



4Q23 REIT Roundup

Operating Fundamentals Challenging Near Term; Transactions Market Begin to Thaw
Amidst Higher Cap Rates

March 5, 2024

Rental Backdrop Cooling, Transaction Market Heating Up

- Diversified operators, led by AIRC, saw +4.4% YoY revenue growth, followed by Coastal operators (+3.8%) and Sunbelt operators (+2.8%). This is the first quarter that Coastal operators have outperformed Sunbelt operators since pre-Covid.
- As a group, the initial REIT guidance from a year ago was spot on with FY23 revenue growth of 5.9% YoY and NOI growth of 6.0%. Forward guidance for FY24 guidance calls for revenue, expense, and NOI growth of +2.3%, 4.8%, and 1.1% YoY, respectively.
- Cap rates are in the mid-5% range across the country with higher cap rates (~6%) for lower quality assets. There is still lower transaction volume, but liquid players are getting more active and seeing good deals with fairly significant discounts to replacement cost being found.

4Q23 Revenue
YoY Growth
+3.6%

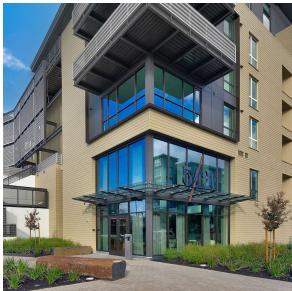
2H23 Cap
Rates
5.4%

FY24 Rev
Guidance
+2.3%



Public REITs Are Among the Largest Owners Across the U.S.

The REITs covered in this report are among the largest apartment owner-operators across the U.S. with ~450,000 combined same-store units. They provide a real-time view into market-level performance and acquisition and disposition trends for analysis and benchmarking.



UDR, Inc.
(UDR)



**Camden
Property Trust**
(CPT)



**Essex
Property Trust**
(ESS)



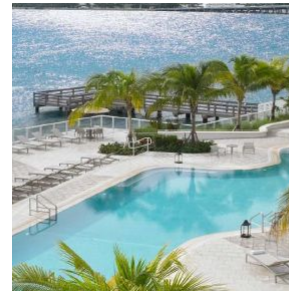
AvalonBay
(AVB)



MAA, Inc.
(MAA)



**Equity
Residential**
(EQR)



**Apartment
Income REIT**
(AIRC)



**Independence
Realty Trust**
(IRT)



Source: Company documents and Markerr

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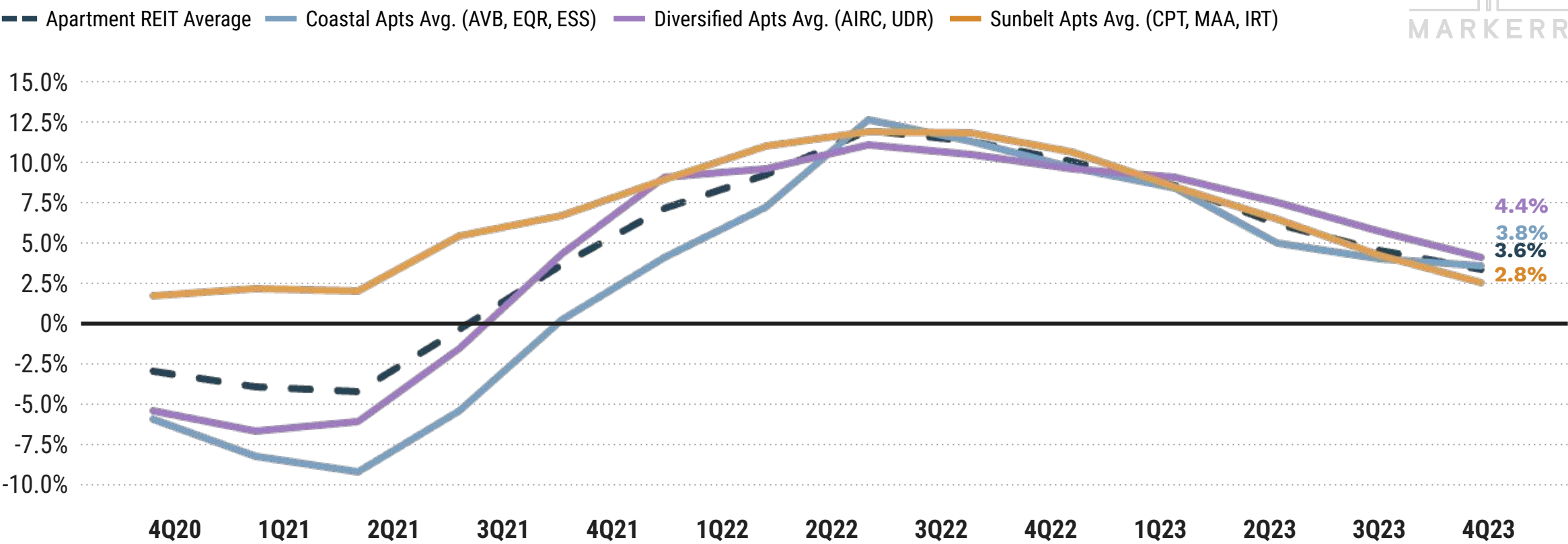
Market Level Trends



