Panelist Overview

Jeff Fisher
NCREIF Data, Research & Education Consultant

Michael Cohen
Vice President of Advisory Services
CoStar Group

Matthew Mowell
Senior Economist
Oxford Economics
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.
Agenda

• Quick summary of NCREIF results for 4th quarter
• Drill down into each property sector with CoStar Data
• Economic outlook with Oxford Economics data
Both ended the year on an up beat
Question

What will the annual NPI total return be for the year 2020?

A. Below 0%
B. 0%-to-1%
C. 1%-to-2%
D. Above 2%
Cap rate compression not likely to help returns going forward.
Question

• What will cap rates be for the nation by the end of 2020?
  • A. Below 4%
  • B. 4% to 4.5%
  • C. 4.5% to 5%
  • D. Above 5%
NPI Property Cap Rates, NOI and Market Values

Chart: C-006-2001

Market Value Index

NOI Index

Cap Rates
Question

• When will the Market Value Index (MVI) peak for this cycle?
  • A. Peaked in the fourth quarter of 2019
  • B. First quarter of 2020
  • C. Sometime in 2020 after first quarter
  • D. After 2020
NPI Returns by Property Type

- Apartment: 1.46%
- Hotel: 0.17%
- Industrial: 3.15%
- Office: 1.70%
- Retail: 0.05%
NPI Property Total Returns by Property Type

Total Returns

0% 2% 4% 6% 8% 10% 12% 14% 16%

NPI Index
Apartment
Industrial
Office
Retail

Annual

Chart: C-001-2001
NPI Property Cap Rates by Property Type

Annual

Cap Rates


NPI Index Apartment Industrial Office Retail

Chart: C-014-2001
NPI Property NOI Growth by Property Type

- NOI Growth
- NPI Index
- Apartment
- Industrial
- Office
- Retail

Annual


Chart: C-021-2001
NPI Property Vacancy by Property Type

Annual

Vacancy

NPI Index
Apartment
Industrial
Office
Retail

2%
4%
6%
8%
10%
12%
14%
16%


Chart: C-017-2001
National Vacancies Poised To Approach Long Term Average

National Index Apartment Fundamentals

Source: CoStar Portfolio Strategy
Note: The National Index is an aggregation of 54 major U.S. markets
*Historical Average: 2002-19

As of 19Q4
Will Luxury Vacancies Begin Trending Upward Again?

Vacancy Rates By Building Rating (National Index)

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

As of 19Q4
Luxury Supply Additions Continuing Through 2021

Net Apartment Deliveries By Star Rating - National Index

- 1 & 2 Star
- 3 Star
- 4 & 5 Star
- 2002-19 Average

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

As of 19Q4
Units Delivering In The Suburbs Come In Much Cheaper

Initial Asking Rents For One Bedroom Units By Submarket Designation

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<tr>
<td>Initial One Bedroom Rent/SF Upon Completion - 4Q Rolling Average</td>
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Source: CoStar Portfolio Strategy  
As of 19Q4
Renters Are Searching Suburban Areas At Outsized Rates

Share Of Search Hits Minus The Share Of Actual Units

Source: Apartments.com, CoStar Portfolio Strategy

As of 19Q3
Rent Growth Has Outperformed In Suburban Submarkets

YoY Rent Growth By Designation Grouping

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<td>Prime Urban</td>
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<td>Suburban</td>
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<td>Overall Urban</td>
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Source: CoStar Portfolio Strategy

*Uses only 1 bedroom rents of buildings built before 2013. Urban=Prime Urban & Urban, Suburban=Prime Suburban & Suburban

As of 1Q4

YoY Rent Growth

<table>
<thead>
<tr>
<th>Period</th>
<th>Overall Urban</th>
<th>Overall Suburban</th>
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<tr>
<td>13Q4-14Q4</td>
<td>3%</td>
<td>4%</td>
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<td>14Q4-15Q4</td>
<td>5%</td>
<td>6%</td>
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<td>15Q4-16Q4</td>
<td>2%</td>
<td>3%</td>
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<td>16Q4-17Q4</td>
<td>2%</td>
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<td>17Q4-18Q4</td>
<td>3%</td>
<td>4%</td>
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<td>18Q4-19Q4</td>
<td>2%</td>
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Suburban submarkets have the most units underway.

