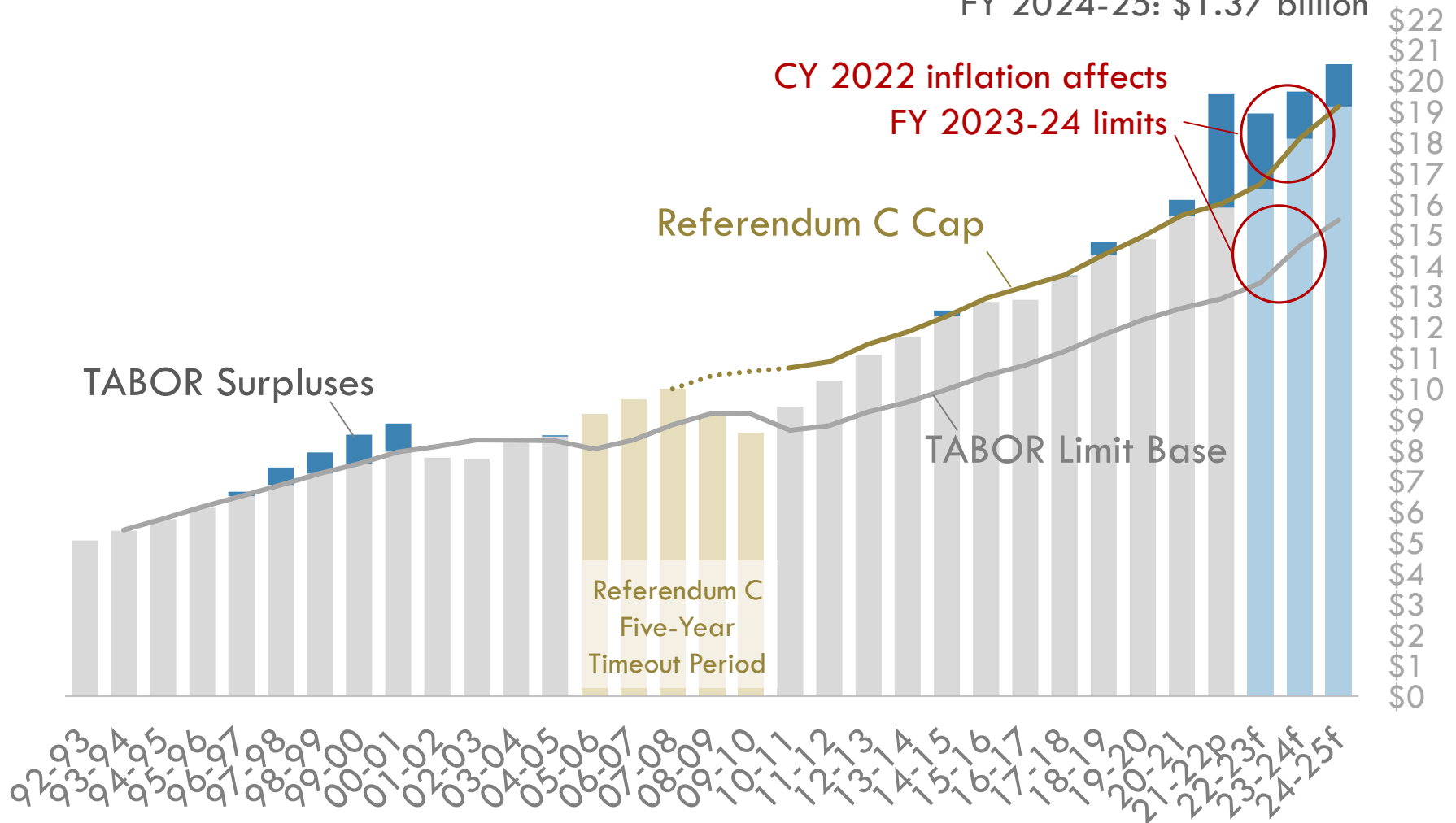
Outlook for TABOR refunds has shifted with Prop 121

Expected TABOR Mechanism Amounts
Millions of Dollars

Six-Tier Sales Tax Mechanism

SB 22-233 Direct Payments
$750 for individuals
$1,500 for joint filers

Property Tax Refunds
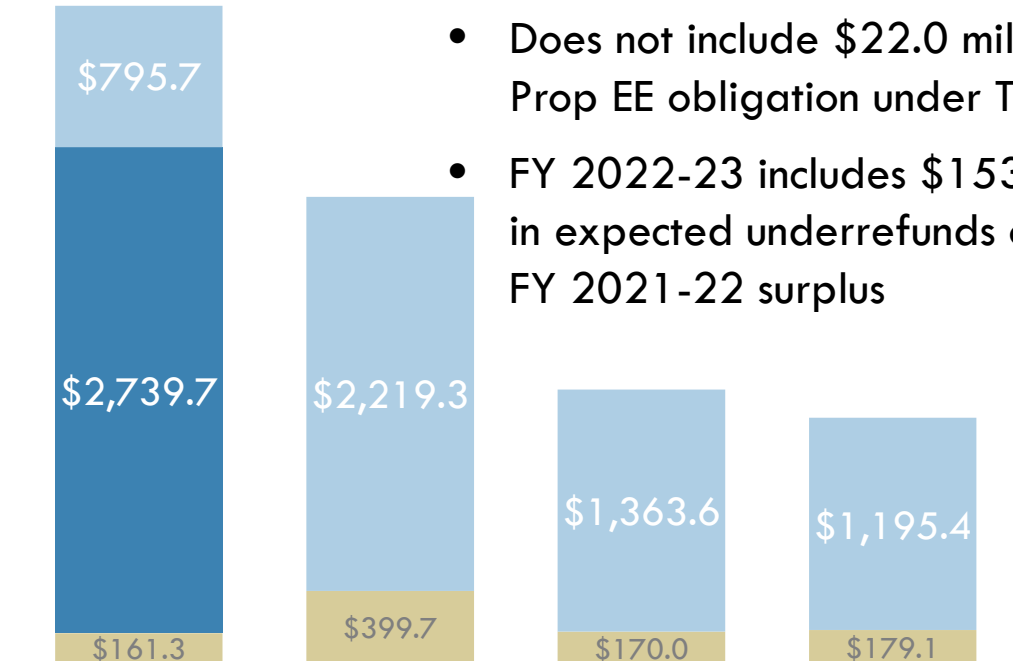
- FY 2021-22 includes $121.1 million in underrefunds of prior surpluses

- Does not include $22.0 million Prop EE obligation under TABOR (3)

- FY 2022-23 includes $153.2 million in expected underrefunds of FY 2021-22 surplus

Chart values	2021-22	2022-23	2023-24	2024-25
Six-Tier Sales Tax Mechanism	$795.7	$2,219.3	$1,363.6	$1,195.4
SB 22-233 Direct Payments	$2,739.7			
Property Tax Refunds	$161.3	$399.7	$170.0	$179.1

TABOR Surplus & Set Aside:	2021-22	2022-23	2023-24	2024-25
Refunded in Fiscal Year:	2022-23	2023-24	2024-25	2025-26

Source: Legislative Council Staff December 2022 forecast.

TABOR Refunds are refunded from General Funds

In a TABOR surplus situation...

