

Setting the Perfect Pace

2023 Economic Forecast for Metro Denver April 11, 2023



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Pace:
to do something at a
speed that is steady
and that allows one to
continue without
becoming too tired.
- Merriam-Webster.com

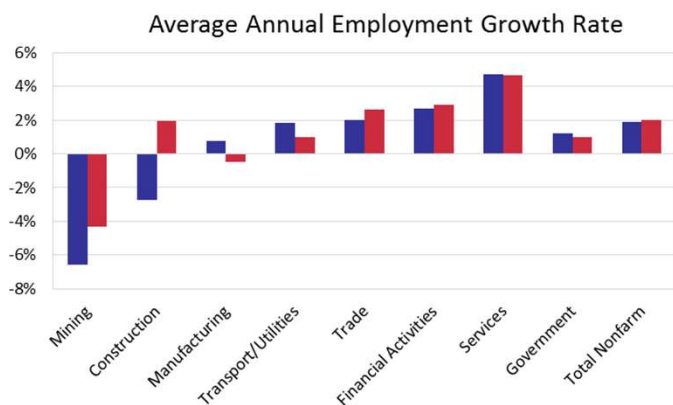
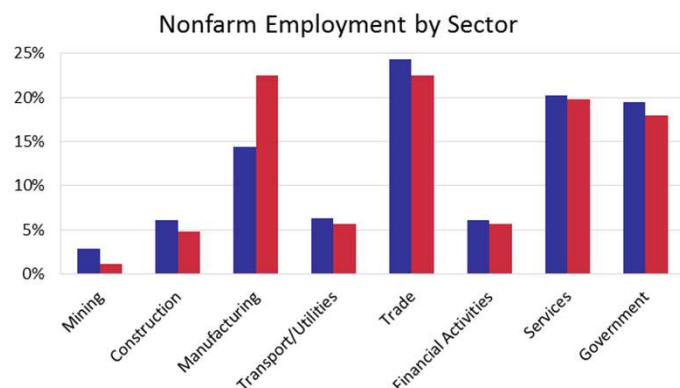
Prepared by:



In Partnership with:



The 1980s: Oil, Tech, & Real Estate



■ Colorado ■ U.S.

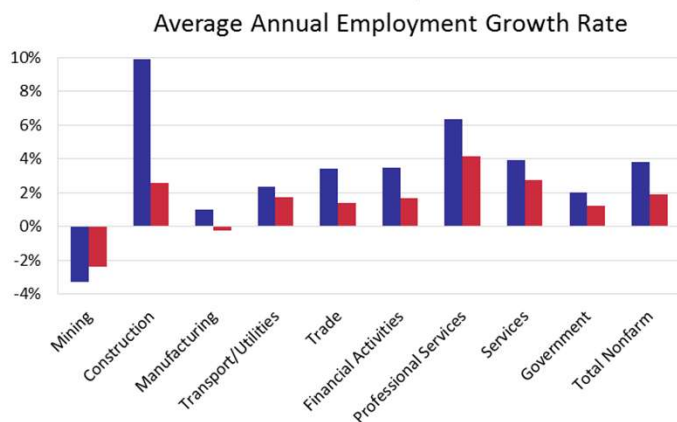
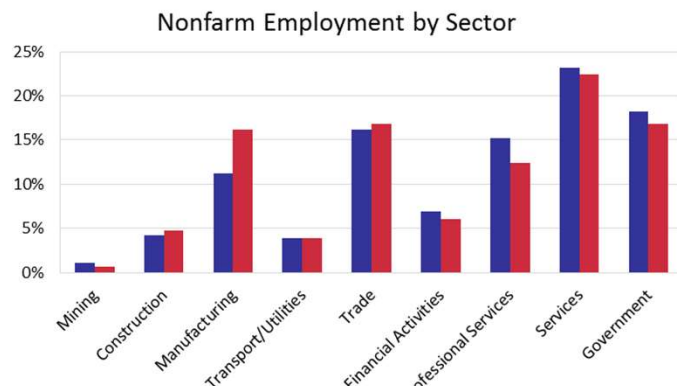
| | U.S. | Colorado |
|-----------------------------------|------------|-----------|
| Employment (1980) | 90.5 M | 1.3 M |
| Emp AAGR* | 2.0% | 1.9% |
| Unemployment Rate | 5.0%-11.4% | 4.6%-9.9% |
| Per Capita Personal Income (1980) | \$10,150 | \$10,885 |
| PCPI AAGR* | 6.8% | 6.1% |
| Months of Recession** | 22 | 29 |

- Boom and bust in oil prices
- HUD homes and high vacancy rates
- Eco devo efforts focus on tech

*AAGR=Average Annual Growth Rate, based on average annual data from 1980 to 1990.

**U.S. Months of Recession from NBER. CO Months of Recession based on year-over-year employment decline.

The 1990s: The New Economy



■ Colorado
 ■ U.S.

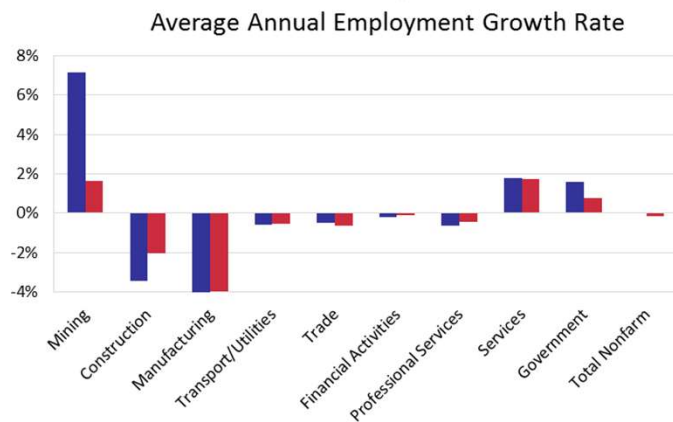
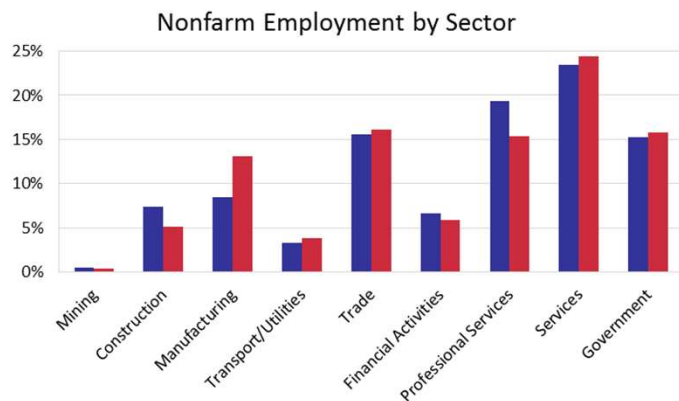
| | U.S. | Colorado |
|-----------------------------------|-----------|-----------|
| Employment (1990) | 109.5 M | 1.5 M |
| Emp AAGR* | 1.9% | 3.8% |
| Unemployment Rate | 3.7%-8.2% | 2.7%-6.8% |
| Per Capita Personal Income (1990) | \$19,584 | \$19,604 |
| PCPI AAGR* | 4.6% | 5.7% |
| Months of Recession** | 8 | 0 |

- Growth spread throughout state
- Dot.com boom – tech & telecomm
- Public infrastructure projects

*AAGR=Average Annual Growth Rate, based on average annual data from 1990 to 2000.

**U.S. Months of Recession from NBER. CO Months of Recession based on year-over-year employment decline.

The 2000s: The Lost Decade



■ Colorado ■ U.S.

| | U.S. | Colorado |
|-----------------------------------|-----------|-----------|
| Employment (2000) | 132.0 M | 2.2 M |
| Emp AAGR* | -0.1% | 0.0% |
| Unemployment Rate | 3.6%-9.7% | 2.4%-8.8% |
| Per Capita Personal Income (2000) | \$30,587 | \$34,227 |
| PCPI AAGR* | 2.8% | 2.0% |
| Months of Recession** | 26 | 44 |

- 9/11, dot.bomb, housing bubble
- Mild 2001 recession followed by Great Recession
- Widespread sector, region losses

*AAGR=Average Annual Growth Rate, based on average annual data from 2000 to 2010.

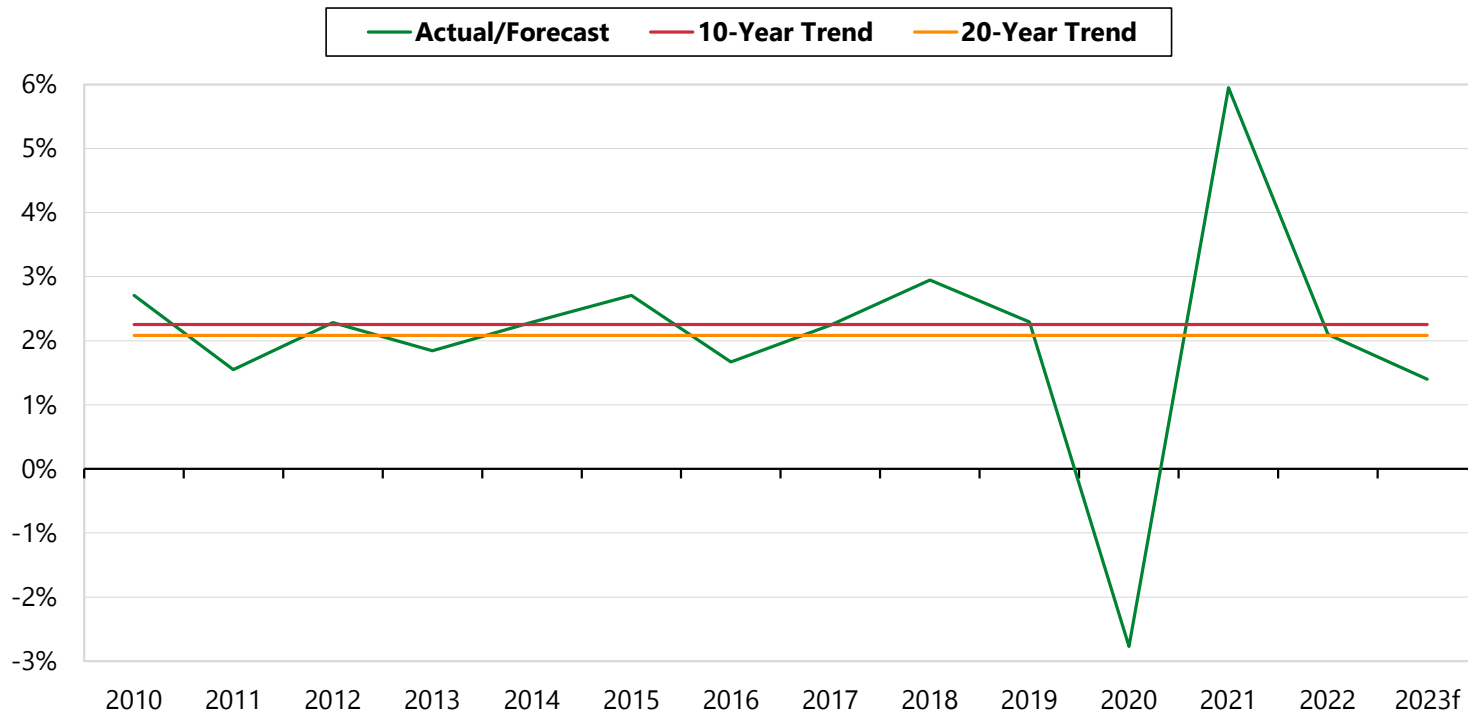
**U.S. Months of Recession from NBER. CO Months of Recession based on year-over-year employment decline.

What is the Perfect Pace?

