Inflation Hits Home

Metro Denver Housing Update

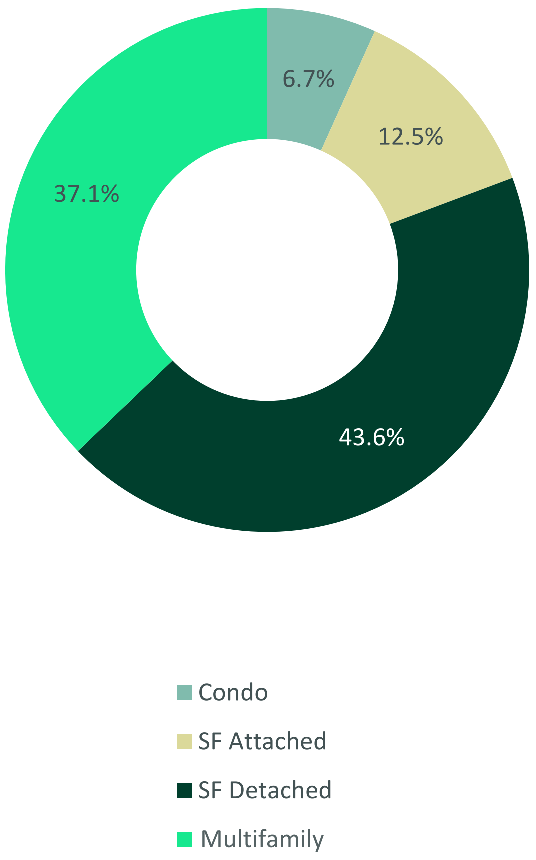
Residential Summary

Indicator	Total (YTD)	YoY	QoQ
Current Inventory	1.40M (Units)	5.7%	N/A
Permits Issued	13,077 (Units)	-36.4%	+41.1%
Construction Starts	15,978 (Units)	-43.7%	-59.0%
Under Construction	41,067 (Units)	-17.7%	-1.7%
New Deliveries	13,731 (Units)	-11.2%	-17.2%
Vacant Developed Lots	13,799 (Units)	6.1%	-1.5%
Median Sale Price	$574K	-2.2%	-0.5%
Number of Listings	37,511 (Units)	-14.5%	+10.9%
Number of Transactions	36,118 (Units)	-32.5%	+59.3%

Figure 1: Summary by Residential Type

Residential Type (YTD)	Single Family Detached	Single Family Attached	Condominium (Units)	Multifamily (Units)
Subproduct Type	Single Family Patio Manufactured	Duplex 4-Plex Townhome	Condominium For Sale	5+ Units For Rent
Current Inventory	596,500	171,700	92,300	360,400
Permits	5,581	1,946	159	5,391
Starts	3,763	1,529	641	10,045
Under Construction	3,155	1,706	913	35,293
Deliveries	2,718	1,735	405	8,873
Vacant Developed Lots	10,246	3,202	351	N/A
Median Sale Price	$594,200 (Q3 2023)		$348,400 (Q3 2023)	$314,600 (Q3 2023)
Number of Listings	30,296			7,215
Number of Transactions	29,465			6,653

2022 Inventory (Census Est.)



Source: CBRE Research, CBRE Econometric Advisors, Zonda, U.S. Census Bureau, Zillow, October 2023

Big Picture

Median household incomes have not kept up with rising housing costs. While multifamily average effective rents have increased at a slightly fastest rate than household incomes, rents have not appreciated nearly as fast as single-family home and condo prices.

81.2%

Median **Household Income** Growth (since 2000)

90.1%

Average **Effective Rent** Increase (since 2000)

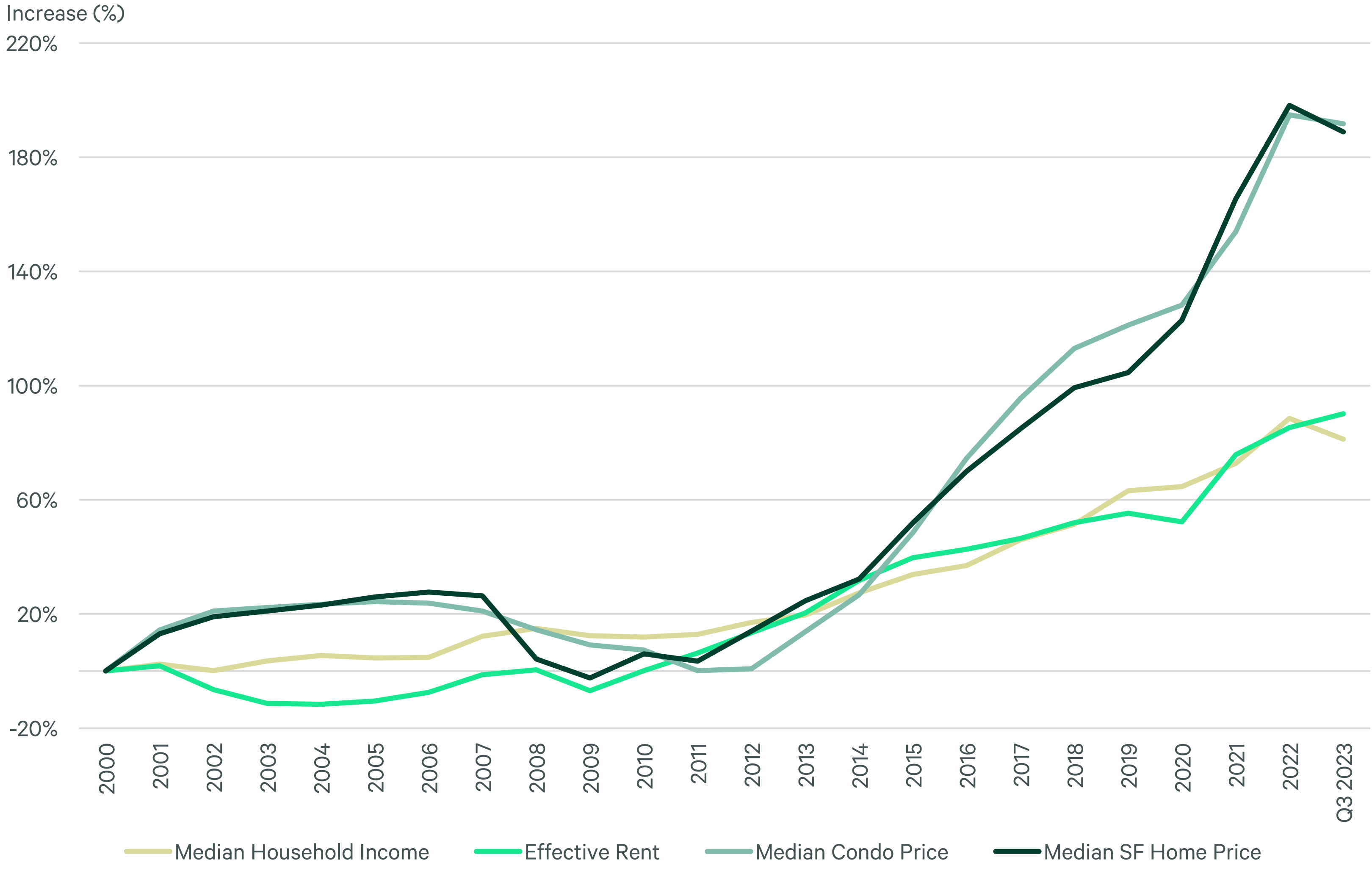
191.7%

Median **Condominium Price** Appreciation (since 2000)

188.8%

Median **Single Family Home Price** Appreciation (since 2000)

Figure 2: Median Household Income, Effective Rent, and Home Price Appreciation Since 2000



