Forward To Days Gone Past

2017 CRE Symposium
Connecticut CCIM

Presented By:
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Subject Matter Expert – CRE
The views and opinions expressed are those of the presenter and are not necessarily those of the Federal Reserve Bank of Atlanta or the Board of Governors of the Federal Reserve System.
Current: As of 7/2017, data through June 2017

Source: Bureau of Labor Statistics, STL FRB FRED
UNEMPLOYMENT RATES

Current: As of 7/2017

Source: Bureau of Labor Statistics, STL FRB FRED
STATE JOB GROWTH

United States
1.6% ▲ Year-Over-Year (YoY) % Change, May 2017
5.6% ▲ % Change from Pre-Recession Peak

YT
0.5% ▲ 1.3% ▲

ME
0.6% ▲ -0.2% ▼

NY
1.6% ▲ 8.5% ▲

NH
1.4% ▲ 3.8% ▲

MA
1.6% ▲ 8.7% ▲

RI
1.5% ▲ -0.1% ▼

MD
1.6% ▲ 4.7% ▲

DC
1.4% ▲ 13.2% ▲

DE
0.9% ▲ 3.4% ▲

NJ
1.1% ▲ 0.4% ▲

YoY % Change, May 2017
Change from Pre-Recession Peak

Source: Bureau of Labor Statistics, Risk Analysis Unit/Federal Reserve Bank of Atlanta
## CONNECTICUT JOBS

<table>
<thead>
<tr>
<th>Sector</th>
<th>Year-Ago Difference (000s)</th>
<th>Total Difference 2007-2016</th>
<th>Average Annual Wage</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>25.8 24.6 -12.1 -16.4 -20.8 5.3 17.4 18.7 12.7 0.6 -72.7 -18.4 16.4 13.4 12.3 11.1 13.0 5.4 11.0</td>
<td>-1.6</td>
<td>$65,880</td>
<td>0.5%</td>
</tr>
<tr>
<td>Nat. Resources</td>
<td>0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0</td>
<td>-0.2</td>
<td>$38,460</td>
<td>5.2%</td>
</tr>
<tr>
<td>Construction</td>
<td>2.3 3.7 0.8 -1.5 -1.9 3.7 1.2 1.5 -3.3 -10.8 -4.6 1.5 -0.1 2.0 2.1 2.4 1.1 2.4</td>
<td>-8.1</td>
<td>$66,550</td>
<td>3.6%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>-7.7 -4.6 -8.9 -15.9 -11.3 -3.0 -2.2 -1.9 -2.9 -3.4 -16.2 -5.7 0.6 -1.5 -1.7 -3.0 -0.3 -0.7 0.1</td>
<td>-34.5</td>
<td>$79,470</td>
<td>-1.4%</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>-0.3 2.1 -0.8 -1.4 -0.6 0.3 0.7 1.0 0.8 0.9 -4.3 -2.2 0.3 0.1 -0.1 -0.2 -0.3 0.3 -0.3</td>
<td>-4.8</td>
<td>$93,640</td>
<td>1.0%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>3.0 2.7 -2.9 -0.3 -3.0 0.7 -0.1 -0.7 -0.1 -3.1 -9.7 -0.2 1.8 1.7 1.4 1.2 0.4 -0.1 -2.7</td>
<td>-6.7</td>
<td>$33,230</td>
<td>0.8%</td>
</tr>
<tr>
<td>Transp. &amp; Utilities</td>
<td>0.8 0.4 -1.2 -0.2 1.2 2.0 0.1 0.2 -0.1 -2.8 -0.7 0.8 0.8 1.4 0.9 1.2 1.1 1.3</td>
<td>2.8</td>
<td>$47,680</td>
<td>0.7%</td>
</tr>
<tr>
<td>Information</td>
<td>0.4 1.8 -1.4 -0.6 -0.9 0.5 -0.6 -3.5 -2.6 -0.4 0.0 0.7 0.0 0.4 -0.1 -1.2</td>
<td>-5.6</td>
<td>$102,270</td>
<td>3.0%</td>
</tr>
<tr>
<td>Finance</td>
<td>3.9 2.2 -0.1 -0.3 0.0 -2.0 1.6 2.0 0.3 -1.2 -5.8 -2.4 -0.2 -1.9 -2.6 -1.8 1.4 -0.1 -3.4</td>
<td>-14.3</td>
<td>$150,470</td>
<td>-0.1%</td>
</tr>
<tr>
<td>Professional Service</td>
<td>7.8 4.5 -6.3 -7.5 -5.1 0.6 3.1 4.5 2.4 -1.3 -15.3 0.1 6.1 5.9 3.3 4.8 4.1 -0.8 -0.2</td>
<td>9.2</td>
<td>$87,440</td>
<td>1.3%</td>
</tr>
<tr>
<td>Educ. &amp; Health</td>
<td>4.6 2.8 7.4 7.1 4.3 4.7 4.6 6.3 8.2 8.9 5.6 4.6 6.1 4.0 3.3 3.7 2.5 2.9 4.9</td>
<td>49.9</td>
<td>$53,140</td>
<td>1.1%</td>
</tr>
<tr>
<td>Leisure &amp; Hospitality</td>
<td>2.9 1.4 -1.6 3.3 2.3 2.5 1.9 3.1 3.2 1.6 -3.6 -0.1 3.5 5.1 4.6 3.1 1.2 2.9 3.4</td>
<td>21.5</td>
<td>$22,510</td>
<td>2.8%</td>
</tr>
<tr>
<td>Other Services</td>
<td>0.6 0.3 1.0 0.8 -0.6 0.3 0.3 0.9 0.4 -1.0 -1.9 -0.7 -0.3 1.2 0.5 1.0 0.9 1.1 2.8</td>
<td>1.3</td>
<td>$32,810</td>
<td>0.4%</td>
</tr>
<tr>
<td>Government</td>
<td>7.3 6.7 2.6 4.9 -3.3 -3.2 0.9 2.1 3.3 3.3 -4.3 -4.1 -3.9 -1.7 -0.3 -0.4 -1.3 -2.7 -4.6</td>
<td>-12.0</td>
<td>$61,470</td>
<td>0.9%</td>
</tr>
</tbody>
</table>
HOME PRICE APPRECIATION