TABOR Limit

Amount available for the General Fund Budget

General Funds

Cash Funds

General Funds
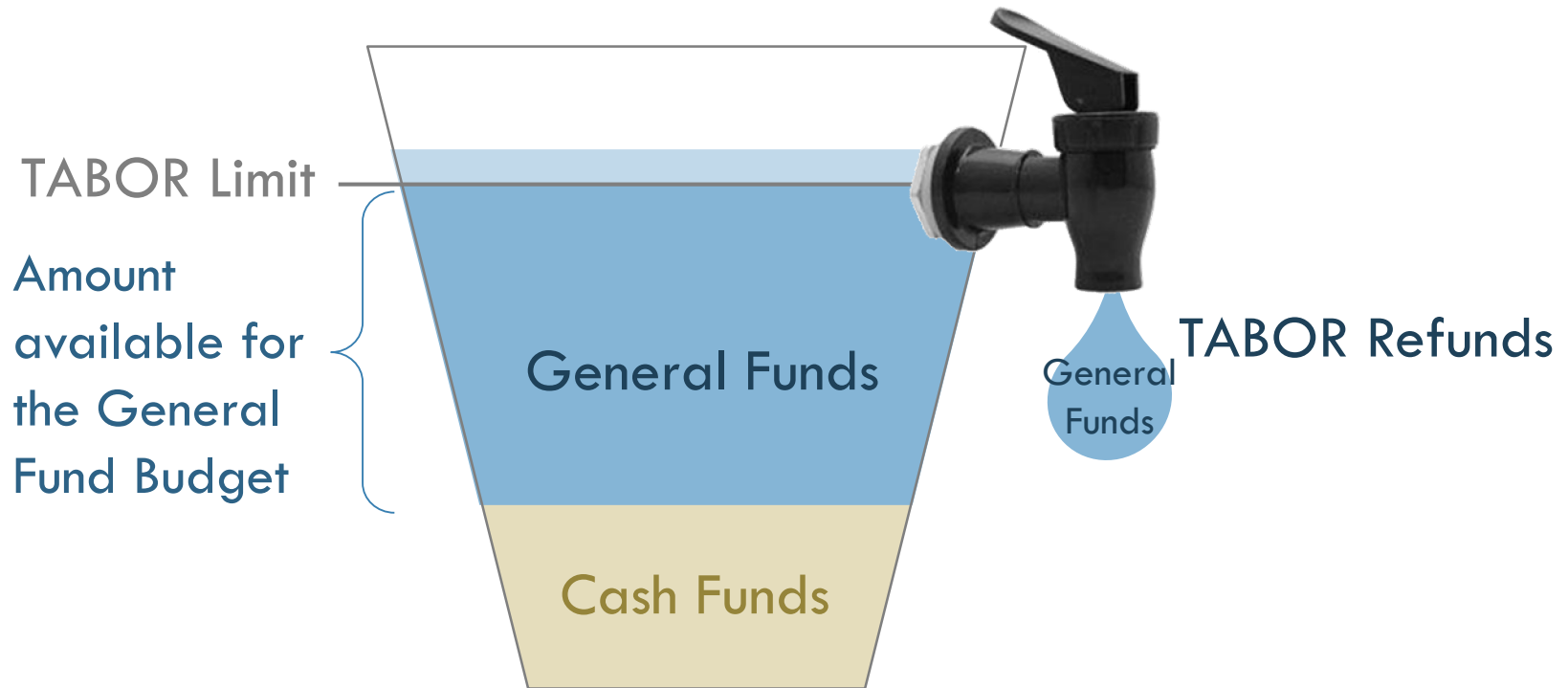
TABOR Refunds

General Fund dollars in = General Fund dollars out

TABOR Refunds are refunded from General Funds

In a TABOR surplus situation…

TABOR Limit

Amount available for the General Fund Budget

General Funds

TABOR Refunds

General Funds
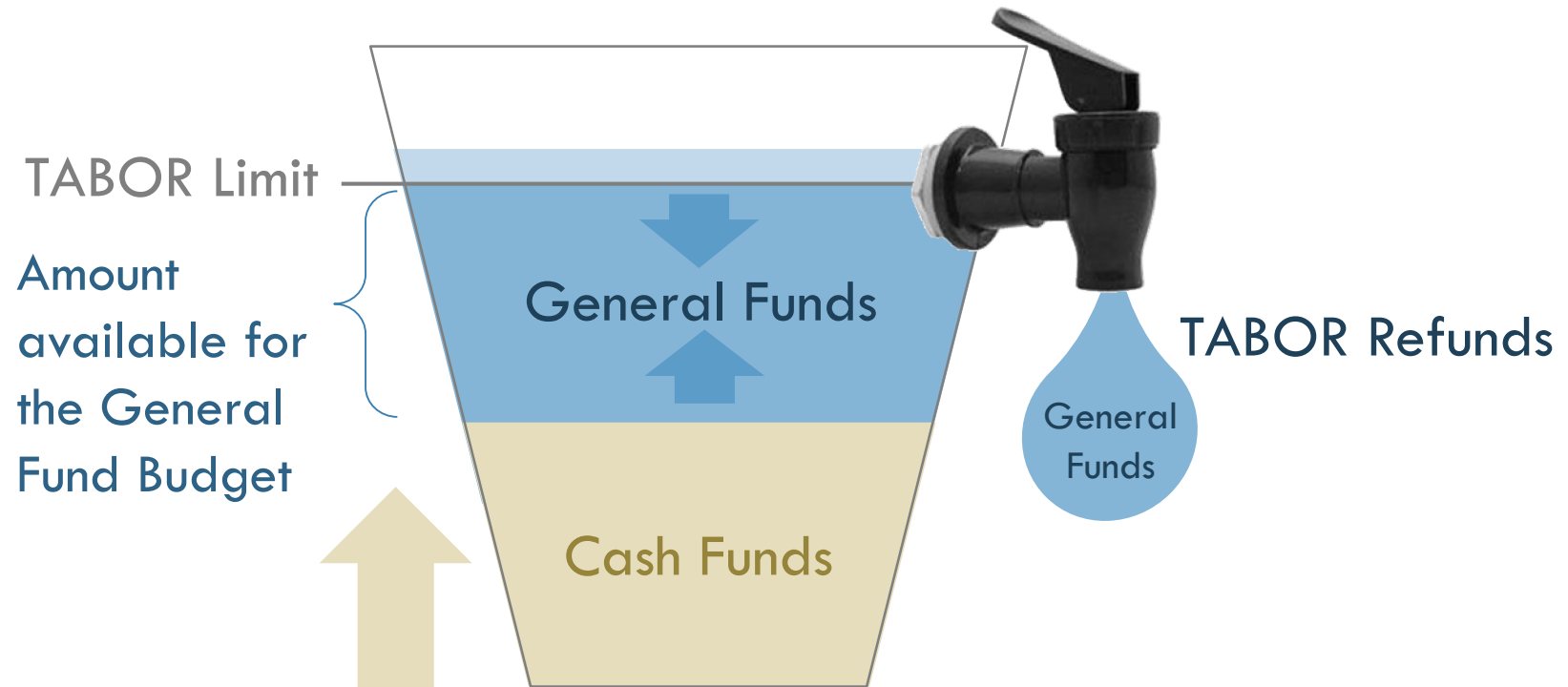
Cash Funds

Cash Fund dollars in = General Fund dollars out

Current Year | FY 2022-23 General Fund Reserve

Sept. 2022 Forecast

December 2022 Forecast

15.0% Required Reserve - $2.05B

$251 Million

$56 Million

13.2% Reserve

14.6% Reserve

$2.5
$2.0
$1.5
$1.0
$0.5
$0.0

Changes since the September 2022 forecast:

$57.2 million higher beginning balance (+)

Net transfers from the GF decreased by $101.8 million (+)

Revenue and TABOR refund expectations both decreased; on net, $84.4 million less in TABOR refund obligation (+)

$48.5 million more in statutory rebates and expenditures (-)

Source: Legislative Council Staff forecasts based on current law.

Budget Year | FY 2023-24 Budget Outlook

Scenario A: Additional revenue available to spend or save above FY 2022-23 spending levels. Amounts hold FY 2022-23 appropriations constant and incorporate the revenue forecast, current law transfers, rebates and expenditures, and the 15% reserve requirement.

Scenario B Assumptions

- **Increased reserve requirement:** $148 million

- Transfers to other cash funds: $164 million

- Capital construction transfers: $283 million

- Placeholders total $128 million

- Proposed budget increases appropriations by $858 million

- FY 2022-23 Mid-Year Adjustments increase beginning balance by $202 million

Scenario A bar: $1.321 Billion (gray), $202 Million (light blue), $57.7 Million (dotted line)

Scenario B bar with segments.

Source: Legislative Council Staff December 2022 forecast and JBC Staff analysis of Governor's November 1, 2022, budget proposal. See Table 2 for additional discussion.

Risks to the Forecast

Elevated recession risk

- Global economy deteriorating

- Aggressive Fed tightening risks triggering recession

- Other economic risks from supply chains, housing market, Ukraine, COVID-19

Risks to the budget outlook

- Revenue will be constrained by the Referendum C cap through the forecast period

- Immediate risks to the budget are on the expenditures side

- Less TABOR refund cushion to absorb forecast error; a recession would likely constrain revenue available for the budget

- Higher (or lower) cash funds revenue subject to TABOR means more (or less) budget pressure

K-12 Enrollment Forecast

K-12 Public School Enrollment

Full-Time Equivalent (FTE) Students

Region	Actual 2022-23	Percent Change
Colorado Springs	122,718	0.1%
Eastern Plains	25,076	0.0%
Metro Denver	472,401	-0.9%
Mountain	24,516	-0.3%
Northern	92,359	0.6%
Pueblo	32,096	0.3%
San Luis Valley	6,957	-1.2%
Southwest Mountain	13,345	-2.1%
Western	49,616	-1.0%
Statewide Total	**839,082**	**-0.5%**

Decline in 2022-23 Enrollment:
-4,182 FTE

-4,627 FTE (-0.5%) **less than forecast last year**

Actual Change in 2022-23 Enrollment

Year-over-Year

Total	Brick & Mortar	Online	CSI	Kindergarten	1st – 12th
-0.5%	-0.4%	-1.5%	-1.8%	-3.8%	-0.2%

Total: (4,182)
Brick & Mortar: (3,416)
Online: (398)
CSI: (368)
Kindergarten: (2,298)
1st – 12th: (1,885)

500
(500)
(1,500)
(2,500)
(3,500)
(4,500)
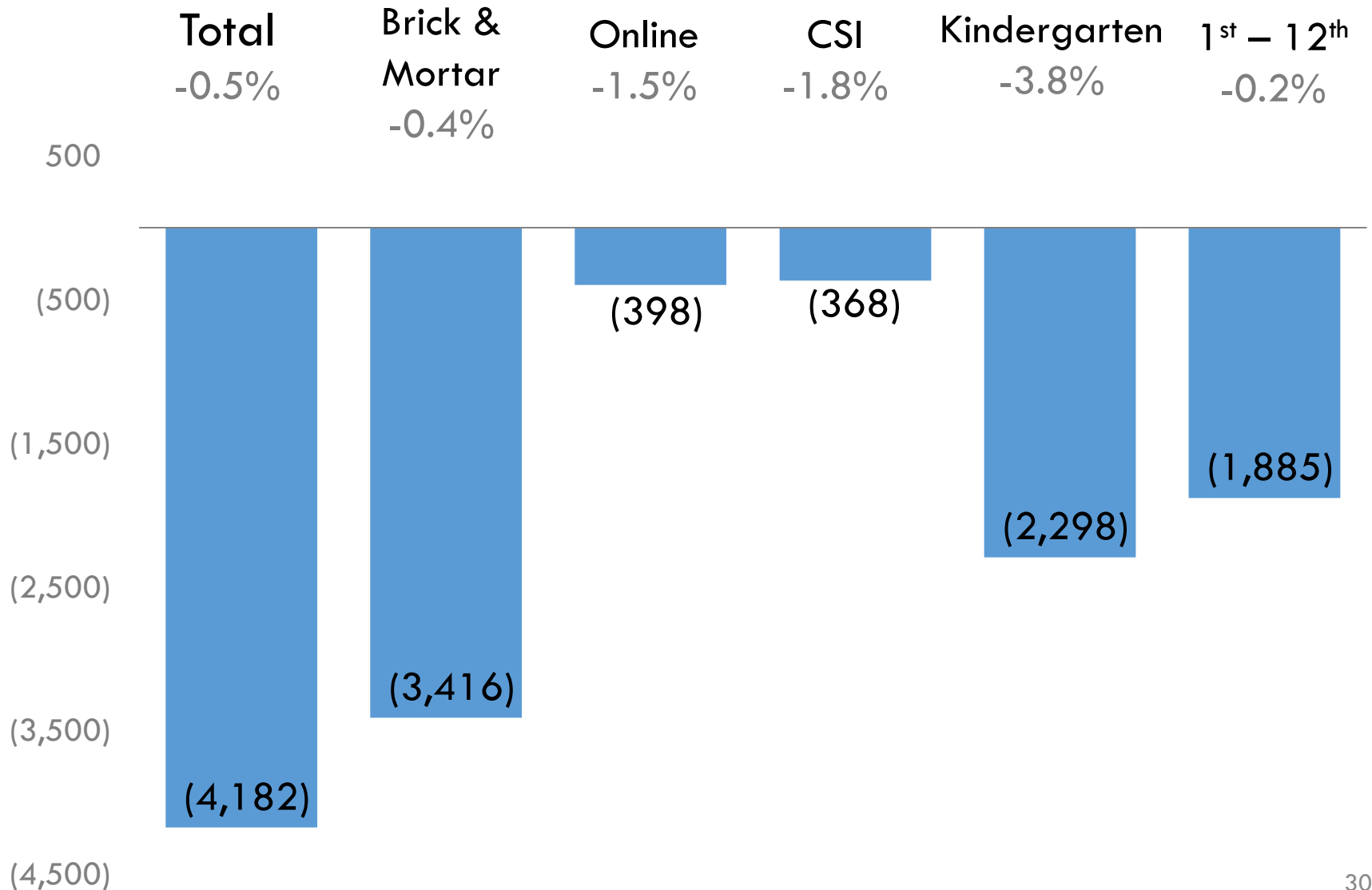
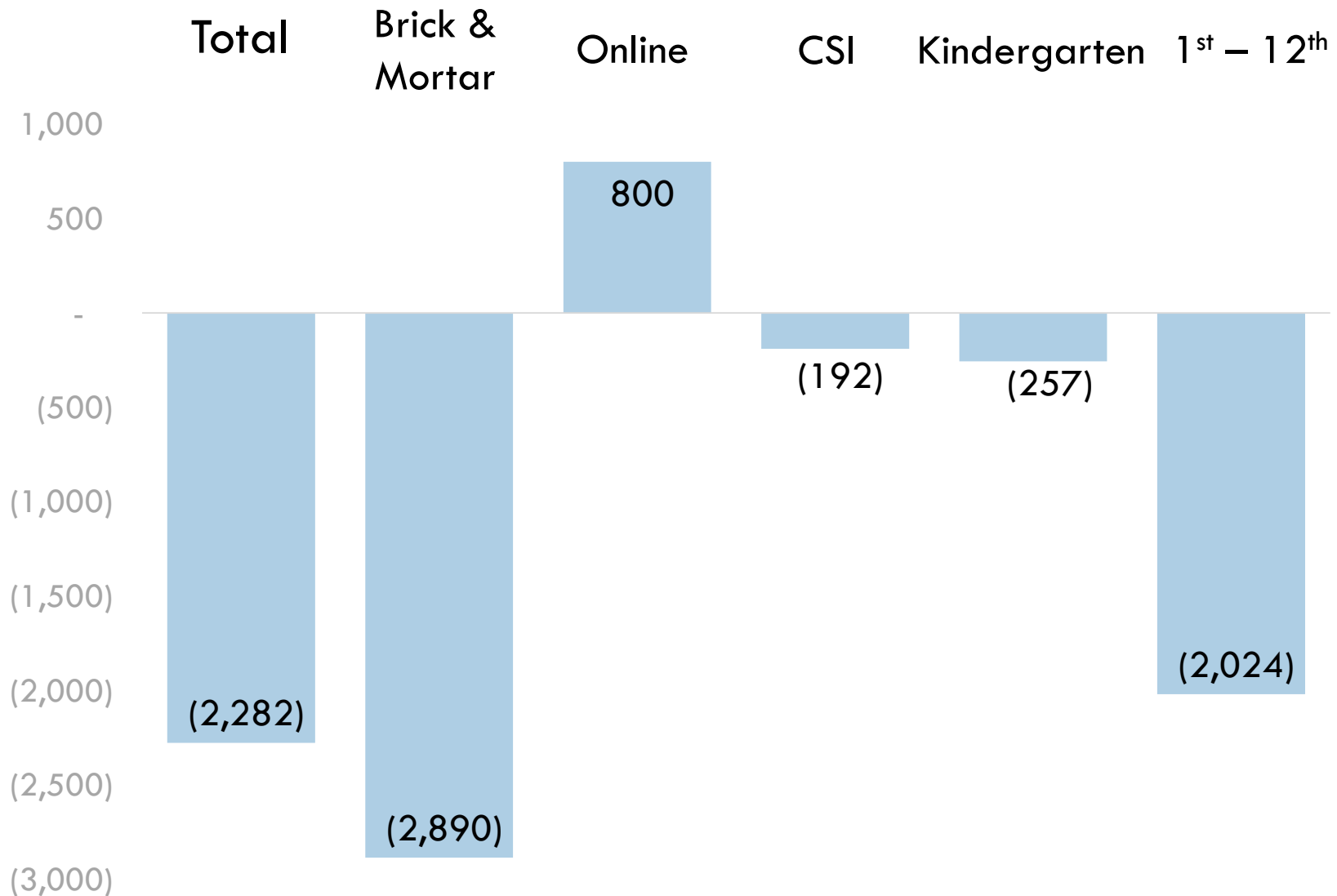Source: Colorado Department of Education October count.