Units Underway By Submarket Designation

<table>
<thead>
<tr>
<th>Year</th>
<th>Prime Urban</th>
<th>Urban</th>
<th>Prime Suburban</th>
<th>Suburban</th>
<th>Low Density Areas</th>
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<td>19</td>
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<td>12</td>
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Source: CoStar Portfolio Strategy

As of 19Q4

Units Under Construction

- Prime Urban
- Urban
- Prime Suburban
- Suburban
- Low Density Areas
Office
Significantly More Demand Growth In 4 & 5 Star Product This Cycle

Cumulative Demand Growth Since 2006 By Star Rating

Source: CoStar Portfolio Strategy
Note: Primary Markets include New York, Washington, D.C., Boston, Chicago, Los Angeles, San Francisco, and Seattle.

As of 19Q3
Unprecedented Nine Year Vacancy Contraction Ends In 2020

National Index Supply, Demand, And Vacancy

Current Quarter: 9/30/2019
Current Vacancy: 
End of Forecast
Forecast Min
Historical Avg.
Recession Max

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

Annual Change In Demand & Supply (MSF)

Vacancy

Nine Year Vacancy Compression Streak At Risk In 2020

As of 19Q3
Net Absorption Slows As WeWork Expansion Pulls Back

The National Index is an aggregation of 54 major U.S. markets. As of 19Q3, the national index shows a decrease in office net absorption, with a focus on WeWork net absorption and other coworking net absorption. The chart forecasts a continued decrease in net absorption for the years 2020 and 2021, with a slight increase in other coworking net absorption.

Source: CoStar Portfolio Strategy

As of 19Q3

The National Index is an aggregation of 54 major U.S. markets.
Occupancy Spread In BPS (Current Vs 10-Year Average)

Source: CoStar Portfolio Strategy

As of 19Q4
The Sun Belt's Rent Growth Lead Accelerates In 2020
Annual Office Rent Growth 2018 Versus 2020 Forecast

Rent Growth Rankings: 2018 Versus 2020 Forecast

- Charlotte
- Seattle
- Raleigh
- Austin
- Tampa
- Denver
- San Jose
- Atlanta
- Philadelphia
- Los Angeles
- Phoenix
- San Francisco

Source: CoStar Portfolio Strategy
As of 19Q3
Supply Pressure Limited To A Few Markets
Supply And Vacancy Trends In New Inventory* By Market

Vacancy In New Construction*

Below Average New Supply But High Vacancy

Above Average New Supply But Low Vacancy

Above Average New Supply and High Vacancy

Source: CoStar Portfolio Strategy
*Includes Inventory Built Since 2015 And Supply Underway

As of 19Q3
Retail
Over 100 MSF of space will be announced for closure in 2020.

Share of total occupied retail RBA by risk category & SF announced for closure:

### Share of Total Occupied RBA

- **2017:**
  - Low Risk Tenants: 28%
  - Medium to High Risk Tenants: 6%

- **2018:**
  - Low Risk Tenants: 26%
  - Medium to High Risk Tenants: 7%

- **2019:**
  - Low Risk Tenants: 24%
  - Medium to High Risk Tenants: 9%

### Retail Space Announced For Closure (MSF)

- **2017:**
  - 105 MSF
- **2018:**
  - 155 MSF
- **2019:**
  - 113 MSF

Sources: Bloomberg; CoStar Portfolio Strategy

Note: Risk is based on Bloomberg's 1-Yr Default Probability Metric; Risk analysis is limited to 130 of the largest public retailers. As of December 2019.
Necessity-Based And Experiential Retail Are The Major Sources Of Demand Change In Occupied SF Leased In Shopping Centers Since 2016