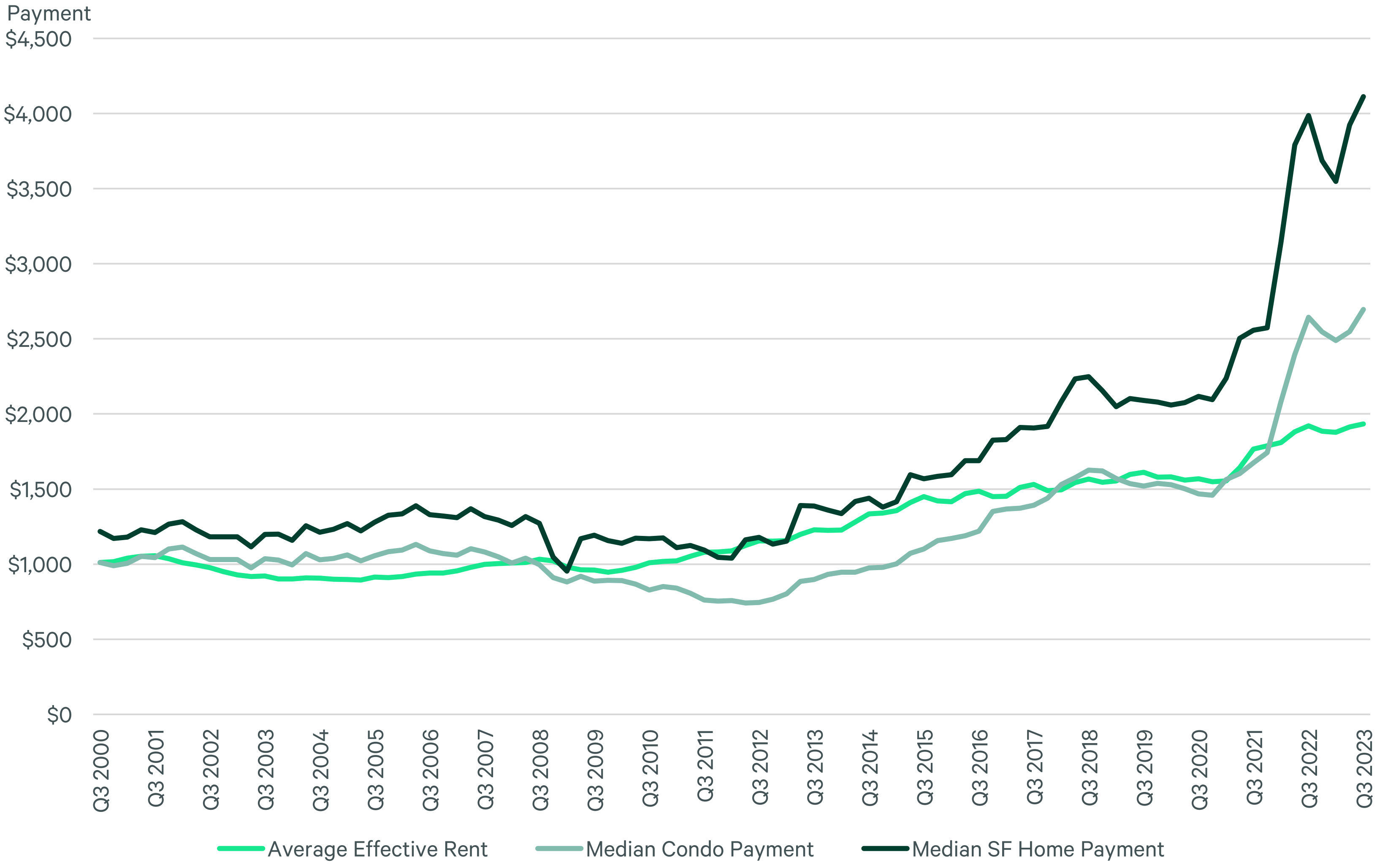
Source: CBRE Research, CBRE Econometric Advisors, U.S. Census Bureau, Zillow, October 2023

Rent vs. Own

Q3 2023	SF Home	Condominium
Median Sale Price	$594,200	$348,400
Down Payment (20% to avoid PMI)	$118,800	$69,700
Monthly Payment	$4,256	$2,696
Monthly Rent	$1,934	$1,934
Annual Savings by Renting	$27,871	$9,143
Total Paid for Home Over 30-Years	$1,321,100	$774,600
Total Interest Paid	$726,900	$426,200

- The delta between renting and owning has never been greater.
- Elevated interest rates and rapid home value appreciation have made owning a home unattainable for many Denverites.

Figure 3: Monthly Single-Family and Condo Ownership Cost Compared to Average Effective Rent



Source: CBRE Research, CBRE Econometric Advisors, U.S. Census Bureau, Zillow, October 2023

Interest vs. Rent

The interest only portion of a mortgage payment now exceeds the median effective rent, not to mention the additional costs of ownership (Insurance and RE Taxes).

$574.0K

Median **Home Sale Price**
(Q3 2023 All Homes)

$3,545

Average **Monthly Mortgage Payment**
(Q3 2023 – Does not include PMI and RE Tax)

