
Overview

Moody’s quarterly Red-Yellow-Green® report measures the health of the commercial real estate markets that support the majority of loans in commercial mortgage backed securities (CMBS). This report is based on data from the first quarter of 2010. The scores and metrics this quarter are encouraging. Though all of the property types retained their same color from last quarter, the trend of improvement continues. Most significantly, due to recovery in year-over-year RevPAR, the hotel sectors have finally broken through the Red 0 barrier where they had languished for the past five quarters. Supply pipelines are down in all seven sectors, and the supply-demand relationships improved in six of the seven sectors. Despite this, increasing vacancy rates persist in the retail, industrial and office sectors. Multifamily saw some deterioration in its supply-demand imbalance, though demand still outweighs supply and its vacancy rate decreased.

While most vacancy rates continued to rise due to the poor absorption experienced in 2009, demand going forward is on the upswing. In fact, the two office sectors are the only property types that have negative absorption forecasts over the next year. Thus, the pace of growth in vacancy rates should begin to flatten and possibly contract in the coming quarters if the expectations materialize. However, excluding multifamily, less than 10% of all market/property type combinations are in green territory, so while commercial real estate in general is looking better than it did twelve months ago, the sector has further challenges ahead as it continues to work through the effects of the recession.
The dispersion of scores in all property types continued its upward shift this quarter. The most noteworthy change occurred in the hotel sectors, where the scores began emerging from Red 0 and are starting to spread across the red-yellow border.
The majority of markets (46%) rest in yellow territory this quarter, a shift from the past four quarters that saw red as the dominant color. The share of red markets is down to a third of all markets (33%) from 43% last quarter, while the green market share grew from 17% to 21%.

**FIGURE 3**

**Market Stress Comparison**

2nd Quarter 2010 and 1st Quarter 2010

<table>
<thead>
<tr>
<th></th>
<th>MULTIFAMILY</th>
<th>RETAIL</th>
<th>OFFICE: CBD</th>
<th>OFFICE: SUBURBAN</th>
<th>INDUSTRIAL</th>
<th>HOTEL: FULL SVC.</th>
<th>HOTEL: LTD. SVC.</th>
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<tbody>
<tr>
<td><strong>Red</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2Q 2010</td>
<td>1</td>
<td>5</td>
<td>13</td>
<td>21</td>
<td>4</td>
<td>38</td>
<td>37</td>
</tr>
<tr>
<td>1Q 2010</td>
<td>0</td>
<td>4</td>
<td>19</td>
<td>25</td>
<td>10</td>
<td>49</td>
<td>48</td>
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<tr>
<td><strong>Yellow</strong></td>
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<tr>
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<td>7</td>
<td>33</td>
<td>29</td>
<td>30</td>
<td>45</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>1Q 2010</td>
<td>15</td>
<td>41</td>
<td>23</td>
<td>26</td>
<td>41</td>
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<td><strong>Green</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2Q 2010</td>
<td>52</td>
<td>17</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>1Q 2010</td>
<td>45</td>
<td>10</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>No. of Markets</strong></td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>2Q 2010</td>
<td>60</td>
<td>55</td>
<td>47</td>
<td>52</td>
<td>51</td>
<td>50</td>
<td>49</td>
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<tr>
<td>1Q 2010</td>
<td>60</td>
<td>55</td>
<td>47</td>
<td>52</td>
<td>51</td>
<td>50</td>
<td>49</td>
</tr>
<tr>
<td><strong>Composite Score</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1Q 2010</td>
<td>G: 81</td>
<td>Y: 56</td>
<td>Y: 52</td>
<td>Y: 35</td>
<td>Y: 41</td>
<td>R: 0</td>
<td>R: 0</td>
</tr>
</tbody>
</table>
The **multifamily** composite score rose an additional five points this quarter, to Green 86, as the sector’s vacancy rate decreased from 7.4% to 6.5%. There was little movement when it came to other factors. The gap between demand and supply shifted only slightly from 0.7% to 0.5%. Demand projections slowed from 1.1% to 0.9% while supply contracted a bit from 0.4% to 0.3%.

The **retail** score gained an additional four points this quarter, from Yellow 56 to Yellow 60. Though its vacancy rate rose once again, from 12.4% to 12.8%, the supply-demand imbalance contracted to a mere -0.1%, from -0.3%. The supply pipeline shrunk to just 0.1% while projected demand is flat at 0.0%.