Diversified Portfolios See Best Rev Growth at 4.4% YoY

Diversified operators, led by AIRC, saw +4.4% YoY revenue growth, followed by Coastal operators (+3.8%) and Sunbelt operators (+2.8%). This is the first quarter that Coastal operators have outperformed Sunbelt operators since pre-Covid.

YoY Revenue Growth by Geographic Areas & Asset Type



Source: Company documents and Markerr. See Appendix A for historical analysis.

FY23 Guidance Spot on From a Year Ago As a Whole

On average, the eight apartment REITs guidance was spot on from a year ago. Coastal REITs performed slightly better relative to their initial guidance ranges, while some Diversified and Sunbelt operators fell slightly short of the midpoint of their initial guidance ranges.

| REIT | FY23 GUIDANCES FROM 4Q22 | | |
|-----------------------|--------------------------|----------------|-------------|
| | Revenue Growth | Expense Growth | NOI Growth |
| EQR | 5.3% | 4.5% | 5.5% |
| AVB | 5.0% | 6.5% | 4.3% |
| ESS | 4.4% | 5.0% | 4.1% |
| MAA | 6.3% | 6.2% | 6.3% |
| CPT | 5.1% | 5.5% | 5.0% |
| UDR | 6.8% | 4.8% | 7.5% |
| AIRC | 8.0% | 5.8% | 8.8% |
| IRT | 6.4% | 6.1% | 6.5% |
| Apartment Avg. | 5.9% | 5.5% | 6.0% |

| REIT | FY23 ACTUALS | | |
|-----------------------|----------------|----------------|-------------|
| | Revenue Growth | Expense Growth | NOI Growth |
| EQR | 5.7% | 4.3% | 6.2% |
| AVB | 6.3% | 6.6% | 6.2% |
| ESS | 4.4% | 4.5% | 4.3% |
| MAA | 6.2% | 6.5% | 6.0% |
| CPT | 5.1% | 6.7% | 4.3% |
| UDR | 5.6% | 4.7% | 6.0% |
| AIRC | 7.9% | 4.0% | 9.3% |
| IRT | 5.7% | 5.6% | 5.7% |
| Apartment Avg. | 5.9% | 5.4% | 6.0% |



Source: Company documents and Markerr

FY24 Guidance Suggests a Short Term Tough Road Ahead

On average, apartment REITs guided revenue growth to be 2.3% for the next full year, with pressure on the expense side, and NOI at ~1%. Revenue is projected to be below the long-term average, and expense growth is above the long-term average. While revenue growth is lower this year, Markerr's internal rent forecast points to an acceleration in rent growth starting in year two.

| REIT | FY24 GUIDANCES | | |
|-----------------------|----------------|----------------|-------------|
| | Revenue Growth | Expense Growth | NOI Growth |
| EQR | 2.5% | 4.0% | 1.8% |
| AVB | 2.6% | 5.6% | 1.3% |
| ESS | 1.7% | 4.3% | 0.6% |
| MAA | 0.9% | 4.9% | -1.3% |
| CPT | 1.5% | 4.5% | 0.0% |
| UDR | 1.5% | 5.3% | 0.0% |
| AIRC | 3.8% | 3.8% | 3.8% |
| IRT | 3.8% | 5.9% | 2.5% |
| Apartment Avg. | 2.3% | 4.8% | 1.1% |