Source: CoStar Portfolio Strategy
As of Oct. 2019

Note: Tenants that do not fit into shown retailer types are excluded from analysis

Change In Occupied Space- 2016 To Now ( Millions SF)

- Services
- Restaurant, Food & Beverage
- Grocery & Drug Stores
- Fitness & Sporting Goods
- Healthcare
- Movies & Entertainment
- Discounter
- Health & Beauty
- Home Improvement
- General Retail & Apparel

Small Tenants (Under 10,000 SF)
Mid-Size Tenants (10,000 - 25,000 SF)
Large Tenants (Over 25,000 SF)

Source: CoStar Portfolio Strategy
Note: Tenants that do not fit into shown retailer types are excluded from analysis

As of Oct. 2019
Bay Area Benefiting From Strong Demographic Growth & Little Supply Growth Growth

Drivers Behind Real Buying Power/SF Growth By Metro

Sources: U.S. Census Bureau; Oxford Economics; CoStar Portfolio Strategy

As of 19Q3
Mixed-Use Retail Supply Growth Share Exceeds Ten-Year Average

Retail RBA Added To Mixed-Use Sites As A % Of Total Retail Supply Growth

Share Of Total Retail Supply Growth

10-Year Average (2009-2019)

Source: CoStar Portfolio Strategy

*54 of the largest U.S. metros

Note: Mixed-Use Analysis is limited to sites/building parks that were built after 1990, are greater than 50,000 SF, and have four or more properties

As of 19Q3
Industrial
Significant Pipeline Of 500k+ Properties Will Soften Vacancies

Vacancy, % Change In Stock, Logistics Properties 500K+ SF Vs. 10K–500K SF

Source: CoStar Portfolio Strategy

As of 19Q3

Note: Historical average since 2007
Deliveries Of 500K SF+ Properties Adding To Supply Risks Across Markets

Vacancy And Under Construction As % Of Stock - Major Markets

As of 19Q4

Note: Analysis limited to logistics buildings with more than 500,000 SF.
Western Ports Slowing While East Rises

Change In TEUS By Region

Sources: Port Websites; CoStar Portfolio Strategy

As of Dec. 2019

*Port of NY/NJ December data based on estimates from December TEU figures.
Over 100 MSF Absorbed By 3PLs And E-commerce Retailers In 2019

Annual Industrial Absorption By NAICS Code And Major E-Commerce Players

Source: CoStar Portfolio Strategy
Note: Major E-commerce players include Amazon, eBay, QVC, Walmart, and Wayfair.

As of 19Q4
In 2019 Amazon Absorbed More Space Than All Its Competitors Combined

Occupied Industrial SF 2018-19 For Major E-commerce Players

Sources: CoStar Portfolio Strategy; 10-K Filings
As of Jan. 2020

Note: Total occupied industrial SF excludes telecom hotel/data hosting, manufacturing, and showroom space.
Amazon Continues To Increase Its Footprint In Smaller Properties

Amazon - Share Of Properties Occupied By Size

[Bar chart showing the share of occupied properties by size from 2009 to 2019, with a legend indicating that 0-250K SF is represented in blue, 250-500K SF in blue, and 500K SF+ in dark blue.]

