Panelist Overview

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Disclaimer

Today we will be presenting what we see in the NCREIF data, trends and changes; all comments about future expectations are the personal views of the speakers and not a reflection of a NCREIF opinion or forecast.
Overview

• NPI return down again for quarter
• But capital return still (slightly) positive; Market Value Index still increased
• Cap rates eek out another all time (for NPI) low
• Occupancy down just slightly from last quarter’s highest since 2001
• Industrial still the leader of the Pack; retail turns negative
• Strong Industrial NOI growth; others small to negative
• Spread to treasuries narrows
NPI Returns

Forty Plus Years of NPI Returns

Chart: E-002-1901
Total Returns by Asset Class

NFI-ODCE 8.3% 8.5% 9.0% 2.8%
NPI 7.0% 7.5% 7.7% 6.7%
Leveraged 1.2% 2.8% 0.0% -6.1%
NPI 6.7% 8.6% 6.7% -4.4%
Farmland 8.3% 11.2% 3.4% -4.4%
Timberland 9.5% 6.7% 1.0% 0.0%
NAREIT 11.2% 3.9% 0.0% -13.5%
S&P 500 12.5% 1% 11.5% -4.4%

12/31/2018 1-Yr 10-Yr Avg 40-Yr Avg
### NCREIF Overview

*Fourth Quarter 2019 Index Composition*

<table>
<thead>
<tr>
<th></th>
<th>NCREIF Property Index (NPI)</th>
<th>NPI Leveraged Property Index</th>
<th>NFI-ODCE (Fund Index – Gross of Fees)</th>
<th>Farmland Properties</th>
<th>Timberland Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Leverage</strong></td>
<td>Unlevered</td>
<td>42%</td>
<td>22%</td>
<td>Unlevered</td>
<td>Unlevered</td>
</tr>
<tr>
<td><strong>Quarterly Return</strong></td>
<td>1.4%</td>
<td>1.2%*</td>
<td>1.2%</td>
<td>2.6%</td>
<td>1.0%</td>
</tr>
<tr>
<td><strong>1 Year Return</strong></td>
<td>6.7%</td>
<td>7.2%</td>
<td>8.4%</td>
<td>6.7%</td>
<td>3.4%</td>
</tr>
</tbody>
</table>

*The unleveraged return on this subset was 1.1%*
Leveraged props have more retail and significantly less industrial resulting in lower unleveraged returns for those properties.
Question

• What will be the best performing asset class in 2019?
  • A. NCREIF Leveraged Returns
  • B. Farmland or Timberland
  • C. S&P 500 Stocks
  • D. Corporate Bonds
  • E. NAREIT Index
Question

• What will the annual NPI total return be for 2019? (Current rolling annual return 6.7%)
  • A. Below 4%
  • B. 4%-to-6%
  • C. 6%-to-8%
  • D. Above 8%
NPI Property Cap Rates by Property Type

Cap Rates


Chart: C-013-1901
Question

• What will cap rates be for the nation by the end of 2019?
  • A. Below 4%
  • B. 4% to 5%
  • C. 5% to 6%
  • D. Above 6%
NPI Transaction Price

![Graph showing the average sale price and percent sold over time. The x-axis represents the years from 1988 to 2016, and the y-axis represents the average sale price (Mill) and percent sold. The graph includes two lines: one for average sale price and another for percent sold. The values fluctuate over time, with peaks and troughs indicating market trends.]
Prices Still Rising

9-11 and Tech Bust

Recession

Recession

Recession

Cap Rates

NOI Index

Market Value Index

Question

• When will the Market Value Index (MVI) peak for this cycle?
  • A. Peaked this quarter
  • B. Next quarter
  • C. Before the end of 2019
  • D. 2020 or later
Returns by Property Type
4th qtr 2018

- Apartment: 1.0%
- Hotel: 1.3%
- Industrial: 3.7%
- Office: 2.0%
- Retail: -0.5%
NPI Property NOI Growth by Property Type

Annual

NOI Growth

2003 2005 2007 2009 2011 2013 2015 2017

NPI Index
Apartment
Industrial
Office
Retail

Chart: C-016-1901
National Apartment Market
Supply & Demand Trends

Source: Reis, Real Estate Solutions by Moody’s Analytics; Top 50 Primary Apartment Markets
Everything Under Construction Is Expensive

Under Construction Units By Rent Decile

Source: CoStar Portfolio Strategy

As of 18Q3
Lease Up Challenges At The Top Of The Market

Top 10% Of Rents Vacancy Vs Bottom 90% Of Rents Vacancy

Source: CoStar Portfolio Strategy

Vacancy Level

As of 18Q4
Workforce Segment Outperforms

Asking Rent Growth By Building Rating (National Index)

Source: CoStar Portfolio Strategy
Note: The National Index is an aggregation of 54 major U.S. markets

As of 18Q4
Suburban Rent Growth Is Outpacing Downtown Neighborhoods

Y/Y Rent Growth By District Type (National Index)

Source: CoStar Portfolio Strategy
Note: The National Index is an aggregation of 54 major U.S. markets

As of 18Q4
Top and Bottom Apartment Markets
Effective Revenue Per Unit, Percent Change 2017Q3 – 2018Q3

Source: Reis, Real Estate Solutions by Moody’s Analytics
National Office Market

Supply & Demand Trends

Source: Reis, Real Estate Solutions by Moody’s Analytics; Top 50 Primary Office Markets

