Today’s Panelists

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1. Brief economic outlook
2. Key NCREIF trends
3. Cap rate drill down – public vs. private
4. Non-NPI (alternatives) returns
Disclaimer

All comments about future expectations are the personal views of the speakers and NOT a “NCREIF opinion” or forecast, and should not be relied upon for investment decisions.
How high, then, might Treasury yields go? Let’s put together the pieces. Suppose the Fed’s short-term interest-rate target, adjusted for inflation, averages about 1% over the next decade. Inflation averages 2.5%, and the bond risk premium is one percentage point. In sum, this suggests a 10-year Treasury note yield of 4.5%. And that’s a conservative estimate.


June 29, 2023 – Bloomberg Editorial
Elevated Recession Risk Continues

U.S. RECESSIONS AND 10 YEAR - 3 MONTH TREASURY YIELD SPREAD

U.S. RECESSIONS AND YEAR-OVER-YEAR %CHANGE IN LEADING INDICATORS

Source: NBER, Federal Reserve, Conference Board
Tight CRE Credit Conditions Continue

Sources: Federal Reserve, NCREIF
Private market valuations are adjusting to higher interest rates – refinancings anticipated to be “cash-in” vs. cash-out based on re-priced assets.

Lowest CRE Transaction Volume in Years

MONTH TO MONTH CUMULATIVE TRANSACTION VOLUME BY YEAR

Source: RCA/MSCI
Max Capital Deployed at Lowest Yields Ever During COVID Period
Most Acute in Apartment and Industrial

AVERAGE APARTMENT APPRAISAL CAP AND TRAILING 4Q TRANSACTION VOLUME

AVERAGE INDUSTRIAL APPRAISAL CAP RATE AND TRAILING 4Q TRANSACTION VOLUME

Source: RCA/MSCI, NCREIF
the elephant (not) in the room
Relationship Between Office Job Growth and Absorption is Broken

YEAR-OVER-YEAR GROWTH IN OFFICE USING EMPLOYMENT AND OCCUPIED OFFICE SPACE (ABSORPTION)

OFFICE USING EMPLOYMENT AND SPACE UTILIZATION INDEX = 100 IN JANUARY 2020

Source: Moody’s Analytics, CBRE-EA, Kastle Systems
They’re Here - Office Property Loan Problems Increasing

SHARE OF CMBS OFFICE LOANS THAT ARE DELINQUENT OR IN SPECIAL SERVICING

Source: TREPP
Long Term Investors Don’t Need to Call the Bottom

<table>
<thead>
<tr>
<th>Period</th>
<th>5 Year Return</th>
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<tbody>
<tr>
<td><strong>Early 1990s</strong></td>
<td></td>
</tr>
<tr>
<td>1995 Q2</td>
<td>11.92%</td>
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<tr>
<td>1995 Q3</td>
<td>12.30%</td>
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<tr>
<td>Trough</td>
<td>12.99%</td>
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<tr>
<td>1996 Q1</td>
<td>12.97%</td>
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<tr>
<td>1996 Q2</td>
<td>12.69%</td>
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<tr>
<td><strong>Tech Crash</strong></td>
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<tr>
<td>2002 Q1</td>
<td>12.68%</td>
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<tr>
<td>2002 Q2</td>
<td>13.51%</td>
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<tr>
<td>Trough</td>
<td>14.01%</td>
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<tr>
<td>2002 Q4</td>
<td>14.04%</td>
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<tr>
<td>2003 Q4</td>
<td>12.50%</td>
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<td><strong>Financial Crisis</strong></td>
<td></td>
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<tr>
<td>2009 Q3</td>
<td>11.34%</td>
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<tr>
<td>2009 Q4</td>
<td>12.85%</td>
</tr>
<tr>
<td>Trough</td>
<td>13.44%</td>
</tr>
<tr>
<td>2010 Q2</td>
<td>13.33%</td>
</tr>
<tr>
<td>2010 Q3</td>
<td>12.94%</td>
</tr>
</tbody>
</table>

