

## Residential REITs

## BofA Apartment REITs cap rate analysis

## Industry Overview

## Cap rate analysis for Apartment REITs

In this report, we track private market cap rates for apartments using Real Capital Analytics (RCA) transaction data by MSA. We then overlay these cap rates onto each Apartment REIT's geographic exposure to build up to a portfolio wide private market cap rate. We then compare this private market cap rate with BofA's applied cap rate and the market's implied cap rate.

## Our cap rates have increased; less than the equity market

Since March 2022, we have increased our applied cap rates by 161bp on average. Since March 2022, the market implied cap rates on Apartment REITs have increased 199bp on average. We note that 4Q22 private market cap rates are -29bp lower than 1Q22.

## Public vs private market cap rates have disconnected

The spread between private market and market implied cap rates is at the widest point since our data series began. Across our REIT coverage the average spread is 206bp. That compares to the average spread of 7bp from 2011-19.

## The spread over the 10-year Treasury has narrowed

The spread between private market cap rates and the 10 year Treasury has narrowed significantly. The narrowing spread has been driven by rising interest rates. Private market cap rates have adjusted by a much smaller degree. Across our REIT coverage, the average spread is 24bp. That compares to the average spread of 296bp from 2011-19.

## We expect private market cap rates to trend higher.

Looking ahead we expect private market cap rates to trend higher. Public markets typically react faster than the private market. Conversations with management team's suggest cap rates have already risen 50-100bp but based on limited trades. We are closely watching to see how funding costs evolve post SVB.

## Summary table of Apartment REIT cap rates

## Exhibit 1: Private market cap rates vs implied cap rates

The public market assures private market cap rates will increase

Ticker	BofA Applied cap rate	Public market Implied cap rate	Private market cap rate			Spread
			January	4Q22	2022	
AVB	5.6%	6.1%	4.1%	4.1%	4.2%	194bps
AIRC*	n.a.	6.3%	4.2%	4.2%	4.2%	218bps
CPT	5.6%	6.4%	4.4%	4.4%	4.3%	196bps
EQR	5.8%	6.5%	4.1%	4.1%	4.2%	245bps
ESS	5.4%	6.0%	3.8%	3.8%	3.7%	218bps
IRT*	n.a.	6.5%	4.5%	4.4%	4.3%	202bps
MAA*	n.a.	6.1%	4.2%	3.9%	4.0%	187bps
UDR	5.3%	6.0%	4.1%	4.1%	4.1%	190bps
Avg	5.6%	6.2%	4.2%	4.1%	4.1%	206bps

Source: RCA analytics, company filings, S&P Global

Note: \*Consensus implied cap rates for REITs not covered from S&P Global

Spread is the difference between the public market implied cap rates and the latest private market cap rates

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Equity  
United States  
REITs

**Joshua Dennerlein**  
Research Analyst  
BofAS  
+1 646 855 1681  
[joshua.dennerlein@bofa.com](mailto:joshua.dennerlein@bofa.com)

**Jeffrey Spector**  
Research Analyst  
BofAS  
+1 646 855 1363  
[jeff.spector@bofa.com](mailto:jeff.spector@bofa.com)

**Daniel Byun**  
Research Analyst  
BofAS  
+1 646 855 3195  
[daniel.byun@bofa.com](mailto:daniel.byun@bofa.com)

**Steven Song**  
Research Analyst  
BofAS  
+1 646 855 0049  
[huainan.song@bofa.com](mailto:huainan.song@bofa.com)

**REITs Team**  
BofAS

[See Team Page for List of Analysts](#)

Key terms used:

Applied cap rate: The cap rate we apply to a REIT's NOI stream to build up to our Net Asset Value (NAV).

BP: basis points

Cap Rate: capitalization rate

Implied cap rate: The public market's implied cap rate based on the equity market capitalization.

MSA: Metropolitan statistical area

RCA: Real Capital Analytics

10 TSY: 10-year Treasury yield

Definition: Private market cap rates are calculated using the Apartment REITs' 3Q22 portfolio geographic exposure by MSAs and RCA's latest private market cap rates by MSAs. Using the geographic exposures as weights, we calculated a weighted average by overlaying the private market cap rates from RCA.

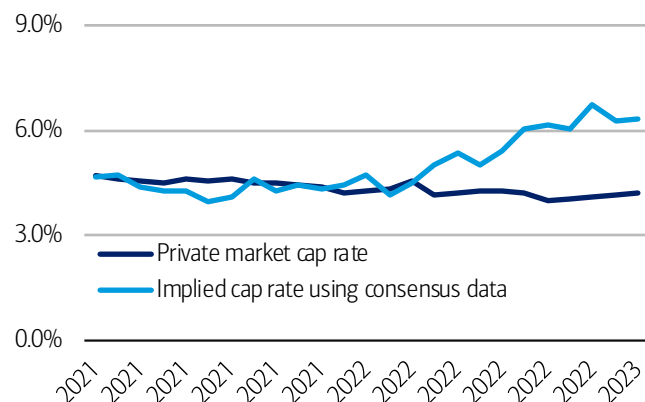
What you will find inside the report: (1) REIT portfolio cap rate analysis, (2) Gateway market cap rate analysis and (3) Sunbelt cap rate analysis.