- 34 business cycles since 1854, when the NBER first began tracking
 - Historic Phase: 1854-1961 (107 years): 26 cycles or every 4 years
 - Current Phase: 1961-2020 (59 years): 8 cycles or every 7.5 years
- 4 of the 5 longest expansions have happened in the Current Phase
 - Average expansion = 6.5 years; Average contraction = 1 year
- 10-year trend (2010-2019): longest expansion in U.S. history
 - Officially, June 2009 – February 2020 or 128 months
- 20-year trend (2000-2019): longer view, includes 2 recessions
- What if economic activity continued to expand according to the 10- and 20-year trend rates after 2019?
 - Where should we be in 2023? Where are we now?



After Wild Swings in 2020 and 2021, Real GDP Growth Below 10-Year Trend in 2022 and 2023



Ann. Average
Growth Rate

2023 Forecast:
1.4%

10-Year Trend:
2.3% per year

20-Year Trend:
2.1% per year

Source: U.S. Bureau of Economic Analysis.
2023f=DRP Forecast.

Labor Force and Employment

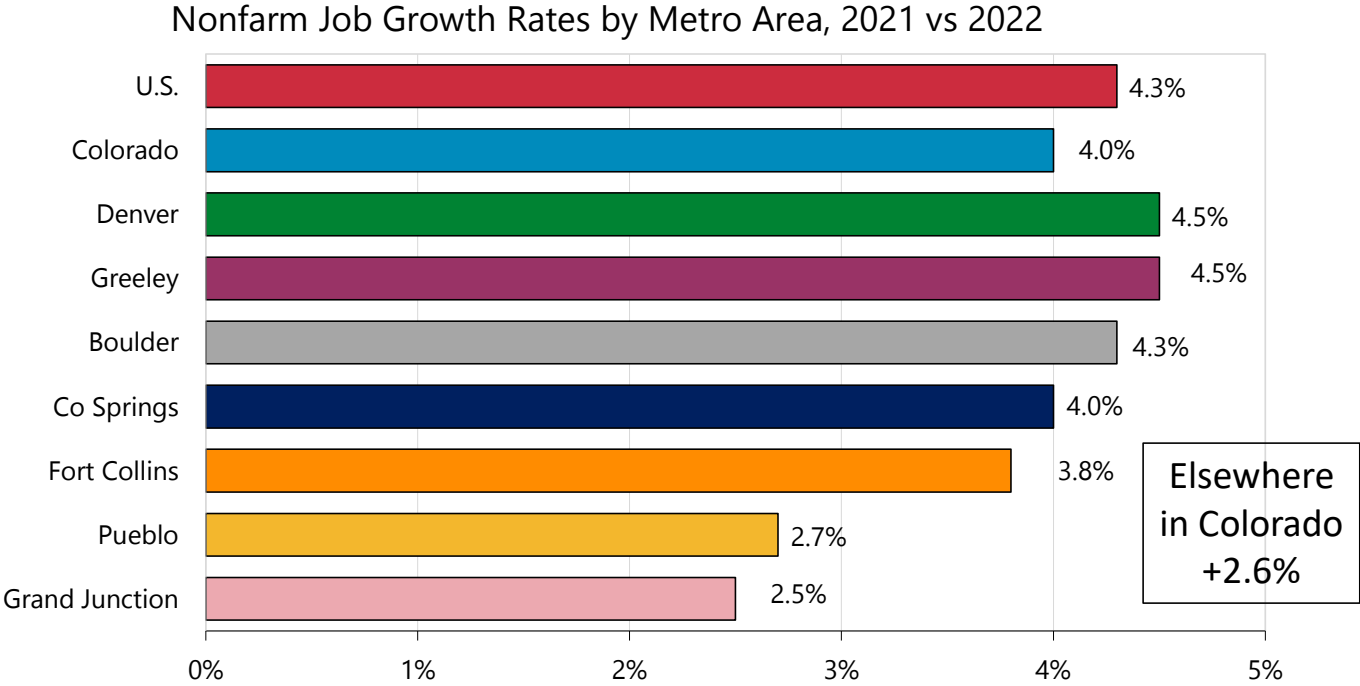
- Total Jobs Added
- Sector Trends
- Job Openings
- # Unemployed



Persistence is key. This isn't about a quick fix, it's about seeking long-term, lasting improvement.

– *The Fire Fighters Charity*

Employment Growth Rates were Solid Across the State's 7 MSAs (covering 17 counties)



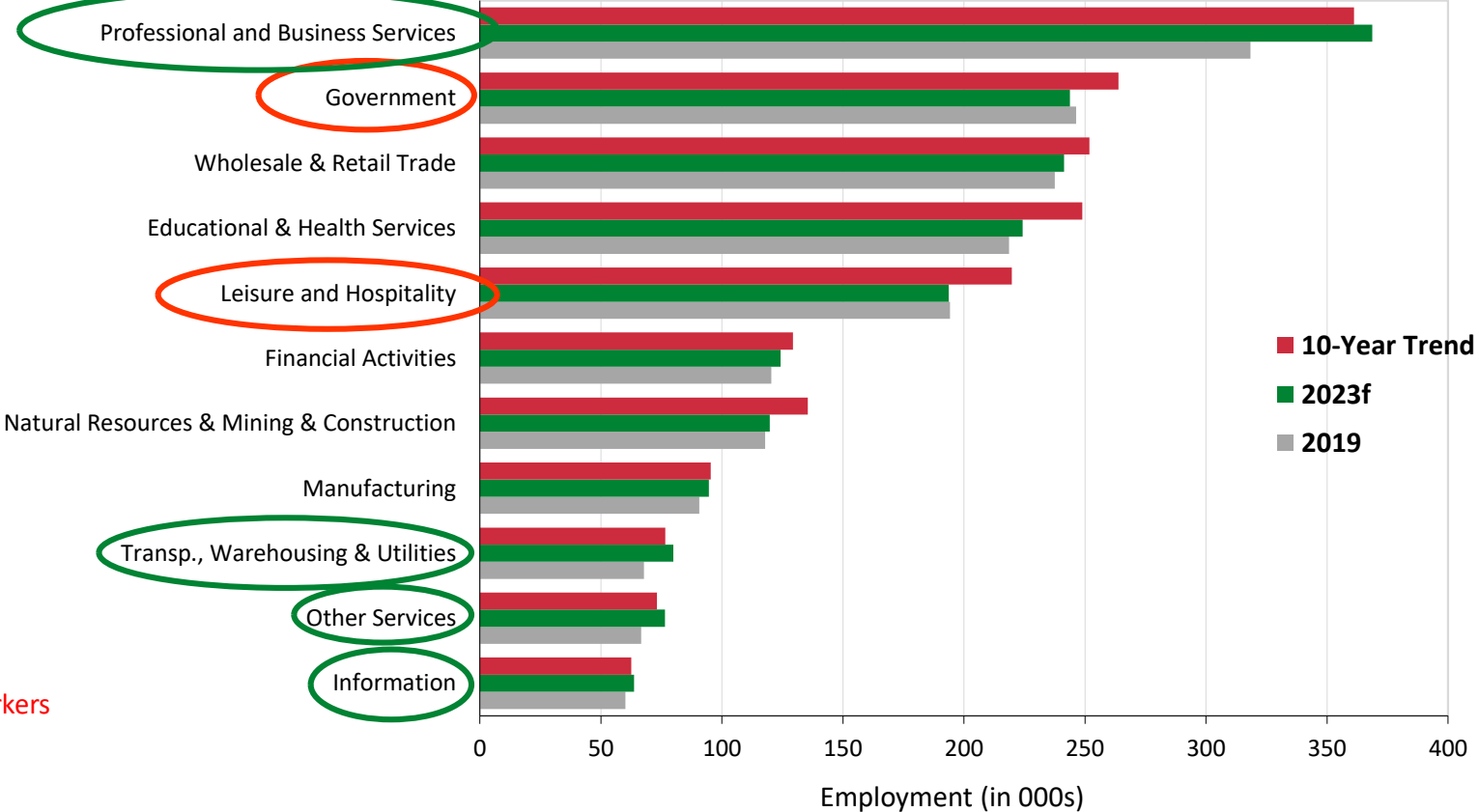
Source: U.S. Bureau of Labor Statistics, Current Employment Statistics.
Benchmark Revisions, March 2023.

Metro Denver Employment by Supersector (9 out of 11 > 2019 Employment)

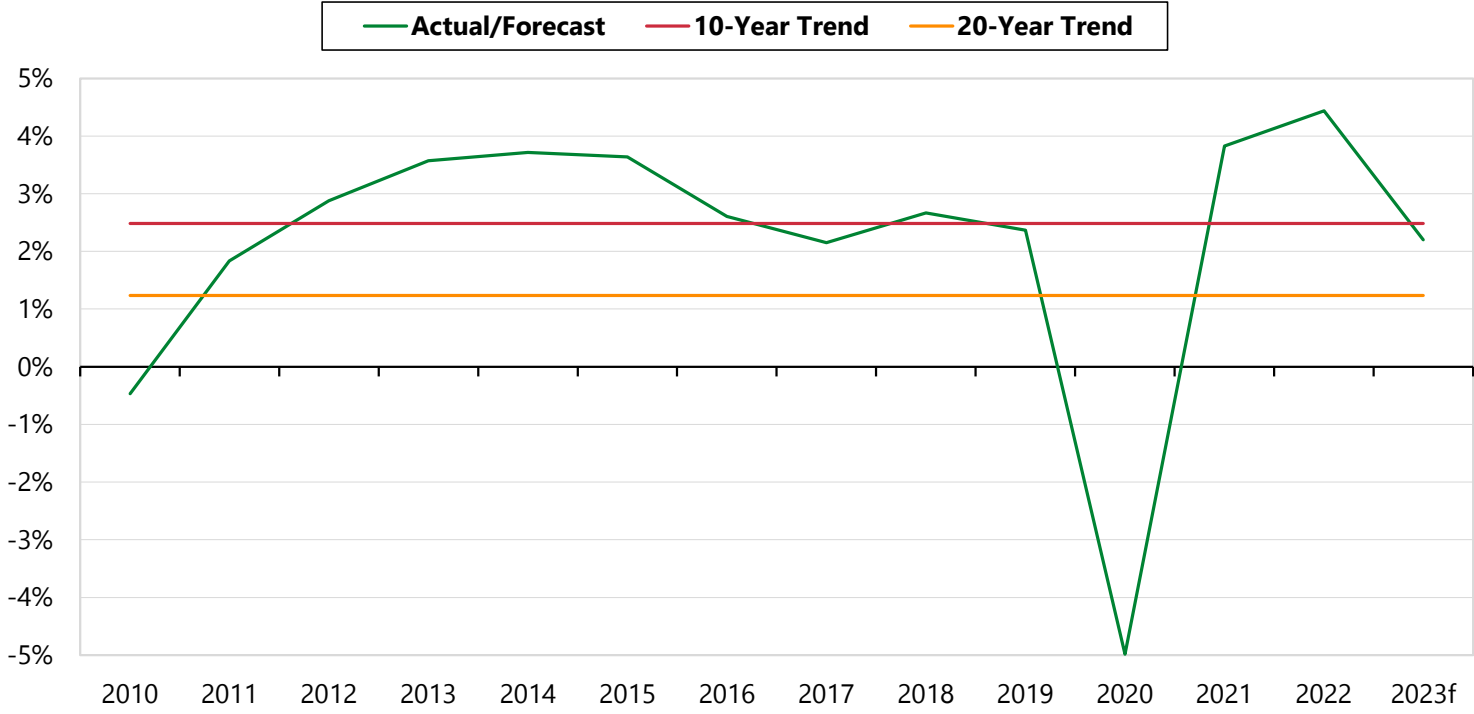
Largest: 369,000 workers



Smallest: 64,000 workers



Metro Denver Employment Growth Rate Highly Variable, but Tracking Below 10-Year Trend in 2023