Source: CoreLogic, Risk Analysis Unit/Federal Reserve Bank of Atlanta

U.S. = 4.5%

House Price Index (YoY %, May 2017)

- < -5% (2)
- 5% - 0% (15)
- 0% - 3% (32)
- 3% - 6% (27)
- > 6% (25)

Buffalo 7.9%
Rochester 1.7%
Albany 1.6%
Bangor 2.3%
Augusta -1.9%
Portland 0.5%
Buffalo 7.9%
Burlington 3.9%
Providence 5.6%
Boston 6.3%
Washington D.C. 5.0%
New York City 3.4%
Hartford 1.3%
Trenton 0.5%
Philadelphia 2.6%
Dover 1.2%
Pittsburgh 1.9%
Harrisburg 0.8%
Baltimore 1.6%
Trenton 0.5%
Hartford 1.3%
New York City 3.4%
Washington D.C. 5.0%
Burlington 3.9%
Providence 5.6%
Boston 6.3%
Philadelphia 2.6%
Dover 1.2%
Pittsburgh 1.9%
Harrisburg 0.8%
Baltimore 1.6%
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Albany 1.6%
Bangor 2.3%
Providence 5.6%
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Washington D.C. 5.0%
New York City 3.4%
Hartford 1.3%
Trenton 0.5%
Philadelphia 2.6%
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Baltimore 1.6%
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Hartford 1.3%
Trenton 0.5%
Philadelphia 2.6%
Dover 1.2%
Pittsburgh 1.9%
Harrisburg 0.8%
Baltimore 1.6%
MORTGAGE DELINQUENCY SNOWPLOGY

Source: McDash Analytics, LLC, a wholly owned subsidiary of Black Knight Financial Services, Risk Analysis Unit/Federal Reserve Bank of Atlanta
MORTGAGE DELINQUENCIES
YEAR-OVER-YEAR CHANGE

Source: McDash Analytics, LLC, a wholly owned subsidiary of Black Knight Financial Services, Risk Analysis Unit/Federal Reserve Bank of Atlanta
COMMERCIAL REAL ESTATE
WHY CRE?