Additional abbreviations on page 8

# REIT cap rate analysis

## Exhibit 2: AIRC: private market vs implied cap rates

Private market and implied REIT cap rates typically track each other

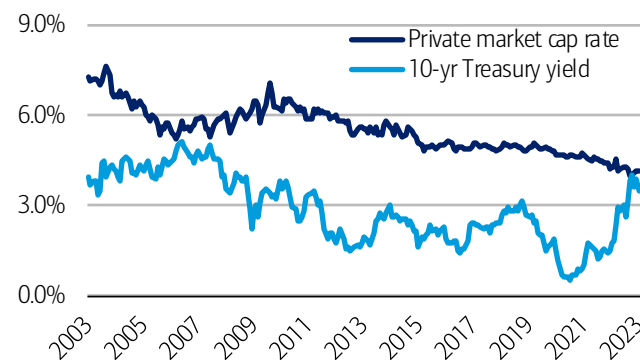


Source: RCA analytics, S&P Global for consensus implied cap rates

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## Exhibit 3: AIRC: private market cap rates vs 10-yr Treasury

Private market cap rate spreads over the 10yr averaged 300bps (2011-2019)



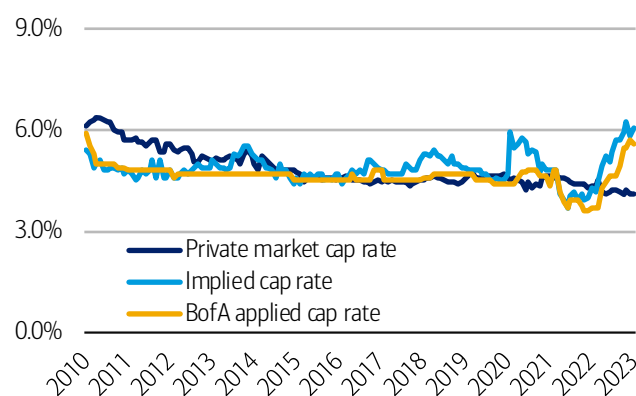
Source: RCA analytics, company filings, Bloomberg

AIRC split off on 12/3/20. We show the private market cap rates before the split off to highlight cap rate compression across their market

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## Exhibit 4: AVB: private market, implied and applied cap rates

Private market and implied REIT cap rates typically track each other

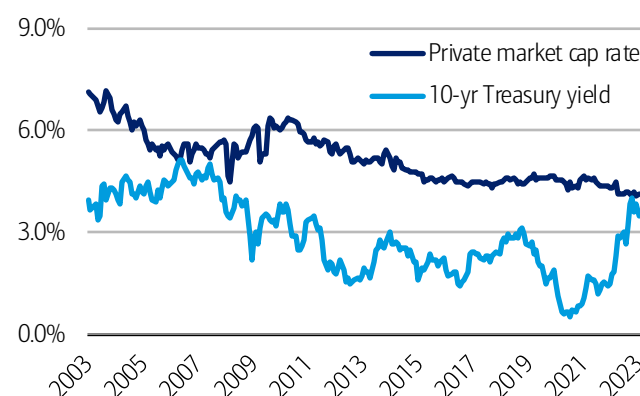


Source: RCA analytics, company filings

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## Exhibit 5: AVB: private market cap rates vs 10-yr Treasury

Private market cap rate spreads over the 10yr averaged 258bps (2011-2019)

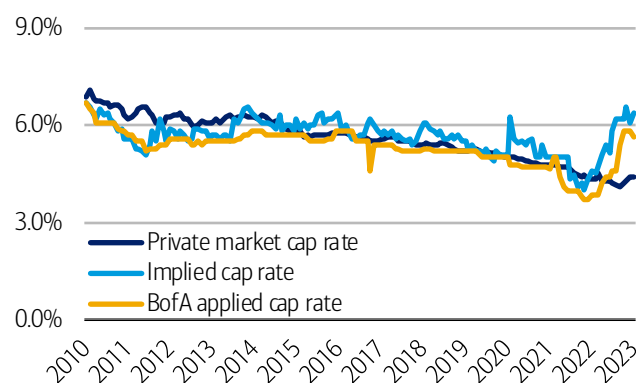


Source: RCA analytics, company filings, Bloomberg

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## Exhibit 6: CPT: private market, implied and applied cap rates

