THE AGING ECONOMIC EXPANSION
Implications for Multifamily and Student Housing

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How Does This Economy Rate?

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What’s Not to Like?
2nd highest 5-year real returns in last 30 years . . . and #1 for multifamily!

Real Rolling Four-Quarter NPI Returns: 1985-2Q16

Sources: NCREIF, BLS, and Colliers International

Markets Mostly Near “Normal” or Getting There
MF and industrial vacancies below avg.; office and retail still elevated

Sources: REIS and Colliers International

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U.S. CRE Transaction Volume Back to Prior Peak in 2015
But more balanced now

![U.S. Commercial Real Estate Transaction Volume > $2.5MM](chart.png)

Sources: Real Capital Analytics and Colliers International

The Uneven, Moderate Expansion Continues
Deserves more respect
The Uneven, Moderate Recovery Continues
Not perfect but good enough for property markets

• Strong enough to drive tenant demand and property investment and yet . . .
• Not strong enough to overheat (most) markets or encourage excessive supply

THE GOOD

- Home prices back to prior peak and home starts rising
- Employment well past prior peak and still going strong
- Consumers happier, stronger, confident
- Credit markets still benign

THE BAD

- Skewed expansion; weak wage growth
- Slower global growth; strong dollar
- Weak mfg / exports; falling corporate profits and CAPEX
- Election uncertainty

The Uneven, Moderate Expansion Continues (1)
Still no breakout, but private domestic economy better

Quarterly GDP Growth at Annualized Rate

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1Q10</td>
<td>-2.0%</td>
</tr>
<tr>
<td>2Q10</td>
<td>-1.0%</td>
</tr>
<tr>
<td>3Q10</td>
<td>0.0%</td>
</tr>
<tr>
<td>4Q10</td>
<td>1.0%</td>
</tr>
<tr>
<td>1Q11</td>
<td>2.0%</td>
</tr>
<tr>
<td>2Q11</td>
<td>3.0%</td>
</tr>
<tr>
<td>3Q11</td>
<td>4.0%</td>
</tr>
<tr>
<td>4Q11</td>
<td>5.0%</td>
</tr>
<tr>
<td>Avg. 1980+ = 3.1%</td>
<td></td>
</tr>
</tbody>
</table>

Quarterly Annualized Growth of Final Private Sales*

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1Q10</td>
<td>-2.0%</td>
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<td>3.0%</td>
</tr>
<tr>
<td>3Q11</td>
<td>4.0%</td>
</tr>
<tr>
<td>4Q11</td>
<td>5.0%</td>
</tr>
<tr>
<td>Avg. 1980+ = 3.4%</td>
<td></td>
</tr>
</tbody>
</table>

Notes: * Final Sales to Private Domestic Purchasers = GDP less Net Exports, Net Inventory Adjustments, and Government Spending and Investment. Sources: BEA, BLS, Macroeconomic Advisors via Haver Analytics and Colliers International.
The Uneven, Moderate Expansion Continues (2)

Job growth is the standout

Quarterly Nonfarm Jobs Growth at Annualized Rate

Nonfarm and Office-Using Jobs (Jan. 2008 = 1)

Leading Economic Indicators Still Quite Positive

U.S. and almost all states expanding

State Leading Indexes: Expected Six-Month Change

U.S. Leading Economic Indicator Index

Sources: BEA, BLS, Macroeconomic Advisors via Haver Analytics and Colliers International.
What, me worry?

Economic Concerns: Fewer, Less Productive Workers
Declining long-term productivity growth limits wage and GDP growth

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Graph of Labor Force Participation Rate" /></td>
<td><img src="image2" alt="Graph of Quarterly Productivity Growth" /></td>
</tr>
</tbody>
</table>

* Three-year moving average.
Economic Concerns: Job Polarization and Weak Wages
Fewer high-paying blue collar jobs means weak overall job growth

Real Average Weekly Earnings** (1964 = 100)

Share of Jobs by Type* (1984-2015)


The Multifamily and Student Housing Markets
Homeownership Rate Still Falling Sharply
Especially among households under 35

<table>
<thead>
<tr>
<th>Homeownership Rates 1Q 1965-2Q 2016</th>
<th>Change in Homeownership Rates (2Q04–2Q16)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td>59%</td>
</tr>
</tbody>
</table>

Sources: U.S. Census Bureau and Colliers International

Household Formations
All gains in this cycle have been rental

<table>
<thead>
<tr>
<th>Change in number of occupied housing units YoY</th>
<th>Change in occupied housing units since 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Renter</td>
</tr>
<tr>
<td></td>
<td>25%</td>
</tr>
</tbody>
</table>

Sources: Bureau of the Census and Colliers International.
University-Owned vs. Privately-Owned Student Housing*
Private SH tracks all MF while university-owned maintains higher occupancy

Among the "Axios175" schools.
Source: Axiometrics and Colliers International

Student Housing Sales Analysis (1)
Sales volume declined in 2013 and 2014 but surged in 2015

Source: Real Capital Analytics and Colliers International
Student Housing Sales Analysis (2)
Cap rates low and still falling but still at large spread to Treasuries

![Capitalization Rates on MF and Student Housing Sales > $2.5MM](image)

Sources: Real Capital Analytics and Colliers International

Student Housing Sales Analysis (3)
Prices continue to rise

![Average Price Per Unit](image)  
![Average Price Per Bed](image)

Source: Real Capital Analytics and Colliers International
Summary and 2016+ U.S. Forecast

“Mostly sunny with increasing clouds and a chance of rain”

An Aging Economic Expansion
Already longer than most

<table>
<thead>
<tr>
<th>Year</th>
<th>Recovery Period</th>
<th>Total Months in Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>1945</td>
<td>10/45 - 11/48</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>11/49 - 7/53</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>5/54 - 8/57</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>4/58 - 4/60</td>
<td>24</td>
</tr>
<tr>
<td>1970</td>
<td>2/61 - 12/69</td>
<td>107</td>
</tr>
<tr>
<td></td>
<td>11/70 - 11/73</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>3/75 - 1/80</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td>12/82 - 7/90</td>
<td>92</td>
</tr>
<tr>
<td>1990</td>
<td>3/91 - 3/2001</td>
<td>123</td>
</tr>
<tr>
<td></td>
<td>11/01 - 12/07</td>
<td>74</td>
</tr>
<tr>
<td>Present</td>
<td>7/09 - now</td>
<td>87</td>
</tr>
</tbody>
</table>

Total = 147 months
Avg. = 63 months

Source: BEA via Haver Analytics and Colliers International.
Summary and 2016+ U.S. Forecast

“Mostly sunny with increasing clouds and a chance of chance of rain”

- We’re (much) closer to the end of the expansion than the beginning:
  - The uneven, moderate expansion continues.
  - Two to three good years left (probably) but . . .
  - The economy is cooling (though not cratering).

- Risks are weighted more to the downside and growing:
  - Global economic slowing, strong dollar strong headwinds.
  - Election jitters; corporate uncertainty.
  - Interest rates to rise very modestly and not material.

- We’re (much) closer to the top of the property market cycle than the bottom:
  - Financial returns easing as cap rates stabilize / rise . . .
  - But strong investor interest will maintain asset values.
  - Strong property fundamentals will drive income returns.
  - Leasing and investment sales volumes stay strong but below 2015.

- Cyclical recovery is essentially complete:
  - Remaining weakness is structural.
  - Bifurcation more important than rising tide, especially in retail.
  - Structural changes favor multi-family, industrial over retail, CBD office over suburban.