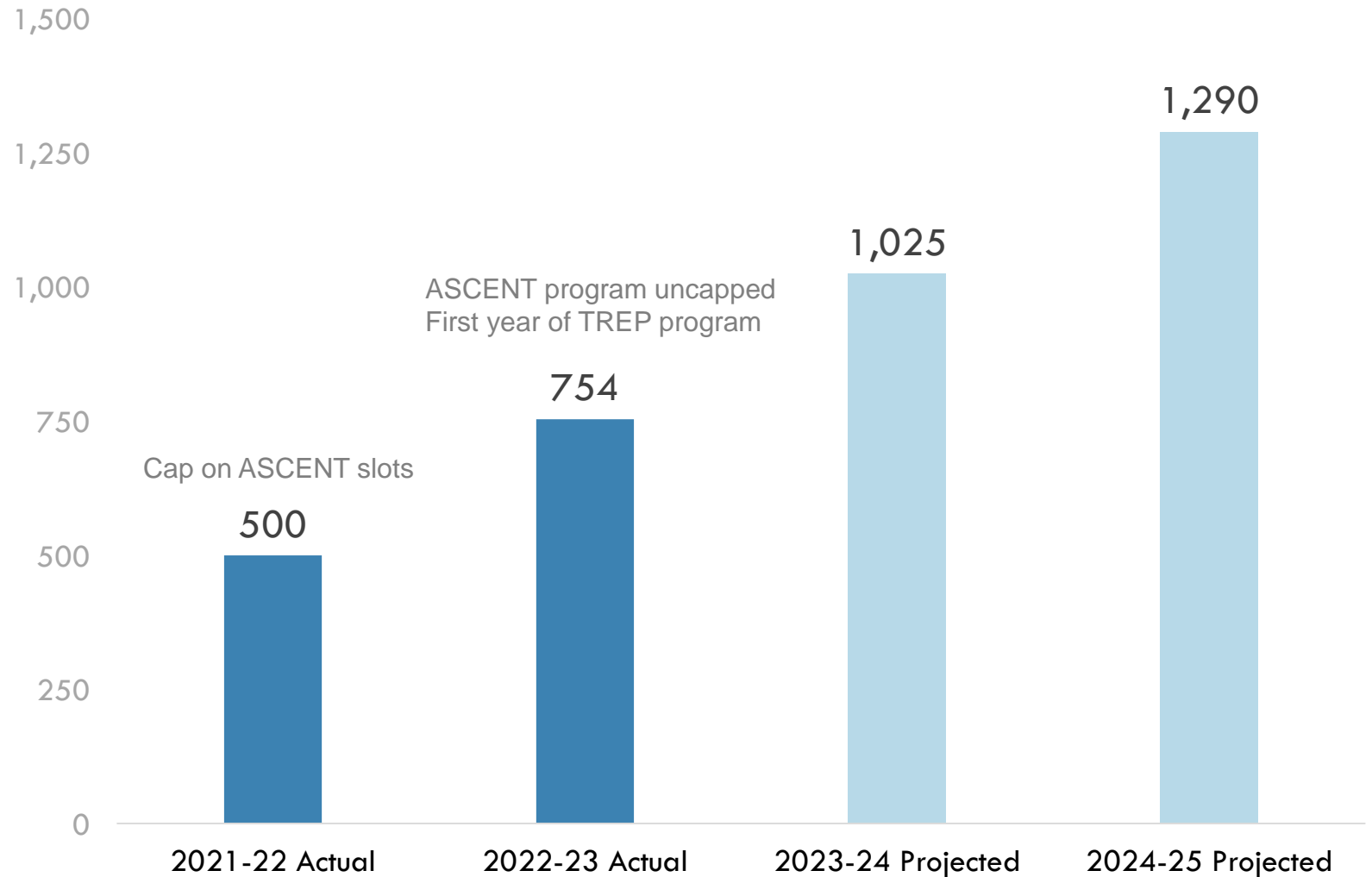# K-12 Public School Enrollment

Full-Time Equivalent (FTE) Students

Region	Actual 2022-23	Percent Change	Estimated 2023-24	Percent Change	Estimated 2024-25	Percent Change	Average Growth*
Colorado Springs	122,718	0.1%	123,301	0.5%	123,833	0.4%	0.5%
Eastern Plains	25,076	0.0%	25,257	0.7%	25,293	0.1%	0.4%
Metro Denver	472,401	-0.9%	468,459	-0.8%	465,830	-0.6%	-0.7%
Mountain	24,516	-0.3%	24,499	-0.1%	24,364	-0.6%	-0.3%
Northern	92,359	0.6%	93,500	1.2%	94,405	1.0%	1.1%
Pueblo	32,096	0.3%	31,880	-0.7%	31,612	-0.8%	-0.8%
San Luis Valley	6,957	-1.2%	6,967	0.1%	6,948	-0.3%	-0.1%
Southwest Mountain	13,345	-2.1%	13,333	-0.1%	13,313	-0.2%	-0.1%
Western	49,616	-1.0%	49,605	0.0%	49,574	-0.1%	0.0%
Statewide Total	**839,082**	**-0.5%**	**836,800**	**-0.3%**	**835,172**	**-0.2%**	**-0.2%**

Projected Change in 2023-24 Enrollment

Year-over-Year

	Total	Brick & Mortar	Online	CSI	Kindergarten	1st – 12th
	(2,282)	(2,890)	800	(192)	(257)	(2,024)

Source: Legislative Council Staff December 2022 forecast.

Extended High School Enrollment

Chart: Extended High School Enrollment

- 2021-22 Actual: 500 — Cap on ASCENT slots
- 2022-23 Actual: 754 — ASCENT program uncapped, First year of TREP program
- 2023-24 Projected: 1,025
- 2024-25 Projected: 1,290

Risks to the K-12 Enrollment Forecast
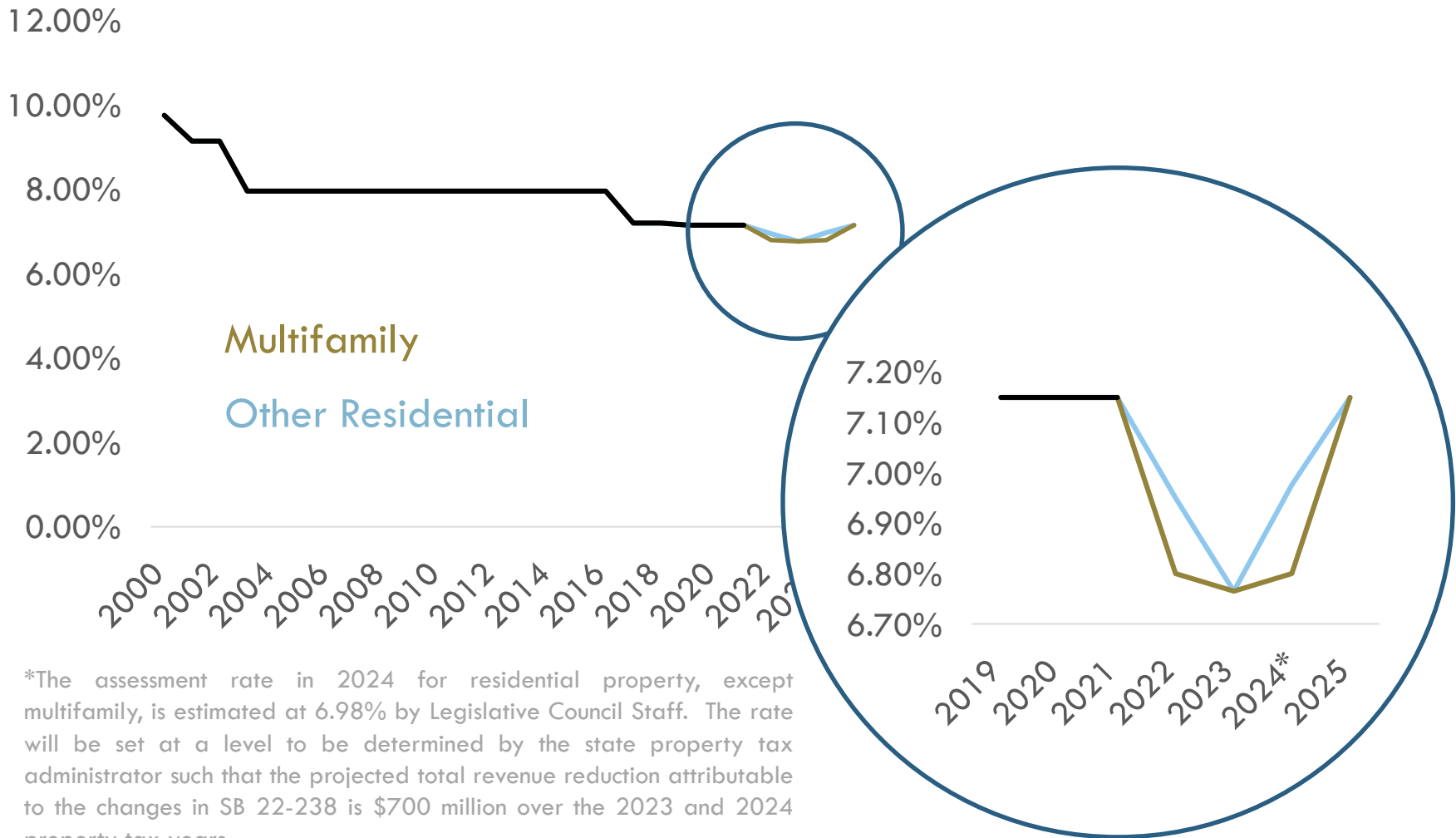
- **Upside risk to the forecast**
  - Students return more quickly than expected