Private market and implied REIT cap rates typically track each other

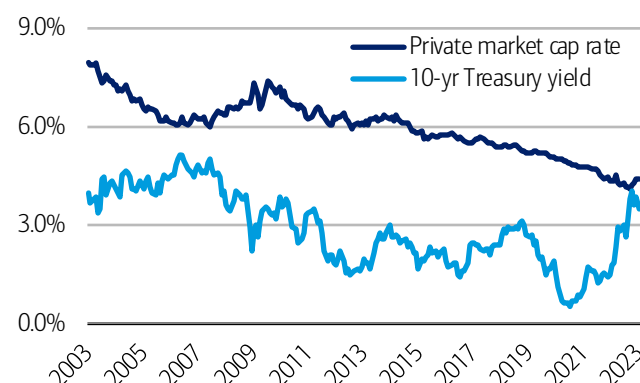


Source: RCA analytics, company filings

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## Exhibit 7: CPT: private market cap rates vs 10-yr Treasury

Private market cap rate spreads over the 10yr averaged 353bps (2011-2019)

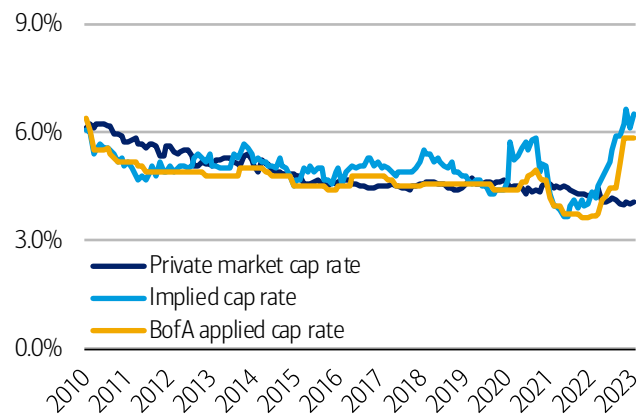


Source: RCA analytics, company filings, Bloomberg

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**Exhibit 8: EQR: private market, implied and applied cap rates**

Private market and implied REIT cap rates typically track each other

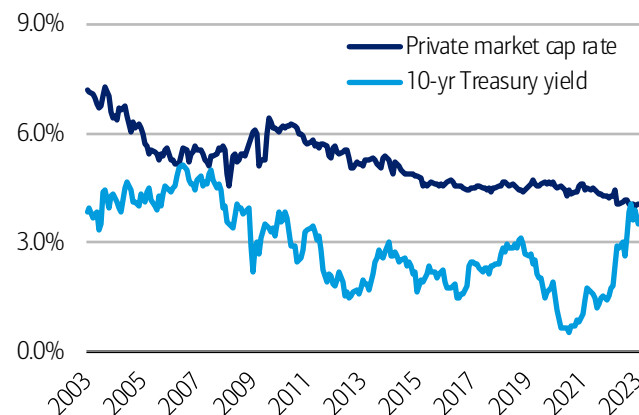


Source: RCA analytics, company filings

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**Exhibit 9: EQR: private market cap rates vs 10-yr Treasury**

Private market cap rate spreads over the 10yr averaged 262bps (2011-2019)

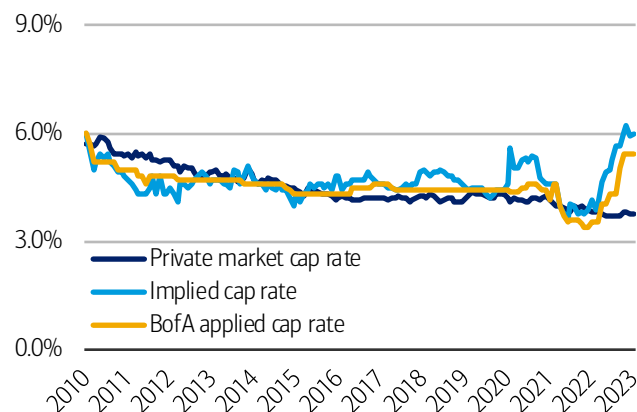


Source: RCA analytics, company filings, Bloomberg

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**Exhibit 10: ESS: private market, implied and applied cap rates**

Private market and implied REIT cap rates typically track each other

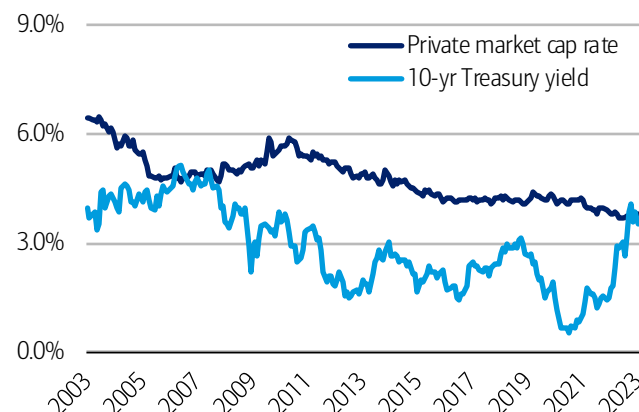


Source: RCA analytics, company filings

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**Exhibit 11: ESS: private market cap rates vs 10-yr Treasury**