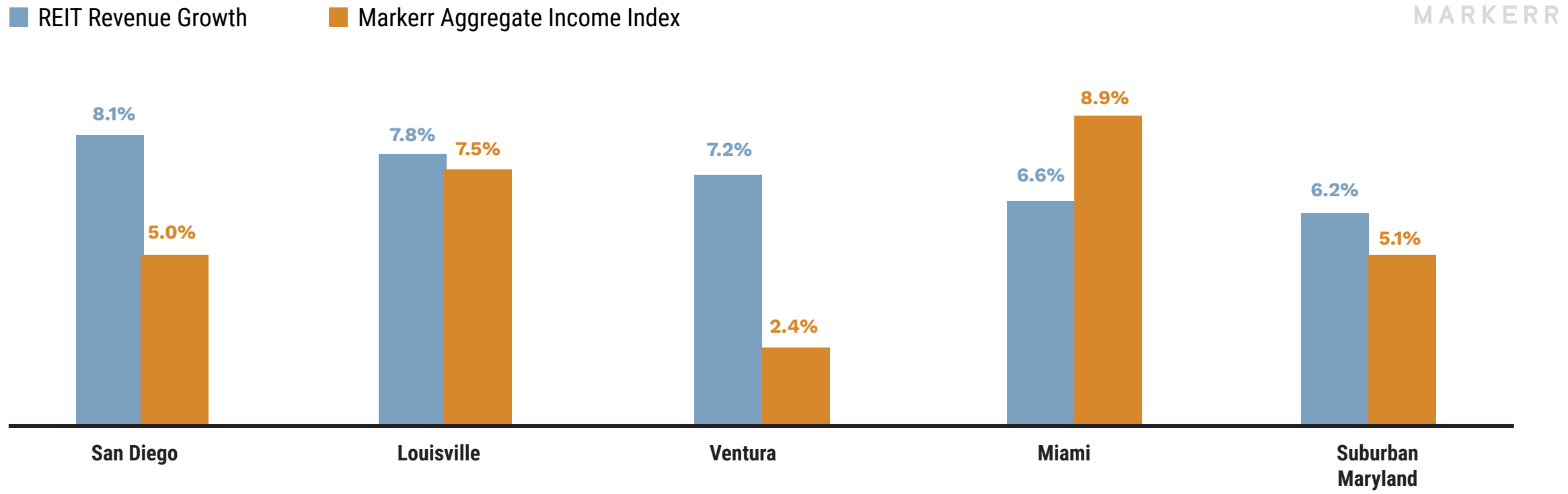


Source: Company documents and Markerr

High Aggregate Income Growth Leads to High Rev Growth

Strong aggregate income growth (job growth * income growth) is often seen across the top markets. Revenue growth is still equal to or outpacing aggregate income growth in all of the top markets except for Miami. As revenue growth has begun to slow down towards more historical norms, the gap between aggregate income growth and revenue growth has narrowed.

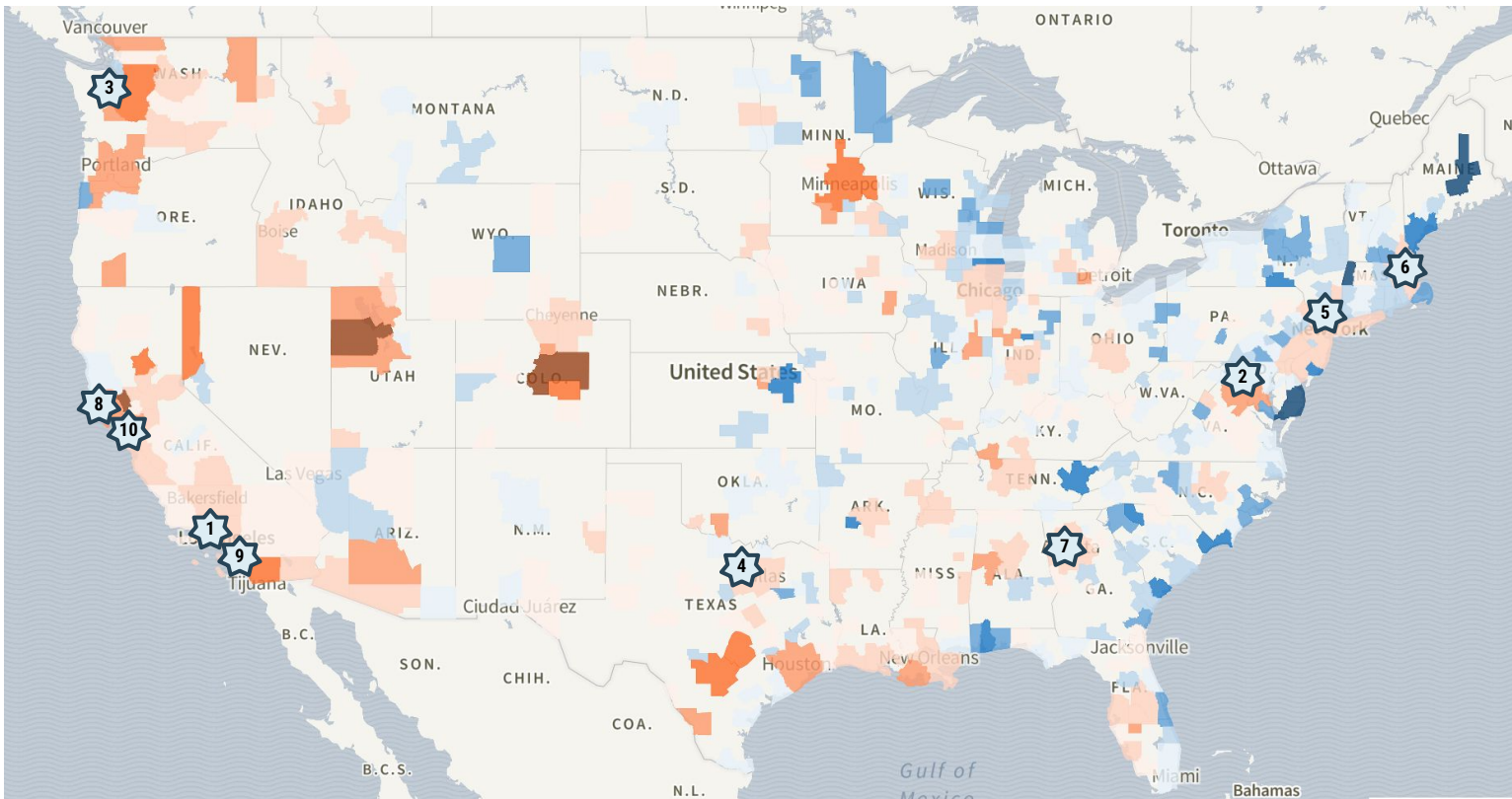
Market Level Revenue Growth Compared to Aggregate Income Growth (YoY)