- **Downside risks to the forecast**
  - Housing affordability issues
  - Lower birth rates
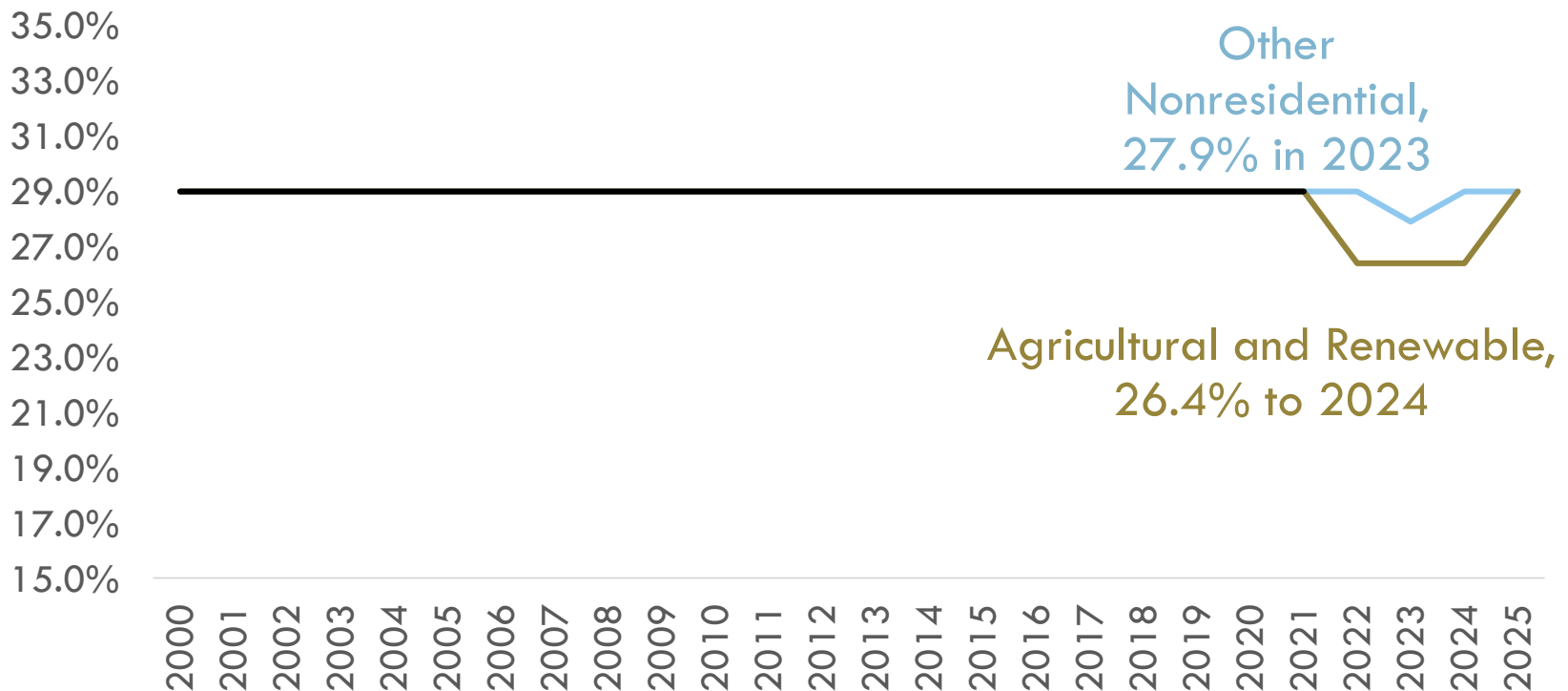 - Slowing net in-migration

Assessed Values

Residential assessment rates established at 7.15% with temporary legislative reductions

Residential Assessment Rates

Multifamily

Other Residential

*The assessment rate in 2024 for residential property, except multifamily, is estimated at 6.98% by Legislative Council Staff. The rate will be set at a level to be determined by the state property tax administrator such that the projected total revenue reduction attributable to the changes in SB 22-238 is $700 million over the 2023 and 2024 property tax years.

Nonresidential assessment rates for most property established at 29% with temporary legislative reductions

Nonresidential vacant, commercial, industrial, natural resources, state-assessed, agricultural, and renewable energy assessment rates

Other Nonresidential, 27.9% in 2023

Agricultural and Renewable, 26.4% to 2024

35.0%
33.0%
31.0%
29.0%
27.0%
25.0%
23.0%
21.0%
19.0%
17.0%
15.0%

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025
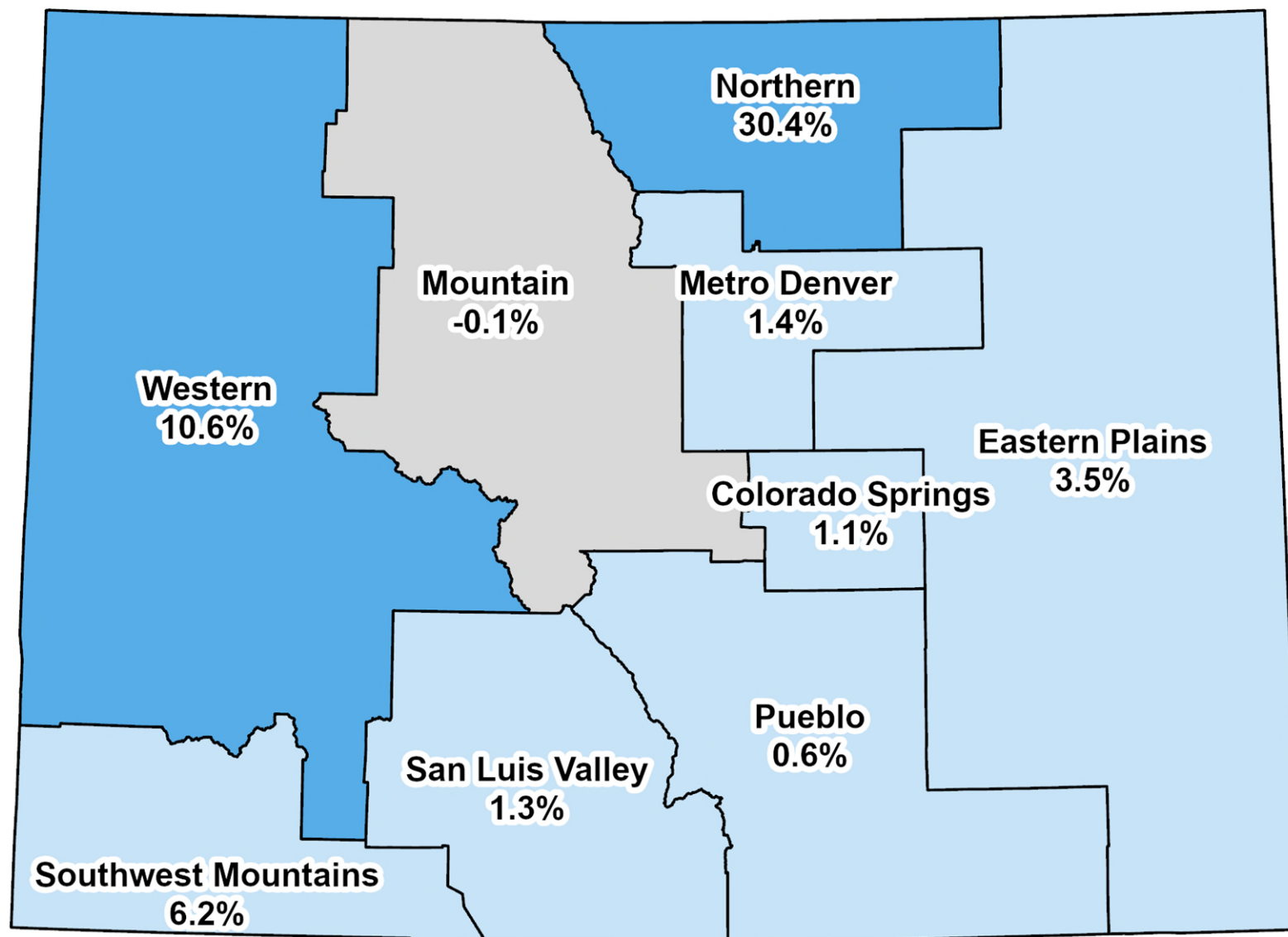
Source: Legislative Council Staff. Does not include oil and gas land and leaseholds, producing mines, and severed mineral interests that are assessed at varying rates.

2022: Intervening Year

Determines school finance for FY 2022-23

- Intervening year AV changes limited
  - O&G, mines, state assessed, new construction
- **Total** AVs **will increase 5.5%** from 2021
- Incorporates the impact of **SB 21-293**
  - RAR fell to **6.95%**, or **6.80%** for multifamily
  - NRAR fell to **26.40%** for agriculture and renewable energy

2022 Intervening Year: 5.5% growth

Northern
30.4%

Mountain
-0.1%

Metro Denver
1.4%

Western
10.6%

Eastern Plains
3.5%

Colorado Springs
1.1%

Pueblo
0.6%

San Luis Valley
1.3%

Southwest Mountains
6.2%

2023: Reassessment Year

Determines school finance for FY 2023-24

- **Total** AVs **will increase 22.5%** from 2022
  - compare to 4.4% in 2021, 17.0% in 2019, 10.1% in 2017
- **Residential** AVs **will increase 26.5%**
  - Represents appreciation between June 2020 and June 2022
  - **Statewide** appreciation in home prices
- **Nonresidential** AVs **will increase 19%**
  - Rebound in commercial values
  - High oil and gas prices
- Incorporates the impact of **SB 22-238's** temporary assessment rate reductions and subtractions from residential and commercial actual values

2023 Reassessment Year: 22.5% growth
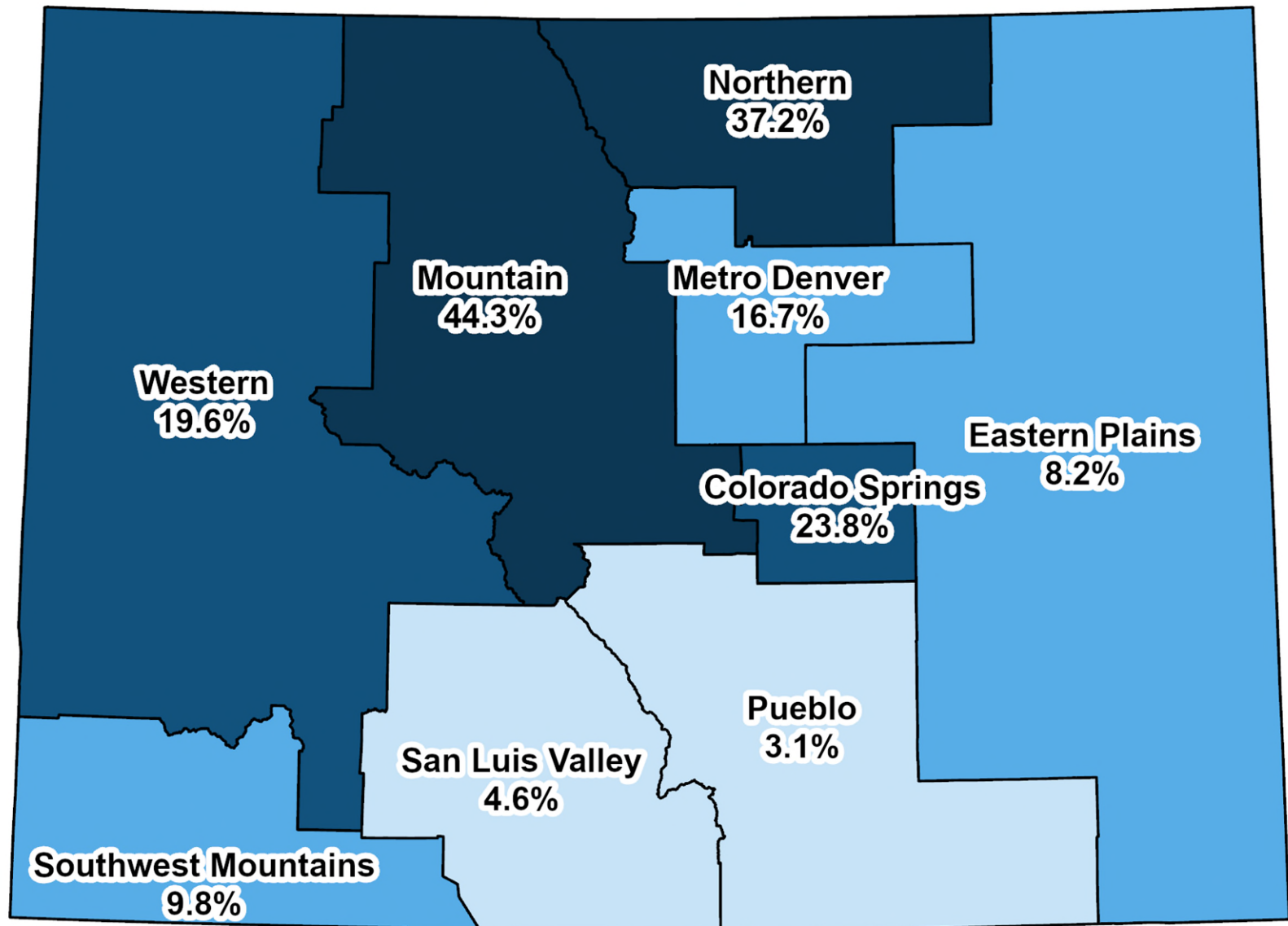
Risks to the Assessed Valuation Forecast

- Market conditions, including:

  - Value of oil and gas production through the forecast period

  - Housing market correction and impact on 2025 reassessment cycle

- Evolving property tax policy environment

  - Forecast relies on an estimate of the residential assessment rate in 2024 for properties other than multifamily, a rate to be set by the property tax administrator
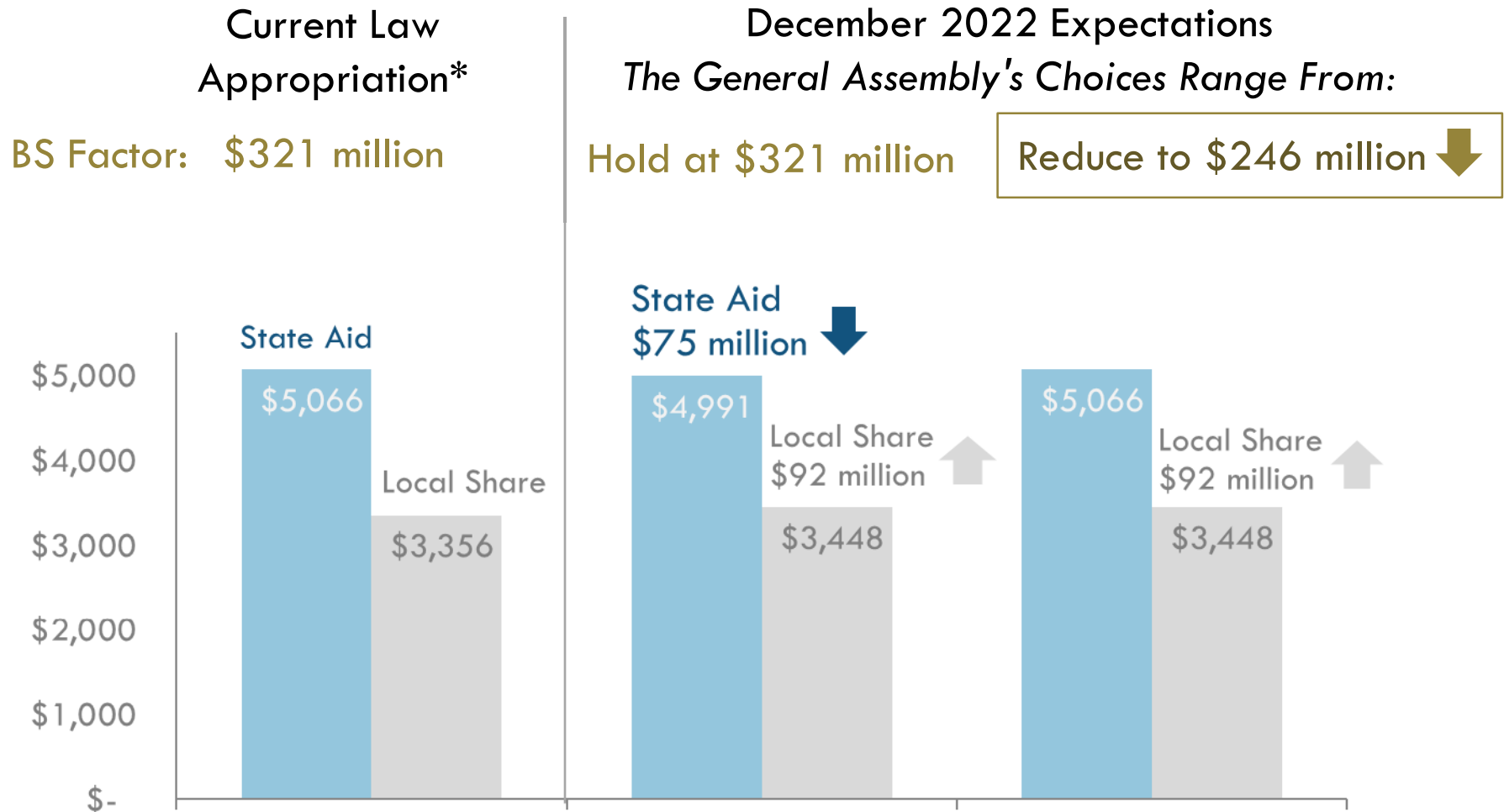
School Finance Outlook

School Finance Basics

- **Funded Pupil Count** is the statutory student count metric used to allocate funding.

- **State Aid** = **Total Program** - **Local Share**.

- General Assembly sets the **Budget Stabilization Factor** to establish **Total Program** and **State Aid.**

- General Assembly balances contributions to State Aid from **General Fund** and **State Education Fund.**

Change in Expectations for FY 2022-23 School Finance Funding
Dollars in Millions

Current Law Appropriation*

December 2022 Expectations
The General Assembly's Choices Range From:

BS Factor: $321 million

Hold at $321 million

Reduce to $246 million ⬇

State Aid
$5,066

Local Share
$3,356

State Aid
$75 million ⬇
$4,991

Local Share
$92 million ⬆
$3,448

$5,066

Local Share
$92 million ⬆
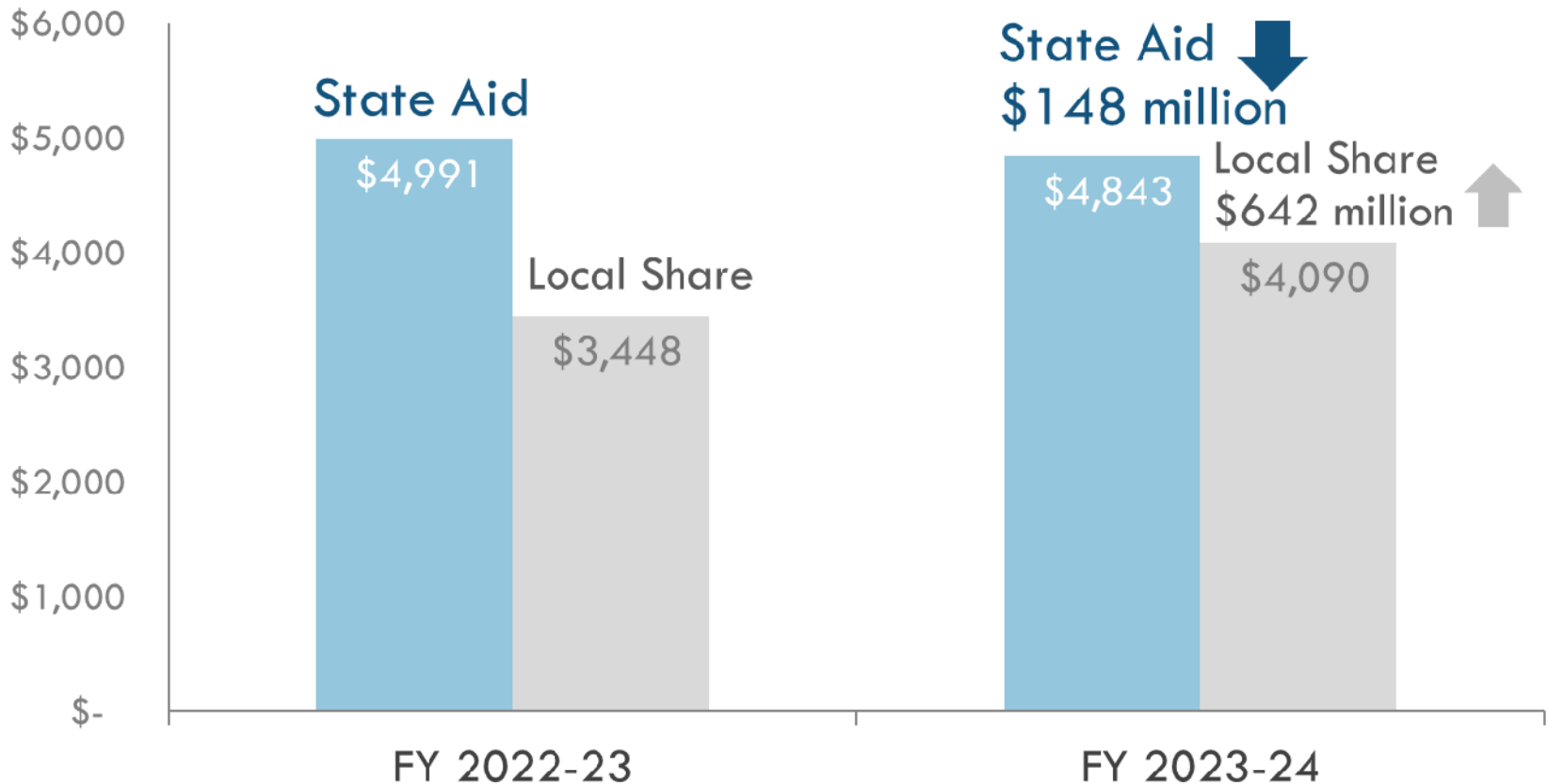$3,448

$5,000
$4,000
$3,000
$2,000
$1,000
$-

Source: Legislative Council Staff December 2022 forecast.
*Current Law appropriation uses December 2021 forecast.

Year-over-Year Change in School Finance Funding
FY 2022-23 to FY 2023-24

Dollars in Millions

State Aid $4,991

Local Share $3,448

State Aid ↓ $148 million

$4,843

Local Share $642 million ↑

$4,090

FY 2022-23

FY 2023-24

$6,000
$5,000
$4,000
$3,000
$2,000
$1,000
$-

Source: Legislative Council Staff December 2022 forecast.

*Assumes a constant Budget Stabilization Factor.

Scenario Implications for General Fund (GF) and State Education Fund (SEF) Contributions in 2023-24 & 2024-25
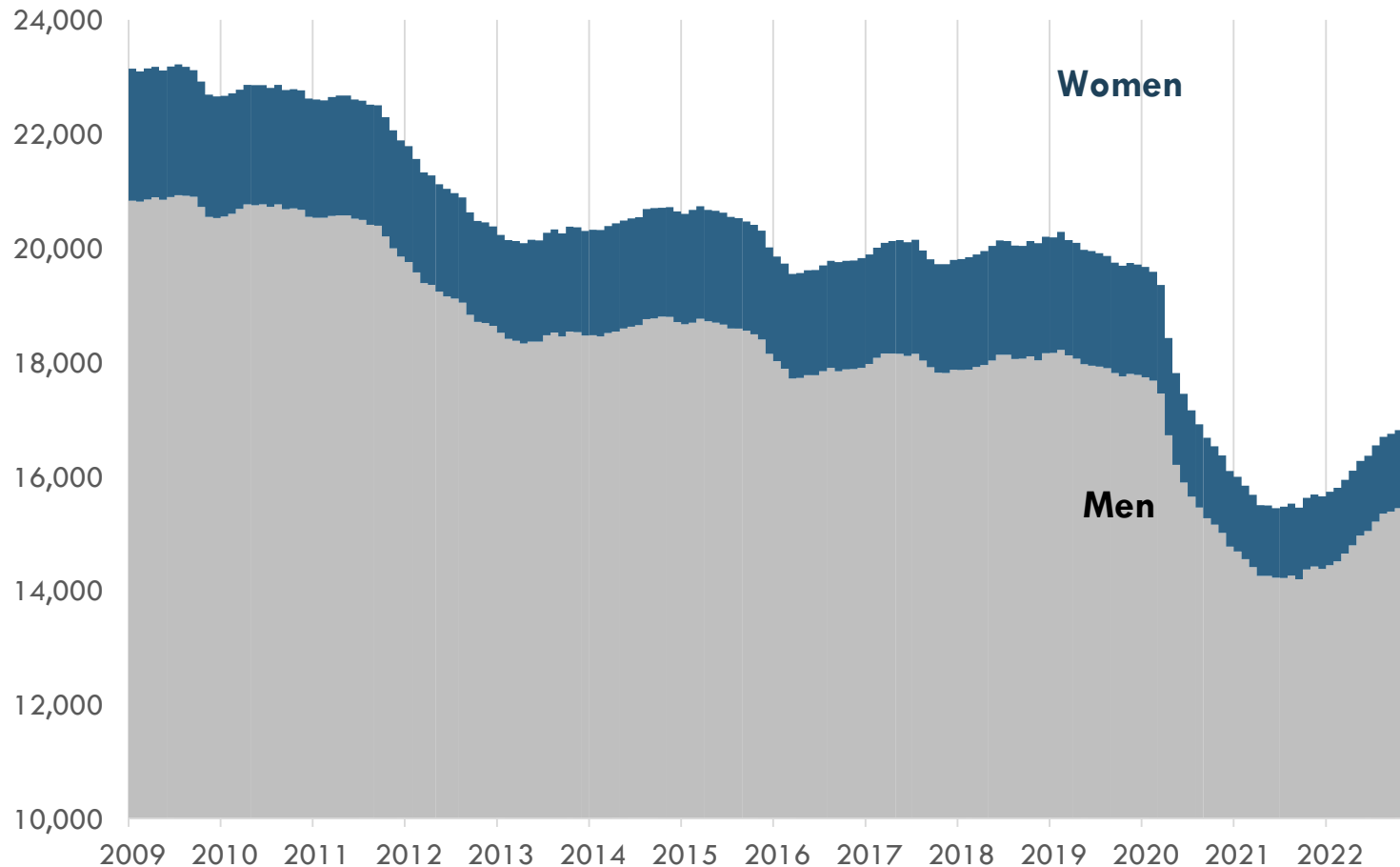
- Scenario in text assumes GA doesn't want to:

  - maintain BS Factor longer than necessary;
  - significantly increase balance in SEF;
  - produce a cliff effect by having negative y/o/y change in GF contribution.

  (Scenario largely depends on predicted increases local share in 2023 and 2025, and inflation moderating.)

- Eliminating BS Factor and maintaining $1.3 B SEF ending balance in 2023-24 requires:

  - $49 million increase in GF appropriation;
  - $149 million decrease SEF contribution.

- Maintaining 0 BS Factor and a $850 M SEF ending balance in 2024-25 requires:

  - $22 million increase in GF appropriation;
  - $485 million increase in SEF contribution.
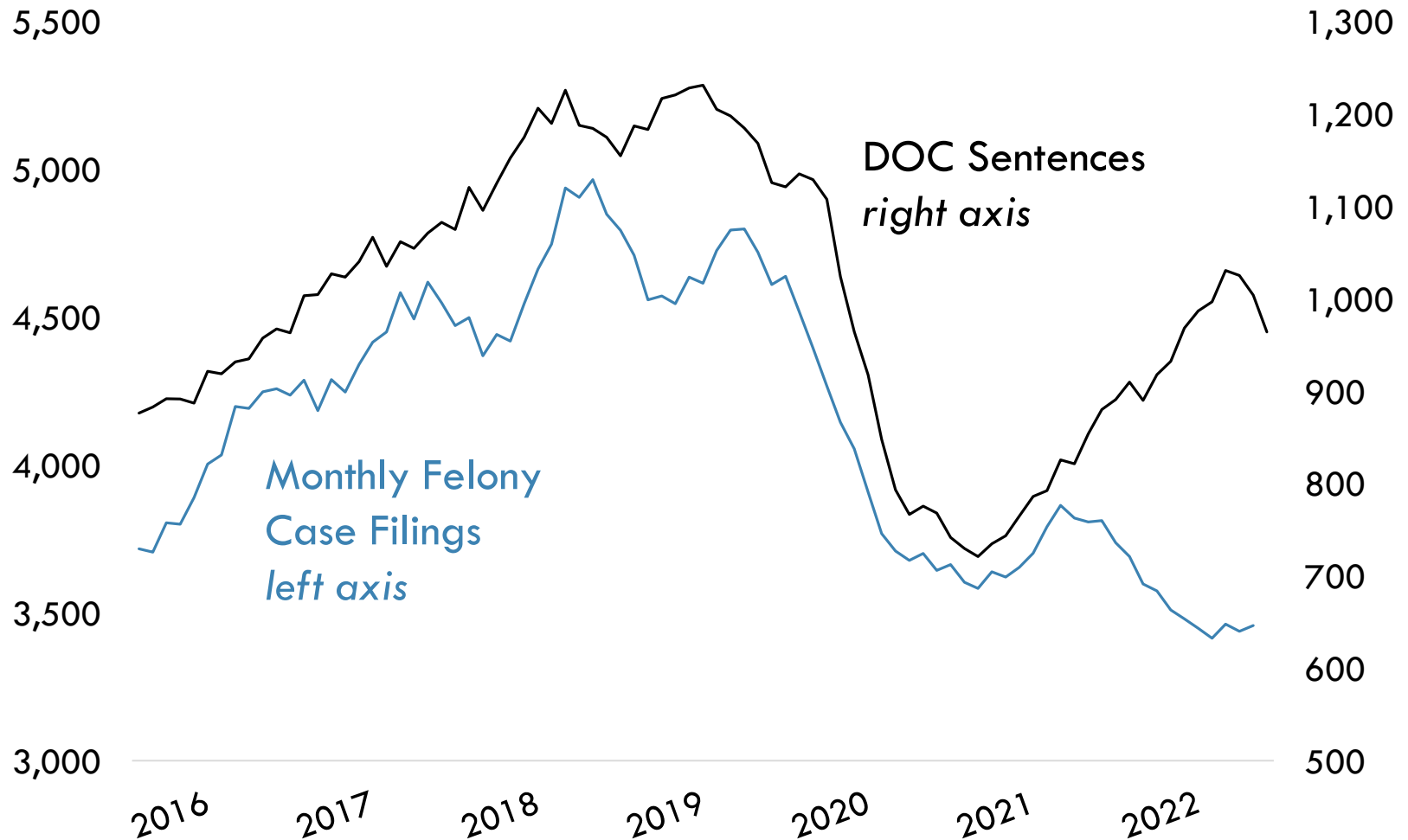
Adult Corrections Populations

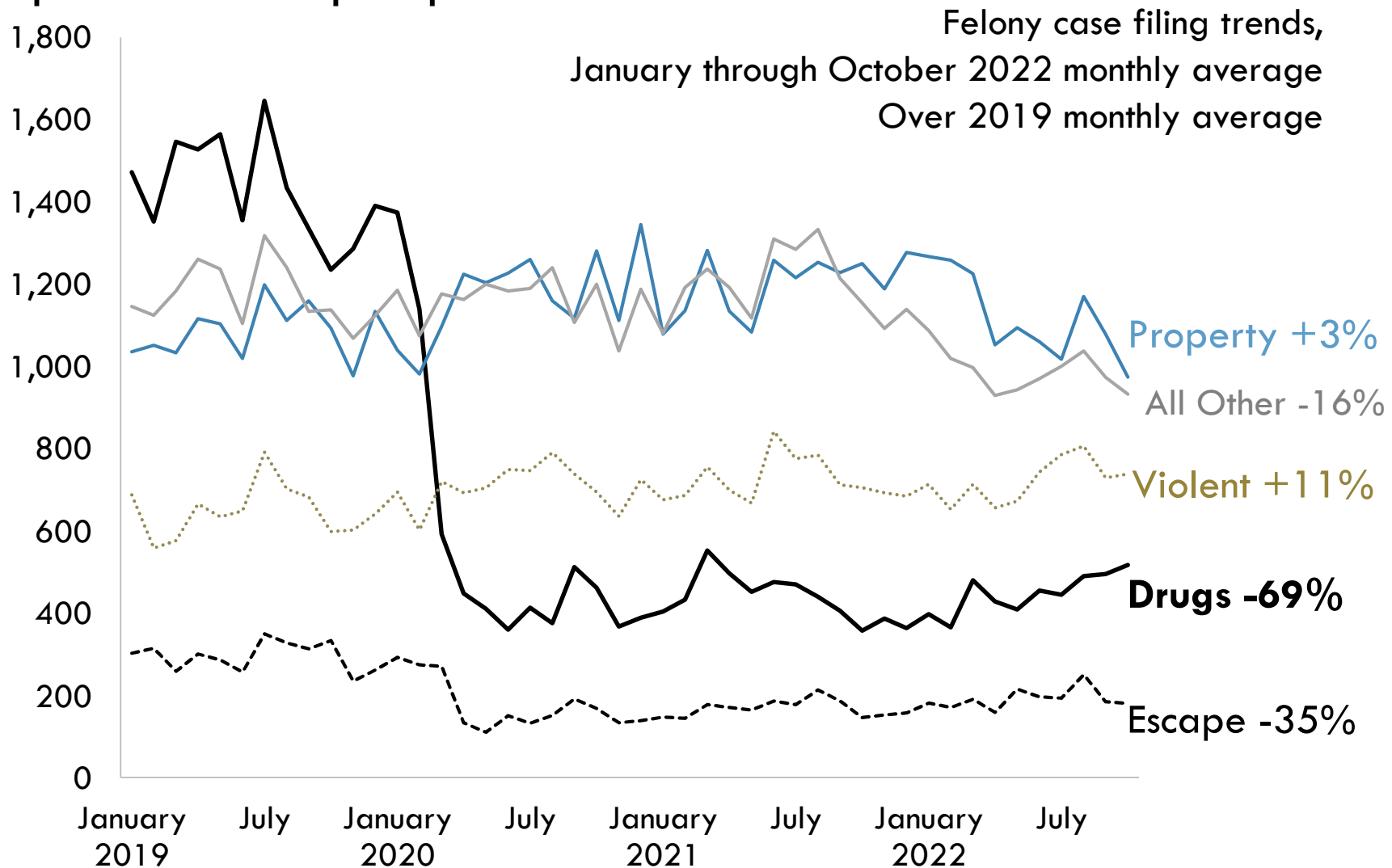# The prison population increased by 6.0 percent in FY 2022-23, the largest percentage increase since FY 2005-06