The score for **offices in central business districts (CBDs)** grew this quarter, from Yellow 52 to Yellow 55. The supply-demand mismatch continued to tighten, with supply outpacing demand by 0.8%, down from last quarter’s 1.4%. The vacancy rate however, increased for the sixth straight quarter, up to 12.9% from 12.5%, a number not seen since 2005, and projected absorption remained negative over the next year, at -0.5%.

The **suburban office** score held steady at Yellow 35 this quarter, as there were only minor shifts among the metrics. Though supply tightened slightly from 0.5% to 0.4%, forecasted demand remained flat at -0.6%, leading to a small improvement in the supply-demand imbalance. This was offset by the vacancy rate which, like the CBD sector, grew once again, to 18.6% from 18.4%.

The **industrial** sector gained another 14 points this quarter moving its score from Yellow 41 to Yellow 55. High vacancy remains intact as the composite vacancy increased slightly from 13.9% to 14.0%. The increase in score can be credited to both projected absorption and the construction pipeline moving in favorable directions. As a result, the supply-demand imbalance narrowed from -0.8% to 0.0%.

The **full-service hotel** score grew to Red 24 after five quarters at Red 0. In fact, only ten markets had scores of Red 0 this quarter, versus 37 last quarter. The noteworthy improvement was largely due to the sector experiencing year-over-year RevPAR growth for the first time since 2008. RevPAR grew 0.3% over last year, a major change from the 11.7% decline from last period. In addition, projected demand is 1.8%, ending a four-year streak of negative demand forecasts.

The **limited-service hotel** sector echoed the full-service sector in year-over-year RevPAR improvement though it still experienced a 3.8% drop. Thus, its score only jumped to Red 15. Projected demand remained positive like the prior two quarters, increasing slightly from last quarter’s 0.8% to 0.9%. Only 11 markets are at Red 0 compared to 36 last quarter, and one market made the leap into green territory, the only hotel market in either sector to do so.
### FIGURE 4