Source: Company documents and Markerr Income & Employment Data

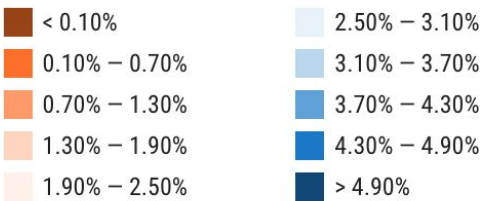
Top 10 REIT Markets Forecasted 5-Year Rent Growth CAGR

The map below shows Markerr’s 5-year rent growth CAGR forecast plotted across all of the MSA’s across the U.S., with the top ten markets by total apartment REIT concentration mapped on top of them. This forecast is available down to the zipcode level in Markerr’s Data Studio dashboards and bulk feeds.



| Top 10 REIT Markets | | Total Units | 5-Y RENT GROWTH CAGR |
|---------------------|---------------|-------------|----------------------|
| 1 | Los Angeles | 40,600 | 1.5% |
| 2 | D.C. | 37,600 | 1.2% |
| 3 | Seattle | 27,800 | 0.1% |
| 4 | Dallas | 24,900 | 1.5% |
| 5 | New York | 23,600 | 1.5% |
| 6 | Boston | 22,600 | 1.3% |
| 7 | Atlanta | 20,600 | 1.4% |
| 8 | San Francisco | 20,200 | 1.1% |
| 9 | Orange County | 18,000 | 1.5% |
| 10 | San Jose | 16,900 | 1.5% |

Rent Mean Forecast 5 Year CAGR






Capital Allocation: Acquisitions, Dispositions, & Transaction Volume

Transaction Market Thawing Amidst Higher Cap Rates

Cap rates are in the mid 5% range across the country with higher cap rates (~6%) for lower quality assets. There is still lower transaction volume, but players with no liquidity issues like the REITs are getting more active. Although there is no mass distress, good deals with fairly significant discounts to replacement cost are being found.

| REIT | Geography | Cap Rate Commentary |  MARKERR |
|------|----------------|---|---|
| AIRC | Diversified | They are getting more active on the acquisitions side. | |
| AVB | Coastal | Sold in high 4% range and bought in mid-4% range (excluding value add boost) but cap rates likely higher now (3Q23) | |
| CPT | Sunbelt | Transaction volume down 60-70% YoY in 3Q23, focused more on dispositions in FY23, and will be neutral in FY24. | |
| EQR | Coastal | Paused new acquisition activity in 2H23. Urban Seattle, San Fran, and L.A. seeing very little activity. | |
| ESS | Coastal (West) | Still 25-50 bps buy-sell spread | |
| IRT | Sunbelt | Doing portfolio optimization sales from STAR acquisition with cap rates in the high 5% range | |
| MAA | Sunbelt | Cap rates up 35 bps Qoq from 3Q23 to 4Q23. Likely compelling opportunities in FY24. | |
| UDR | Diversified | Cap rates sit plus or minus in the 5% range | |



Source: Company documents and Markerr

REIT Transactions Increase in 2H23

The REITs are buying 5%-caps with some properties in lease-up being bought closer to 6% cap rates. Their dispositions are dilutive being 4.5% - ~6.0% cap rates being sold. The IRT dispositions are also being driven by a portfolio optimization/deleveraging strategy. Transaction volume has picked up compared to the first half of the year.

