Keynote:
Economic Expansion, Commercial Real Estate- What’s Next?
Agenda

1. ECONOMIC OVERVIEW AND OUR OUTLOOK FOR THE NEAR TERM.
2. THE LATEST TRENDS FOR MULTIFAMILY, OFFICE, RETAIL, AND INDUSTRIAL. CHANGES IN DEMOGRAPHICS, USE OF SPACE, TECHNOLOGY, AND THE POLICY ENVIRONMENT THAT AFFECTS THE FUTURE OF SPECIFIC PROPERTY TYPES.
3. A DISCUSSION OF INTEREST RATES, THE YIELD CURVE, AND VARIOUS RECESSIONARY RISK FACTORS.
4. Q & A
Annual GDP Growth
2001 - 2023

Source: Bureau of Economic Analysis; Economy.com

Forecast
The World Economy
2017 GDP, $ in trillions

World’s Region
- North America
- Other Countries
- Africa
- Asia
- Australia
- Europe
- South America
- Middle East

Source: Worldbank
Labor Market Dynamics
Monthly, 2007 - 2019

Source: Bureau of Labor Statistics

REIS, Real Estate Solutions by Moody's Analytics
DJIA vs. 10-Year Treasury Rate
Daily, 04/2010 – 04/2019

Source: FRED; Federal Reserve Bank of Philadelphia
The Economic Outlook

Key Takeaways for 2018 and 2019

» US GDP growth for 2018 likely to have been as strong as in 2014 (the strongest growth year since the end of the last recession); consensus forecasts suggest that 2019 will drop back down to the low 2s, which has been CAGR since the end of the recession in mid-2009.

» Moderation does not mean contraction, although this does render growth vulnerable to shocks or shifts in sentiment.

» How does all this translate to how different property types performed in late 2018 and early 2019?

» We will, however, discuss some thoughts on what will cause the next recession, towards the end of this presentation. Hang on!
### National Apartment Market

#### Quarterly and Annual Market Conditions

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<th>Percent Change</th>
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<th>Percent Change</th>
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Source: Reis, Real Estate Solutions by Moody’s Analytics, 79 of 275 Apartment Markets

» Vacancies continuing to rise – as expected – ending the fourth quarter at 4.9%.

» Asking and effective rents still relatively healthy at 0.8% in the fourth quarter.

» Delays have moved relief from supply glut issues to next year, as 2019 promises to be the sector’s ‘cyclical high.’ Measures of demand remain strong, however.
National Apartment Market
Supply & Demand Trends

Source: Reis, Real Estate Solutions by Moody's Analytics; Top 50 Primary Apartment Markets
Completions by Submarket (DC)
2012-2018, Yearly

Source: Reis, Real Estate Solutions by Moody’s Analytics
NY Apartment Market
Supply & Demand Trends

Source: Reis, Real Estate Solutions by Moody's Analytics
Completions by Submarket (NY)
2012-2018, Yearly

Source: Reis, Real Estate Solutions by Moody’s Analytics
Demographic Tailwinds

Source: U.S. Census Bureau, Population Division

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
Office Space Per Employee

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Source: Reis, Real Estate Solutions by Moody’s Analytics
WeWork’s Growing Influence
Manhattan’s Largest Office Tenants by Square Footage

As of September 2018, WeWork is now the largest office tenant in Manhattan with 5.3 Million Square Feet

The Co-Sharing Company is the second largest occupier of office space in London, after government office space

Source: Cushman & Wakefield (As of August 2018)
### National Retail Market

**Quarterly and Annual Market Conditions**

**Neighborhood and Community Shopping Centers**

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<th>Year</th>
<th>Qtr</th>
<th>Net Absorption</th>
<th>Asking Rent</th>
<th>Percent Change</th>
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### Regional/Super Regional Malls

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<th>Effective Rent</th>
<th>Percent Change</th>
<th>Vacancy Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>Y</td>
<td>$40.48</td>
<td>0.3%</td>
<td>$37.45</td>
<td>0.3%</td>
<td>7.1%</td>
</tr>
<tr>
<td>2009</td>
<td>Y</td>
<td>$39.03</td>
<td>-3.6%</td>
<td>$36.33</td>
<td>-3.6%</td>
<td>8.8%</td>
</tr>
<tr>
<td>2010</td>
<td>Y</td>
<td>$38.79</td>
<td>-0.6%</td>
<td>$36.83</td>
<td>-0.6%</td>
<td>8.7%</td>
</tr>
<tr>
<td>2011</td>
<td>Y</td>
<td>$38.92</td>
<td>0.3%</td>
<td>$36.23</td>
<td>0.3%</td>
<td>9.2%</td>
</tr>
<tr>
<td>2012</td>
<td>Y</td>
<td>$39.31</td>
<td>1.0%</td>
<td>$36.58</td>
<td>1.0%</td>
<td>8.6%</td>
</tr>
<tr>
<td>2013</td>
<td>Y</td>
<td>$39.95</td>
<td>1.6%</td>
<td>$36.70</td>
<td>1.6%</td>
<td>7.9%</td>
</tr>
<tr>
<td>2014</td>
<td>Y</td>
<td>$40.66</td>
<td>1.8%</td>
<td>$36.71</td>
<td>1.8%</td>
<td>8.0%</td>
</tr>
<tr>
<td>2015</td>
<td>Y</td>
<td>$41.54</td>
<td>2.2%</td>
<td>$36.82</td>
<td>2.2%</td>
<td>7.8%</td>
</tr>
<tr>
<td>2016</td>
<td>Y</td>
<td>$42.38</td>
<td>2.0%</td>
<td>$36.70</td>
<td>2.0%</td>
<td>7.8%</td>
</tr>
<tr>
<td>2017</td>
<td>Y</td>
<td>$43.00</td>
<td>1.5%</td>
<td>$36.87</td>
<td>1.5%</td>
<td>8.3%</td>
</tr>
<tr>
<td>2018</td>
<td>X</td>
<td>$43.35</td>
<td>0.8%</td>
<td>$36.93</td>
<td>0.8%</td>
<td>9.0%</td>
</tr>
</tbody>
</table>