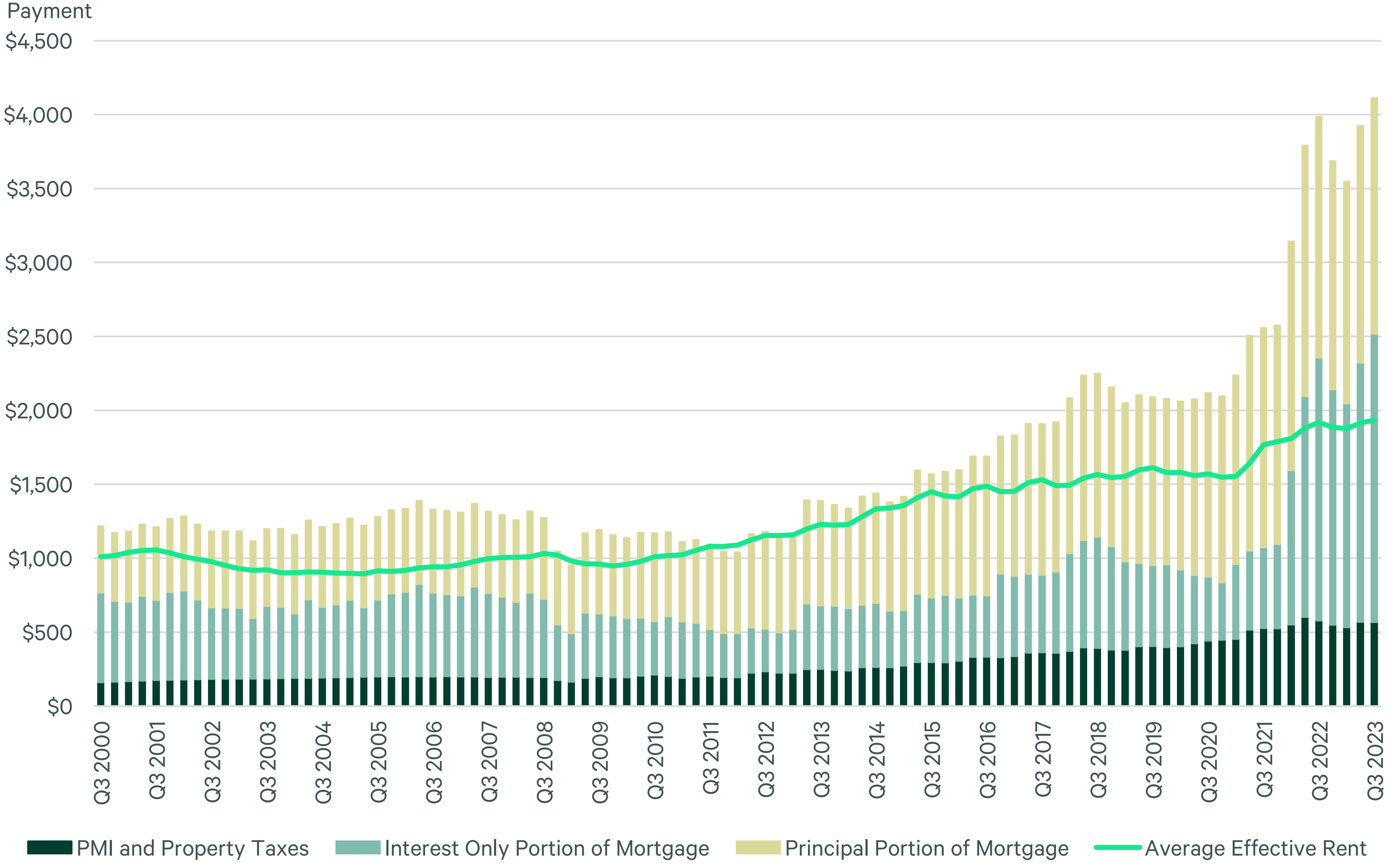
$1,951

Average **Interest Portion of Mortgage**
(Q3 2023)

$1,934

Median **Effective Rent**
(Q3 2023)

Figure 4: Monthly Components of Homeownership Cost Compared to Average Effective Rent



Source: CBRE Research, CBRE Econometric Advisors, U.S. Census Bureau, Zillow, October 2023

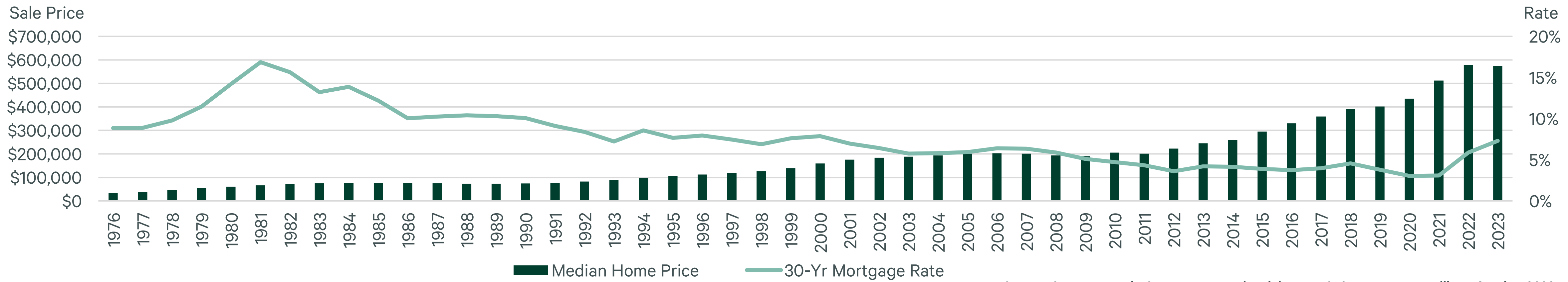
Historical Interest Rate Environment

- The long-run average 30-year mortgage rate has been 7.5% since 1980.
- The more recent average 30-year mortgage rate over the past 10 years has been 4.3%.
- Since their peak in 1981, interest rates had steadily declined until March of 2022 when the Fed began hiking rates to combat historically high inflation.
- Prior to the pandemic, the cost of owning a home was between 20%-30% of the median household income while the rent-to income ratio has been slightly lower.
- Record high home prices and elevated interest rates have made the ratio for the cost of owning to median household income grow to the highest percentage Denver has ever seen.

Figure 5: Historical Buying Power in Different Mortgage Rate Environments

	1995	2000	2005	2010	2015	Q3 2023
Median Home Sale Price	$106,265	$159,407	$200,915	$205,704	$294,479	$574,000
Median Household Income	$44,301	$52,495	$54,900	$58,732	$70,280	$95,143
Average Mortgage Rate	7.7%	7.9%	5.9%	4.7%	3.9%	7.3%
Monthly Cost of Ownership	$780	$1,207	$1,288	$1,111	$1,382	$4,713
Monthly Effective Rent	$749	$1,011	$904	$991	$1,409	$1,934
Home Cost to Income Ratio	21.1%	27.6%	28.2%	22.7%	23.6%	52.6%
Rent to Income Ratio	20.3%	23.1%	19.8%	20.3%	24.1%	24.4%

Figure 6: Home Prices and the 30-Year Mortgage Rate



Source: CBRE Research, CBRE Econometric Advisors, U.S. Census Bureau, Zillow, October 2023

Today vs. Peak Mortgage Rates

- The 30-year mortgage rate peaked at 18.6% in 1981 but averaged 16.9% for the year as a whole.
- While the median household income has increased 3.8X since 1981, the median home sale price has increased significantly faster, experiencing appreciation of 8.7X.
- In 1981, it took two years and eight months of household income to equal the purchase price of a home, but due to rapid home value appreciation, that time has expanded to six years.
- Similarly, the time needed for household income to equal a 20% down payment has more than doubled. In 1981, it took 6.4 months of a household's median income to equal a 20% down payment. Today, that timeline has increased to 14.5 months of income.
- While home value appreciation has outpaced median household income, the 30-year mortgage rate is 2.3 times lower today at 7.3% compared to the peak in 1981 of 16.9%.

The Bottom Line

Although the 30-year mortgage rate is significantly lower today than it was in 1981, homes values have appreciated at a faster rate than median household income, ultimately making the consumer worse off today than during a time of peak mortgage rates. Not to mention the increased timeline that families need to save up for a down payment, **the cost of owning a home today is 52.6% of the median household income. This is 4.3% higher than in 1981 and significantly higher than the historical range between 20% and 30%.**

Figure 7: Are Buyers Worse Off Today or During Peak Mortgage Rates?

	1981	Difference	Q3 2023
Median Home Sale Price	$65,998	**8.7X**	$574,000
Median Household Income	$24,758	**3.8X**	$95,143
Median Household Income to Equal the Median Home Sale Price (time)	2 Years 8 Months	**3 Years 4 Months**	6 Years
Down Payment (20% to Avoid PMI)	$13,199		$114,800
Years of Rent to Equal Income to Equal Down Payment (time)	6.4 Months	**8.1 Months**	14.5 Months
Mortgage Rate	16.9%	**9.6% (Lower Today)**	7.3%
Annual Cost of Ownership (Assumes a 10% down payment, PMI, Monthly mortgage payment, and RE Taxes)	$11,971		$50,075
Home Cost to Income Ratio	48.3%	**4.3% (Higher Today)**	52.6%

Source: CBRE Research, CBRE Econometric Advisors, U.S. Census Bureau, Zillow, October 2023

The Covid-19 Pandemic

- Covid was a unique time that drastically changed the shape of metro Denver's residential market.
- Interest rates declined to record lows, zoomers with high-paying jobs from costal markets relocated to Denver in the thousands, and a decade of record high migration fueled the materialization of the hottest residential market Denver has seen.
- From 2019 to Q3 2023, the median home sale price increased 42.8% while the median household income only increased 11.1%.
- The timeline for median household income to equal a 20% down payment increased from 11.2 months to 14.5 months, indicating that potential first-time homebuyers will likely rent for longer.
- In 2019, the home cost to income ratio was 27.9%, on the higher end of the historical average, while the rent-to-income ratio was 22.2%. Today, the home cost-to-income ratio has hit a record level at 52.6, while the rent-to-income ratio increased to 24.4%.