| ACQUISITION MARKETS | | | | | | | |
|---------------------|----------------------------|-----------------|------------------|-------|------------------------|----------|---------|
| Company | Asset | Market | Price (Millions) | Units | Value/Unit (Thousands) | Cap Rate | Quarter |
| EQR | Atlanta Property | Atlanta | \$98.0 | 344 | \$284.9 | 5.4% | 3Q23 |
| EQR | Atlanta Property | Atlanta | \$81.7 | 290 | \$281.7 | 5.1% | 3Q23 |
| UDR | 6 Properties Portfolio | Dallas / Austin | \$402.2 | 1,753 | \$229.5 | 5.1% | 3Q23 |
| AVB | Avalon Mooresville | Mooresville, NC | \$52.1 | 203 | \$256.7 | 4.5% | 4Q23 |
| AVB | Avalon West Plano | Carrollton, TX | \$142.0 | 568 | \$250.0 | 4.5% | 4Q23 |
| AIRC | The Villages at Olde Towne | Raleigh, NC | \$84.5 | 360 | \$234.7 | 5.3% | 3Q23 |
| AIRC | The Elm | Bethesda, MD | \$250.0 | 456 | \$548.2 | 5.4% | 3Q23 |
| AIRC | Brizo Apartments | Durham, NC | \$70.0 | 260 | \$269.2 | 5.1% | 3Q23 |
| MAA | MAA Central Avenue | Phoenix, AZ | \$101.7 | 323 | \$314.7 | 5.5% | 4Q23 |
| MAA | MAA Optimist Park | Charlotte, NC | \$105.9 | 352 | \$300.9 | 5.9% | 4Q23 |

| DISPOSITION MARKETS | | | | | | | |
|---------------------|-------------------------------------|----------------|------------------|-------|------------------------|----------|---------|
| Company | Asset | Market | Price (Millions) | Units | Value/Unit (Thousands) | Cap Rate | Quarter |
| EQR | San Francisco Property | San Francisco | \$50.9 | 93 | \$547.3 | 5.8% | 4Q23 |
| EQR | Seattle Property | Seattle | \$26.9 | 96 | \$280.2 | 5.8% | 4Q23 |
| EQR | Los Angeles Property | Los Angeles | \$106.7 | 310 | \$344.2 | 5.8% | 4Q23 |
| EQR | Seattle Property | Seattle | \$60.1 | 166 | \$362.0 | 5.4% | 3Q23 |
| UDR | The Arbor | Hillsboro, OR | \$78.6 | 276 | \$284.8 | 5.8% | 4Q23 |
| AVB | Avalon Mamaroneck | Mamaroneck, NY | \$104.0 | 229 | \$454.1 | 4.8% | 4Q23 |
| AVB | Avalon Columbia Pike | Arlington, VA | \$105.0 | 269 | \$390.3 | 4.8% | 3Q23 |
| IRT | The Meadows at River Run | Chicago, IL | \$72.7 | 374 | \$194.4 | 6.8% | 4Q23 |
| IRT | Fielder's Creek | Denver, CO | \$44.1 | 217 | \$203.2 | 5.7% | 4Q23 |
| IRT | Cottage Trails at Culpepper Landing | Norfolk, VA | \$40.8 | 183 | \$222.7 | 6.0% | 4Q23 |
| IRT | Oak Crossing | Fort Wayne, IN | \$43.1 | 222 | \$194.1 | 5.2% | 4Q23 |
| AIRC | New York Property | New York, NY | \$21.0 | 195 | \$107.7 | – | 3Q23 |
| CPT | Camden Martinique | Costa Mesa, CA | \$232.0 | 714 | \$324.9 | 5.5% | 4Q23 |
| CPT | Camden Sea Palms | Costa Mesa, CA | \$61.1 | 138 | \$442.8 | 4.6% | 3Q23 |



Source: Company documents and Markerr



Portfolio Tracking: Asset Management & REIT Monitoring

Aggregated REIT Portfolios Appended with MSA Level Data

Weighted average MSA level data can be compared across each of the major apartment REITs. This data shows the differing strengths and weaknesses of each portfolio. For example, higher population growth, job growth, and income growth are found in Sunbelt REIT portfolios.