Source: Reis, Real Estate Solutions by Moody’s Analytics; 77 of 190 Office Markets

Net Absorption figures are in millions of square feet.
Retail e-commerce trends

Source: U.S. Census Bureau, Population Division
Industrial: Upward for 2018

» Flex/R&D vacancies rose by 10 basis points to 9.8% after falling the previous quarter.

» Effective rents grew at the same clip as the past quarter.

» Warehouse/distribution vacancies fell to 9.3% in the fourth quarter.

» Some evidence of recovery on the pricing side, with effective rents growing by 0.8% (an improvement over the first half of the year).

Source: Reis, Real Estate Solutions by Moody’s Analytics
Self-Storage in the Fourth Quarter

» Occupancies weakened by 150 basis points in the fourth quarter, ending the period at 86.6%

» Climate-controlled 10x10 unit rents fell by 2.4%, and non-climate-controlled 10x10 unit rents fell by 1.8%

» Supply concerns may ease as soon as this year, but it remains to be seen if sector fundamentals will improve significantly as it tries to absorb new deliveries.

Source: Reis, Real Estate Solutions by Moody’s Analytics
How About All the Others?

Source: U.S. Census Bureau, Population Division
Senior Housing in the Fourth Quarter

Source: Reis, Real Estate Solutions by Moody's Analytics
A Slide That Will Remain Untitled

How Did That Slide Get In There?

Source: Center for Disease Control
Student Housing in the Fourth Quarter

Tables present Fall 2018 to Fall 2019 expected trends in vacancies and rent change.

We expect a continued decrease in vacancies, despite strong supply growth, particularly for properties that rent by the Bed.

We expect a good year (Fall 2018 to Fall 2019) for student housing properties – with properties in the Southwest that rent by the Unit forecasted to show the strongest rent growth.
LIHTC in the Fourth Quarter

» National aggregations for vacancies of LIHTC properties remained very tight at 2.3% (though this represents a 20 basis point increase year over year).

» Because of tax reform lowering the value of LIHTC tax credits, we estimate a 40% reduction in LIHTC deliveries over the five year forecast period – relative to baseline. What is to be done?

Source: Reis, Real Estate Solutions by Moody’s Analytics
Driverless Cars

Investor’s Expectations of AV’s Impact on Parking and Development Opportunities

Source: Deloitte
The Changing Policy Environment

» Opportunity Zones as the latest iteration of “investing in places.”

» Who wins when places compete for business? The Amazon HQ2 story.

» How should one think of policy interventions and assess its impacts?

» What about other real estate related policy initiatives? Is infrastructure spending even part of the conversation these days (it should be)?
Yield Curve Tightening
Shorter term maturities invert, longer maturities retain higher rates

Shorter term Inversion
Shorter term yields vs. 5-Yr TSY recently inverted

However...
Longer maturities have not yet dropped below shorter term yields

Source: U.S. Department of the Treasury
Summary and Parting Thoughts

So, what will cause the next recession?

» The US economy grew by 2.9% in 2018 – matching the recent cyclical high from 2014, dated from when the last recession ended.

» A climb down back to the low 2s in 2019 does not mean a contraction.

» Short of an exogenous shock, a recession (however minor) can stem from a multitude of firms and individuals cutting back, however slightly, because they are acting prudently. The systemic result, however, can be economic contraction. Are you talking yourself into a recession?

» Multifamily and Self-Storage vacancies rising because of supply conditions, but will ease as soon as next year. Student Housing and Affordable Housing properties are relatively tight; Senior Housing needs to deal with demographic challenges. Other commercial property types not doing nearly as well as multifamily (with the possible exception of Industrial).
Economic Expansion & Real Estate
What’s Next – Near Term & Long Term?
Business Cycles, Technological Change, the Policy Environment, and the Future of Multifamily & Commercial Real Estate

April 30, 2019
Victor Calanog PhD | Chief Economist
Moody’s Analytics | REIS