The Bottom Line

The U.S. Government offered many financial incentives to mitigate the economic impacts of COVID like low interest rates that supported spending and investment, stimulus checks, rent forgiveness, and mortgage relief under the CARES Act. However, this led to rampant inflation, prompting the Federal Reserve to raise interest rates. Rapid home price appreciation and elevated interest rates have increased the timeframe homebuyers need to save for a down payment, and drastically increased the monthly costs of ownership. Rents increased at a much slower rate during the same period, ultimately keeping renters renting for longer.

Figure 8: Rapid Home Price Appreciation

	2019	Difference	Q3 2023
Median Home Sale Price	$401,900	**+42.8%**	$574,000
Median Household Income	$85,640	**+11.1%**	$95,143
Median Household Income to Equal the Median Home Sale Price (time)	4 Years 8 Months	**1 Year 4 Months**	6 Years
Down Payment (20% to Avoid PMI)	$80,381		$114,800
Median Household Income to Equal Down Payment (time)	11.2 Months	**3.3 Months**	14.5 Months
Average Mortgage Rate	3.8%	**3.5% (Higher Today)**	7.3%
Annual Cost of Ownership (Assumes a 10% down payment, PMI, and RE Taxes)	$23,889		$50,075
Home Cost to Income Ratio	27.9%	**24.7% (Higher Today)**	52.6%
Annual Effective Rent	$19,029		$23,208
Rent-to-Income Ratio	22.2%	**2.2% (Higher Today)**	24.4%

Source: CBRE Research, CBRE Econometric Advisors, U.S. Census Bureau, Zillow, October 2023

Buyer's or Seller's Market?

With the 30-year mortgage rate at its highest level since 2000, many existing homeowners are staying put, choosing not to downsize, upsize, or relocate. Historically, the metro Denver residential market has experienced some seasonality, where transaction volume typically sees an uptick in summer months and a slowdown in winter months. While this was still true in Q3 2023, the number of transactions, new listings, and active listings that went under contract have been trending down since mortgage rates began increasing in early 2022. Transactions are down 13.9% year-over-year, new listings down 10.3%, and the number of listings that went under contract are down 12.4%. Even with less transactional supply, new listings are only sitting on the market for a median of 10 days before going under contract, whereas the historical pre-pandemic median was 15 days. While the days listed is below the historical average, more sellers are beginning to experience price cuts or accept an offer below list price. Over the pandemic, metro Denver experienced an influx of residents moving away from crowded cities to the open-aired mountains–which kicked off the hottest seller's market in Denver's history. New listings were on the market for just days before going under contract, buyers were forgoing property inspections, and most homes sold above list price.

Figure 10: Number of Days From Listing to Close and Price Cuts

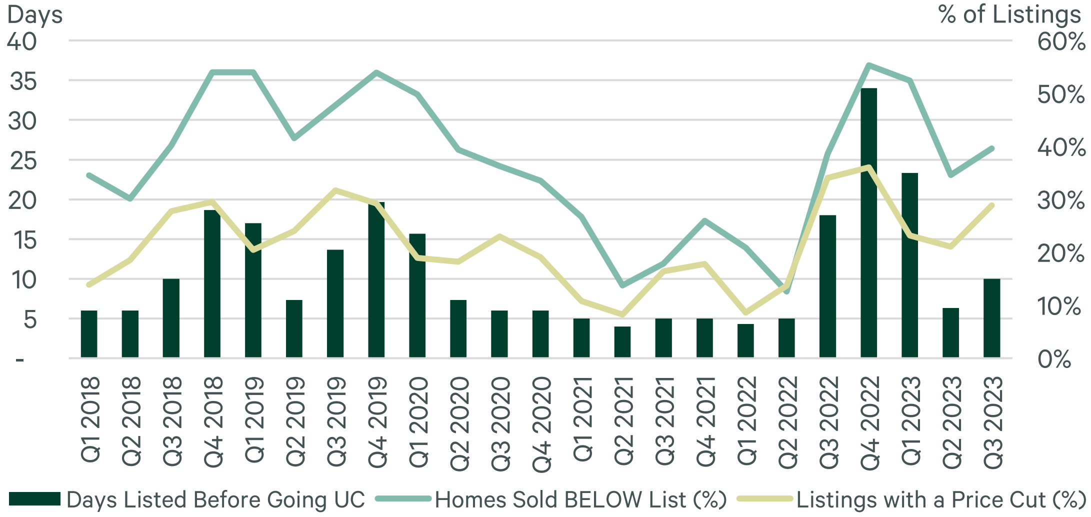


Figure 9: Sale Price Above/Below List Price

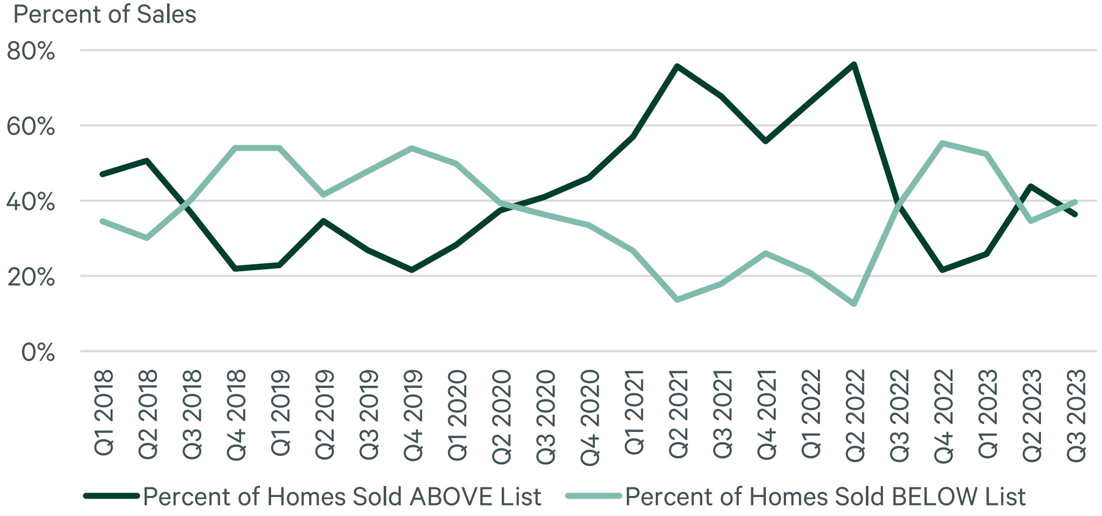
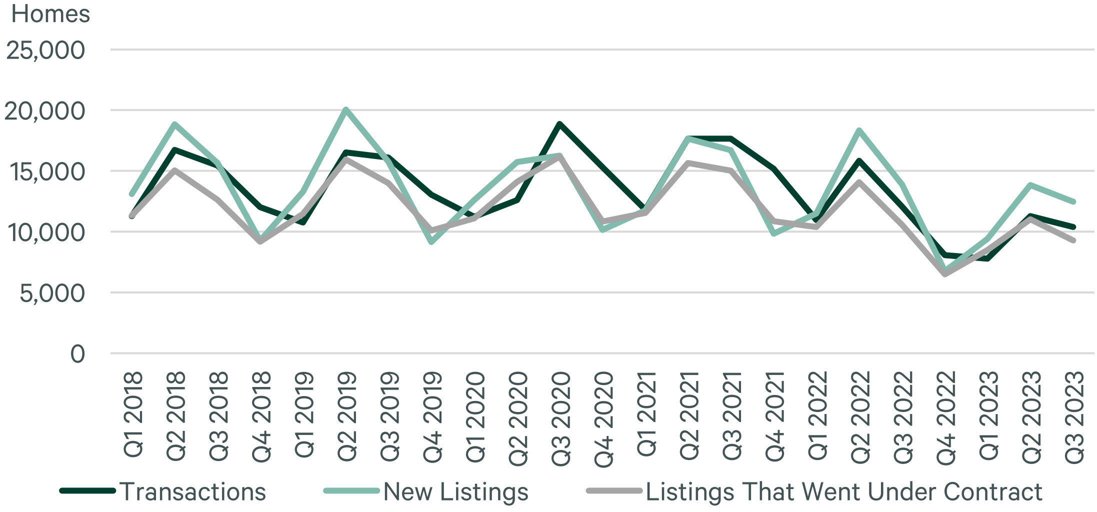