Source: NCREIF

ODCE Total Return Index During Financial Crisis (GFC)
INDEX = 100 IN 1977 Q4

Graph showing the ODCE Total Return Index during financial crises from 2005 Q4 to 2013 Q4.
REITs up this quarter – a leading indicator?
Returns Continue in Negative Territory

Only three times there have been negative returns in the history of the NPI.
3.53% annual compound growth
Office and retail losing ground to industrial and apartment.
Write-Downs Remain Elevated
Even higher percent written down for office
Question

• Where will institutional real estate values be by the end of 2023 compared to now? (Not for the year.)
  • A. Values will be somewhat lower by the end of 2023.
  • B. Values will stabilize at the current level
  • C. Values will be somewhat higher by the end of 2023.
  • D. I have no idea!
Only Hotels in Positive Territory
Rent and NOI Growth Deteriorating

**Rent Growth**

- **2021Q**: 2.0%
- **2022Q**: 2.5%
- **2023Q**: 2.0%
- **2024Q**: 1.5%
- **2025Q**: 1.0%
- **2026Q**: 0.5%

**NOI Growth**

- **2021Q**: 4.5%
- **2022Q**: 4.0%
- **2023Q**: 3.5%
- **2024Q**: 3.0%
- **2025Q**: 2.5%
- **2026Q**: 2.0%
- **2027Q**: 1.5%
- **2028Q**: 1.0%
- **2029Q**: 0.5%
- **2030Q**: -0.5%
Percent Leased

Leased – Occupied = Phantom space
Percent Leased

Occupancy by Property Type

- Apartment
- Hotel
- Industrial
- Office
- Retail

Occupancy

0% 20% 40% 60% 80% 100% 120%

Property Type
Question

• What Property Sector do you think will perform best (highest total return) for all of 2023?
  • A. Apartment
  • B. Hotel
  • C. Industrial
  • D. Office
  • E. Retail
What Cap Rate?

• NCREIF Appraisal – Reported NOI divided by reported appraised value
  • Most recent quarter NOI
  • All external appraisals
  • Internal appraisals with a change in value more than adding capex to last value

• NCREIF Transaction – Reported NOI divided by sale price
  • Small sample
  • NOI for previous full quarter

• Greenstreet Nominal – Cap rate used to estimate the private market value of the REIT portfolio

• Greenstreet Implied – Cap rate that would equate the private market value to the stock price
  • More volatile than nominal cap rate
  • Reflects more than just the value of the underlying real estate
  • Can be influenced by growth from M&A activity & development pipeline and balance sheet
REIT Implied cap rates equal weight the cap rates for apartment, industrial, office and retail from Green Street.
Peak-to-Trough Decline in Capital Value since 2022 Q1

-25% -20% -15% -10% -5% 0%

Office: Central Business District -22.4%
Office: Urban -18.4%
Office: Secondary Business District -17.4%
Office: Suburban -16.2%
Other: Other -14.7%
Retail: Street -10.6%
Residential: Apartment -9.1%
Office: Life Science -8.6%
Other: Data Center -8.4%
Industrial: Life Science -7.8%
Industrial: Warehouse -7.6%
Retail: Mall -6.4%
Office: Medical Office -6.4%
Residential: Single Family Rental -6.2%
Industrial: Specialized -5.6%
Industrial: Flex -4.5%
Retail: Strip -4.1%
Industrial: Manufacturing -3.8%
Residential: Student Housing -2.1%
Hotel: Full Service 0.0%
Question

• What will be the return for the NPI for calendar year 2023 (annual return)?
  • A. Lower than negative 10%
  • B. Negative 5% to negative 10%.
  • C. Zero to negative 5%.
  • D. Positive
Summary of 2nd Quarter 2023

- Returns negative for third straight quarter
- Market values fall for fourth straight quarter
- Only Hotels have positive returns
- Office is biggest drag on returns
- Rent and NOI growth starting to deteriorate
- Percent leased down a little (percent occupied?)
- Cap rates continue rising
- Five properties in the NPI returned to lender
- 47 properties have a value less than or equal to the loan balance