**Markets with Greatest Deterioration or Improvement**

<table>
<thead>
<tr>
<th>MARKET</th>
<th>2Q 10 SCORE</th>
<th>1Q 10 SCORE</th>
<th>CHANGE</th>
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</thead>
<tbody>
<tr>
<td><strong>Greatest Deterioration</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stamford Industrial R: 7 Y: 46</td>
<td>R: 7</td>
<td>Y: 46</td>
<td>-39</td>
</tr>
<tr>
<td>El Paso Multifamily R: 29 Y: 56</td>
<td>R: 29</td>
<td>Y: 56</td>
<td>-27</td>
</tr>
<tr>
<td><strong>Greatest Improvement</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miami Full-Service Hotel Y: 53 R: 0</td>
<td>Y: 53</td>
<td>R: 0</td>
<td>+53</td>
</tr>
<tr>
<td>Edison Limited-Service Hotel Y: 51 R: 0</td>
<td>Y: 51</td>
<td>R: 0</td>
<td>+51</td>
</tr>
<tr>
<td>Fort Lauderdale Full-Service Hotel Y: 50 R: 0</td>
<td>Y: 50</td>
<td>R: 0</td>
<td>+50</td>
</tr>
<tr>
<td>Miami Limited-Service Hotel G: 69 R: 20</td>
<td>G: 69</td>
<td>R: 20</td>
<td>+49</td>
</tr>
<tr>
<td>Boston Full-Service Hotel Y: 47 R: 0</td>
<td>Y: 47</td>
<td>R: 0</td>
<td>+47</td>
</tr>
<tr>
<td>Atlanta Full-Service Hotel Y: 44 R: 0</td>
<td>Y: 44</td>
<td>R: 0</td>
<td>+44</td>
</tr>
<tr>
<td>Los Angeles Full-Service Hotel Y: 47 R: 3</td>
<td>Y: 47</td>
<td>R: 3</td>
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<td>+43</td>
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<tr>
<td>New York Full-Service Hotel Y: 43 R: 0</td>
<td>Y: 43</td>
<td>R: 0</td>
<td>+43</td>
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<tr>
<td>Boston Limited-Service Hotel Y: 42 R: 0</td>
<td>Y: 42</td>
<td>R: 0</td>
<td>+42</td>
</tr>
<tr>
<td>Los Angeles Limited-Service Hotel Y: 42 R: 0</td>
<td>Y: 42</td>
<td>R: 0</td>
<td>+42</td>
</tr>
<tr>
<td>West Palm Beach Full-Service Hotel Y: 42 R: 0</td>
<td>Y: 42</td>
<td>R: 0</td>
<td>+42</td>
</tr>
<tr>
<td>West Palm Beach Limited-Service Hotel Y: 58 R: 19</td>
<td>Y: 58</td>
<td>R: 19</td>
<td>+39</td>
</tr>
<tr>
<td>Charlotte CBD Office Y: 37 R: 0</td>
<td>Y: 37</td>
<td>R: 0</td>
<td>+37</td>
</tr>
<tr>
<td>Fort Worth Full-Service Hotel Y: 43 R: 7</td>
<td>Y: 43</td>
<td>R: 7</td>
<td>+36</td>
</tr>
<tr>
<td>Phoenix CBD Office Y: 36 R: 0</td>
<td>Y: 36</td>
<td>R: 0</td>
<td>+36</td>
</tr>
<tr>
<td>Cincinnati Full-Service Hotel Y: 35 R: 0</td>
<td>Y: 35</td>
<td>R: 0</td>
<td>+35</td>
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<tr>
<td>Wilmington Industrial Y: 42 R: 7</td>
<td>Y: 42</td>
<td>R: 7</td>
<td>+35</td>
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<td>Y: 34</td>
<td>R: 1</td>
<td>+33</td>
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<tr>
<td>San Francisco Full-Service Hotel R: 32</td>
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<td>R: 0</td>
<td>+32</td>
</tr>
<tr>
<td>Albuquerque Industrial Y: 50 R: 19</td>
<td>Y: 50</td>
<td>R: 19</td>
<td>+31</td>
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<tr>
<td>Charlotte Limited-Service Hotel R: 28</td>
<td>R: 28</td>
<td>R: 0</td>
<td>+28</td>
</tr>
<tr>
<td>Orlando Limited-Service Hotel R: 28</td>
<td>R: 28</td>
<td>R: 0</td>
<td>+28</td>
</tr>
<tr>
<td>Tucson Limited-Service Hotel R: 27</td>
<td>R: 27</td>
<td>R: 0</td>
<td>+27</td>
</tr>
<tr>
<td>Cleveland Multifamily Y: 66 R: 40</td>
<td>Y: 66</td>
<td>R: 40</td>
<td>+26</td>
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<tr>
<td>Chicago Industrial Y: 55 R: 31</td>
<td>Y: 55</td>
<td>R: 31</td>
<td>+24</td>
</tr>
<tr>
<td>Denver Full-Service Hotel R: 24</td>
<td>R: 24</td>
<td>R: 0</td>
<td>+24</td>
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<tr>
<td>San Antonio Limited-Service Hotel R: 24</td>
<td>R: 24</td>
<td>R: 0</td>
<td>+24</td>
</tr>
<tr>
<td>Albuquerque Limited-Service Hotel Y: 52 R: 29</td>
<td>Y: 52</td>
<td>R: 29</td>
<td>+23</td>
</tr>
<tr>
<td>Cincinnati Multifamily Y: 63 R: 40</td>
<td>Y: 63</td>
<td>R: 40</td>
<td>+23</td>
</tr>
<tr>
<td>Minneapolis Full-Service Hotel R: 23</td>
<td>R: 23</td>
<td>R: 0</td>
<td>+23</td>
</tr>
<tr>
<td>New Orleans Limited-Service Hotel R: 23</td>
<td>R: 23</td>
<td>R: 0</td>
<td>+23</td>
</tr>
<tr>
<td>San Diego Limited-Service Hotel R: 23</td>
<td>R: 23</td>
<td>R: 0</td>
<td>+23</td>
</tr>
<tr>
<td>Nashville Full-Service Hotel R: 22</td>
<td>R: 22</td>
<td>R: 0</td>
<td>+22</td>
</tr>
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<td>Albuquerque Full-Service Hotel R: 33</td>
<td>R: 33</td>
<td>R: 12</td>
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<tr>
<td>Charlotte Industrial R: 40 R: 19</td>
<td>R: 40</td>
<td>R: 19</td>
<td>+21</td>
</tr>
<tr>
<td>Philadelphia Limited-Service Hotel R: 29</td>
<td>R: 29</td>
<td>R: 8</td>
<td>+21</td>
</tr>
<tr>
<td>Portland Full-Service Hotel Y: 35 R: 14</td>
<td>Y: 35</td>
<td>R: 14</td>
<td>+21</td>
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<td>Salt Lake City Retail Y: 50 R: 29</td>
<td>Y: 50</td>
<td>R: 29</td>
<td>+21</td>
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<td>R: 0</td>
<td>+20</td>
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<td>Minneapolis Industrial Y: 55 R: 35</td>
<td>Y: 55</td>
<td>R: 35</td>
<td>+20</td>
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<td>Philadelphia Full-Service Hotel R: 25</td>
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<td>+20</td>
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<td>San Francisco Limited-Service Hotel R: 20</td>
<td>R: 20</td>
<td>R: 0</td>
<td>+20</td>
</tr>
</tbody>
</table>
The previous table, Figure 4, lists those markets where the score changed by 20 points or more from
the previous quarter across sectors. The table below, Figure 5, is also a cross-sector summary, but of
those markets where one of two conditions is expected to prevail for the next year going forward:

» **Supply Watch.** New supply is expected to increase the existing inventory over the next year by 5%
or more.

» **Supply-Demand Watch.** The growth in supply is expected to exceed the growth in demand over
the next year by 5% or more (i.e., the supply-demand imbalance > 5%).

These are markets that, by definition, merit watching.

---

**FIGURE 5**

**Cross-Sector Market Watch**

<table>
<thead>
<tr>
<th>Vigorous Supply or Potential Supply-Demand Imbalance</th>
<th>SUPPLY WATCH</th>
<th>SUPPLY-DEMAND WATCH</th>
</tr>
</thead>
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<td><strong>Multifamily</strong></td>
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<td>El Paso</td>
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<td></td>
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<tr>
<td><strong>Retail</strong></td>
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<td>None</td>
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<tr>
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<td>Miami</td>
</tr>
<tr>
<td></td>
<td>6.9%</td>
<td>-7.8%</td>
</tr>
<tr>
<td></td>
<td>Charlotte</td>
<td>-5.0%</td>
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<tr>
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<td>None</td>
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<tr>
<td><strong>Industrial</strong></td>
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<td>-6.4%</td>
</tr>
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<td>Detroit</td>
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<td>-11.7%</td>
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<td>Nashville</td>
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<td>Cleveland</td>
<td>-10.1%</td>
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<td></td>
<td>Pittsburgh</td>
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<td></td>
<td>Detroit</td>
<td>-8.9%</td>
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<tr>
<td></td>
<td>San Antonio</td>
<td>-8.9%</td>
</tr>
<tr>
<td></td>
<td>Indianapolis</td>
<td>-8.8%</td>
</tr>
<tr>
<td></td>
<td>Memphis</td>
<td>-8.0%</td>
</tr>
<tr>
<td></td>
<td>St. Louis</td>
<td>-8.0%</td>
</tr>
<tr>
<td></td>
<td>Los Angeles</td>
<td>-7.7%</td>
</tr>
<tr>
<td></td>
<td>Chicago</td>
<td>-7.0%</td>
</tr>
<tr>
<td></td>
<td>Oakland</td>
<td>-7.0%</td>
</tr>
<tr>
<td></td>
<td>Newark</td>
<td>-5.5%</td>
</tr>
<tr>
<td></td>
<td>Richmond</td>
<td>-5.4%</td>
</tr>
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</table>
VACANCY FALLS AS MULTIFAMILY CONTINUES TO IMPROVE

The composite score for multifamily properties rose five points this quarter, from Green 81 to Green 86, due to an overall decrease in the sector’s vacancy.

Vacancy has been above 7% and relatively stable for the past four quarters. This quarter, vacancy fell from 7.4% to 6.5% which subsequently influenced the overall composite score. Other factors continued on the same trend as they have in past quarters. Projected absorption again fell slightly from 1.1% to 0.9%, while the supply pipeline narrowed from 0.4% to 0.3%. These two factors have caused the supply-demand relationship to move from 0.7% to 0.5%.

An additional seven markets entered green territory this quarter. Overall, there are 53 green markets, seven yellow markets, and one red. The lone red market is currently El Paso (Red 29). Adding to the positive vacancy news, there are 14 markets which have vacancy rates less than 5.0% compared to only three markets last quarter. Furthermore, the number of markets that have vacancy rates in excess of 10% halved from 12 to six.