| | | | Total Portfolio Average Weighted by Units | | | | | |
|------|------------------|------------------|---|------------------------|-----------------|---------------------|--------------------|----------------------|
| REIT | Target Geography | Same-Store Units | 1-yr Rev Growth | 1-yr Population Growth | 1-yr Job Growth | Median Gross Income | 1-yr Income Growth | % Age 25-34 Year-Old |
| EQR | Coastal | 77,676 | 4.0% | -0.5% | 1.3% | \$69,150 | 3.5% | 26.3% |
| ESS | Coastal | 50,064 | 2.9% | -0.8% | 0.7% | \$75,450 | 3.6% | 26.8% |
| UDR | Diversified | 51,801 | 2.6% | -0.2% | 1.8% | \$62,550 | 3.0% | 27.4% |
| MAA | Sun Belt | 95,284 | 2.1% | 0.4% | 2.5% | \$53,500 | 3.9% | 25.9% |
| AVB | Coastal | 74,730 | 4.5% | -0.6% | 1.5% | \$69,100 | 4.4% | 25.9% |
| CPT | Sun Belt | 47,423 | 2.6% | 0.1% | 2.3% | \$55,750 | 4.3% | 25.9% |
| AIRC | Diversified | 22,794 | 6.2% | -0.6% | 2.7% | \$64,100 | 3.3% | 25.9% |
| IRT | Sun Belt | 31,829 | 3.7% | 0.4% | 2.2% | \$51,450 | 4.6% | 25.5% |



Source: Company documents and Markerr

AVB’s Portfolio Shows Positive Job & Income Growth YoY

Each REIT’s portfolio can be tracked with Markerr data for each MSA that the company operates in. The table below shows AVB’s same-store markets appended to key MSA-level metrics.

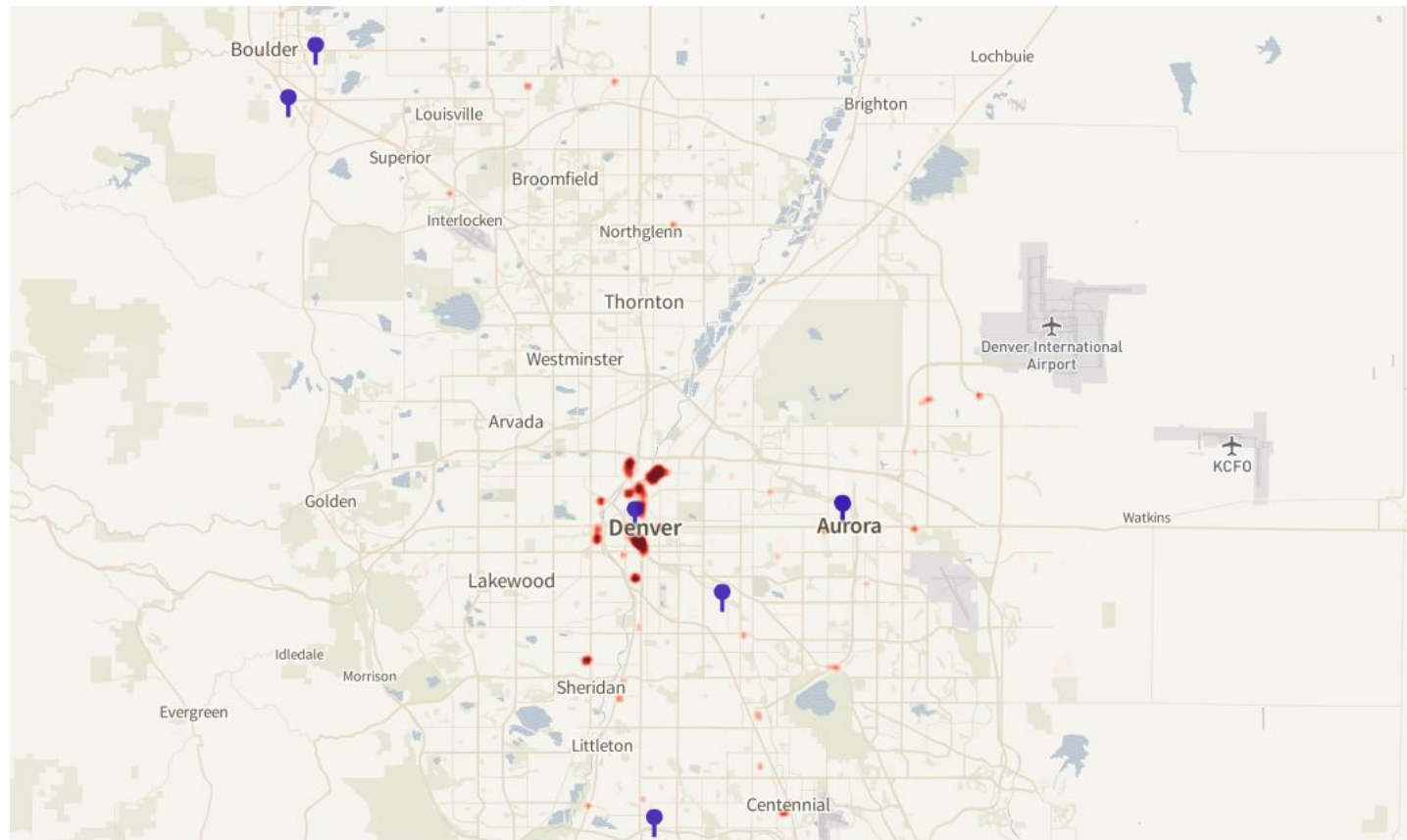
| Company Documents | | | | | | Markerr Data | | | | |
|-------------------|--------------------------|--------|------------|----------------|-----------------|------------------------|-----------------|---------------------|--------------------|----------------------|