Women

Men

Shifting relationship between case filings and sentences

DOC Sentences
right axis

Monthly Felony
Case Filings
left axis

5,500
5,000
4,500
4,000
3,500
3,000

1,300
1,200
1,100
1,000
900
800
700
600
500

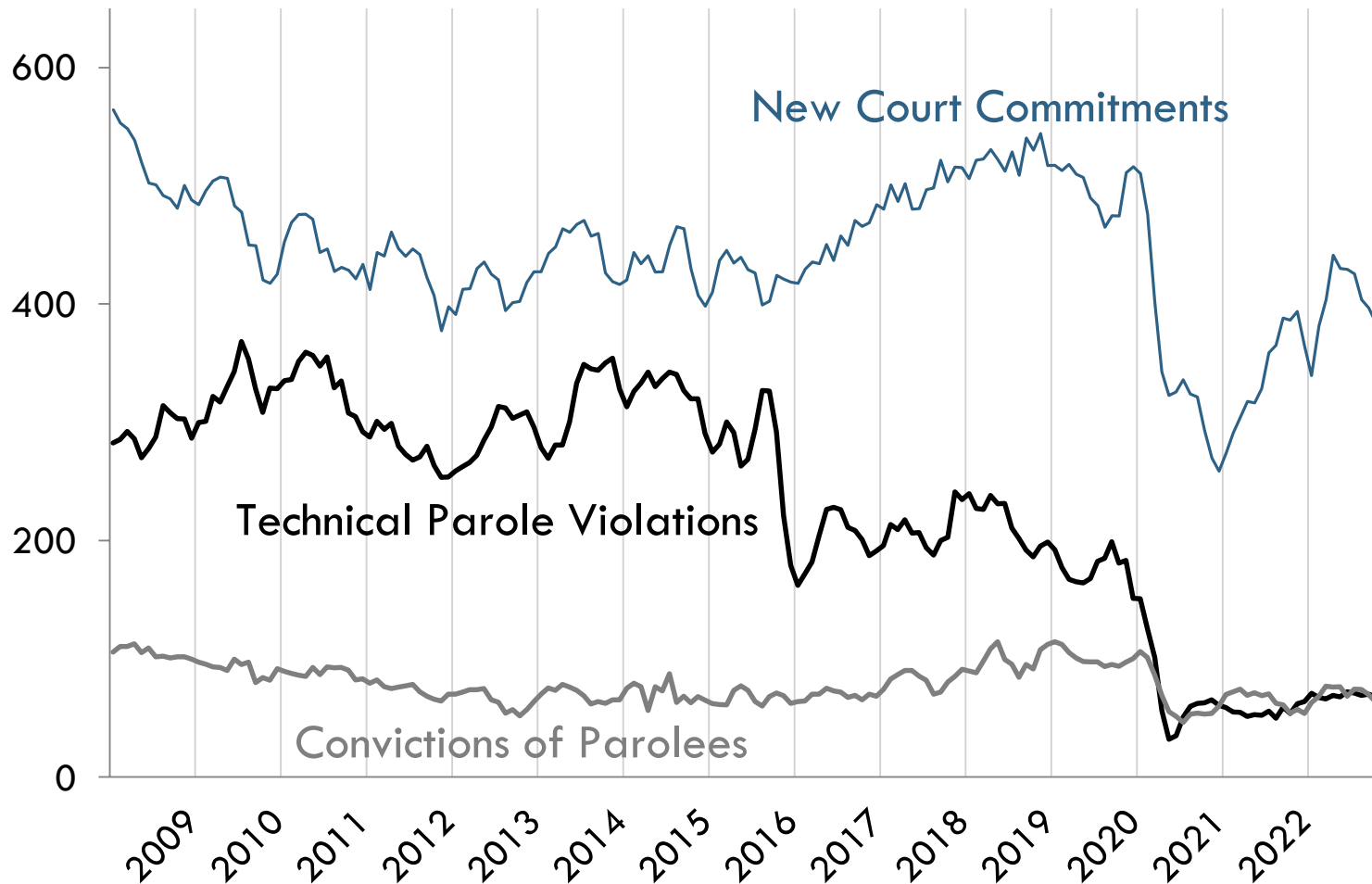2016   2017   2018   2019   2020   2021   2022

Source: Office of the State Court Administrator. Monthly data; both series shown as six-month moving averages through October 2022.

State district court drug felony case filings are down 69 percent from pre-pandemic levels

Felony case filing trends,
January through October 2022 monthly average
Over 2019 monthly average

Property +3%

All Other -16%

Violent +11%

Drugs -69%

Escape -35%

1,800
1,600
1,400
1,200
1,000
800
600
400
200
0

January 2019   July   January 2020   July   January 2021   July   January 2022   July
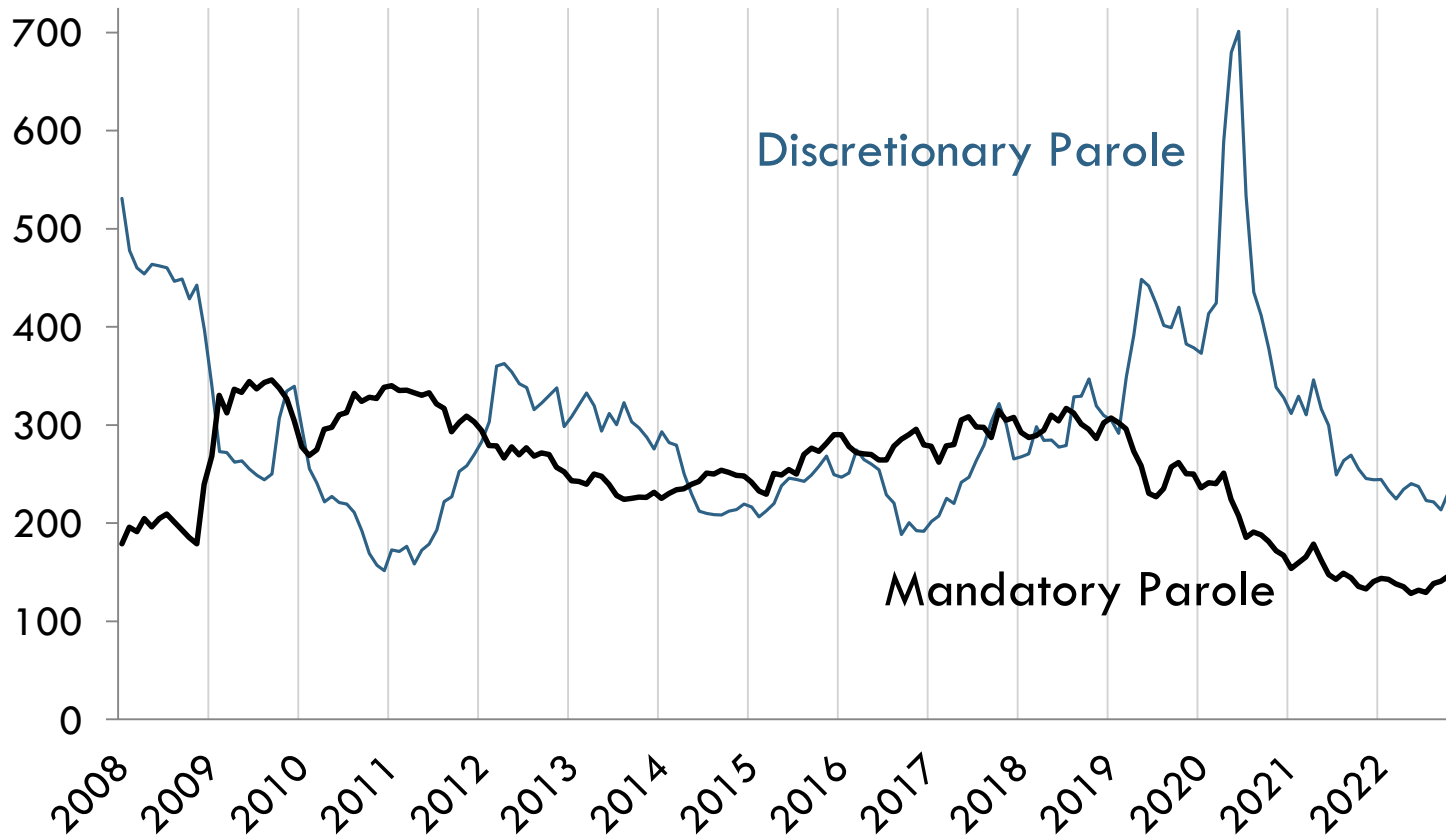
# New court commitments have risen; other admissions remain suppressed.

Source: Department of Corrections, Office of Planning and Analysis. Monthly data through November 2022.

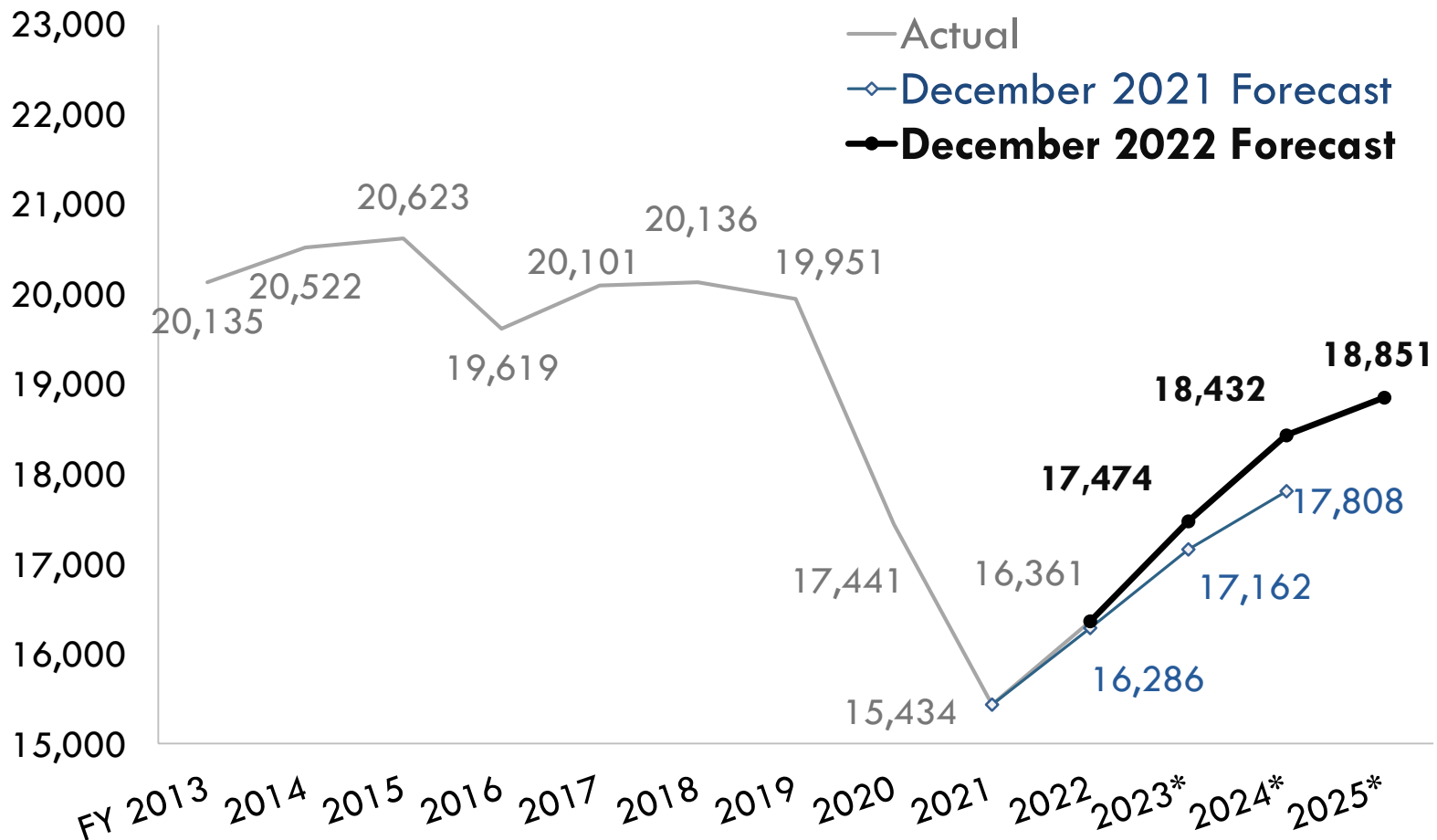52

Releases to parole show signs of flattening

Discretionary Parole

Mandatory Parole

Source: Department of Corrections. Data through November 2022.