Private market cap rate spreads over the 10yr averaged 227bps (2011-2019)

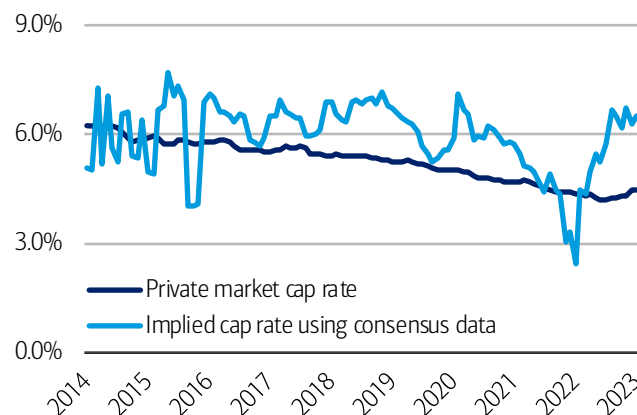


Source: RCA analytics, company filings, Bloomberg

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**Exhibit 12: IRT: private market vs implied cap rates**

Private market and implied REIT cap rates typically track each other

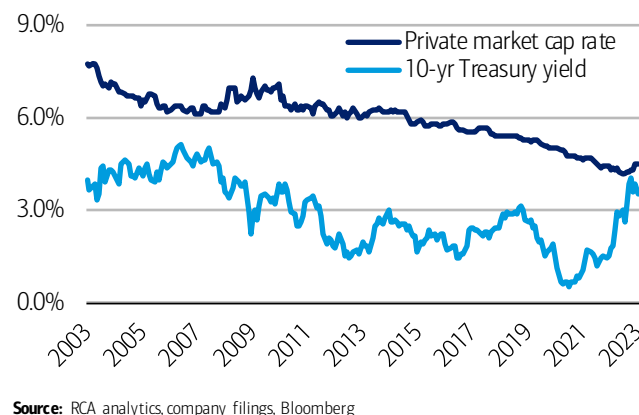


Source: RCA analytics, S&amp;P Global for consensus implied cap rates

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**Exhibit 13: IRT: private market cap rates vs 10-yr Treasury**

Private market cap rate spreads over the 10yr averaged 353bps (2011-2019)



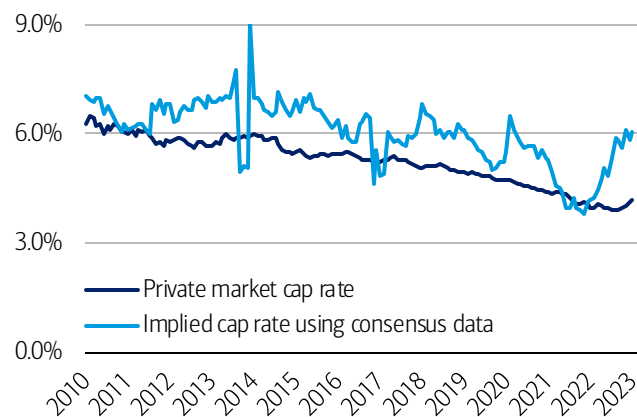
Source: RCA analytics, company filings, Bloomberg

IRT IPO-ed on 8/13/13. We show the private market cap rates before the IPO to highlight cap rate compression across their market

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**Exhibit 14: MAA: private market vs implied cap rates**

Private market and implied REIT cap rates typically track each other

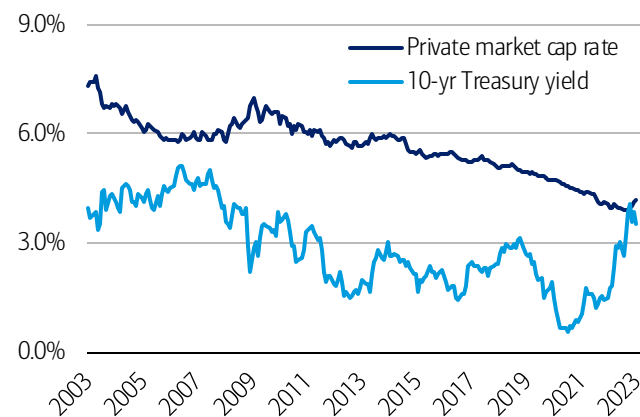


Source: RCA analytics, S&amp;P Global for consensus implied cap rates

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**Exhibit 15: MAA: private market cap rates vs 10-yr Treasury**

Private market cap rate spreads over the 10yr averaged 320bps (2011-2019)