Headlines:

Hot Real Estate A Potential Red Flag: Fed’s Rosengren (CNBC)
Dying Shopping Malls Are Wreaking Havoc on Suburban America (Bus. Insider)
…Shadows Darken Over American Malls (USA Today)
America’s Dying Shopping Malls Have Billions in Debt Coming Due (Bloomberg)
Once purchased for $120 MM, AZ Mall Backing $75mm CMBS Loan Gets Valued at $18mm (CRE Direct)
American Retailers Are Closing Stores Faster Than Ever (Bloomberg)
Amazon Purchases Whole Foods

Retailers Facing Challenges:

JC Penney’s, Sears, Macy’s, HH Gregg, Radio Shack, American Apparel, Wet Seal, Crocs, Chicos, The Limited, Gander Mountain, Claire’s, Target, Payless, etc…

Lending

Bank CRE lending is rising; but the risk appetite is also very cautious
The number of institutions above the SR 07-1 guidance continues to grow
Data through 2017Q2
Retail: Neighborhood, Community and Strip Centers

Source: AXIOMetrics, CBRE-EA, Risk Analysis Unit/Federal Reserve Bank of Atlanta
NATIONAL NEW SUPPLY VS. LONG-TERM AVERAGE
20-YEAR AVERAGES VS. 2015, 2016, 2017 SUPPLY

Source: CBRE EA, Risk Analysis Unit/Federal Reserve Bank of Atlanta
APARTMENT SUPPLY & DEMAND

Data through 2017Q1 (4Q Rolling Sum)

Source: AXIOMetrics, Risk Analysis Unit/Federal Reserve Bank of Atlanta
APARTMENT UNITS UNDER CONSTRUCTION
AS A % OF EXISTING INVENTORY

Feb 2017 New Construction
As a Percent of Stock (ACS 2014 5+ units)
- 0% - 2% (89)
- 2% - 4% (86)
- 4% - 6% (39)
- 8% - 10% (31)
- 10%+ (16)

Source: RCA Analytics, Risk Analysis Unit/Federal Reserve Bank of Atlanta
MULTIFAMILY OCCUPANCY

Annualized Occupancy
(%, May 2017)

- < 92% Poor (2)
- 92% - 93% Fair (1)
- 93% - 95% Average (7)
- 95% - 96% Above Average (13)
- > 96% Strong (31)

Source: AXIOMetrics, Risk Analysis Unit/Federal Reserve Bank of Atlanta
MULTIFAMILY OCCUPANCY
YEAR-OVER-YEAR CHANGE

YoY % Change in Occupancy
(May 2017)

< 1% (12)
-1% - 0% (12)
0% - 0.5% (8)
0.5% - 1.5% (11)
> 1.5% (8)

Source: AXIOMetrics, Risk Analysis Unit/Federal Reserve Bank of Atlanta
MULTIFAMILY EFFECTIVE RENT GROWTH (ERG)

Source: AXIOMetrics, Risk Analysis Unit/Federal Reserve Bank of Atlanta
OFFICE VACANCY

Level

U.S. = 13%

Year-Ago BP Difference

U.S. = -10 bps

Source: CBRE-EA, REIS, Risk Analysis Unit/Federal Reserve Bank of Atlanta

Data for 2017 Q1
INDUSTRIAL VACANCY

Source: CBRE-EA, REIS, Risk Analysis Unit/Federal Reserve Bank of Atlanta

Level

U.S. = 8%

Year-Ago BP Difference

U.S. = -50 bps

< 7.5% (2)
7.5% - 10.0% (6)
10.0% - 12.5% (6)
12.5% - 15.0% (1)
15.0% - 20.0% (0)
> 20.0% (0)