Ann. Average Growth Rate

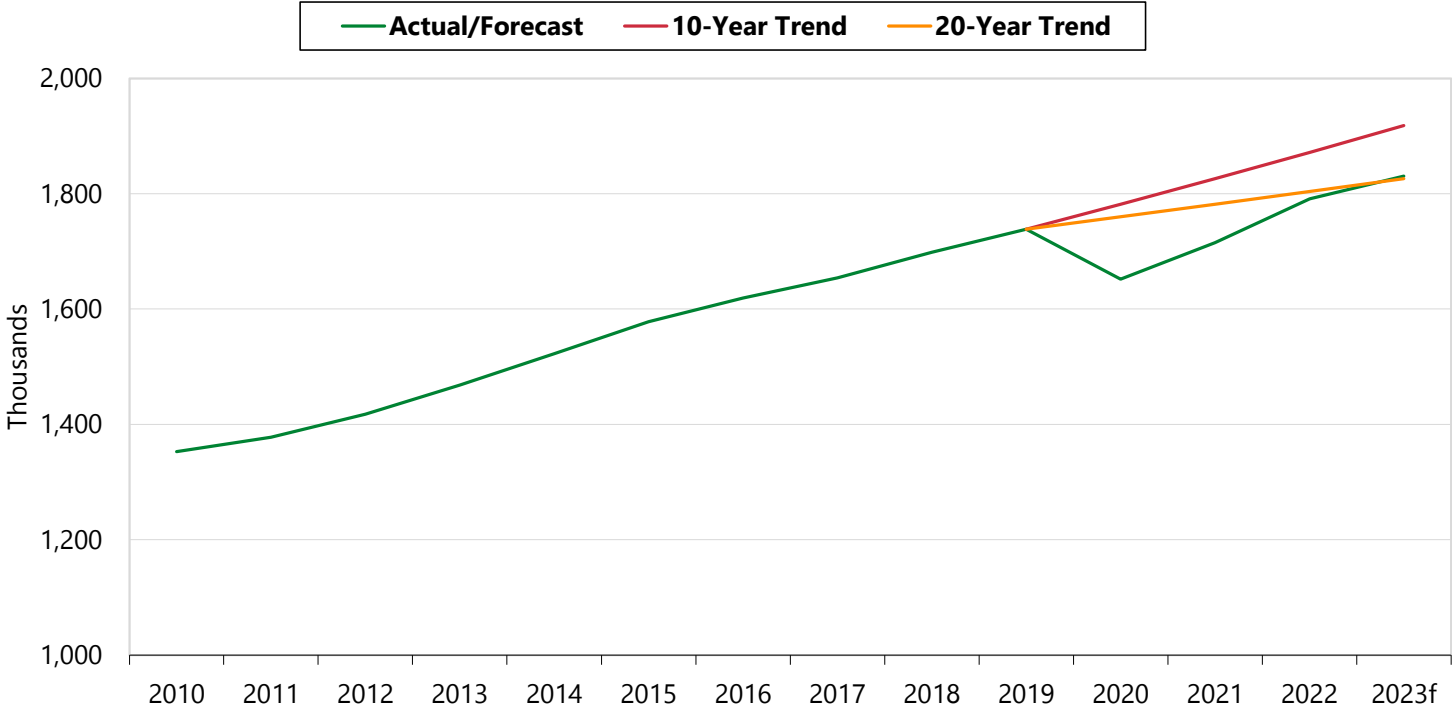
2023 Forecast: 2.2%

10-Year Trend: 2.5% per year

20-Year Trend: 1.2% per year

Source: U.S. Bureau of Labor Statistics, Current Employment Statistics. 2023f=DRP Forecast.

Metro Denver Total Employment 88,000 Jobs Short Based on 10-Year Trend



Source: U.S. Bureau of Labor Statistics, Current Employment Statistics. 2023f=DRP Forecast.

Ann. Average Growth Rate

2023 Forecast:
2.2%
+39,000 jobs

10-Year Trend:
2.5% per year
+38,000 jobs

20-Year Trend:
1.2% per year
+19,000 jobs

88,000 jobs short

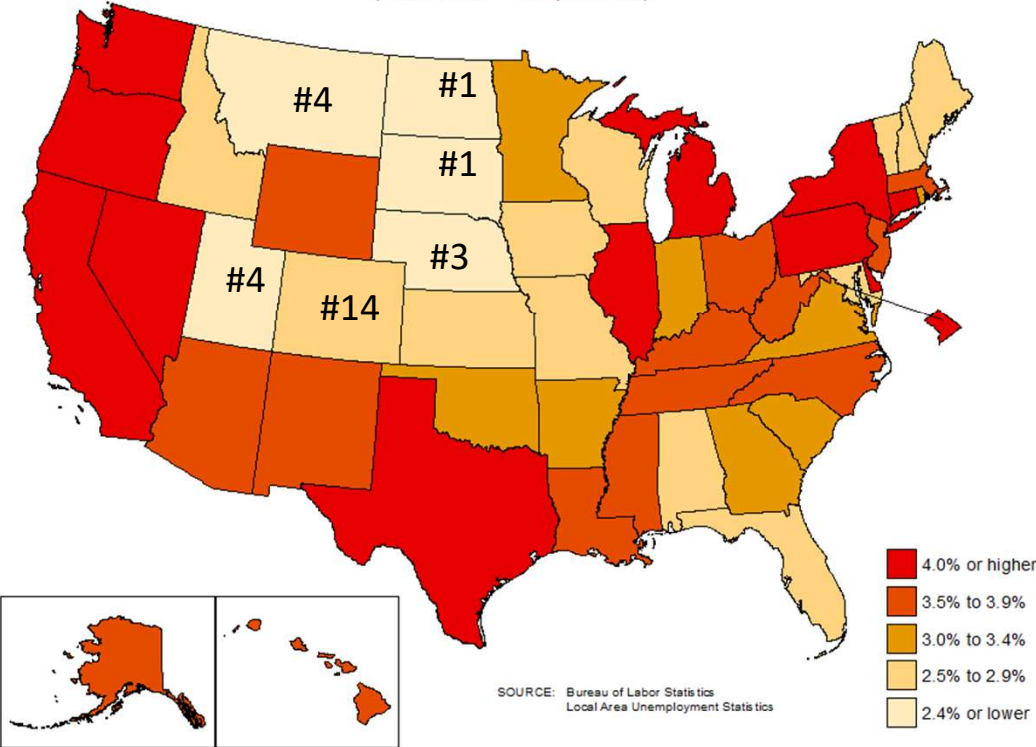
Colorado's Unemployment Rate of 2.9% is 14th Lowest in U.S.

Unemployment Rate Range

2.1% ND, SD to 5.5% in NV

Unemployment rates by state, seasonally adjusted, February 2023

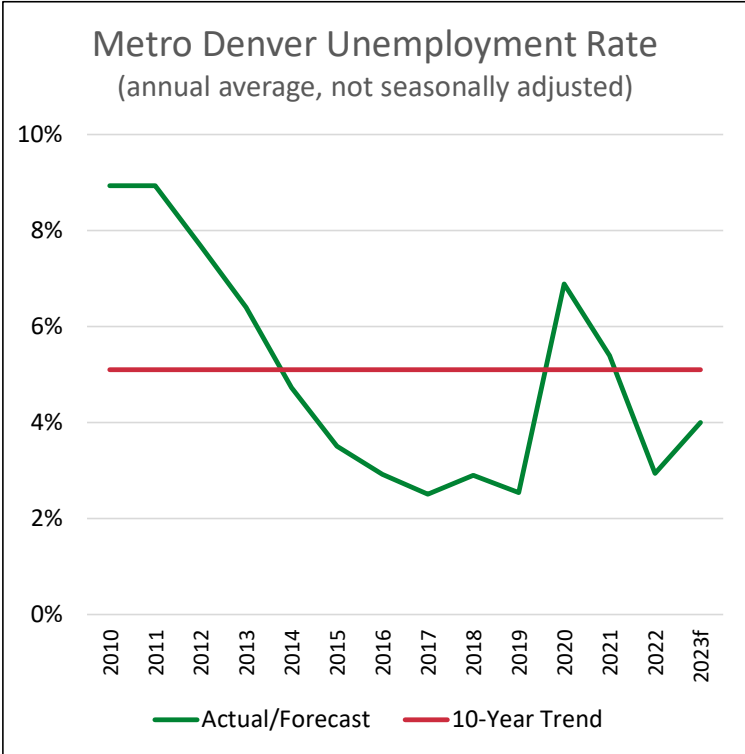
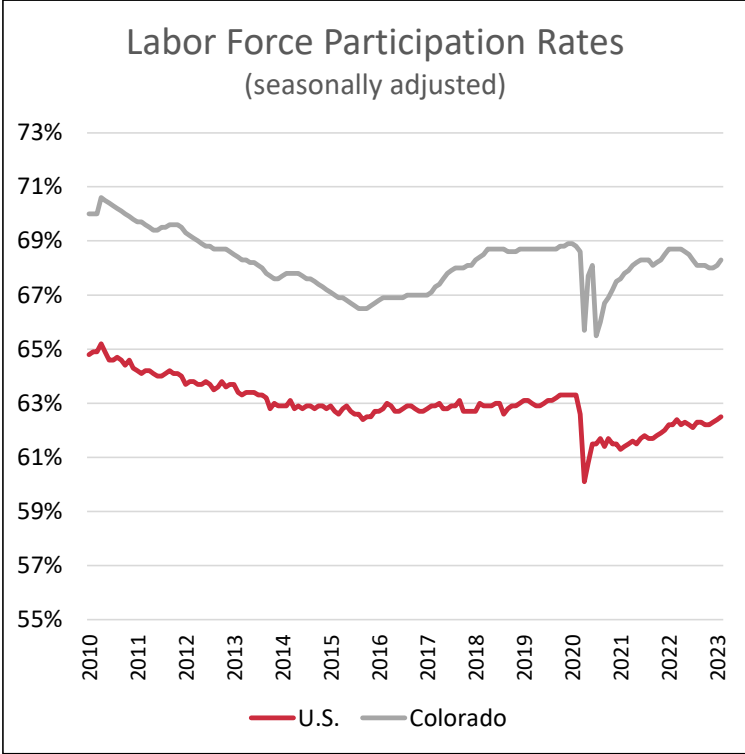
(U.S. rate = 3.6 percent)



SOURCE: Bureau of Labor Statistics
Local Area Unemployment Statistics

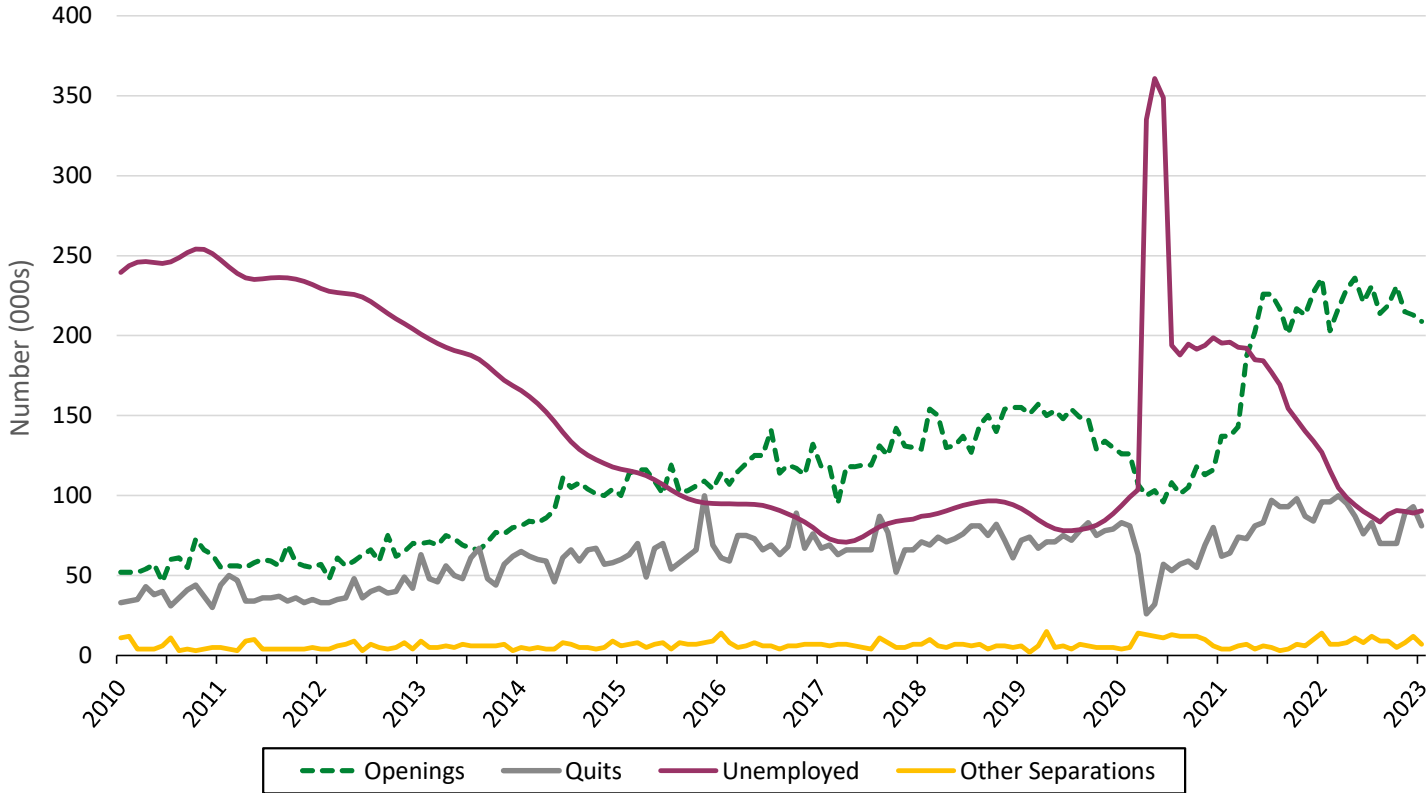
Source: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics.