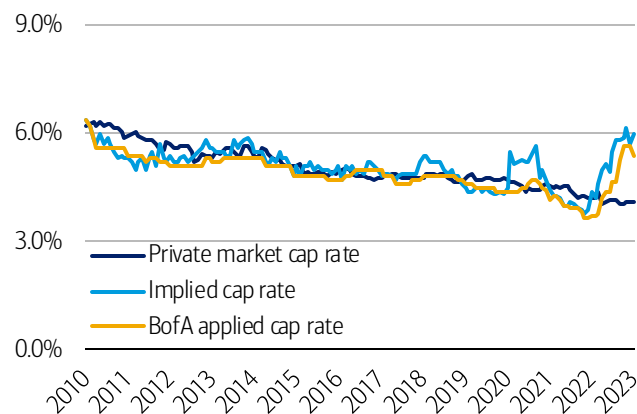


Source: RCA analytics, company filings, Bloomberg

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**Exhibit 16: UDR: private market, implied and applied cap rates**

Private market and implied REIT cap rates typically track each other

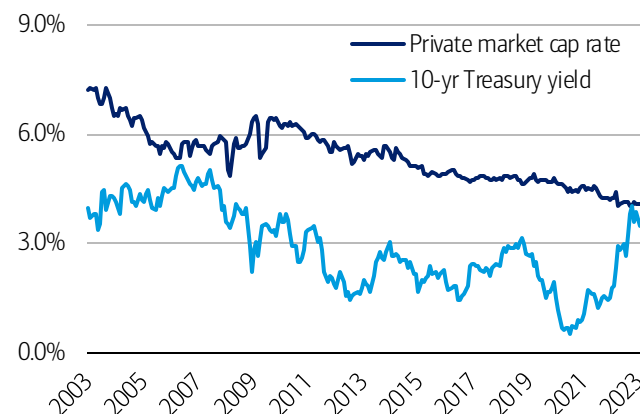


Source: RCA analytics, company filings

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**Exhibit 17: UDR: private market cap rates vs 10-yr Treasury**

Private market cap rate spreads over the 10yr averaged 286bps (2011-2019)



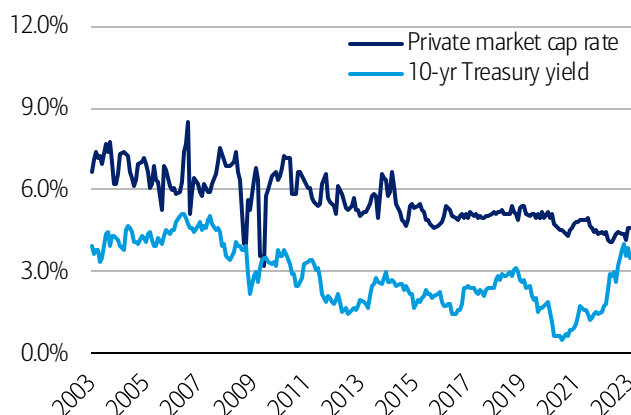
Source: RCA analytics, company filings, Bloomberg

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# Cap rates in Gateway markets

## Exhibit 18: Boston private market cap rates

Private market cap rate spreads over the 10yr averaged 304bps (2011-2019)

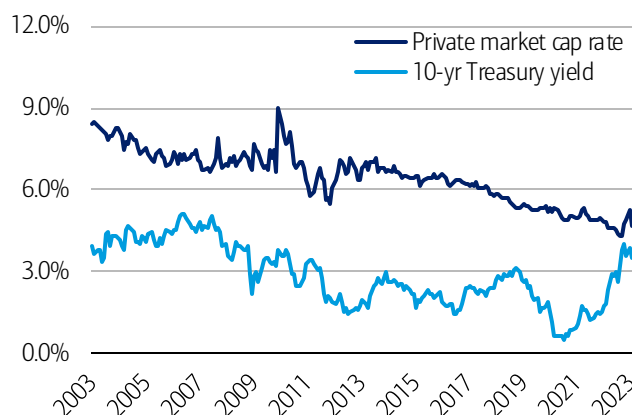


Source: RCA analytics, Bloomberg

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## Exhibit 19: Houston private market cap rates

Private market cap rate spreads over the 10yr averaged 394bps (2011-2019)

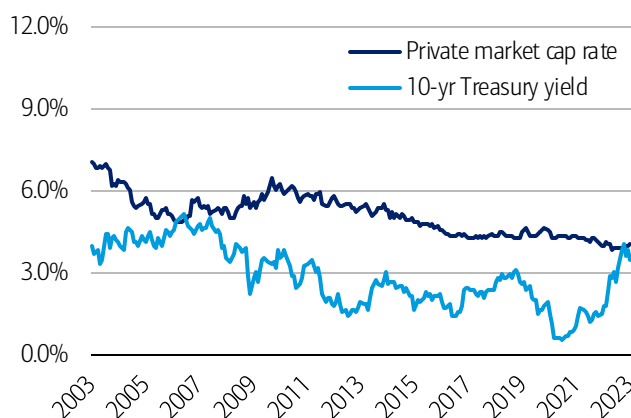


Source: RCA analytics, Bloomberg

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## Exhibit 20: Los Angeles private market cap rates