Figure 11: Number of Transactions and New Listings



Source: CBRE Research, Zonda, Zillow, October 2023

Metro Denver Needs More Homes

#1 Boulder

#2 Denver

#3 Fort Collins

#4 Greeley

“Colorado has the four most expensive housing markets in U.S. not on a coast”

– The *Denver Post, October 2023*

Development Headwinds

National Barriers

- The cost of construction debt is the highest it has been since 2007 as interest rates remain elevated and volatile
- There is limited availability of skilled and unskilled employees, driving construction labor costs up
- Material costs are largely unchanged year-over-year. However, over the past two years, material costs are up across the board
- According to the Mortenson Cost Index, from Q3 2021 to Q3 2023, material prices have increased:
  - Copper Wire: +23%
  - PVC Pipe: +21%
  - Lumber: +15%
  - Steel Pipe: +5%
  - Structural Steel: +5%
  - Copper Piping: +5%

Local Barriers

- Golden: 1% growth cap on all residential development
- Lakewood: Phasing-out growth cap by the end of 2025
- Boulder’s Blueline Rule: States the city will not provide water to structures above a certain elevation
- Arvada: Doubled tap fees recently
- Highway 36 Corridor: Has high impact/development fees
- Open Space: Plentiful and will never be developed
- Mountains: Metro Denver is largely built out from the urban core to the foothills
- Sewer Capacity Barriers
- Energize Denver: City-wide effort to reduce greenhouse gas emissions

Condominium Barriers

Colorado has some of the most strict construction liability laws in the country. Because of this, many of the unique condo developers have started building apartments instead or left Colorado entirely.

- Construction Liability Laws
  - Consumer Protection Act
  - Increased insurance costs
  - Inflated quotes from contractors and subcontractors
  - Developers' hesitation to build condos in Denver given the additional risk with Colorado laws
- Height restrictions to preserve views in many areas
- Limited land/sites available in Denver’s urban core

Multifamily Barriers

Multifamily developers continue to face headwinds that cut into their NOI and many projects no longer pencil, forcing developers to abandon projects. New headwinds include:

- Inclusionary Housing Ordinances: require affordable units in new developments
  - Denver, Longmont, Boulder, Broomfield, Littleton, Superior, and Louisville
- Other legislation:
  - Energize Denver
  - Property Tax Assessment (largest increase ever)
  - Insurance (2x-3x increase)
  - Pet fee cap
  - Prohibited provisions in leases
  - Universal applications
  - Agency radon policy change

Development Tailwinds

Metro Denver

- Builder sentiment rises on falling interest rates
- Previous supply chain issues are no longer felt
- Significant supply of undeveloped land in the eastern reaches of metro Denver
- Volatility in the banking world appears to be cooling
- Local jurisdictions such as Boulder and Lafayette recently lifted their housing growth caps
- Stabilizing construction costs
- Lender incentives for affordable development
- Local jurisdictions are nearly caught up reviewing backlogged permit applications and site development plans since COVID.