CO Labor Force Participation Ranks 4th Highest, Unemployment Higher than Pre-Covid



Sources: U.S. Bureau of Labor Statistics, Current Population Survey and Local Area Unemployment Statistics. 2023f=DRP Forecast.

Colorado Job Openings Trending at Historic Highs; Openings Greater than the Number Unemployed



Source: U.S. Bureau of Labor Statistics, Job Openings & Labor Turnover Survey (Colorado).
Other Separations = Retirement, death, disability, and transfers.

Commercial Real Estate

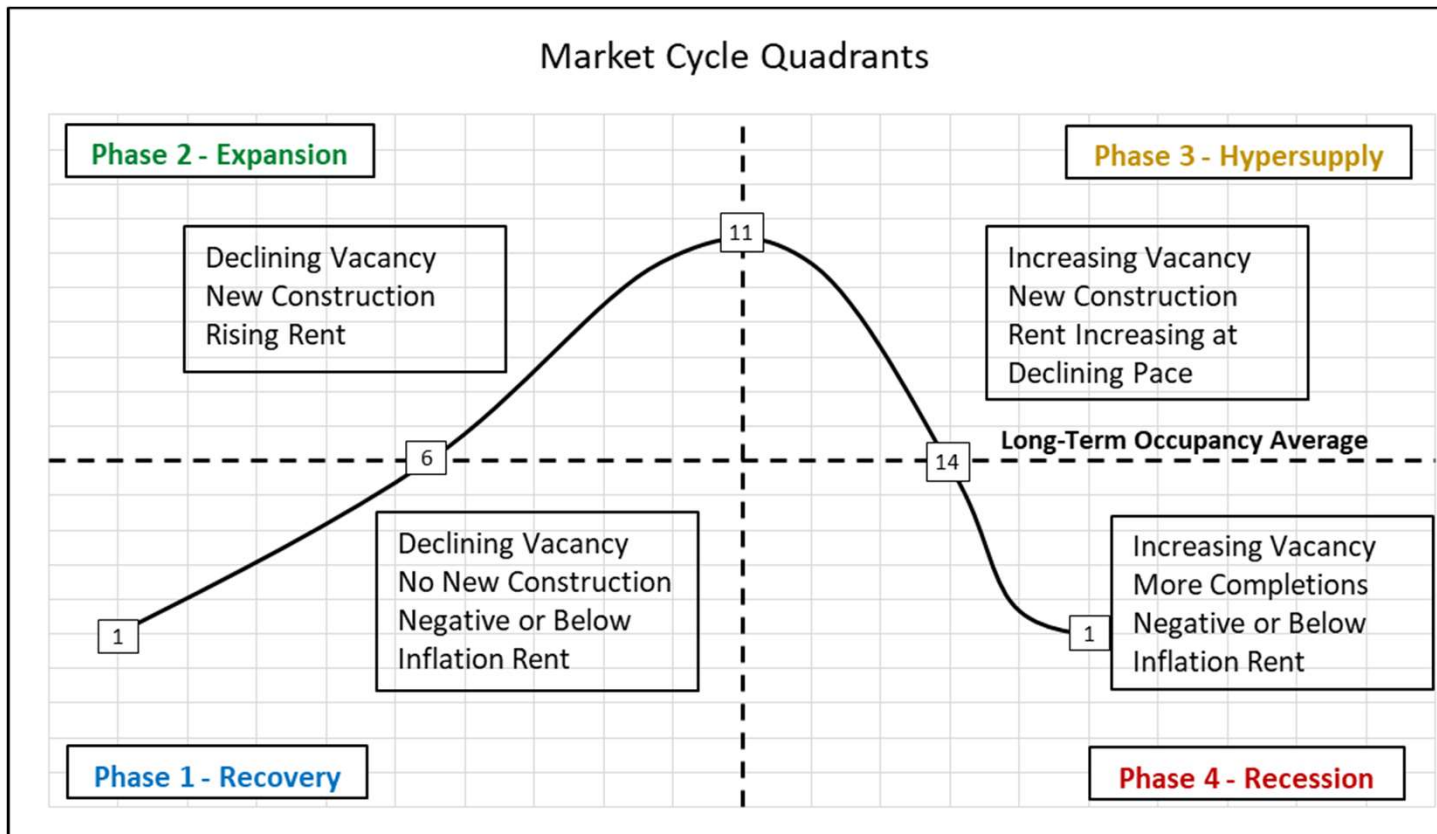


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- Cycle Position by Property Type
- Vacancy Rates
- Lease Rates
- Construction Activity

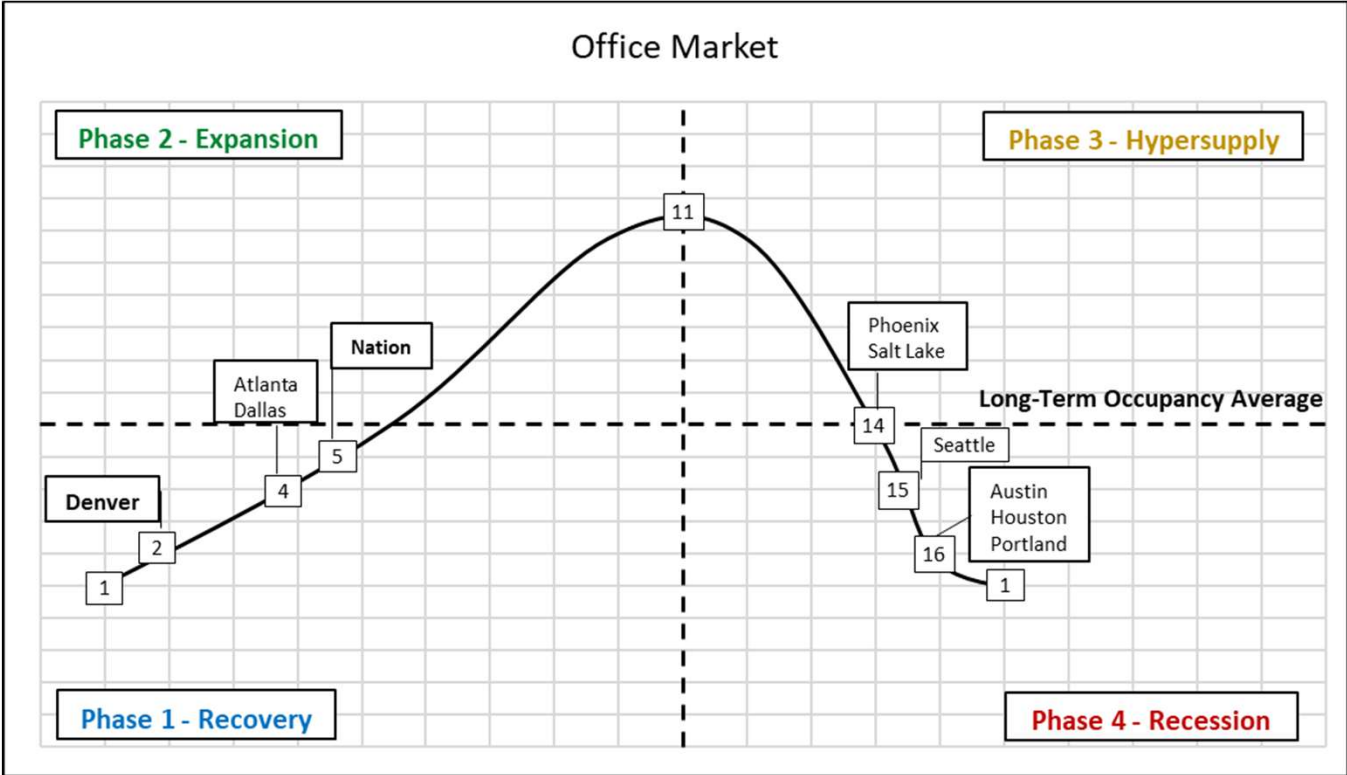
You don't always perform at race pace.
Sometimes you need to take a longer-term view to get back on track.
- *Anonymous*

Mueller Real Estate Market Cycle Monitor - University of Denver, Daniels College of Business



- Quarterly Analysis
- 5 Property Types (Office, Industrial, Apartment, Retail, Hotel)
- 54 metro markets
- Areas may move up or down from one quarter to next

Denver Just Entering the Recovery Phase for Office



4Q 2022

Vacancy Rate:
12.2%

Full-Service Rent:
\$30.99

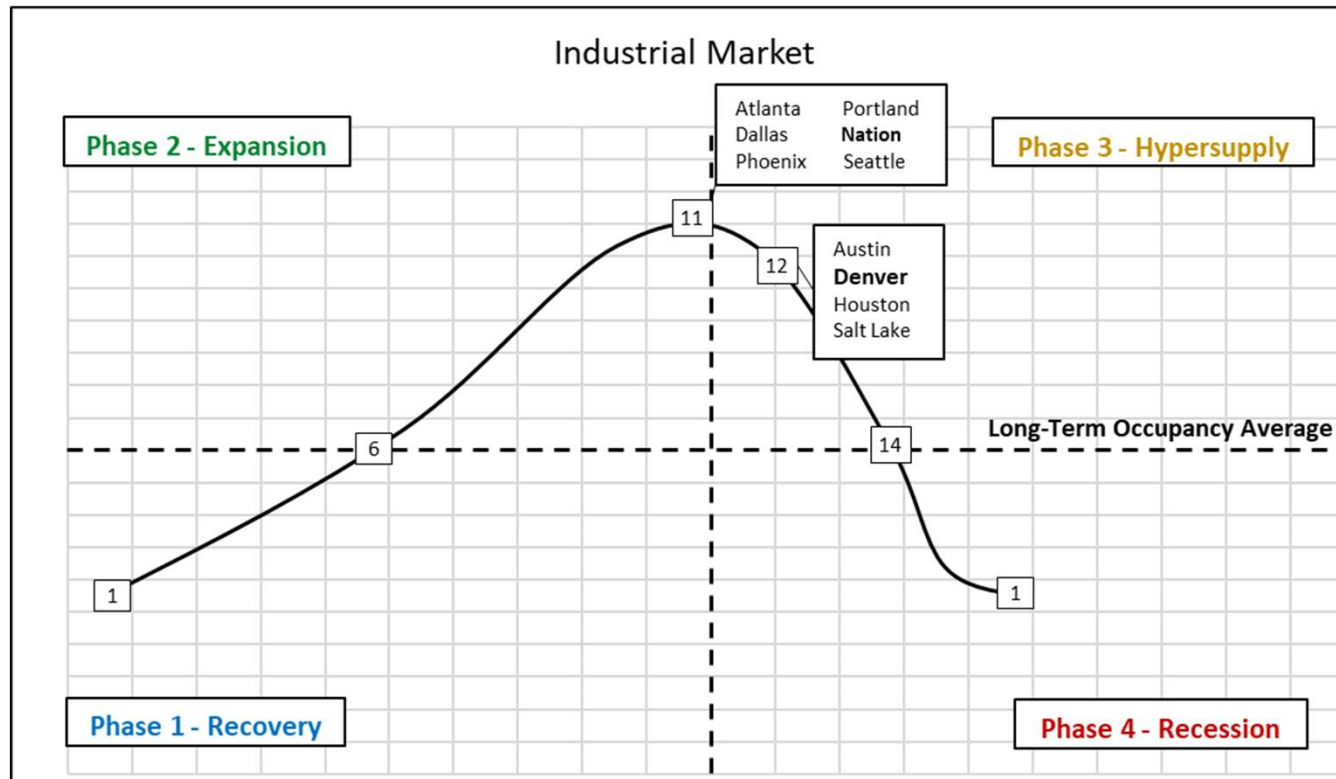
Completed:
0.75 MSF

Under Construction:
3.3 MSF

Source: CoStar Group, Inc.