Three markets experienced higher than 20 point improvements this quarter. Cleveland (Yellow 66), Cincinnati (Yellow 63), and Indianapolis (Yellow 61) gained 26, 24, and 22 points respectively. All three markets saw a 1% or higher decline in vacancy as well as positive movements in their supply-demand relationships. El Paso’s score fell 27 points from Yellow 56 to Red 29 this quarter. Although El Paso has a very low vacancy rate, the market’s supply-demand relationship moved unfavorably from -2.0% to -5.5%.

The Best and the Worst

The three multifamily markets of all 60 markets scored with the strongest and weakest measures on several variables are listed below.

Highest overall score: San Jose (G: 96); San Francisco (G: 94); Portland and Washington DC, both Green 93.

Lowest overall score: El Paso (R: 29); St. Louis (Y: 45); Columbus (Y: 56).

Least construction: Dayton (G: 76), Detroit (G: 81), and Pittsburgh (G: 70) all have zero construction.

Most construction: Salt Lake City (G: 77), 2.6%; Charlotte (G: 74), 1.6%; Norfolk (G: 87), 1.4%.

Most absorption: Charlotte (G: 74), 4.4%; Greensboro (G: 77), 3.5%; Atlanta (G: 74), 3.4%.
Least absorption: El Paso (R: 29), -5.2%; St. Louis (Y: 45), -2.7%; Cleveland (Y: 66) and Columbus (Y: 56), both -1.8%.

Best supply-demand relationship: Atlanta (G: 74), 3.2%; Birmingham (Y: 64), 3.1%; Charlotte (G: 74), 2.8%.

Worst supply-demand imbalance: El Paso (R: 29), -5.5%; St. Louis (Y: 45), -3.1%; Columbus (Y: 56), -2.6%.

Lowest vacancy: El Paso (R: 29), 2.6%; San Jose (G: 96), 3.4%; San Diego (G: 90), 3.7%.

Highest vacancy: Birmingham (Y: 64), 12.3%; Jacksonville (G: 71), 11.3%; Memphis (G: 72), 11.1%.

Best year-over-year vacancy change: Albuquerque (G: 89), -3.3%; Riverside (G: 88), -2.9%; El Paso (R: 29), -2.6%.

Worst year-over-year vacancy change: Houston (Y: 65), 2.2%; Dallas (G: 72), 1.3%; Pittsburgh (G: 70), 1.2%.
### Figure 7
Multifamily Market Diagnostic

<table>
<thead>
<tr>
<th>Supply Significantly Greater Than Demand or Supply Growth Alone Very High</th>
<th>Vacancy High or Increased Significantly</th>
<th>Vacancy Moderate or Increased Somewhat</th>
<th>Vacancy Low or Stable to Falling</th>
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<table>
<thead>
<tr>
<th>Supply Somewhat Greater Than Demand or Supply Growth Alone Somewhat High</th>
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<th>Vacancy Moderate or Increased Somewhat</th>
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RETAIL SCORE GROWS AS PROJECTED ABSORPTION IMPROVES

The composite score for the retail sector continued its growth trend from the past two quarters, gaining an additional four points this quarter to Yellow 60.

Like last quarter, the score improvement was largely caused by further tightening of the mismatch between supply and demand. Projected supply is down to just 0.1% from last quarter’s 0.2%, marking the sixth straight quarter of record low supply. Expected absorption for the coming year is up from -0.2% last period to 0.0%. This quarter is the first since 2008 without a negative absorption forecast. As a result of the movement in both construction and absorption, the supply-demand imbalance narrowed to just -0.1%, from -0.3% last quarter.

While the supply-demand metrics continued to improve, the aggregate vacancy rate once again increased. The composite vacancy is up to 12.8%, from 12.4% last quarter, and is reflective of the negative absorption that has been experienced for the last five quarters. However, vacancy is only up 1.2% over a year ago, whereas last quarter it was up 1.8%, so the rate of vacancy growth is on the decline. Thirty-eight of the individual markets also saw their vacancy rates rise this quarter.

Overall, scores increased in 34 of the 55 markets and fell in 19. Only one market, Salt Lake City, moved by more than 15, as it jumped from Red 29 to Yellow 50 due to significant tightening of its negative absorption projection.