Private market cap rate spreads over the 10yr averaged 261bps (2011-2019)

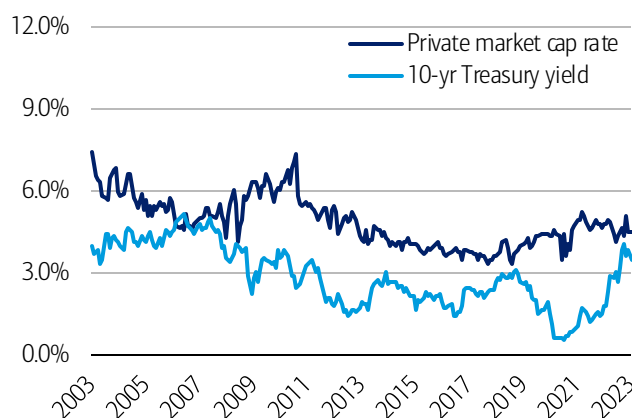


Source: RCA analytics, Bloomberg

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## Exhibit 21: New York City private market cap rates

Private market cap rate spreads over the 10yr averaged 194bps (2011-2019)

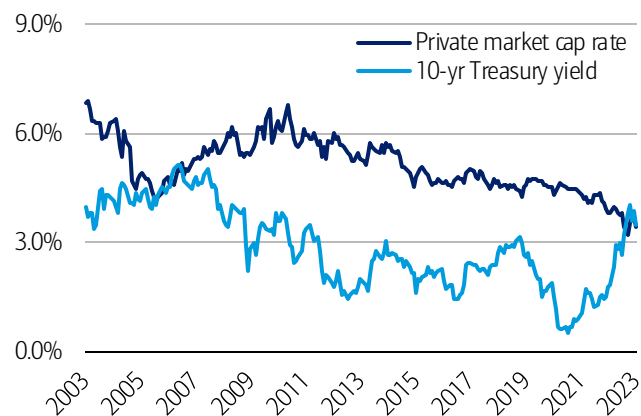


Source: RCA analytics, Bloomberg

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**Exhibit 22: San Diego private market cap rates**

Private market cap rate spreads over the 10yr averaged 278bps (2011-2019)

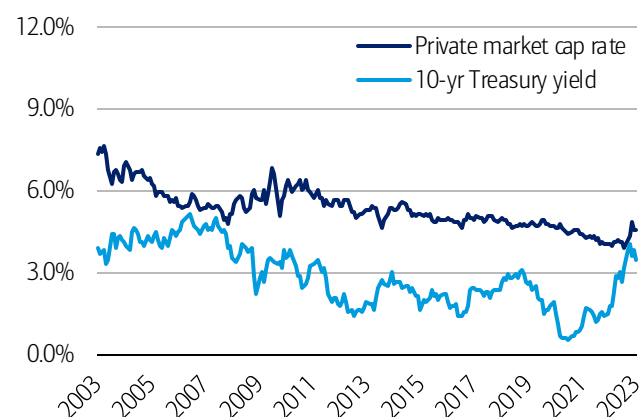


Source: RCA analytics, Bloomberg

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**Exhibit 24: Seattle private market cap rates**

Private market cap rate spreads over the 10yr averaged 285bps (2011-2019)

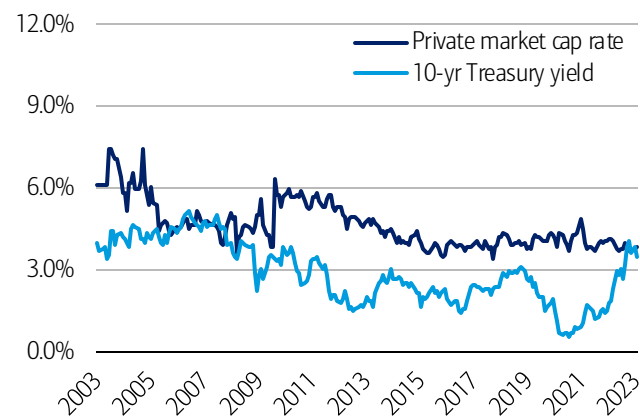


Source: RCA analytics, Bloomberg

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**Exhibit 23: San Francisco private market cap rates**

Private market cap rate spreads over the 10yr averaged 203bps (2011-2019)

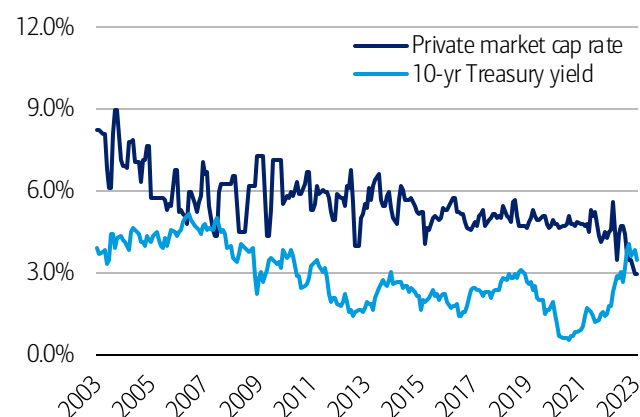


Source: RCA analytics, Bloomberg

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**Exhibit 25: Washington DC private market cap rates**