Source: CoStar Portfolio Strategy
As of 19Q4
E-commerce To Occupy Over 400 MSF Of Industrial Space

E-commerce Square Feet Occupied And % Of Retail Sales (Exc. Auto And Gas)

Sources: Haver Analytics; Oxford Economics; 10-K Filings; eMarketer; CoStar Portfolio Strategy
As of Jan. 2020
Question

• What will be the best performing property sector in 2020?
  • A. Apartment
  • B. Industrial
  • C. Office
  • D. Retail
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Oxford Economics Outlook for North American Metros?
The outlook for the US economy from 30K feet

Real GDP growth should cool from 2.3% in 2019 to 1.6% in 2020. Weak business spending and industrial production will weigh upon growth this year. The coronavirus could shave 25bps from global growth (SARS had a 15bps impact).
The labor market is expected to cool

- The labor market is underwriting the expansion as unemployment is at a 50-year low.
- Monthly hiring this year should slow to 140K.
Our outlook for interest rates

- After reducing the policy rate by 75bps in 2019, the FOMC has shifted to a wait-and-see stance.
- Weaker economic growth will erode the Fed’s hawkish stance, expect a 25bps cut this year.

Source: Oxford Economics, Federal Reserve
Homeownership is up but should not drive material ‘move-outs’

- Homeownership will continue to pick-up but at a very slow pace.
- Many renters just don’t have savings for a down payment.
The Millennial boom is nearly over and they are going to the ‘burbs

- ‘Young adults’ are generally going to places they can afford with good job growth
- Top counties for growth are often purely suburban places, on the edge of large cities

Population of persons aged 20-29, CAGR 2019-23 (%)

- Mostly suburban, Sunbelt Counties
- The average county size is 1.26 million
- Supply growth could curtail rental gains
- Most counties will lose ‘twenty-somethings’ during the next 5 years

- Bubble diameter represents total county population
- Graphic only displays counties with a total population of >=600,000

Cities mentioned:
- Fort Bend
- Collin
- Denton
- Gwinnett
- Mecklenburg
- Tarrant
- Bexar
- Maricopa
- Harris
- Riverside
- Broward
- Miami-Dade
- Cook
- San Diego
- New York
- Los Angeles
- Philadelphia
- Kings
- Wayne
- District of Columbia
Low homeownership and demographic growth to drive occupancy

- Growing cities with low homeownership rates are ideal for some landlords.
- Some high-cost cities with low homeownership rates will have pockets of strong income growth.

Source: Oxford Economics, US Census
Industrial demand is likely to be bifurcated

- Manufacturing space is going to face head-winds from weak capital goods production.
- Logistics activity is likely to soften but not weaken like the manufacturing sector.

Source: Oxford Economics, BEA
Weaker job growth will translate into weaker spending. Although consumer sentiment should remain heightened, consumers will pull punches in 2020.
Only a few places are ‘high-skilled’ and ‘low-cost’

The unique combination of a highly skilled labor force and strong forecast growth.

The economy is slowly pivoting towards more office-using sectors.

- Many of the USA’s key knowledge economies have high barriers-to-entry or are expected to see slower growth.
- A small handful of generally Sunbelt cities offers a skilled labor force but a *relatively* low cost structure.
- The combination of skills and low-costs encourages more diverse growth.

Source: Oxford Economics, US Census
Some migrants are bringing new skills and changing the economic base.

The concentration of professional services has grown considerably across the South and West.

Boomtowns, such as Las Vegas and Phoenix, are focusing more on construction and logistics.
Question

• What region of the country do you think will perform best in 2020?
  • A. East
  • B. West
  • C. South
  • D. Midwest
Question

- What will impact US CRE the most in 2020?
  - A. Fed changing interest rates
  - B. Global slowdown (China, Germany, etc.)
  - C. Recession in the US
  - D. Trade wars
  - E. Coronavirus
Summary

• Another new high in market values
• Returns on all property types remain positive
• Industrial still has highest return but down slightly from last quarter
• Apartment and Office had the greatest increase from last quarter
• Cap rates remain at all time low levels
• Occupancy continues near all time high levels
• Slower GDP growth in 2020 but no recession and improving thereafter
• Ten year treasuries likely to remain steady
• Business investment may be weak this year
Upcoming NCREIF Events

NCREIF Winter Conference 2020
Phoenix, AX
March 9 – 12, 2020

Visit www.ncreif.org for more information