FIGURE 8
Retail Markets That Improved or Deteriorated

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<tr>
<th>BETTER: RED → YELLOW</th>
<th>BETTER: YELLOW → GREEN</th>
<th>BETTER: RED → GREEN</th>
</tr>
</thead>
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<td>Atlanta (30 → 40)</td>
<td>Baltimore (56 → 69)</td>
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<tr>
<td>Salt Lake City (29 → 50)</td>
<td>Edison (64 → 68)</td>
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<td>Los Angeles (60 → 71)</td>
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<tr>
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<td>Miami (62 → 72)</td>
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<td>Oakland (65 → 71)</td>
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<td></td>
<td>Oklahoma City (66 → 68)</td>
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<td></td>
<td>San Diego (64 → 69)</td>
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<td>San Francisco (64 → 72)</td>
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<tr>
<td></td>
<td>Washington DC (58 → 69)</td>
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<table>
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<th>WORSE: YELLOW → RED</th>
<th>WORSE: GREEN → RED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bakersfield (69 → 66)</td>
<td>Orlando (34 → 28)</td>
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</tr>
<tr>
<td>Newark (68 → 62)</td>
<td>Tampa (36 → 32)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tucson (39 → 25)</td>
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</tr>
</tbody>
</table>
The Best and the Worst

The three retail markets of all 55 markets scored with the strongest and weakest measures on several variables are listed below.

*Highest overall score:* Fresno (G: 78); Long Island (G: 77); Albuquerque (G: 75).

*Lowest overall score:* Tucson (R: 25); Orlando (R: 28); Detroit (R: 31).

*Least construction:* Thirty-three markets have zero construction, including Chicago (Y: 56), Houston (Y: 64), and Phoenix (Y: 39).

*Most construction:* Tucson (R: 25), 1.1%; Atlanta (Y: 40) and Nashville (Y: 47), both 0.7%.

*Most absorption:* San Jose (G: 69), 4.0%; Charlotte (Y: 62), 2.1%; Cincinnati (Y: 34), 1.9%.

*Least absorption:* Orlando (R: 28), -1.7%; Newark (Y: 62), -1.3%; Tampa (R: 32) and West Palm Beach (Y: 45), both -1.2%.

*Best supply-demand relationship:* San Jose (G: 69), 4.0%; Charlotte (Y: 62), 2.1%; Cincinnati (Y: 34), 1.9%.

*Worst supply-demand imbalance:* Orlando (R: 28), -2.1%; Tampa (R: 32), -1.6%; Newark (Y: 62), Salt Lake City (Y: 50), and West Palm Beach (Y: 45), all -1.3%.

*Lowest vacancy:* San Francisco (G: 72), 6.1%; Honolulu (Y: 66), 7.5%; Orange County (G: 72) and San Jose (G: 69), both 8.1%.

*Highest vacancy:* Indianapolis (Y: 37), 19.1%; Detroit (R: 31), 18.7%; Trenton (Y: 43), 18.5%.

*Best year-over-year vacancy change:* Columbus (Y: 43), -1.3%; Albuquerque (G: 75), -0.8%; New York (Y: 64), Salt Lake City (Y: 50), and Wilmington (Y: 64), all -0.6%.

*Worst year-over-year vacancy change:* Cincinnati (Y: 34), 3.7%; Tampa (R: 32), 3.6%; Tucson (R: 25), 3.5%.
### FIGURE 9
Retail Market Diagnostic

<table>
<thead>
<tr>
<th>Retail Market Diagnostic</th>
<th>Vacancy High or Increased Significantly</th>
<th>Vacancy Moderate or Increased Somewhat</th>
<th>Vacancy Low or Stable to Falling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Significantly Greater than Demand or Supply Growth Alone Very High</td>
<td>Red (0-16)</td>
<td>Red (17-33)</td>
<td>Yellow (34-66)</td>
</tr>
<tr>
<td>Supply Somewhat Greater than Demand or Supply Growth Alone Somewhat High</td>
<td>Red (17-33)</td>
<td>Yellow (34-66)</td>
<td>Green (67-83)</td>
</tr>
<tr>
<td>Supply No More than Slightly Greater than Demand or Supply Growth Alone Restrained</td>
<td>Yellow (34-66)</td>
<td>Green (67-83)</td>
<td>Green (84-100)</td>
</tr>
</tbody>
</table>

- Tucson 25
- Orlando 28
- Detroit 31
- Tampa 32
- Las Vegas 33
- West Palm Beach 45
- Nashville 47
- Salt Lake City 50
- Newark 62
- New York 64