< -500 (1)
-500 - -250 (3)
-250 - -50 (10)
-50 - 50 (1)
50 - 250 (0)
250 - 500 (0)
> 500 (0)

Data for 2017 Q1
Source: CBRE-EA, REIS, Risk Analysis Unit/Federal Reserve Bank of Atlanta

Data for 2017 Q1
UPPER-TIER HOTEL OCCUPANCY

Level

Year-Ago BP Difference

U.S. = 72%

U.S. = 20 bps

Source: CBRE-EA, Risk Analysis Unit/Federal Reserve Bank of Atlanta

Data for 2017 Q1
LOWER-TIER HOTEL OCCUPANCY

Level

Year-Ago BP Difference

U.S. = 64.7%

U.S. = 30 bps

Source: CBRE-EA, Risk Analysis Unit/Federal Reserve Bank of Atlanta
CAPITAL & FINANCE
CRE TRANSACTION VOLUME

Data: Q1 2017
Source: Real Capital Analytics, Risk Analysis Unit/Federal Reserve Bank of Atlanta
MAJOR MARKET CRE PRICE INDICES

Major markets: (Boston, Chicago, Los Angeles, New York City, San Francisco, and Washington D.C.)

Data: Q1 2017

Source: Real Capital Analytics, Risk Analysis Unit/Federal Reserve Bank of Atlanta

*Major markets: (Boston, Chicago, Los Angeles, New York City, San Francisco, and Washington D.C.)
NON-MAJOR MARKET CRE PRICE INDICES

Source: Real Capital Analytics, Risk Analysis Unit/Federal Reserve Bank of Atlanta

Data: Q1 2017

*Nonmajor markets: All markets except the majors (Boston, Chicago, Los Angeles, New York City, San Francisco, and Washington D.C.)
Commercial Real Estate Prices
Major vs. Non-Major Markets (Cumulative)

Major
- Apartment: 93% (1 Year) -9% (3 Year) -13% (5 Year) -20% (From Pre-Downturn Peak)
- Office: 95% (1 Year) -7% (3 Year) -10% (5 Year) -15% (From Pre-Downturn Peak)
- Industrial: 70% (1 Year) -4% (3 Year) -5% (5 Year) -10% (From Pre-Downturn Peak)
- Retail: 59% (1 Year) -3% (3 Year) -1% (5 Year) -5% (From Pre-Downturn Peak)
- Suburban Office: 47% (1 Year) -2% (3 Year) -3% (5 Year) -6% (From Pre-Downturn Peak)

Non-Major
- Apartment: 94% (1 Year) -10% (3 Year) -16% (5 Year) -20% (From Pre-Downturn Peak)
- Office: 73% (1 Year) -3% (3 Year) -5% (5 Year) -10% (From Pre-Downturn Peak)
- Industrial: 51% (1 Year) -1% (3 Year) -2% (5 Year) -5% (From Pre-Downturn Peak)
- Retail: 60% (1 Year) -3% (3 Year) -5% (5 Year) -7% (From Pre-Downturn Peak)
- Suburban Office: 51% (1 Year) -3% (3 Year) -4% (5 Year) -8% (From Pre-Downturn Peak)

*on Property Sales > $2.5mm

Source: Real Capital Analytics/FRB Atlanta Risk Analysis Unit.
CMBS
Newly Delinquent Loan Balances By Property Type

IN=Industrial; LO=Lodging; MF=Multifamily; OT=Other; OF=Office; RT=Retail

Source: TREPP
Data through April 2017
In seven past quarters, a net number of respondents reported tightening underwriting standards on Multifamily, Nonfarm Nonres and C&D Loans.