Private market cap rate spreads over the 10yr averaged 302bps (2011-2019)



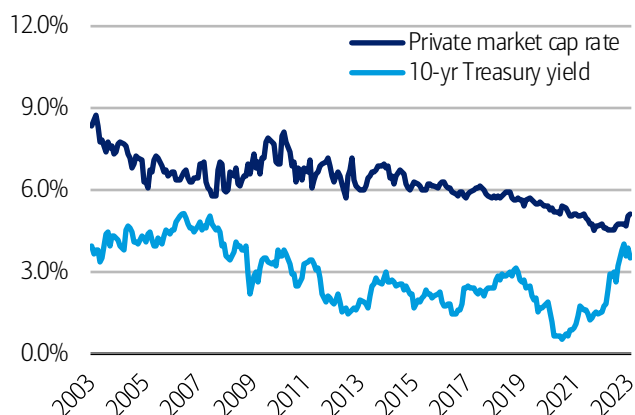
Source: RCA analytics, Bloomberg

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# Cap rates in Sunbelt markets

## Exhibit 26: Atlanta private market cap rates

Private market cap rate spreads over the 10yr averaged 389bps (2011-2019)

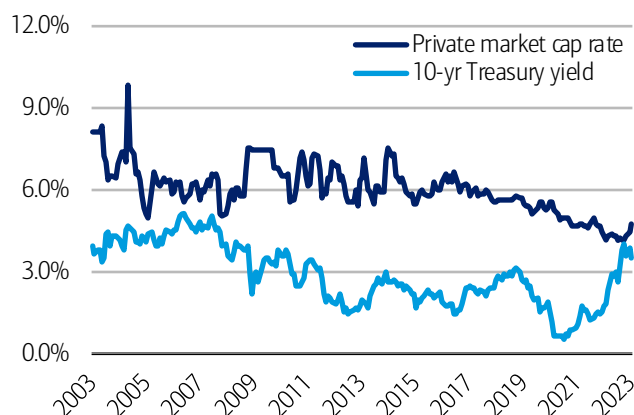


Source: RCA analytics, Bloomberg

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## Exhibit 27: Charlotte private market cap rates

Private market cap rate spreads over the 10yr averaged 376bps (2011-2019)

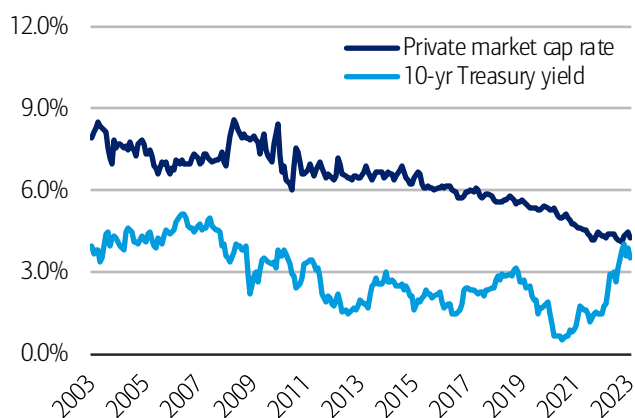


Source: RCA analytics, Bloomberg

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## Exhibit 28: Dallas private market cap rates

Private market cap rate spreads over the 10yr averaged 389bps (2011-2019)

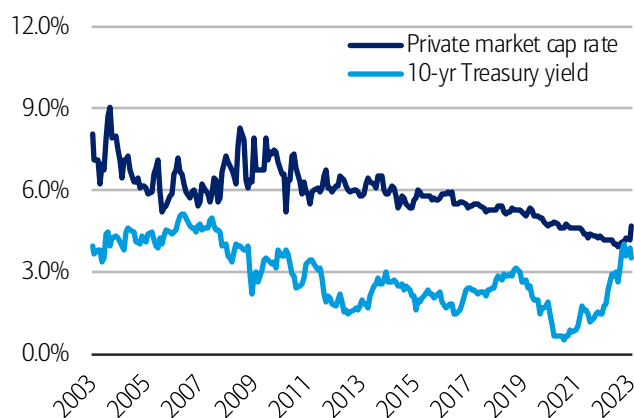


Source: RCA analytics, Bloomberg

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## Exhibit 29: Denver private market cap rates

Private market cap rate spreads over the 10yr averaged 342bps (2011-2019)