Source: Mueller Real Estate Market Cycle Monitor, 4Q 2022 Analysis.

Denver Moved from Equilibrium in 2Q 2022 to First Phase of Hypersupply for Industrial



4Q 2022

Vacancy Rate:
5.3%

NNN Rent:
\$9.70

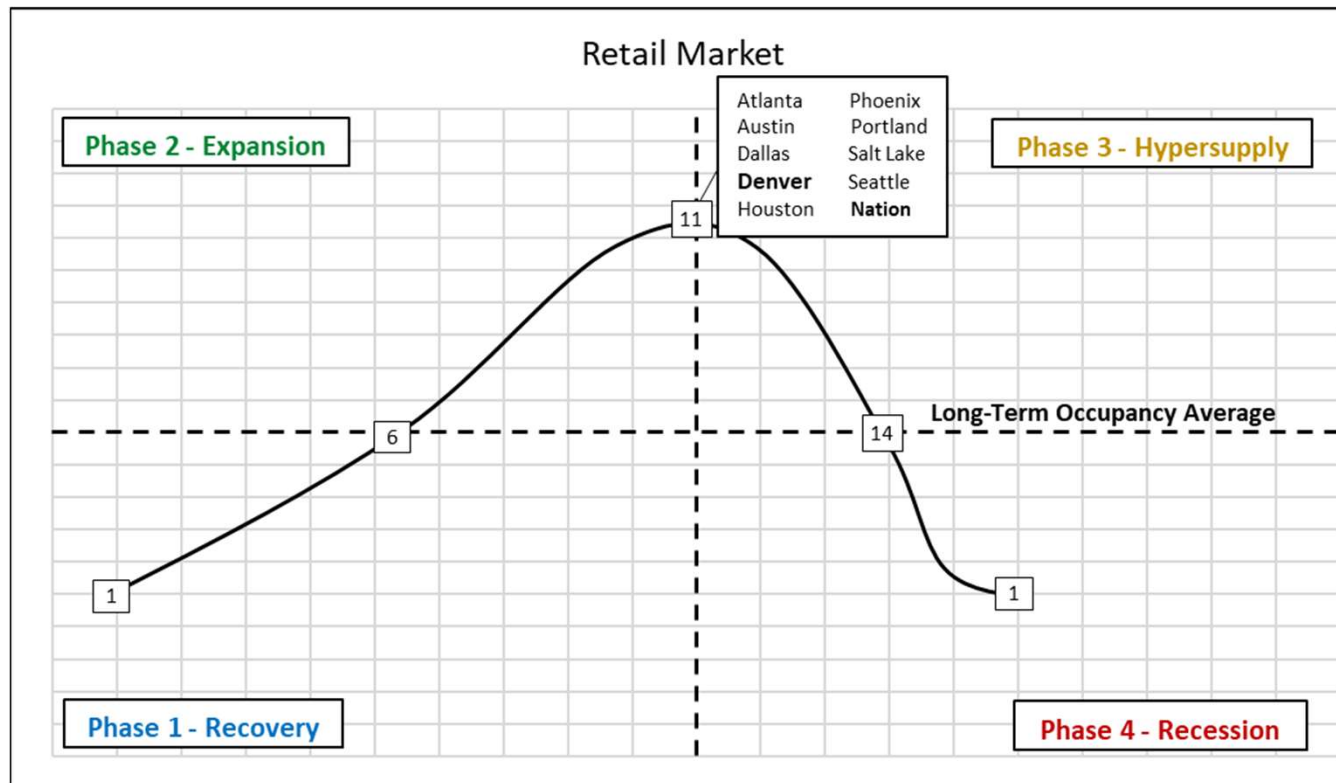
Completed:
7.6 MSF

Under
Construction:
7.8 MSF

Source: CoStar Group, Inc.

Source: Mueller Real Estate Market Cycle Monitor, 4Q 2022 Analysis.

All 54 Markets Measured Said to be in Equilibrium for Retail



4Q 2022

Vacancy Rate:
4.1%

NNN Rent:
\$20.22

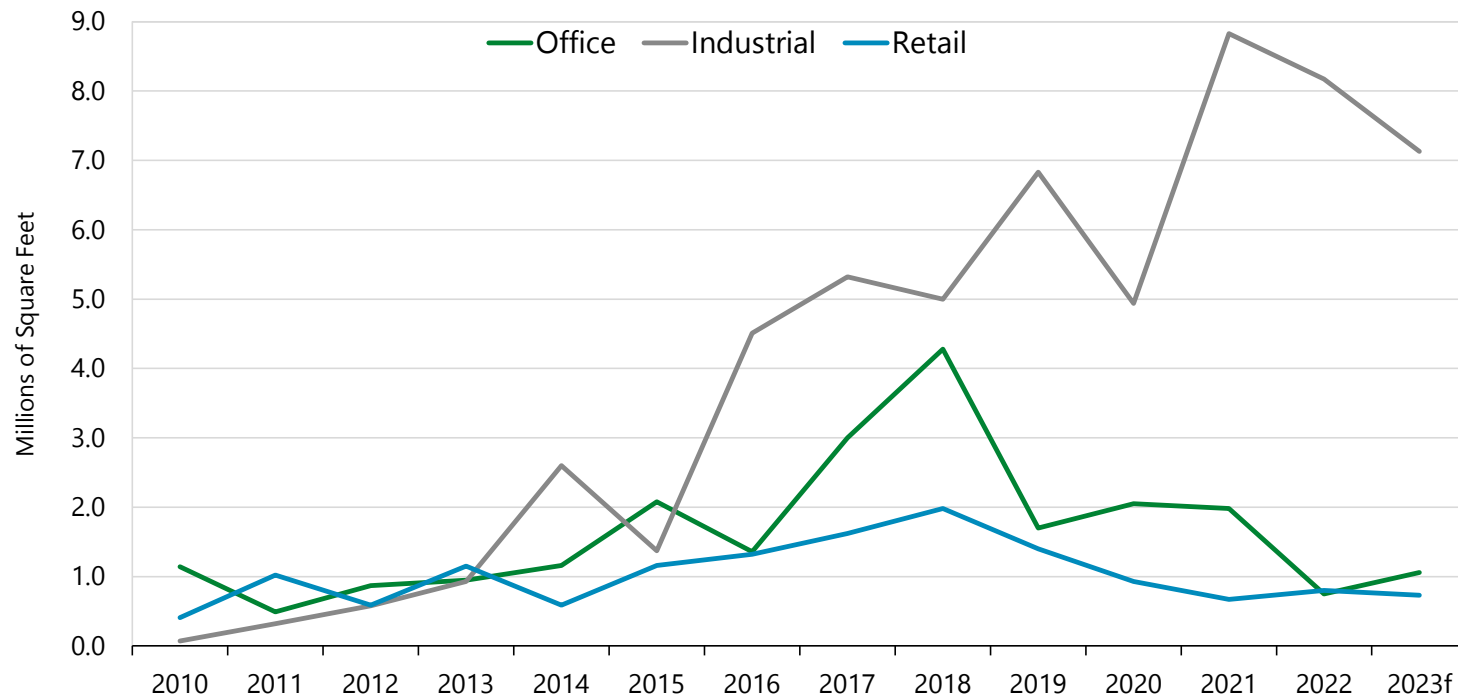
Completed:
0.66 MSF

Under
Construction:
0.86 MSF

Source: CoStar Group, Inc.

Source: Mueller Real Estate Market Cycle Monitor, 4Q 2022 Analysis.

9.7 MSF Completed in 2022, 8.9 MSF Expected to be Completed in 2023; Industrial Dominates



Source: CoStar Group, Inc.
2023f=DRP Forecast.

Demographics & Consumer Activity

- Population Growth
- Population by Age
- Inflation
- Retail Trade Activity

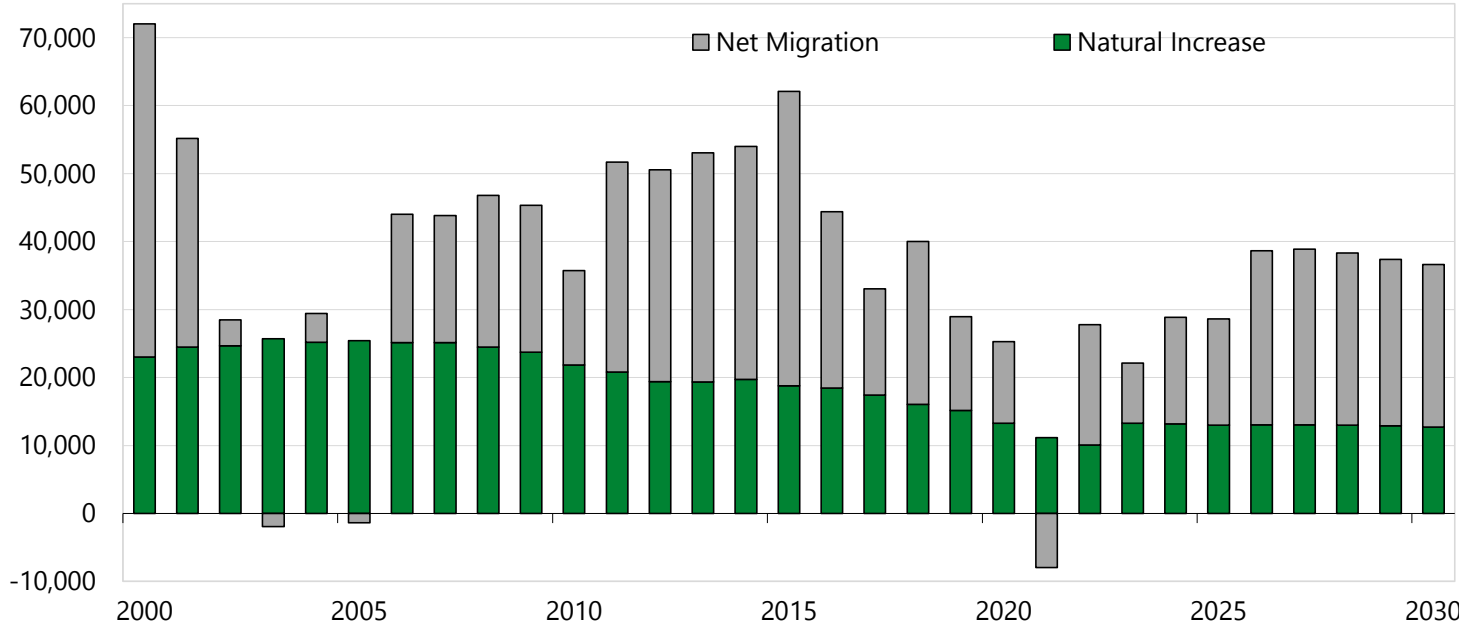


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While running faster is necessary for improving speed, rest and recovery are also crucial to the equation. Stress plus rest equals growth. – *FleetFeet.com*