Source: CBRE Research, Mortenson, Local County Websites, October 2023

Development Activity

Figure 12: Historical Inventory

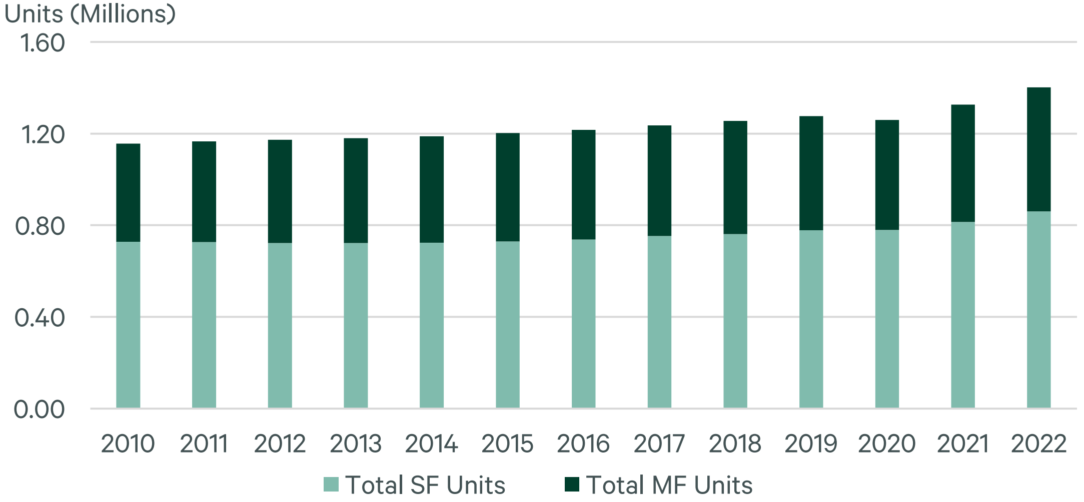


Figure 14: Historical Starts

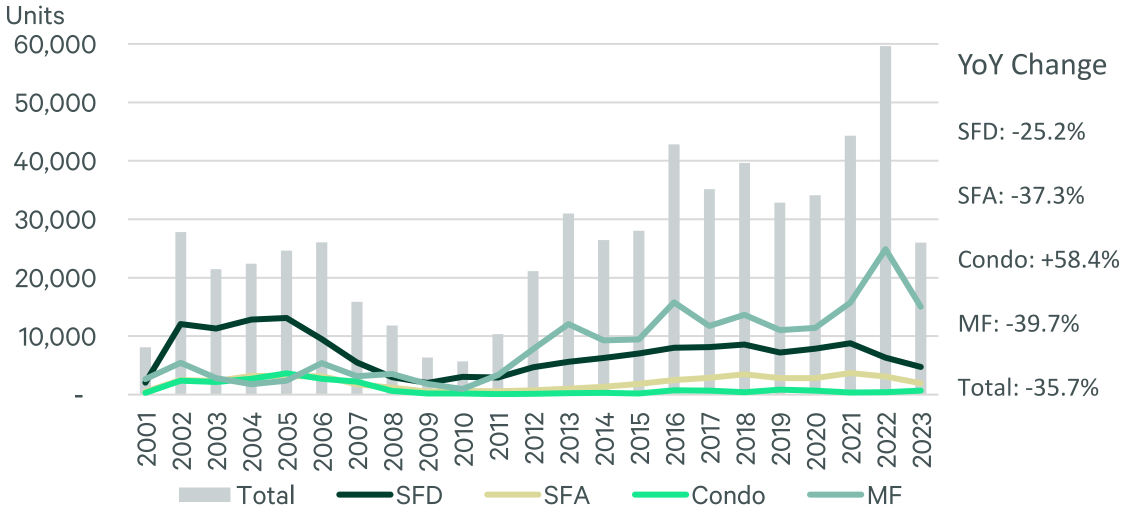


Figure 13: Historical Deliveries

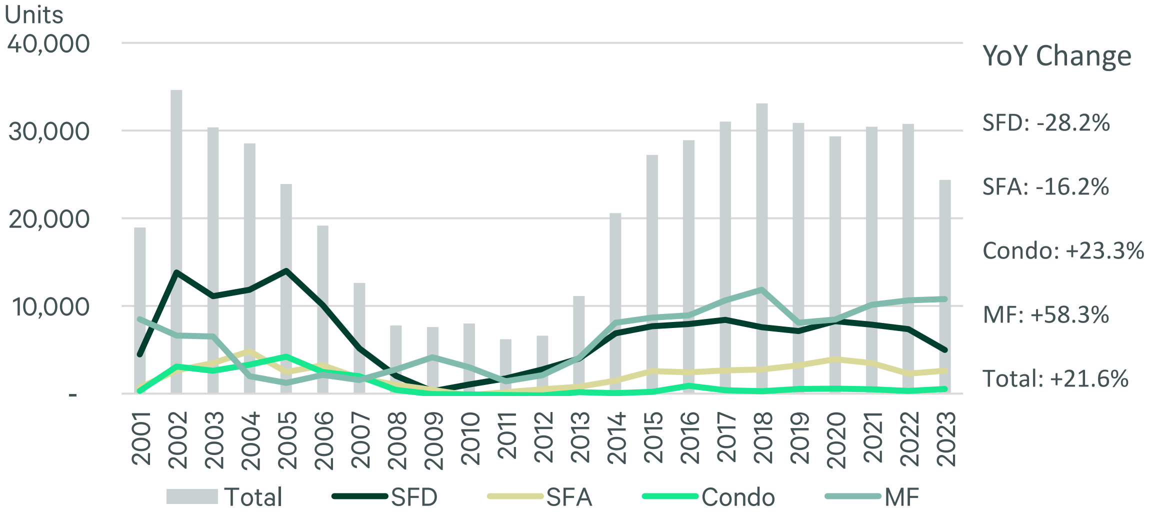
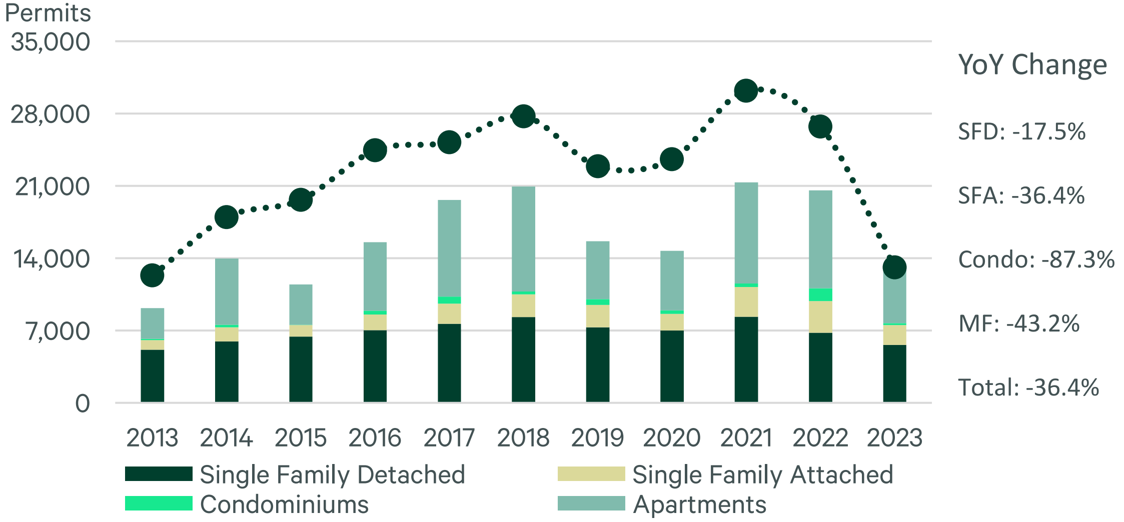


Figure 15: Year-to-Date Permitting Through September



Source: CBRE Research, CBRE Econometric Advisors, Zonda, U.S. Census Bureau, Zillow, October 2023

Future Development

While metro Denver continues to add historically high numbers of apartment units, for-sale residential deliveries have been steadily decreasing since 2020. The multifamily construction pipeline was artificially inflated with numerous developers breaking ground earlier than anticipated to avoid building affordable units as required by Denver's Inclusionary Housing Act. To avoid building affordable units as required by Denver's Inclusionary Housing Act, multifamily developers pushed more site development plans through the city and broke ground faster than observed historically, resulting in an artificially high number of deliveries today and though 2024.

The for-sale under construction pipeline continually grew from 2020-2022 but has seen a steep decline. Homes under construction are down 36.4% year-over-year.

Finished vacant units are up 72.9% year-over-year, indicating developers' reluctance to reduce pricing from where they underwrote their exit.

With the under-construction pipeline trending down, it is unsurprising that vacant developed lots are up 6.1% year-over-year.