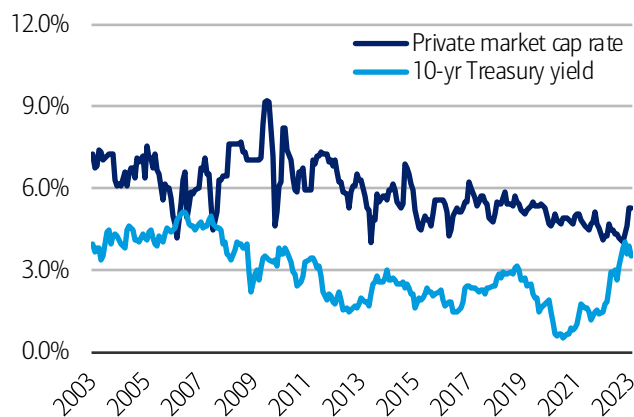


Source: RCA analytics, Bloomberg

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**Exhibit 30: Miami private market cap rates**

Private market cap rate spreads over the 10yr averaged 338bps (2011-2019)

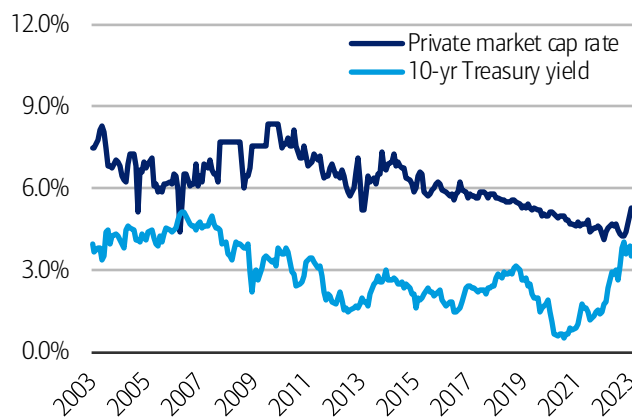


Source: RCA analytics, Bloomberg

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**Exhibit 31: Orlando private market cap rates**

Private market cap rate spreads over the 10yr averaged 379bps (2011-2019)

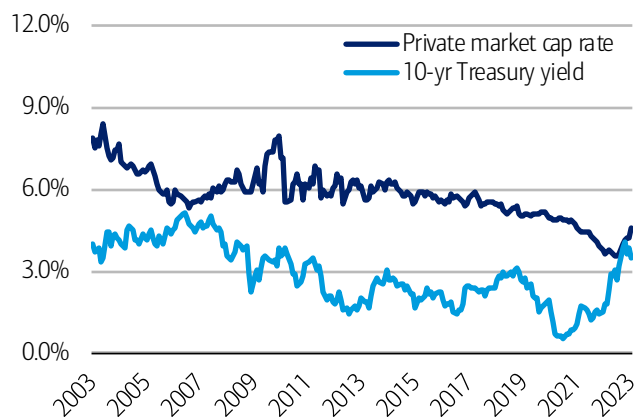


Source: RCA analytics, Bloomberg

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**Exhibit 32: Phoenix private market cap rates**

Private market cap rate spreads over the 10yr averaged 345bps (2011-2019)

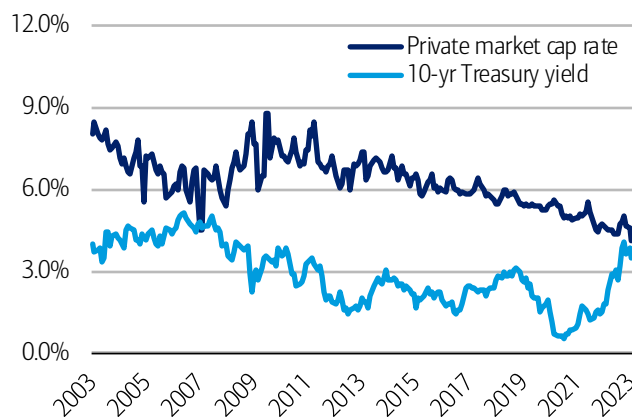


Source: RCA analytics, Bloomberg

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**Exhibit 33: Tampa private market cap rates**

Private market cap rate spreads over the 10yr averaged 400bps (2011-2019)



Source: RCA analytics, Bloomberg

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**Abbreviations:**

AIRC	Apartment Income REIT Corp.
AVB	AvalonBay
CPT	Camden Property
EQR	Equity Residential
ESS	Essex Property
IRT	Independence Realty
MAA	Mid-America Ap
UDR	UDR, Inc.



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## Research Analysts

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**Daniel Byun**  
Research Analyst  
BofA  
[daniel.byun@bofa.com](mailto:daniel.byun@bofa.com)

**Joshua Dennerlein**  
Research Analyst  
BofA  
[joshua.dennerlein@bofa.com](mailto:joshua.dennerlein@bofa.com)

**Steven Song**  
Research Analyst  
BofA  
[huainan.song@bofa.com](mailto:huainan.song@bofa.com)

**Jeffrey Spector**  
Research Analyst  
BofA  
[jeff.spector@bofa.com](mailto:jeff.spector@bofa.com)