| REIT | MSA | Units | % of Units | Avg Rent/ Unit | 1-yr Rev Growth | 1-yr Population Growth | 1-yr Job Growth | Median Gross Income | 1-yr Income Growth | % Age 25-34 Year-Old |
| AVB | Boston | 9,577 | 12.8% | \$3,358 | 4.6% | -0.3% | 1.2% | \$71,650 | 2.3% | 25.2% |
| AVB | New York | 12,766 | 17.1% | \$3,619 | 3.7% | -0.7% | 4.2% | \$63,000 | 4.6% | 25.7% |
| AVB | D.C. Metro | 10,984 | 14.7% | \$2,463 | 4.2% | -0.4% | 0.9% | \$73,600 | 3.8% | 25.6% |
| AVB | Baltimore | 2,317 | 3.1% | \$2,180 | 5.8% | -0.3% | 1.4% | \$55,600 | 3.1% | 24.2% |
| AVB | Miami | 2,187 | 2.9% | \$2,924 | 3.9% | -1.4% | 3.0% | \$45,250 | 5.4% | 22.2% |
| AVB | Denver | 1,086 | 1.5% | \$2,297 | 2.6% | 0.1% | 0.8% | \$63,050 | 3.8% | 29.5% |
| AVB | Seattle | 5,474 | 7.3% | \$2,685 | 2.0% | -0.2% | 1.5% | \$84,100 | 2.5% | 31.0% |
| AVB | San Jose | 4,723 | 6.3% | \$3,014 | 3.2% | -1.4% | -0.3% | \$100,850 | 0.5% | 27.3% |
| AVB | San Francisco | 7,410 | 9.9% | \$3,092 | 1.9% | -1.0% | -1.4% | \$88,500 | 1.3% | 26.3% |
| AVB | Los Angeles | 15,514 | 20.8% | \$2,808 | 7.8% | -0.9% | 1.8% | \$52,900 | 2.9% | 26.9% |
| AVB | San Diego | 1,767 | 2.4% | \$2,863 | 7.5% | -0.6% | 1.4% | \$59,700 | 2.8% | 27.2% |
| AVB | Other Markets | 925 | 1.2% | \$2,162 | 3.2% | 0.5% | 1.8% | \$54,450 | 3.8% | 25.0% |
| AVB | Weighted Total Portfolio | 74,730 | 100.0% | \$2,789 | 4.5% | -0.6% | 1.5% | \$69,100 | 3.0% | 26.3% |