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After spiking in 2020, parole population plummeted

Total Parole
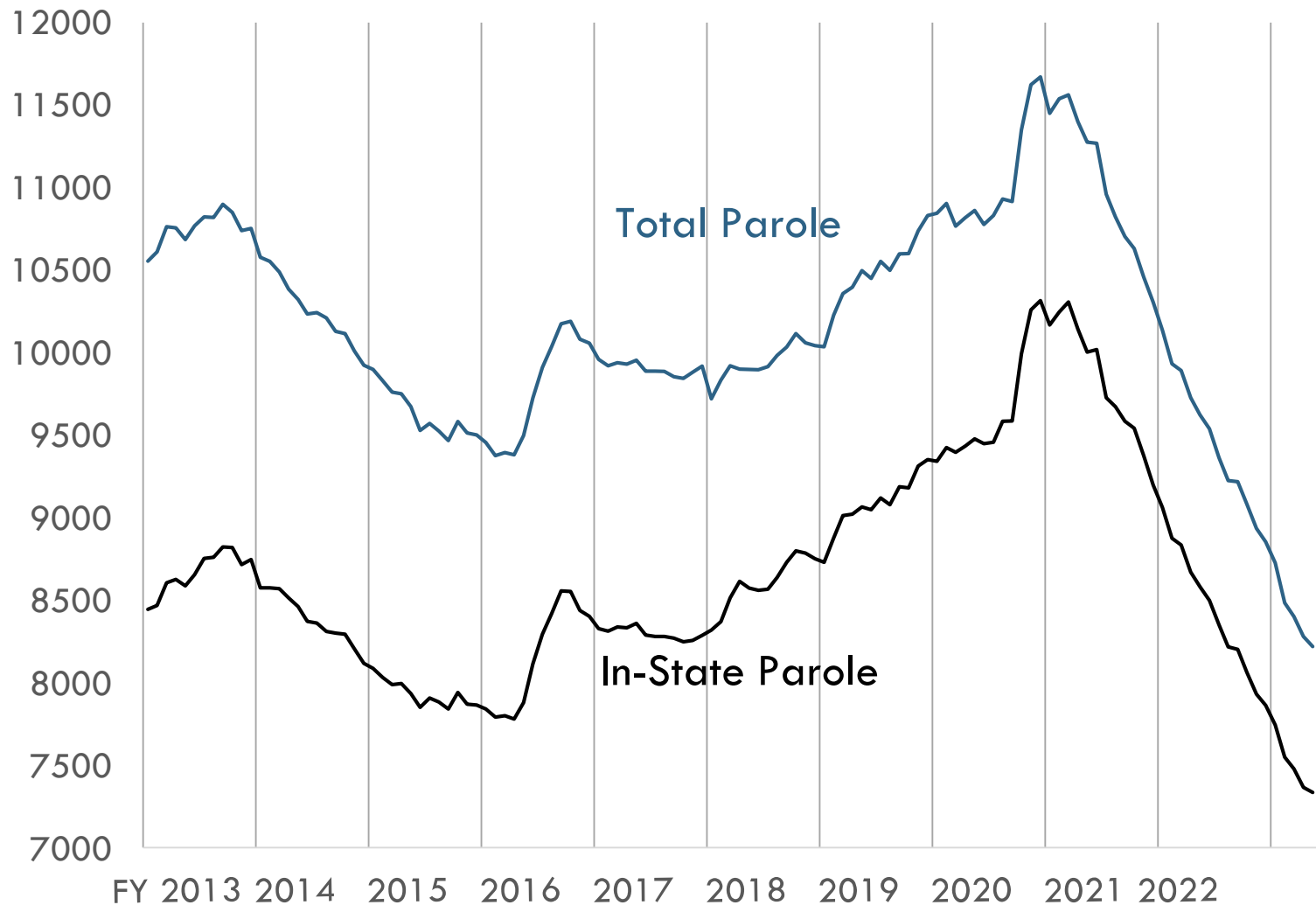
In-State Parole

The prison population will increase in 2022

Adult Inmate Population Forecasts as of June 30

Legend:
— Actual
—◇— December 2021 Forecast
—●— **December 2022 Forecast**

Data labels:
- 20,135 (FY 2013)
- 20,522 (2014)
- 20,623 (2015)
- 19,619 (2016)
- 20,101 (2017)
- 20,136 (2018)
- 19,951 (2019)
- 17,441 (2020)
- 15,434 (2021)
- 16,361 (2022)
- 16,286 (December 2021 Forecast)
- 17,162
- 17,808
- **17,474** (December 2022 Forecast)
- **18,432**
- **18,851**

X-axis: FY 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023*, 2024*, 2025*

Y-axis: 15,000 – 23,000

Parole caseload has declined since June 2020, expected to rise again starting in FY 2023-24.

Adult Parole Caseload Forecasts as of June 30
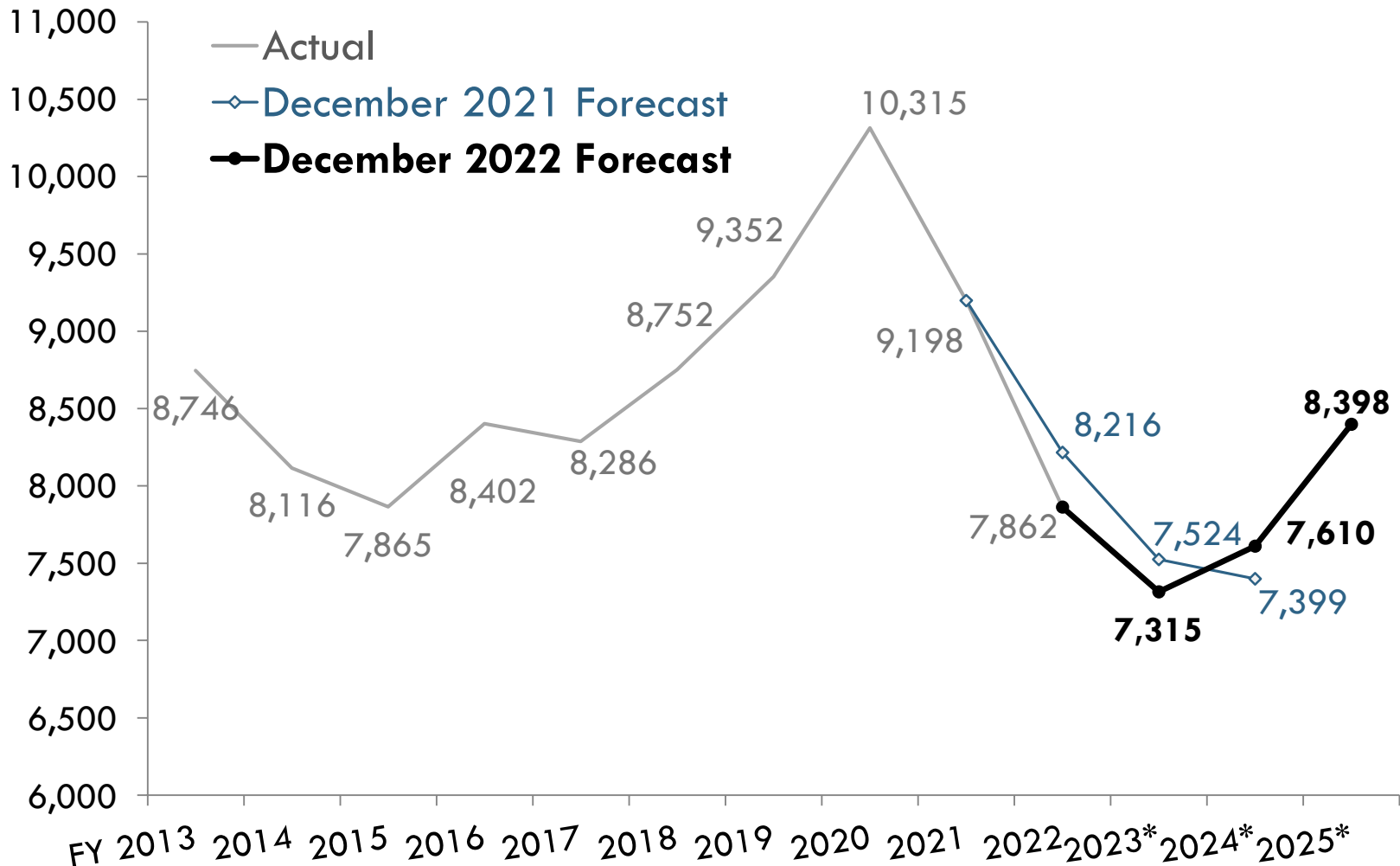
Forecast uncertainty remains elevated

- This forecast always contains (bidirectional) error
  - Before 2020, current year forecast error averaged about 1.7 percent, or 328 inmates
  - Current year forecast error from the 2021 forecast is 0.5 percent, or 75 inmates in June 2022
  - **Relative to last year, risks are lower, but remain elevated**
  - Longer term impacts of legislative changes are emerging more clearly
  - Uncertainty remains elevated as the system is in transition
  - Small deviations in the timing and extent of assumed adjustments can contribute to large population changes
  - A key risk is staffing shortages and turnover affecting operations throughout the criminal justice system

Youth Corrections Population Forecast

DYS Populations falling with some fluctuations in the forecast period

Average Daily Populations
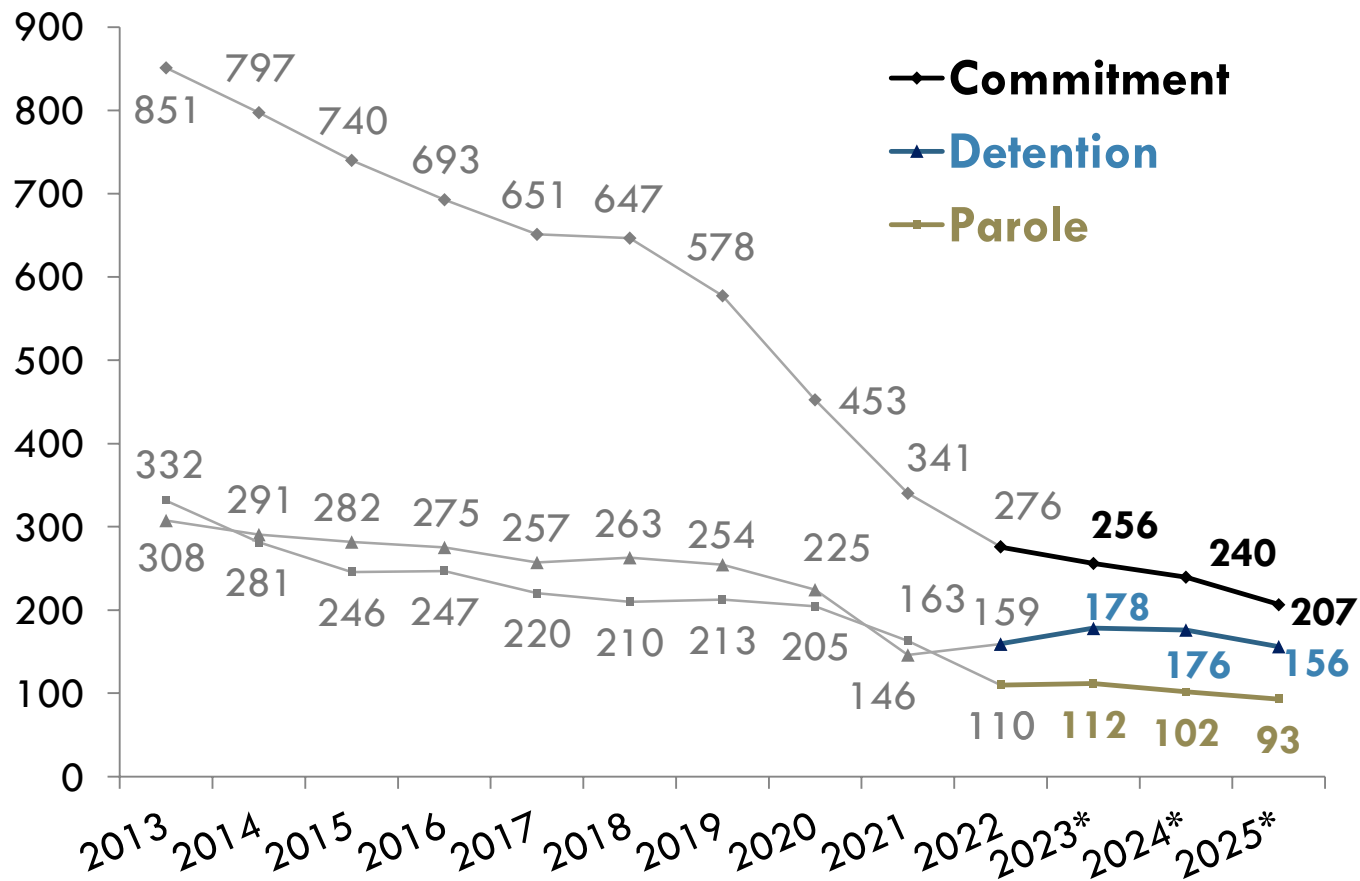
Source: CDHS Division of Youth Services and *Legislative Council Staff December 2022 forecast.

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Questions?

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