Source: Federal Reserve; Risk Analysis Unit/FRB Atlanta
A SIGN OF THE TIMES...
SALES GROWTH
TRADITIONAL RETAIL VS. ECOMMERCE

Source: US Census Bureau, STL FRB FRED
RETAIL SQUARE FEET PER CAPITA

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Retail Sq. Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>24</td>
</tr>
<tr>
<td>Canada</td>
<td>15</td>
</tr>
<tr>
<td>Australia</td>
<td>10</td>
</tr>
<tr>
<td>Norway</td>
<td>8</td>
</tr>
<tr>
<td>Netherlands</td>
<td>6</td>
</tr>
<tr>
<td>New Zealand</td>
<td>5</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>5</td>
</tr>
<tr>
<td>Japan</td>
<td>4</td>
</tr>
<tr>
<td>Germany</td>
<td>3</td>
</tr>
<tr>
<td>China</td>
<td>1</td>
</tr>
</tbody>
</table>
NOTABLE RETAIL BANKRUPTCIES

As of July 1, 2017
Source: CNBC, TheDeal, AlixPartners

Number of Notable Retailer Bankruptcies

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sale</td>
<td>3</td>
<td>4</td>
<td>8</td>
<td>7</td>
<td>3</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Re-Org</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Liquidation</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>2</td>
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<td>3</td>
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<td>6</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Not Determined</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

YTD: Year-to-Date
INCREASING TARGETED RETAIL RISKS

MALLS ACROSS AMERICA ARE AT RISK OF CLOSING

Number of malls

<table>
<thead>
<tr>
<th>Mall grade</th>
<th>Number of Malls</th>
</tr>
</thead>
<tbody>
<tr>
<td>A++</td>
<td>37</td>
</tr>
<tr>
<td>A+</td>
<td>66</td>
</tr>
<tr>
<td>A</td>
<td>97</td>
</tr>
<tr>
<td>A-</td>
<td>110</td>
</tr>
<tr>
<td>B+</td>
<td>152</td>
</tr>
<tr>
<td>B</td>
<td>161</td>
</tr>
<tr>
<td>B-</td>
<td>113</td>
</tr>
<tr>
<td>C+</td>
<td>94</td>
</tr>
<tr>
<td>C</td>
<td>95</td>
</tr>
<tr>
<td>C-</td>
<td>108</td>
</tr>
<tr>
<td>D</td>
<td>37</td>
</tr>
</tbody>
</table>

334 malls that qualify as C & D rated are at high risk of closing

SOURCE: Green Street Advisors
Ecommerce has been good at shifting consumer buying habits away from commodity based brick-and-mortar retailers but has made little inroads against grocery purchases.

Ecommerce penetration of grocery-related sales is estimated at roughly 2%

Grocery prices down 1.3% in 2016

Kroger same-store sales down for the first time in 13 years

Consumers demand home delivery….big implications for retailers…more consumer options, lower amount of impulse buys, declining margins in an already margin challenged business, etc.

Source: NREI, Risk Analysis Unit/Federal Reserve Bank of Atlanta
• Apartment dynamics slowing (greater supply, slowing rent growth (may be negative in some cases), and rising operating costs)
• Industrial in high demand due to ecommerce, but a large amount of new supply is underway
• Office using employment continues to grow, impacting demand; however, trends in densification and telecommuting pose headwinds
• Retail encountering significant impacts from ecommerce, some retail could rapidly move from the Upturn to the Mature Stage

Source: AXIOMetrics, CBRE-EA, Mueller, Risk Analysis Unit/Federal Reserve Bank of Atlanta
• The national economy today appears positioned for continued growth and steadily improving conditions. However, there are some areas that are experiencing soft dynamics.

• Oversupply conditions appear to be growing in certain Multifamily segments.

• Consumer buying habits are shifting due to the low switching costs. This is creating chaos among traditional brick-n-mortar retailers that are unable to adapt.

• Will the future Grocery-Anchored landscape evolve similar to the one experienced by electronics, books, etc.?