Forecast
Development Lower This Cycle, But Speculative Construction Increasing

National Index Office RBA Under Construction

![Graph showing RBA Under Construction (MSF) with data points for quarters from 07Q1 to 18Q3. The graph includes bars for Under Construction Committed, Under Construction Available, and Percent Available. The source is CoStar Portfolio Strategy, As of 18Q4. Note: The National Index is an aggregation of 54 major U.S. markets.](image-url)
The Flight To Quality Is Widespread

Office Net Absorption By Building Quality (Last 4-Quarters)

Source: CoStar Portfolio Strategy As of 18Q4
Leaving Tenants With Limited Options For New Space

National Index Vacant SF Of Office Buildings Built In Last 10 Years

Sources: CoStar Portfolio Strategy
Note: The National Index is an aggregation of 54 major U.S. markets

As of 18Q4
Shortage Of New Space Accelerating Rent Premium

National Index Asking Rents By Building Age

Sources: CoStar Portfolio Strategy

Note: The National Index is an aggregation of 54 major U.S. markets

As of 18Q4
Top and Bottom Office Markets

Effective Revenue Per Square Foot, Percent Change 2017Q3 – 2018Q3

Source: Reis, Real Estate Solutions by Moody’s Analytics
NPI Retail Property Total Returns by Property Subtype

Annual

Total Returns


Retail Mall Retail Strip Retail Other
National Retail Market
Supply & Demand Trends

Source: Reis, Real Estate Solutions by Moody’s Analytics ; Top 50 Primary Retail Markets
2018 Announcements Set New Record

Announced Store Closures By Square Feet

Sources: Business Insider; Clark Howard; ICSC; SEC Filings; RIS; CoStar Portfolio Strategy

As of Nov. 2018

Retail Space Announced For Closure (MSF)

87 MSF
76 MSF
102 MSF
147 MSF

2008
2016
2017
2018
Q1
Q2
Q3
Q4

Sources: Business Insider; Clark Howard; ICSC; SEC Filings; RIS; CoStar Portfolio Strategy

As of Nov. 2018
“Shrink To Grow” Having Some Impact

Real Buying Power Per SF And Public Retailer Productivity

Sources: U.S. Census Bureau; Moody’s Analytics; CoStar Portfolio Strategy
As of 18Q2

*Median Household Income times # of Households

All figures in 2017 dollars

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The chart illustrates the trend in Real Buying Power*/SF and Real Public Retailer Sales/SF over time, showing a decline in these metrics from 2002 to 2018, with a rebound starting around 2018. The data sources include U.S. Census Bureau, Moody’s Analytics, and CoStar Portfolio Strategy. The trend lines indicate a decrease in Real Buying Power*/SF and Real Public Retailer Sales/SF, with a notable increase from 2018 onwards.
Necessity-Based and Experiential Retail Are The Major Sources Of Demand

SF Leased In Smaller Center Types: 2007-08 vs 2017-18

Change In SF Leased (2007-2018)

Apparel
General Retail
Health & Beauty
Fitness & Sporting Goods
Service
Entertainment
Drug/Grocery
Discounter
Restaurant
Fast Food
Other Food
Grocery
Movie Theater

Necessity-Based
Experiential
Total

Source: CoStar Portfolio Strategy

*Necessity-Based includes services & grocery. Experiential includes fitness, health/beauty and restaurant.
High LQS Scores Commanding A Premium

Pricing and Cap Rates By LQS, 2017-18 Vs. Prerecession Peak

Sources: CoStar Portfolio Strategy; Census Bureau; Neustar
As of Nov-18

Graphic showing the relationship between Location Quality Score and Avg. Price/SF.
Top and Bottom Retail Markets
Effective Revenue Per Square Foot, Percent Change 2017Q3 – 2018Q3

Source: Reis, Real Estate Solutions by Moody’s Analytics
NPI Industrial Property Total Returns by Property Subtype

![Chart: C-080-1901]
National Industrial Market
Supply & Demand Trends

Source: Reis, Real Estate Solutions by Moody's Analytics; Top Industrial Markets
Construction Is Back In Full Force

BTS And Spec Bulk Regional RBA Under Construction

Source: CoStar Portfolio Strategy

*In 137 CoStar markets with data back to 06Q1.

As of 18Q4
Western Ports Slowing While East Rises

Change In TEUs By Region

YTD*  
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18

Sources: Port Websites; CoStar Portfolio Strategy
*First 8 Months of 2018 vs First 8 Months of 2017

As of Oct. 2018
New Bulk Product Shifting Focus From West To East This Cycle
National Hotel Market
Supply & Demand Trends

Source: PWC
New Supply by Hotel Chain
2012-2018, Difference in Year-End Supply

Source: PWC
Question

• What will be the best performing property sector in 2019?
  • A. Apartment
  • B. Hotel
  • C. Industrial
  • D. Office
  • E. Retail
NPI Property Total Returns by Top CSAs

Annual

Chart: C-002-1901
NPI Property Total Returns by Metro

Chart: C-003-1901
Question

• What is your biggest concern for 2019 (that could impact CRE)?
  • A. Fed raising interest rates
  • B. Political stalemate
  • C. Inflation
  • D. Trade protectionism
Summary

• National returns continue downward trends
• Capital return barely positive leading to new high in market value index
• Cap rate drop slightly to another all time low
• Industrial returns continue to be the strongest sector; retail capital return turns negative
• Occupancy just down slightly for the quarter after hitting highest return since tech bust
Upcoming NCREIF Events

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March 18 – 20, 2019

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