Presented By:
Brian D. Bailey, CCIM, CRE
Subject Matter Expert – CRE

Commercial Real Estate and the Next Downturn

2018 Atlanta Fed Banking Outlook Conference
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.
Economy
• National Unemployment
• State Unemployment

Property Sector
• Vacancy/Occupancy
• Apartment Effective Rent Growth
• Supply

Capital Markets
• Transactions
• Cap Rates
• Risk Premiums

Has The Downturn Started
• Cyclical/Idiosyncratic Risk
UNEMPLOYMENT RATES

Current: 8.2%
Pre Crisis: 8.4%

Current: 4.1%
Pre Crisis: 4.6%

Source: Bureau of Labor Statistics, STL FRB FRED

Current: As of 1/2018
STATE UNEMPLOYMENT RATES
1Q 2007 – 4Q 2017 (%)

<table>
<thead>
<tr>
<th>State</th>
<th>U3</th>
<th>U6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>6.6</td>
<td>3.3</td>
</tr>
<tr>
<td>Georgia</td>
<td>8.1</td>
<td>4.5</td>
</tr>
<tr>
<td>Tennessee</td>
<td>8.6</td>
<td>5.1</td>
</tr>
<tr>
<td>Alabama</td>
<td>6.9</td>
<td>3.9</td>
</tr>
<tr>
<td>Mississippi</td>
<td>11.0</td>
<td>6.6</td>
</tr>
<tr>
<td>Louisiana</td>
<td>7.9</td>
<td>4.4</td>
</tr>
</tbody>
</table>

Source: Bureau of Labor Statistics, STL FRB FRED
Data 4Q/2017
COMMERCIAL REAL ESTATE
OCCUPANCY RATES
CURRENT VS. 20-YEAR AVERAGE (ATL, MIAMI, NASHVILLE, NATION)

Source: AXIOMetrics, CBRE-EA, Risk Analysis Unit/Federal Reserve Bank of Atlanta
### APARTMENT OCCUPANCY RATES

<table>
<thead>
<tr>
<th>Occupancy Range</th>
<th># of Markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 90%</td>
<td>25</td>
</tr>
<tr>
<td>90% to 92%</td>
<td>29</td>
</tr>
<tr>
<td>92% to 94%</td>
<td>75</td>
</tr>
<tr>
<td>94% to 96%</td>
<td>153</td>
</tr>
<tr>
<td>≥ 96%</td>
<td>106</td>
</tr>
</tbody>
</table>

Source: AXIOMetrics, Risk Analysis Unit/Federal Reserve Bank of Atlanta
APARTMENT EFFECTIVE RENT GROWTH & OCCUPANCY

COMBINED CHANGE

<table>
<thead>
<tr>
<th>Change Range</th>
<th># of Markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ -3%</td>
<td>78</td>
</tr>
<tr>
<td>-3% to 0%</td>
<td>115</td>
</tr>
<tr>
<td>0% to 2%</td>
<td>66</td>
</tr>
<tr>
<td>2% to 4%</td>
<td>52</td>
</tr>
<tr>
<td>≥ 4%</td>
<td>77</td>
</tr>
</tbody>
</table>

Source: AXIOMetrics, CBRE-EA, Mueller, 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
Source: AXIOMetrics, CBRE-EA, Mueller, Risk Analysis Unit/Federal Reserve Bank of Atlanta
Note: Depending upon economic conditions, indicators can remain stable or reverse

Source: AXIOMetrics, CBRE-EA, CoStar, Federal Reserve, Mueller
CAPITAL & FINANCE
CRE TRANSACTION VOLUME

Transaction Volume ($ USD, Billions)

Data: Q4 2017
Source: Real Capital Analytics, Risk Analysis Unit/Federal Reserve Bank of Atlanta
NATIONAL CRE CAP RATES
QUARTERLY AVERAGES 2010-2017

Yield 10 Yr T (10Q1: 3.83%, 174Q: 2.40%)
Data through 4Q 2017
Source: RCA, Federal Reserve Bank of Atlanta
NATIONAL CRE CAP RATES
QUARTERLY AVERAGES 2010-2017

Yield 10 Yr T (10Q1: 3.83%, 174Q: 2.40%)
Data through 4Q 2017
Source: RCA, Federal Reserve Bank of Atlanta
CRE CAP RATES
SPREAD ABOVE 10-YR TREASURY

Yield 10 Yr T = 2.4%
Data through 4Q 2017
Source: RCA, Federal Reserve Bank of Atlanta
CRE CAP RATES
SPREAD ABOVE 10-YR TREASURY

Office 412
Industrial 434
Retail 395
Apartment 326
Hotel 555

Table: Current vs. Average

<table>
<thead>
<tr>
<th>Type</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apartment</td>
<td>-3</td>
</tr>
<tr>
<td>Retail</td>
<td>25</td>
</tr>
<tr>
<td>Office</td>
<td>20</td>
</tr>
<tr>
<td>Industrial</td>
<td>1</td>
</tr>
<tr>
<td>Hotel</td>
<td>63</td>
</tr>
</tbody>
</table>

10 Yr T Yield = 2.4%

Data through 4Q 2017

Source: RCA, Federal Reserve Bank of Atlanta
THE 2008 DOWNTURN

Property

Economy

Lending
SHIFT HAPPENS
**Property Sector**
- Overbuilding
- Greater Efficiency
  - Amazon
- Affordability
  - Higher Rents
  - Increased Costs
- Cybersecurity

**Capital Markets**
- Capital Availability
- Heightened Value Levels
- Rising Cap Rates
- Reduced Regulatory Environment
- Current Prevailing Market Sentiment “What Can Go Wrong”
- Current LTV Environment

**RISK**
- Current LTV Environment
Market participants say: “Average loan LTV = 58%. A low leverage environment equates to safety and what can go wrong.”

<table>
<thead>
<tr>
<th></th>
<th>Current</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOI</td>
<td>$100,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>Cap Rate</td>
<td>5.50%</td>
<td>7.00%</td>
</tr>
<tr>
<td>Value</td>
<td>$1,818,182</td>
<td>$1,428,571</td>
</tr>
<tr>
<td>Leverage @ 58%</td>
<td>$1,054,545</td>
<td>$1,054,545</td>
</tr>
<tr>
<td>LTV Based on New Value</td>
<td>74%</td>
<td></td>
</tr>
</tbody>
</table>

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<tr>
<td>NOI</td>
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<td>$100,000</td>
</tr>
<tr>
<td>Cap Rate</td>
<td>4.00%</td>
<td>5.50%</td>
</tr>
<tr>
<td>Value</td>
<td>$2,500,000</td>
<td>$1,818,182</td>
</tr>
<tr>
<td>Leverage @ 58%</td>
<td>$1,450,000</td>
<td>$1,450,000</td>
</tr>
<tr>
<td>LTV Based on New Value</td>
<td>80%</td>
<td></td>
</tr>
</tbody>
</table>

All else remaining equal, a 150 basis point increase in CRE Cap Rates moves the LTV upward notably in both scenarios.

The implications may be greater for smaller markets.
STRATEGIES TO MINIMIZE RISK

Property Sector

- Enhanced Market Knowledge
- Greater Due Diligence
- Monitoring Changing Dynamics
- Actively Monitoring Concentrations
  - Property
  - Geography
  - Tenant

Capital Markets

- Stress Testing Going-In & Exit Cap Rates
- Stress Testing LTVs Against Changing Property Values
- Asking “What Can Go Wrong”