Figure 17: All For-Sale Residential Future Inventory

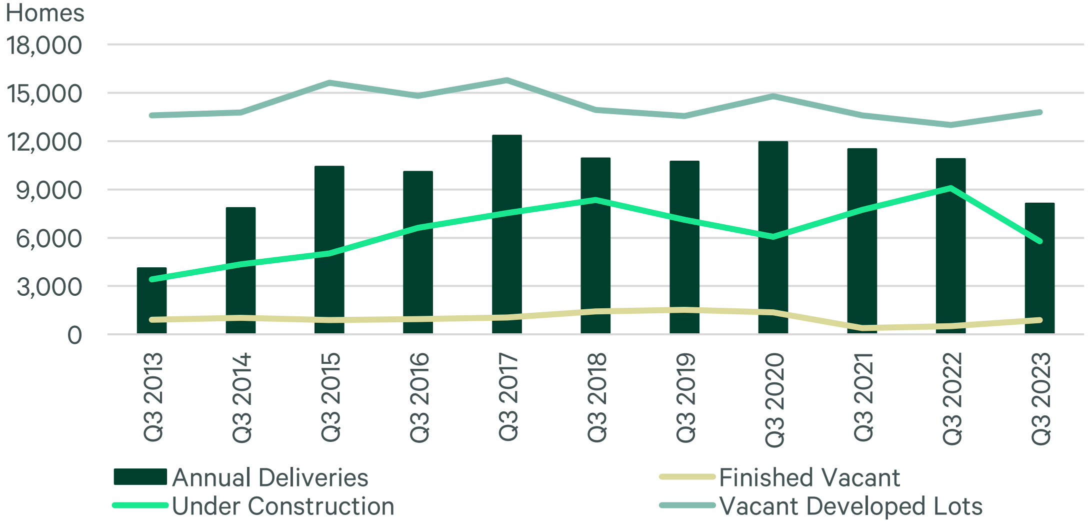


Figure 16: For-Sale Residential Future Inventory by Product Type as of Q3 2023

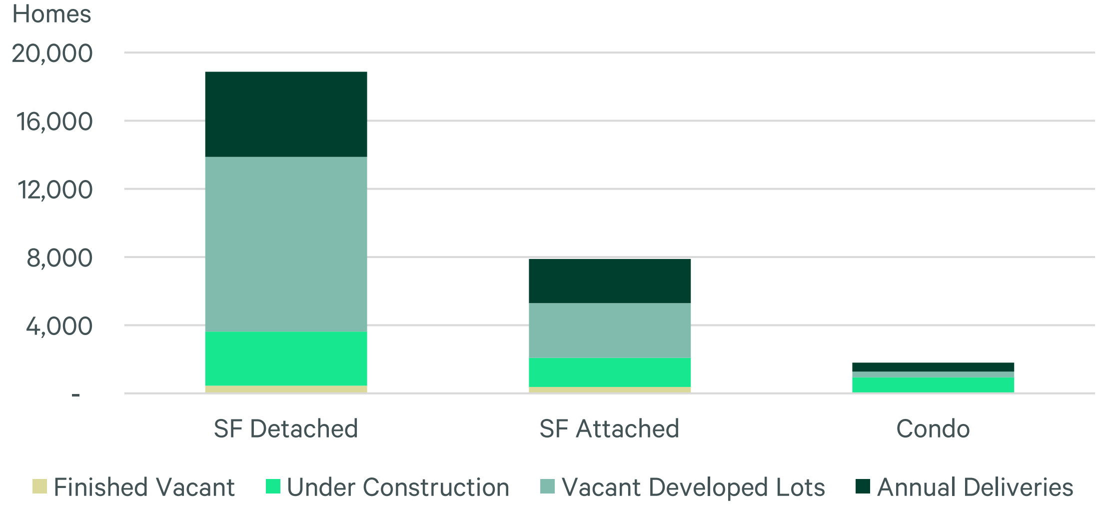
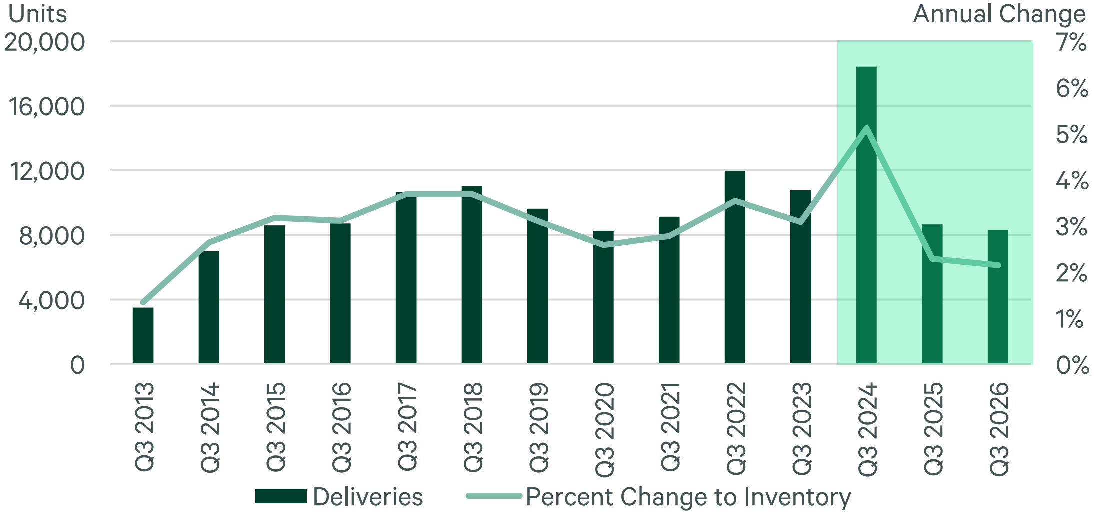


Figure 18: Multifamily Future Inventory



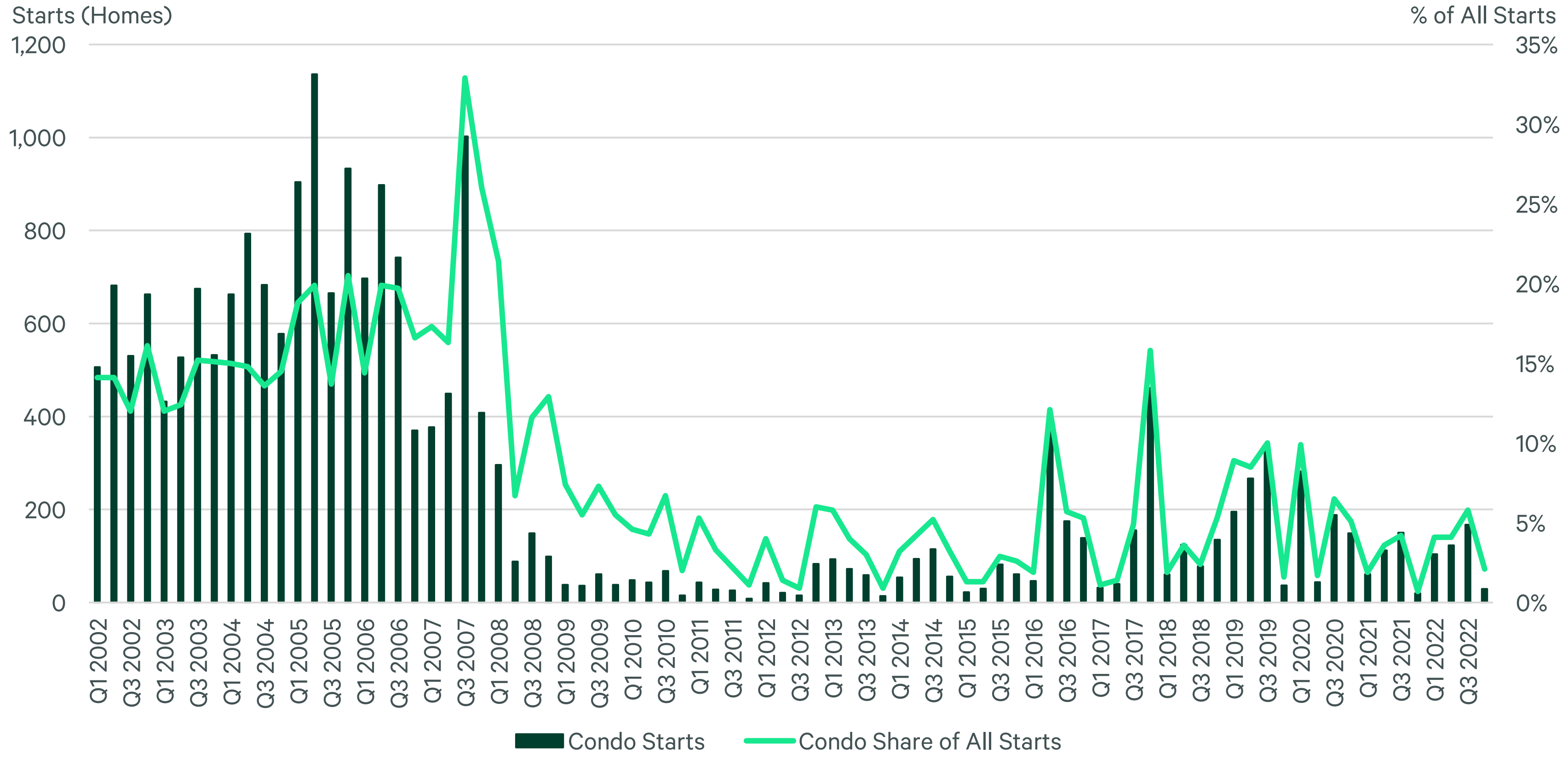
Source: CBRE Research, CBRE Econometric Advisors, Zonda, Zillow, October 2023

Condominium Dilemma

Since 2007, condominium development has fallen off a cliff in Colorado as numerous bills aimed to protect homeowners have inadvertently deterred condo developers from building in the state. Condos offer a more affordable option for homeownership, making them attractive to first-time buyers or those looking for a particularly affordable option. And with rapid home price appreciation over the pandemic leading to record single-family home prices, metro Denver needs an influx of condo supply now more than ever.

Many renters who are homeownership-ready but are priced out of the market will turn to condos as a more affordable option. With lower prices than other for-sale single-family product, potential buyers will need to set aside less cash for a down payment, ultimately positioning them to be homeowners sooner. Condo's also appeal to empty nesters looking to downsize, individuals who prefer the convenience of large amenity packages, residents who want to live in urban environments, and households that enjoy relatively low maintenance living.

Figure 19: Effects of Legislation on Metro Denver's Condominium Starts



Colorado Residential Construction Liability Defect Laws Timeline

2001
HB01-1166
Colorado Construction Defect Action Reform Act (CDAR)

CDARA established a framework for construction defect claims to protect homeowners and developers through procedures that address resolving disputes.