Metro Denver Annual Change in Population

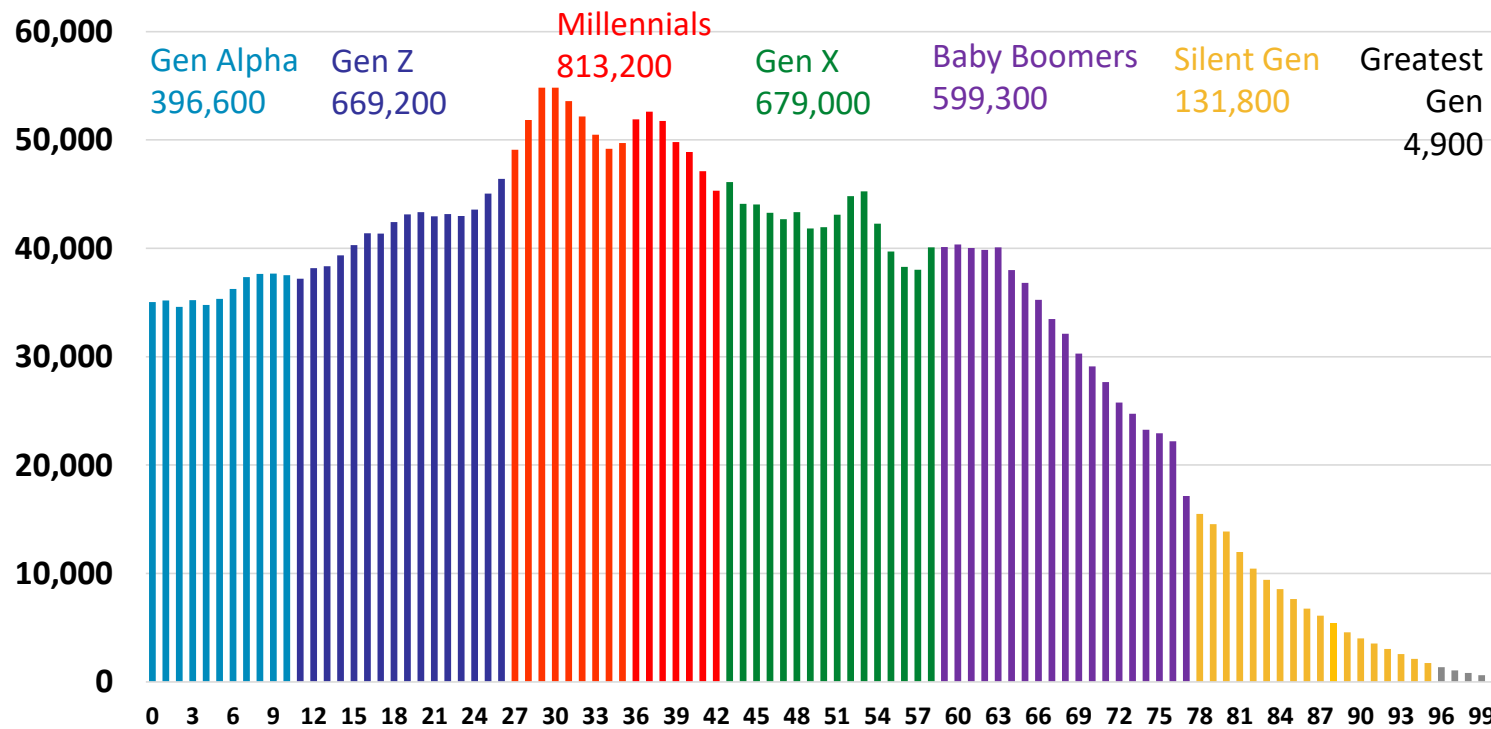
2023 Population = 3.3 Million



Source: Colorado Division of Local Government, State Demography Office. Vintage 2021 Data, released October 2022.

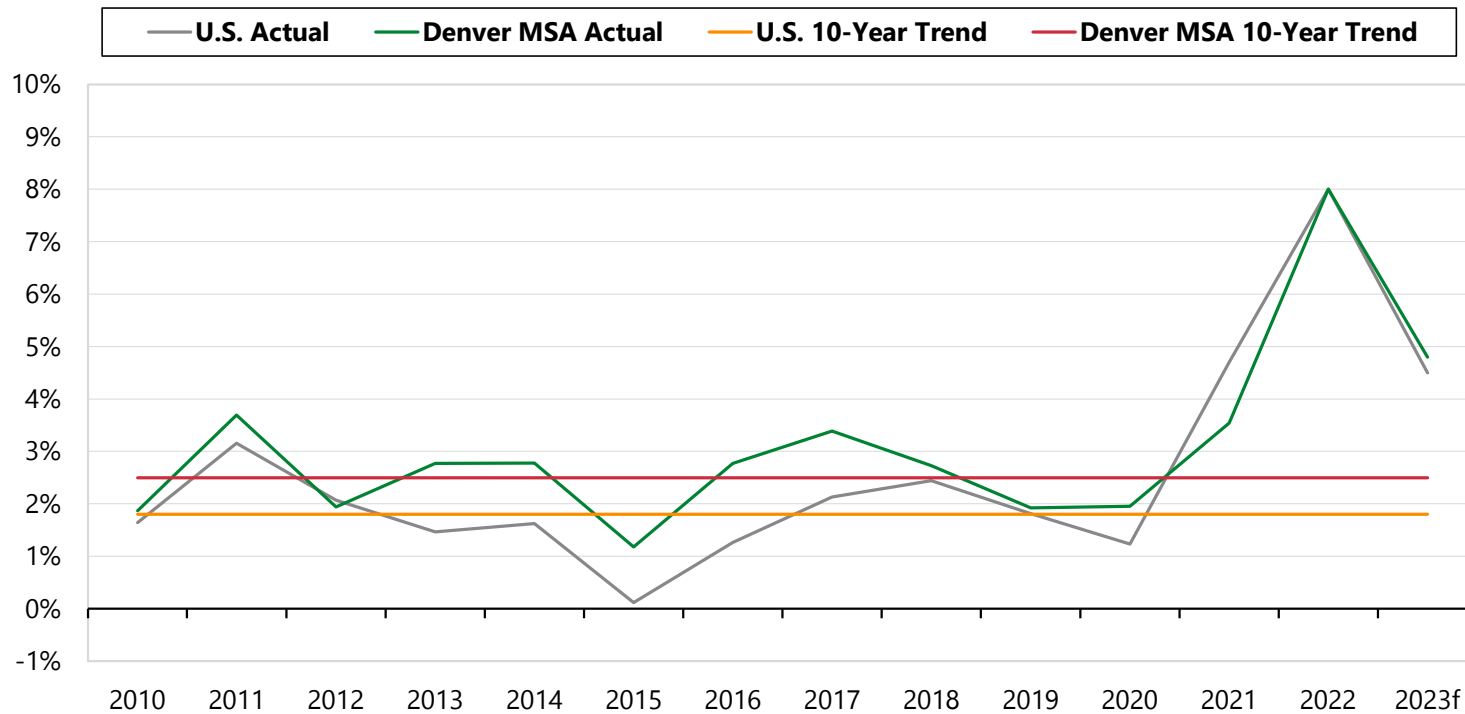
Millennials Largest Population Group; Gen Z Most Diverse (so far)

Metro Denver Population 2023 = 3.3 million



Source: Colorado Division of Local Government, State Demography Office.
Vintage 2021 Data, released October 2022.
Generational groups defined by Pew Research Center, January 2019.

Inflation Tempering, but Still at Highest Levels Since the 1980s



Ann. Average Growth Rate

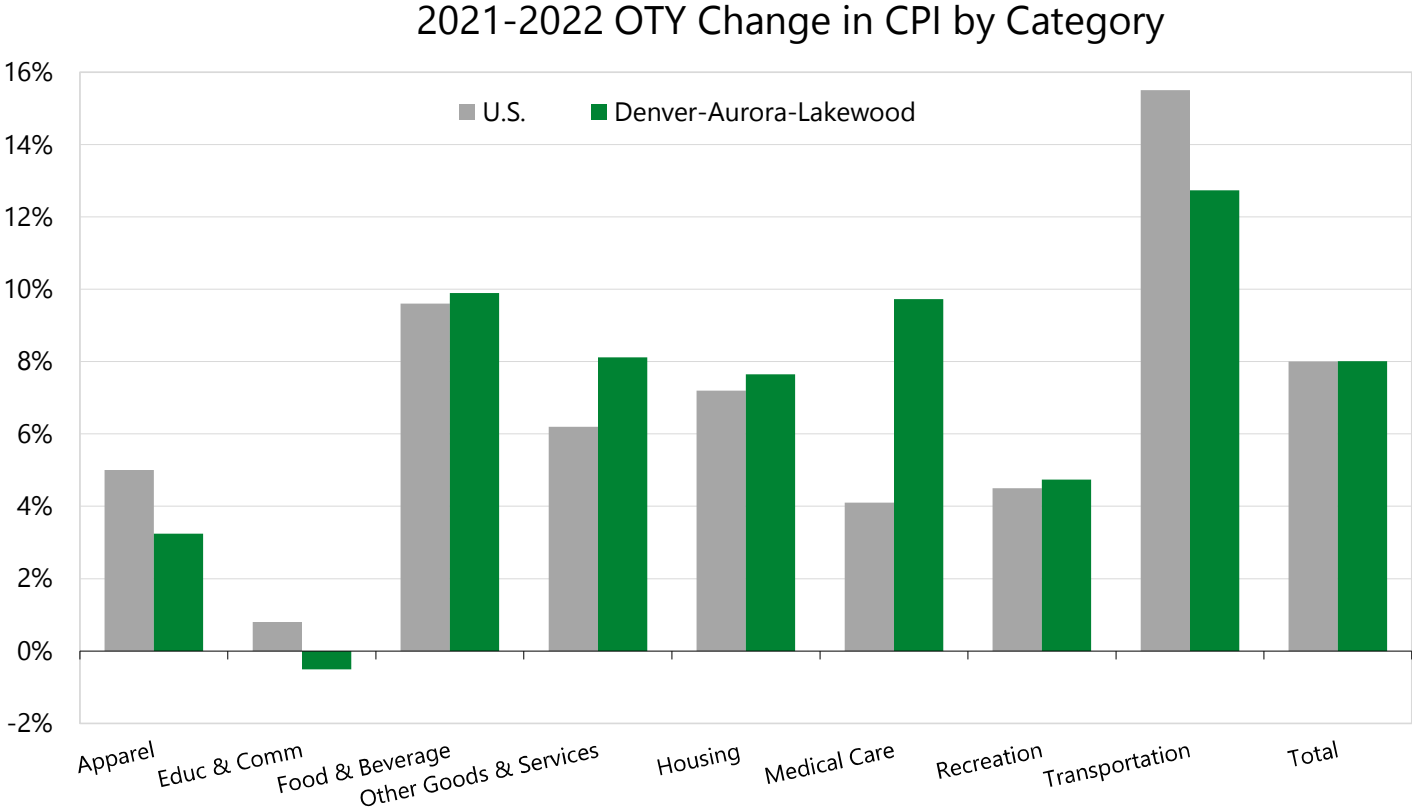
2023 Forecast:
U.S. = 4.5%
Denver MSA = 4.8%

10-Year Trend:
U.S. = 1.8%
Denver MSA = 2.5%

20-Year Trend:
U.S. = 2.2%
Denver MSA = 2.4%

Source: U.S. Bureau of Labor Statistics.
2023f=DRP Forecast.