- Cincinnati 34
- Providence 36
- Indianapolis 37
- Cleveland 39
- Phoenix 39
- Atlanta 40
- Jacksonville 41
- Columbus 43
- Trenton 43
- Fort Worth 50
- St. Louis 50
- Dallas 51
- Kansas City 51
- Portland 51
- Riverside 53
- Chicago 56
- Fort Lauderdale 57
- Sacramento 57
- Minneapolis 58
- Philadelphia 58
- Seattle 60
- Charlotte 62
- Houston 64
- Wilmington 64
- Austin 65
- Bakersfield 66
- Denver 66
- Honolulu 66

**Composite 60**
CBD OFFICE GAINS THREE POINTS AS DEMAND CONTINUES TO IMPROVE

Offices in central business districts (CBDs) continued to gain ground for the third consecutive quarter as the composite score increased three points to Yellow 55.

Ongoing improvement within this sector was driven by the contraction of the supply-demand imbalance. Demand remained constant at -0.5%; however the supply pipeline slowed to 0.4% from 0.8% last quarter. This resulted in a narrowing of the supply-demand imbalance to -0.8% from -1.4% a quarter ago. However, this quarter vacancy once again continued to rise. Vacancy in the sector grew by 0.4% from 12.5% last quarter up to 12.9% this quarter, and is now up by 1.9% from a year ago.

Overall, instability persists in the sector. However, there continued to be favorable signs demonstrating improvement as more markets increased in score (23) than declined (20). Twenty-nine markets are yellow and 13 markets are red, a decrease of six from last quarter. There are five markets with a green score: Washington DC (Green 75), Boston (Green 73), New York (Green 73), Pittsburgh (Green 73) and Fort Worth (Green 67).

The market with the largest increase in score was Charlotte, which saw its score rise from Red 0 to Yellow 37 as demand increased from -0.8% to -0.4% and the supply pipeline slowed dramatically from 13.7% to 4.6%. The largest decline in score was Cincinnati, which saw its score drop from Yellow 62 to Yellow 49 as supply increased from 0.0% to 1.5% and vacancy grew from 12.5% a quarter ago, to 13.1%.

Top Ten Sees Improvement in Supply-Demand Relationship

The ten largest CBD markets, which comprise almost three quarters of all CBD space, greatly impact the sector’s composite score. This quarter only one market is red, Seattle (Red 32), five markets are yellow, and four are green, as one market, Washington DC (Green 75) moved from yellow to green.

Similar to the overall sector, the supply-demand imbalance continued to contract for the top ten markets, as the weighted average narrowed to -0.4% from -0.7% a quarter ago. Improvement in supply projections, from 0.5% last quarter to 0.2% was the main catalyst. The largest imbalance is in Houston (Yellow 50), where the supply-demand relationship widened from -2.0% to -2.7% as supply increased from 0.0% to 0.7%.

The top ten markets saw their weighted average vacancy increase to 10.7%, with nine markets reporting a year-over-year increase in vacancy. In addition, eight markets continued to have vacancy rates in the double-digits: Seattle (Red 32), 17.0%; Raleigh (Yellow 55), 16.1%; Chicago (Yellow 43), 15.2%; San Francisco (Yellow 66), 13.1%; Philadelphia (Yellow 55), 12.0%; Houston (Yellow 50), 11.9%; Pittsburgh (Green 73), 10.9%; and Washington DC (Green 75), 10.4%.
The Best and the Worst

The three CBD office markets of all 47 markets scored with the strongest and weakest measures on each of several variables are listed below.

**Highest overall score:** Washington DC (G: 75); Boston and New York, both Green 73.

**Lowest overall score:** Detroit, Miami, and San Jose, all Red 0.

**Least construction:** Thirty-four markets have zero construction, including Boston (G: 73), Chicago (Y: 43), and Washington DC (G: 75).