2003
HB03-1161
(AKA CDARA II)

Introduced a 75-day notice period and homeowner voting requirements for lawsuits.

2007
HB07-1338

Prohibits contractual clauses that waive any rights outlined in the CDARA and aims to ensure that property owners are not unfairly restricted from exercising their rights.

2010
HB10-1394

Clarifies what constitutes an "occurrence" in a construction defect claim.

2017
HB17-1279

Requires an HOA to notify unit owners and the developer about a potential construction defect lawsuit, hold an owner meeting to present arguments and relevant facts, and obtain at least 51% approval from HOA members before filing a lawsuit.

Source: CBRE Research, Zonda, October 2023

Renters Will Rent for Longer

With record home prices, elevated interest rates, and a slowdown in new supply, potential first-time homebuyers will have to rent for longer. Furthermore, there have been historically high numbers of multifamily deliveries over the past five years and that trend is expected to continue through 2024. The new supply will likely cause rent growth to be below the long run average of 3.0%, while home prices and monthly costs of living will continue to be significantly more expensive.

Prior to the pandemic, the long-run average number of years in rental payments to equal a 20% down payment has been 3.4 years. Today, it would take 4.9 years of rent to equal a 20% down payment.

The number of homes with a mortgage and whose owners are paying 35%+ of their household income on monthly home costs had been trending down with interest rates. The number of homes in this category has been trending up since 2020 as home prices and interest rates rose.

The metro Denver homeownership rate had been trending up in recent years but flat-lined and began to trend down in 2021 and 2022. Over the past 10 years, the metro homeownership rate has been 3.6% lower than the U.S. on average. Today that delta is 4.4%.

Figure 20: Years of Rental Payments to Equal a Down Payment

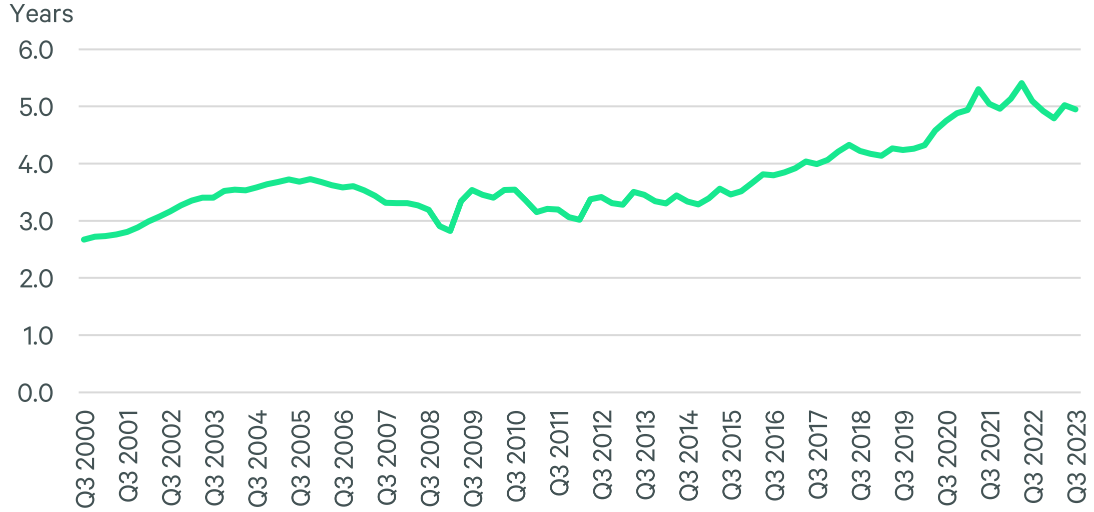


Figure 21: Number of Mortgaged Homes Where the Cost of Owning is 35%+ of Income

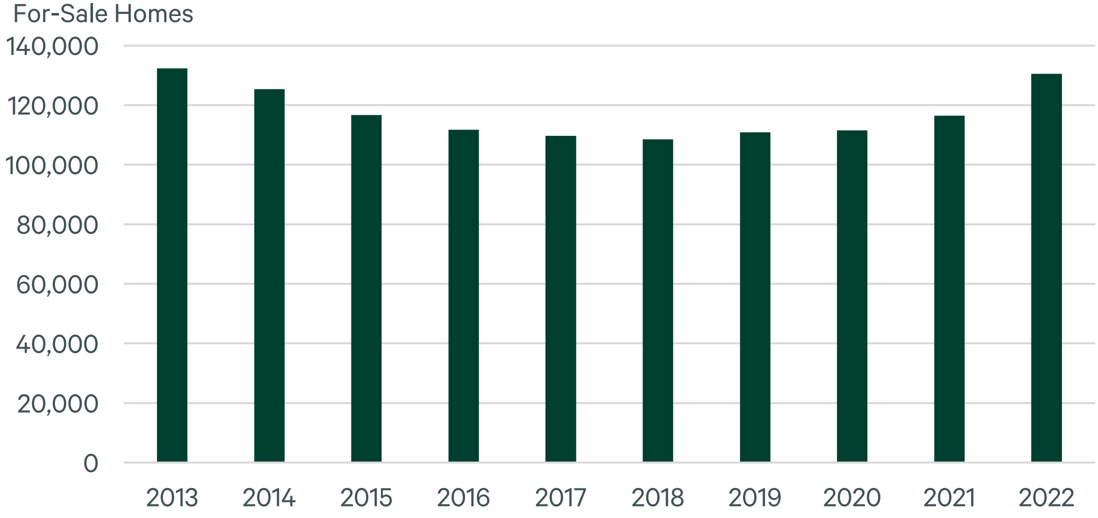
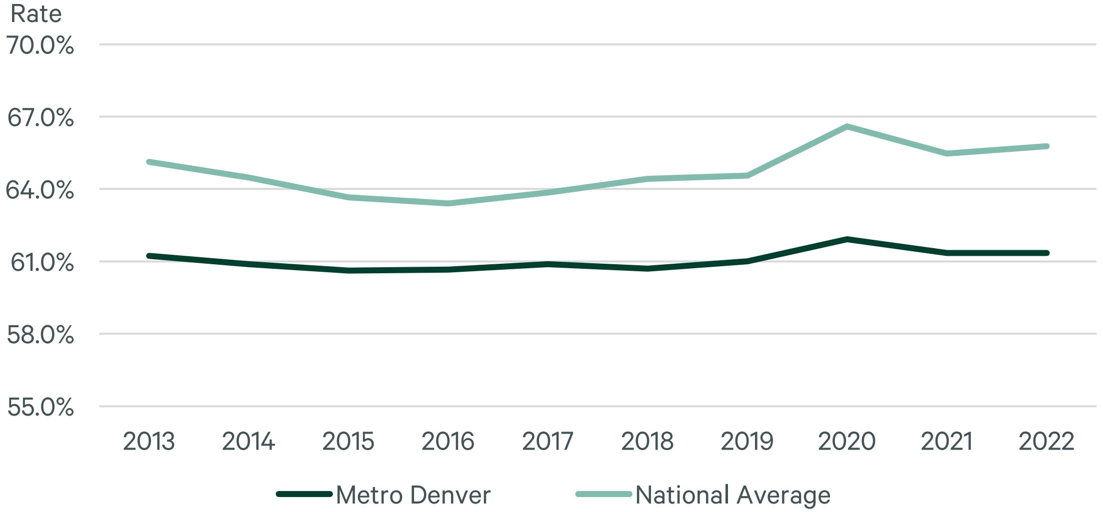


Figure 22: Homeownership Rate



Source: CBRE Research, CBRE Econometric Advisors, Zonda, U.S. Census Bureau, Zillow, October 2023

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Survey Criteria

Metro Denver includes Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, and Jefferson counties.