Inflation Started With Transportation Costs and Spread to Other Categories



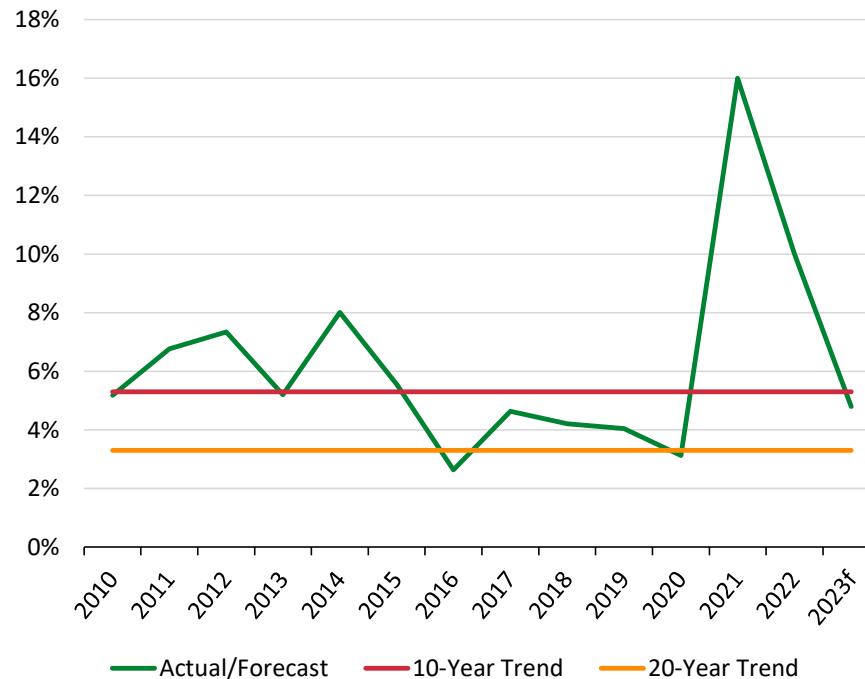
Source: U.S. Bureau of Labor Statistics, Consumer Price Index.

Metro Denver Retail Trade Spending Increased at Record Level in 2021; Expect Slower Pace in 2023

Change in Retail Trade Spending

| | 2019 | 2020 | 2021 | 2022 |
|--------------|------|-------|-------|-------|
| Metro Denver | 4.3% | 2.9% | 16.0% | 10.0% |
| Adams | 2.9% | 5.2% | 16.5% | 11.8% |
| Arapahoe | 7.3% | 0.9% | 14.8% | 6.9% |
| Boulder | 3.8% | 3.4% | 13.4% | 7.6% |
| Denver | 4.6% | -2.6% | 16.9% | 11.6% |
| Douglas | 3.1% | 7.7% | 22.5% | 16.8% |
| Jefferson | 2.4% | 7.4% | 13.2% | 6.7% |
| Colorado | 4.7% | 4.9% | 17.0% | 9.4% |
| U.S. | 3.1% | 0.7% | 19.6% | 9.1% |

Metro Denver Retail Trade Growth Rate



Ann. Average Growth Rate

2023 Forecast: 4.8%

10-Year Trend: 5.3% per year

20-Year Trend: 3.3% per year

Source: Colorado Department of Revenue.
2023f=DRP Forecast.

Residential Real Estate

The idiom "a change of pace" means to do something different than before. — *OysterEnglish.com*

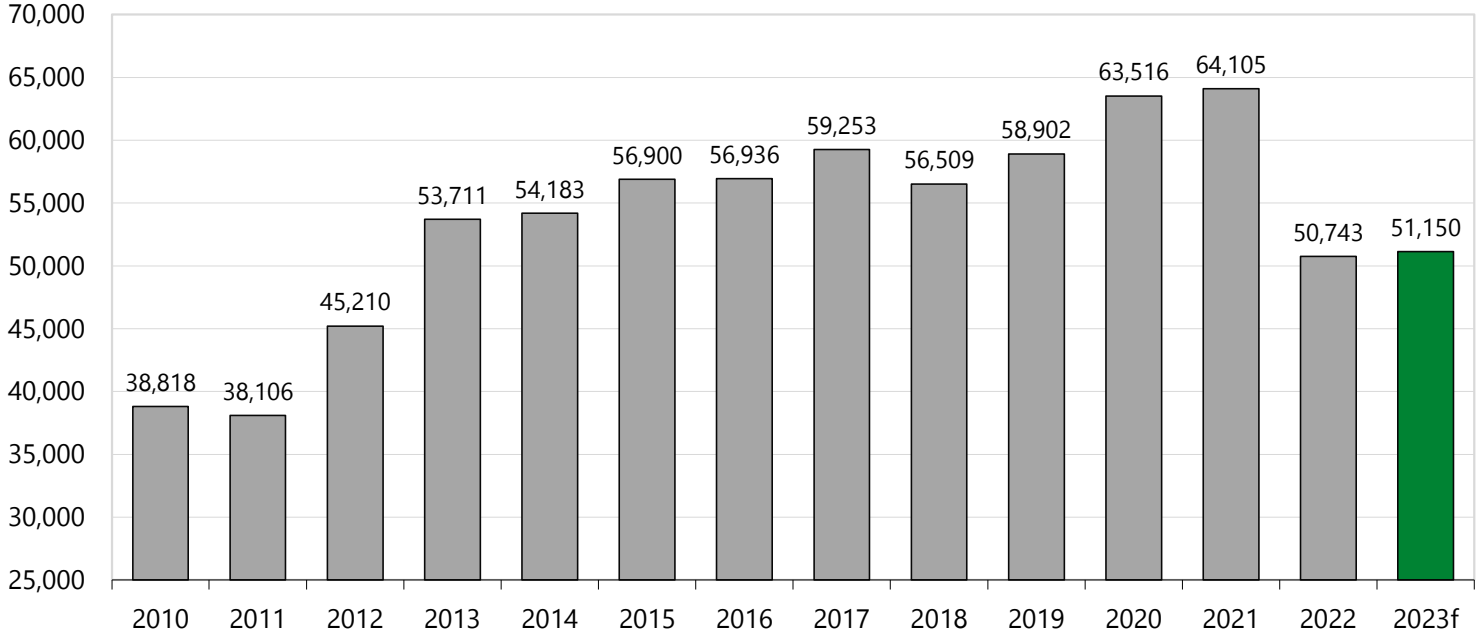


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- Sales Activity
- Home Prices
- Apartment Market
- New Construction

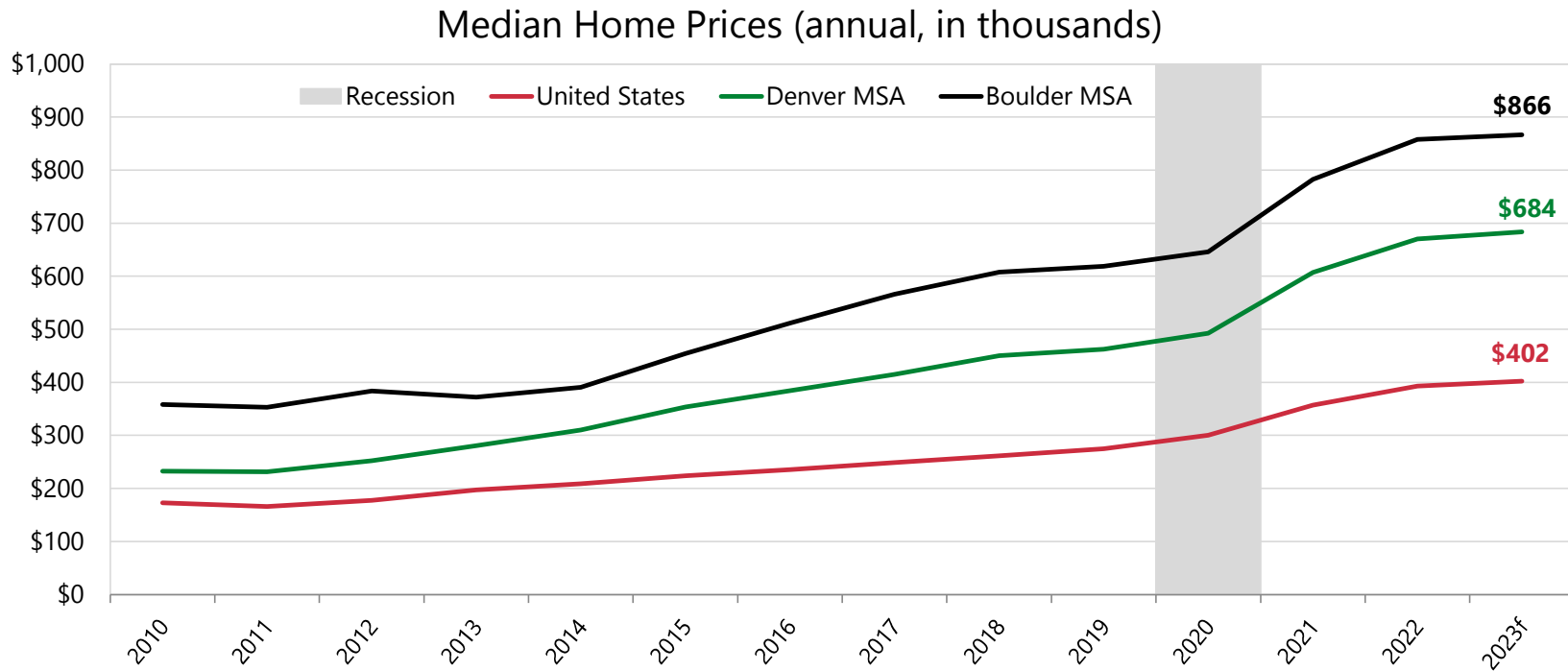
Rising Mortgage Rates Led to Slower Sales Environment in 2022; Challenges will Continue

Metro Denver Existing Home Sales Closed



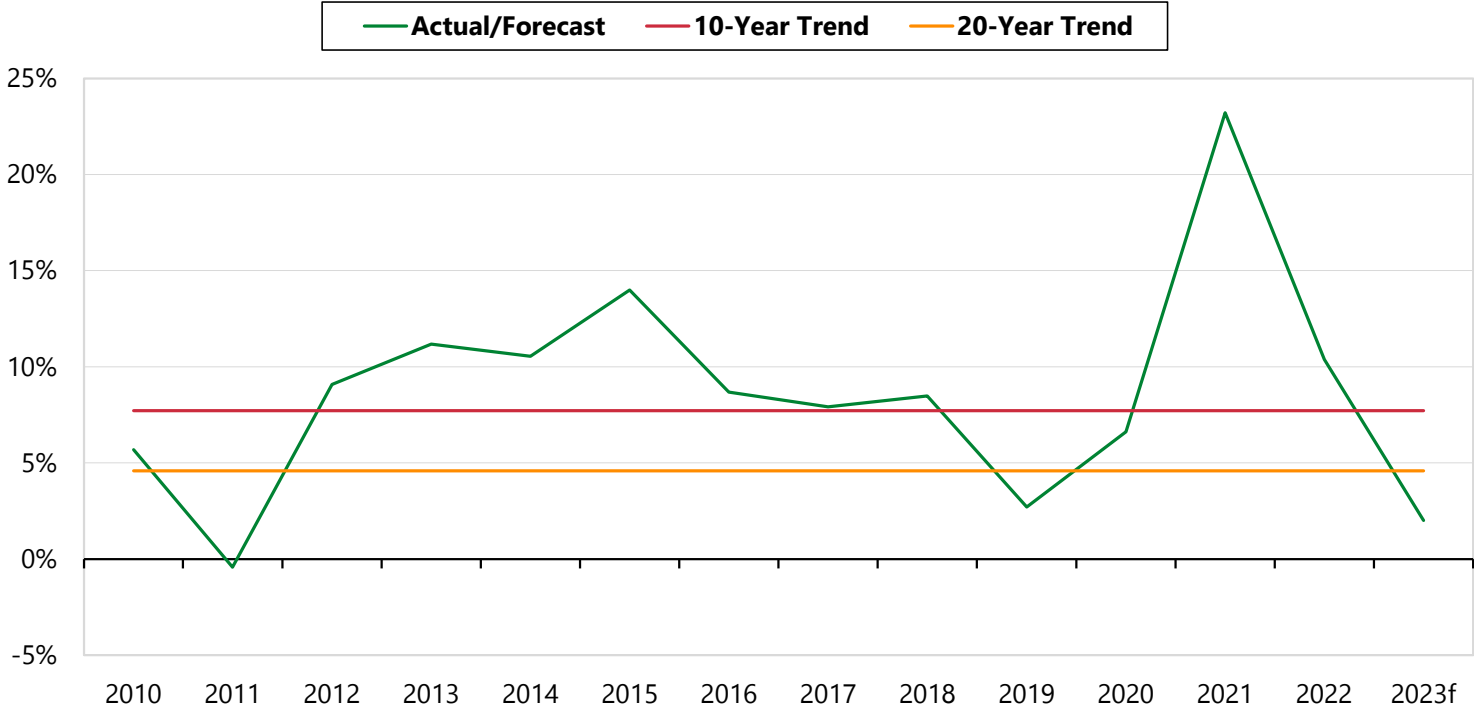
Sources: Metrolist (2010); Denver Metro Association of REALTORS (2011-2022).
2023f=DRP Forecast.