Source: Company documents and Markerr.

Emerging Construction Expected Near AIRC's Downtown Asset

This map shows AIRC's properties in Denver MSA and the Markerr Supply Data for supply coming online in 2024. Markerr believes that supply is a hyperlocal issue and the majority of AIRC's assets are located far from the future supply which should limit the impact on its assets.



Source: Company documents and Markerr

Appendix



Appendix A: REIT YoY Revenue Growth

Notes: AVB and EQR exclude other non-residential from their results. ESS and UDR report results on a cash basis versus other REITs straightlining concessions.

| REIT | 1Q20 | 2Q20 | 3Q20 | 4Q20 | 1Q21 | 2Q21 | 3Q21 | 4Q21 | 1Q22 | 2Q22 | 3Q22 | 4Q22 | 1Q23 | 2Q23 | 3Q23 | 4Q23 |
|---------------------|-------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|
| AVB | 3.1% | -2.9% | -6.1% | -8.6% | -9.1% | -4.7% | 1.0% | 4.7% | 8.5% | 12.9% | 11.8% | 10.3% | 9.5% | 6.3% | 5.2% | 4.5% |
| EQR | 2.9% | -0.9% | -5.0% | -8.2% | -10.6% | -8.4% | -2.5% | 4.3% | 7.8% | 13.7% | 12.1% | 9.5% | 9.2% | 5.5% | 4.4% | 4.0% |
| ESS | 3.2% | -3.8% | -6.7% | -8.0% | -8.1% | -3.0% | 2.7% | 4.0% | 6.5% | 12.7% | 11.4% | 10.5% | 7.6% | 4.0% | 3.2% | 2.9% |
| AIRC | 3.5% | -1.1% | -4.9% | -7.4% | -5.7% | -1.9% | 6.0% | 9.9% | 9.2% | 11.6% | 9.6% | 9.9% | 10.1% | 8.8% | 6.8% | 6.2% |
| UDR | 3.0% | -2.1% | -5.9% | -5.9% | -6.4% | -1.0% | 3.2% | 9.0% | 10.8% | 11.4% | 12.2% | 10.1% | 8.9% | 6.9% | 5.3% | 2.6% |
| CPT | 3.7% | 0.1% | 0.8% | -0.1% | -0.4% | 4.1% | 5.1% | 8.5% | 11.1% | 12.1% | 11.7% | 9.9% | 8.0% | 6.1% | 4.1% | 2.6% |
| MAA | 4.2% | 2.1% | 2.1% | 1.8% | 1.4% | 4.7% | 6.7% | 9.3% | 12.2% | 13.7% | 14.6% | 13.6% | 11.0% | 8.1% | 4.1% | 2.1% |
| IRT | 4.7% | 1.7% | 3.0% | 5.4% | 5.6% | 8.5% | 9.4% | 10.2% | 11.0% | 11.4% | 10.6% | 9.8% | 7.5% | 6.2% | 5.4% | 3.7% |
| Straight Avg | 3.5% | -0.9% | -2.8% | -3.9% | -4.2% | -0.2% | 4.0% | 7.5% | 9.6% | 12.4% | 11.8% | 10.5% | 9.0% | 6.5% | 4.8% | 3.6% |



Source: Company documents and Markerr

Appendix B: Portfolio Concentration & YoY Revenue Growth

The apartment REITs tend to skew towards higher quality assets (A- to B+ range) and have a Coastal portfolio bent.

| Top 10 Markets | Total Units | % | Rev Growth | Top 20 Markets | Total Units | % | Rev Growth | Top 30 Markets | Total Units | % | Rev Growth | Top 40 Markets | Total Units | % | Rev Growth |
|----------------|-------------|------|------------|----------------|-------------|------|------------|-------------------|-------------|------|------------|------------------------|-------------|------|------------|
| Los Angeles | 40,645 | 9.0% | 4.9% | San Diego | 13,259 | 2.9% | 8.1% | Northern Virginia | 7,651 | 1.7% | 4.9% | Philadelphia | 2,748 | 0.6% | 2.1% |
| D.C. | 37,561 | 8.3% | 4.9% | Tampa | 12,855 | 2.8% | 2.9% | Miami | 6,988 | 1.5% | 6.6% | Suburban Maryland | 2,595 | 0.6% | 6.2% |
| Seattle | 27,783 | 6.2% | 0.7% | Houston | 12,573 | 2.8% | 3.1% | Phoenix | 6,652 | 1.5% | 0.0% | Birmingham | 2,536 | 0.6% | 3.4% |
| Dallas | 24,910 | 5.5% | 1.5% | Orlando | 12,356 | 2.7% | 2.7% | Baltimore | 4,538 | 1.0% | 3.5% | Columbus | 2,510 | 0.6% | 4.0% |
| New York | 23,620 | 5.2% | 4.0% | Oakland | 10,916 | 2.4% | 2.3% | Fort Worth | 3,687 | 0.8% | 1.1% | Ventura | 2,254 | 0.5% | 7.2% |
| Boston | 22,562 | 5.0% | 4.7% | Denver | 10,700 | 2.4% | 2.5% | Charleston | 3,686 | 0.8% | 4.7% | Oklahoma City | 2,147 | 0.5% | 5.2% |
| Atlanta | 20,584 | 4.6% | 1.2% | Austin | 10,357 | 2.3% | 0.1% | Jacksonville | 3,496 | 0.8% | -0.7% | Huntsville | 2,101 | 0.5% | 1.7% |
| San Francisco | 20,237 | 4.5% | 2.2% | Raleigh | 9,582 | 2.1% | 2.8% | Memphis | 3,194 | 0.7% | 0.3% | Indianapolis | 1,979 | 0.4% | 5.5% |
| Orange County | 18,034 | 4.0% | 5.1% | Charlotte | 8,969 | 2.0% | 3.2% | Richmond | 3,091 | 0.7% | 2.9% | Savannah | 1,837 | 0.4% | 4.4% |
| San Jose | 16,910 | 3.7% | 3.2% | Nashville | 8,805 | 1.9% | 2.2% | Greenville | 3,057 | 0.7% | 4.2% | Additional Markets | 23,473 | 5.2% | 2.5% |
| | | | | | | | | | | | | Wtd Avg Total | 451,601 | 100% | 3.3% |
| | | | | | | | | | | | | Straight Average Total | | | 3.1% |

Source: Company documents and Markets



Source: Company documents and Markerr