Denver MSA #13 and Boulder MSA #8 for Highest Median Home Price, 4Q 2022



Source: National Association of REALTORS.
2023f=DRP Forecast.

Metro Denver Median Home Price Appreciation Expected to Fall Below Trend in 2023



Ann. Average Growth Rate

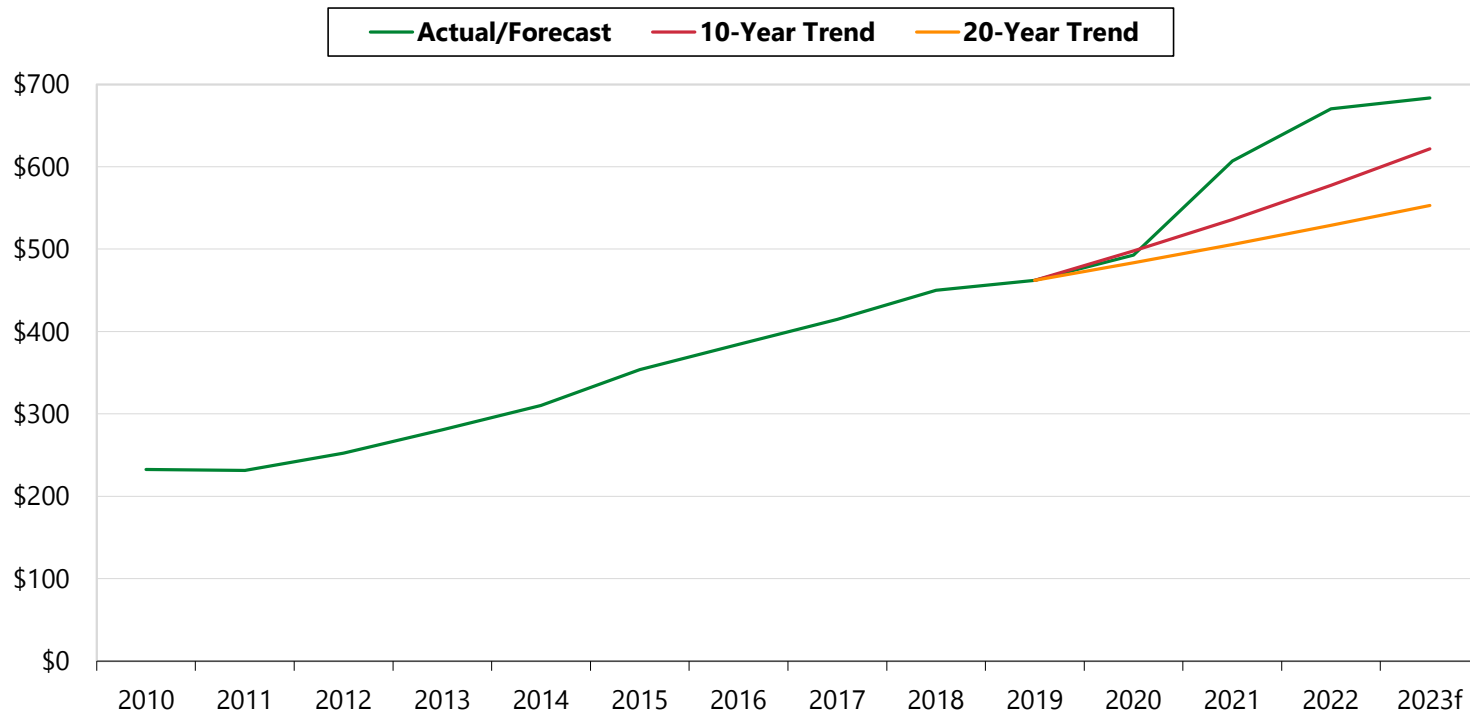
2023 Forecast: 2.0%

10-Year Trend: 7.7% per year

20-Year Trend: 4.6% per year

Source: National Association of REALTORS.
2023f=DRP Forecast.

Metro Denver Median Home Price is \$62,000 More Than 10-Year Trend; \$130,000 > 20-Year Trend



Source: National Association of REALTORS.
2023f=DRP Forecast.

Ann. Average Growth Rate

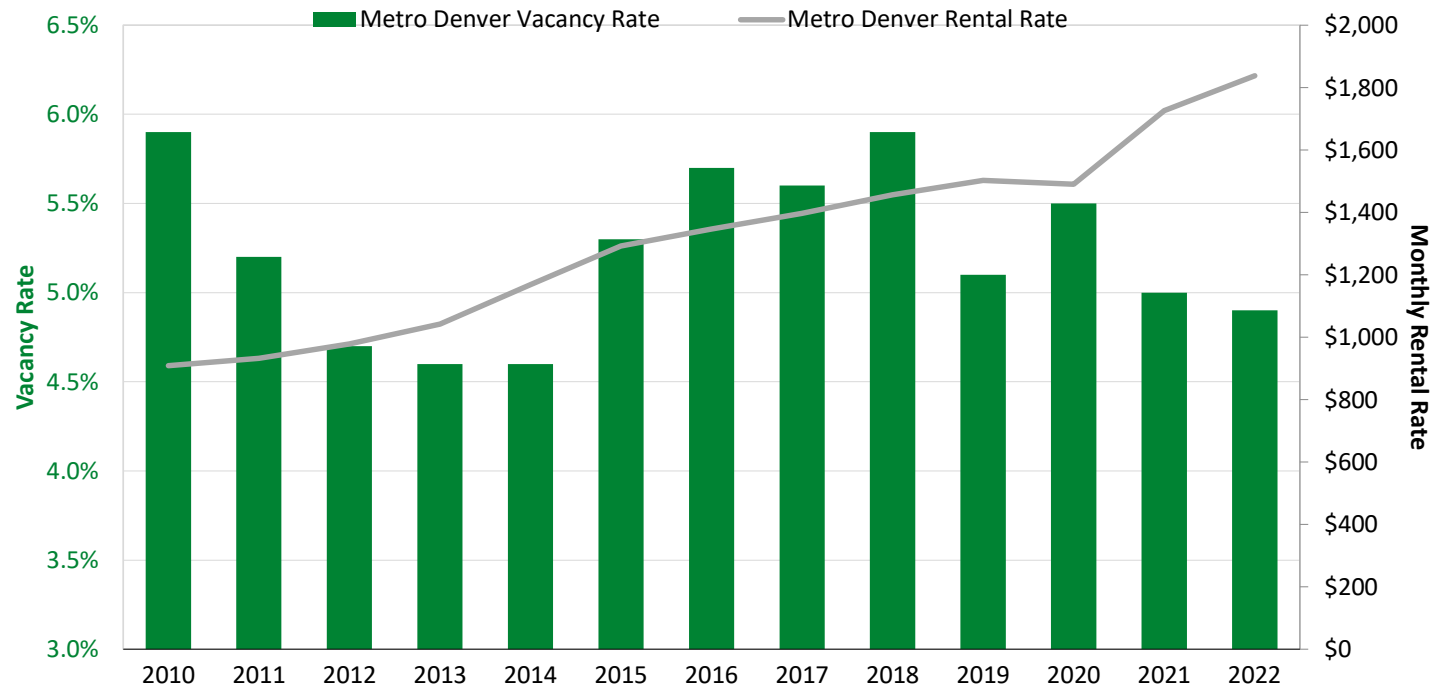
2023 Forecast:
2.0%
\$683,500

10-Year Trend:
7.7% per year
\$621,900

20-Year Trend:
4.6% per year
\$553,100

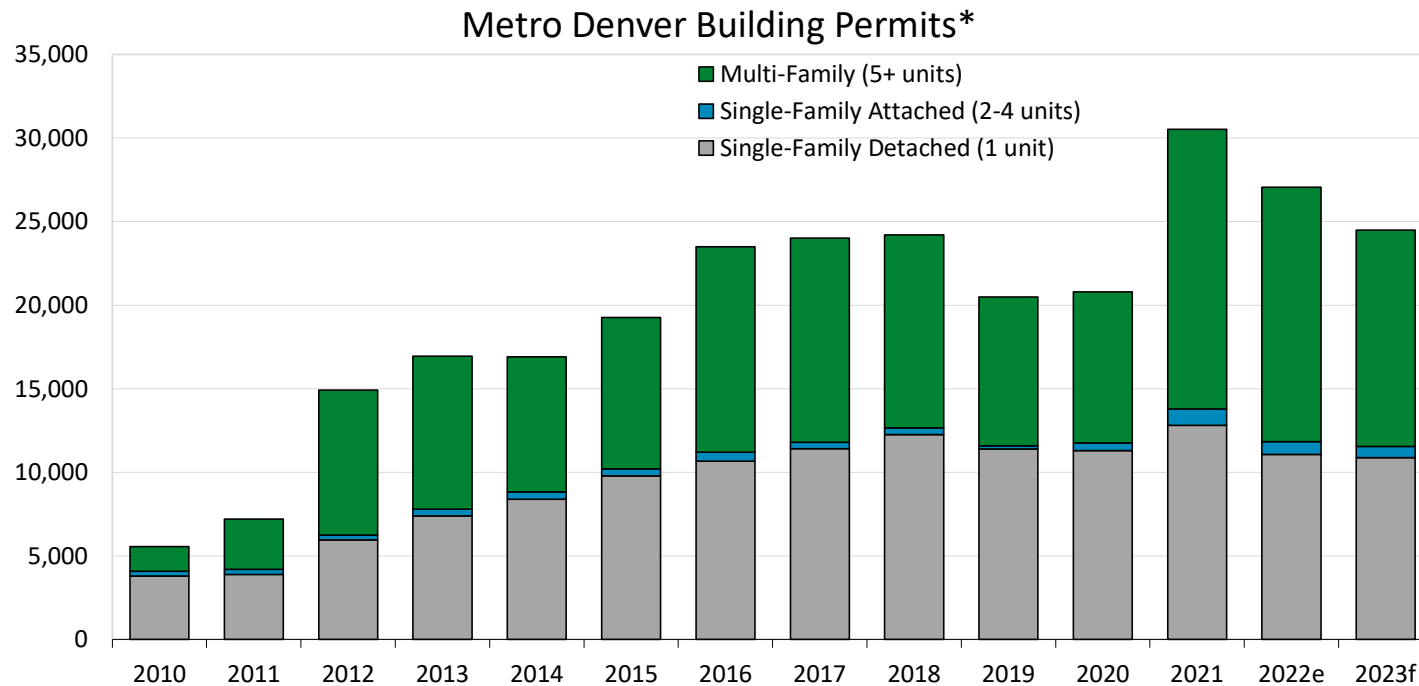
\$62,000 over-priced

Apartment Vacancy and Rental Rates



Source: Denver Metro Apartment Vacancy & Rent Survey.

Number of Units Permitted in 2021 was Highest Since 1983; Pullback Continues in 2023



* The Census Bureau tracks building permits by the number of housing units in the structure.
Source: U.S. Census Bureau, Building Permits.
2022e=DRP Estimate; 2023f=DRP Forecast.

Questions?

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