**Most construction:** Miami (R: 0), 6.9%; Charlotte (Y: 37), 4.6%; Wilmington (R: 23), 2.6%.

**Most absorption:** Raleigh (Y: 55), 2.4%; Fort Worth (G: 67) and Tucson (R: 20), both 1.7%.

**Least absorption:** Detroit (R: 0), -2.9%; Albuquerque (R: 14), -2.7%; Houston (Y: 50), -2.0%.

**Best supply-demand relationship:** Raleigh (Y: 55), 1.9%; Fort Worth (G: 67), 1.7%; Tucson (R: 20), 1.7%.

**Worst supply-demand imbalance:** Miami (R: 0), -7.8%; Charlotte (Y: 37), -5.0%; Portland (Y: 43), -3.5%.

**Lowest vacancy:** New York (G: 73), 7.5%; Charlotte (Y: 37), 9.0%; Boston (G: 73), 9.2%.

**Highest vacancy:** Detroit (R: 0), 30.3%; San Jose (R: 0), 27.6%; Dallas (R: 18), 24.1%.

**Best year-over-year vacancy change:** Hartford (Y: 44), -2.5%; Pittsburgh (G: 73), -1.1%; Denver (Y: 43), -0.6%.

**Worst year-over-year vacancy change:** Tucson (R: 20), 11.7%; San Jose (R: 0), 9.4%; Phoenix (Y: 36), 5.8%.
**FIGURE 11**

**CBD Office Market Diagnostic**

<table>
<thead>
<tr>
<th>SUPPLY SIGNIFICANTLY GREATER THAN DEMAND OR SUPPLY GROWTH ALONE VERY HIGH</th>
<th>VACANCY HIGH OR INCREASED SIGNIFICANTLY</th>
<th>VACANCY MODERATE OR INCREASED SOMEWHAT</th>
<th>VACANCY LOW OR STABLE TO FALLING</th>
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<th>VACANCY HIGH OR INCREASED SIGNIFICANTLY</th>
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SUBURBAN OFFICE SCORE REMAINS UNCHANGED

This quarter, the score for the suburban office sector remained the same, Yellow 35. Vacancy in the sector is still high at 18.6%, an increase from 18.4% last quarter. However, a decrease in supply, from 0.5% to 0.4% this quarter, along with demand remaining constant at -0.6%, was enough to mitigate the growth in vacancy.

The sector continues to be weak, as all but one covered market exhibited double-digit vacancy rates. In addition, 17 markets have vacancies above 20%: Phoenix (Red 21), 27.3%; Las Vegas (Red 2), 24.8%; Tampa (Red 5), 24.3%; Detroit (Red 10), 23.4%; Jacksonville (Red 25), 23.2%; Sacramento (Red 14), 23.1%; Chicago (Red 20), 23.0%; West Palm Beach (Red 32), 22.6%; Riverside (Red 26), 22.4%; Edison (Red 8), 21.9%; San Jose (Red 20), 21.6%; Dallas (Red 24), 21.5%; Miami (Red 16), 21.4%; Orange County (Red 26), 21.3%; Atlanta (Red 23), 21.1%; San Diego (Yellow 38), 20.4%; and Austin (Yellow 46), 20.2%.

The total number of red markets decreased to 21, down four from last quarter. The rest of the markets are all yellow except for Nashville (Green 69), which improved from yellow to green this quarter. Overall, 26 markets improved, 19 deteriorated and seven stayed the same.

The market with the largest increase was Wilmington (Yellow 51), which saw its score increase from Yellow 34 to Yellow 51 as vacancy decreased from 18.4% to 16.3% and demand increased from -2.4% a quarter ago, to -0.7%. Las Vegas (Red 2) was the market with the largest decline as its score fell from Red 20 to Red 2 as vacancy increased from 23.4% to 24.8% and supply doubled from 0.7% to 1.4%.

Top Ten Hold Steady

Similar to the rest of the sector, the weighted average score for the ten largest suburban office markets maintained the same score at Yellow 36. This quarter, five of the top ten markets are red while the other five are yellow.

Four of the ten markets deteriorated in score while six improved. As with the composite, a somewhat smaller supply pipeline helped maintain the top ten markets this quarter, even though vacancy increased from 17.8% last quarter to 18.3%. In nine markets, supply is expected to continue to outpace demand growth over the next year and the weighted average imbalance remains negative at -1.1%. Washington DC (Yellow 55) was the only top ten market to have a positive supply-demand ratio of 0.5%. The largest supply-demand imbalance remains in Houston (Red 26), -2.7%, as absorption of -2.5% is expected.

Vacancy for all top ten markets is still in the double-digits. The three markets with the highest vacancies are Chicago (Red 20), 23.0%; Dallas (Red 24), 21.5%; and Orange County (Red 26), 21.3%.
**FIGURE 12**

**Suburban Office Markets That Improved or Deteriorated**

<table>
<thead>
<tr>
<th>BETTER: RED → YELLOW</th>
<th>BETTER: YELLOW → GREEN</th>
<th>BETTER: RED → GREEN</th>
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</thead>
<tbody>
<tr>
<td>Los Angeles (33 → 37)</td>
<td>Nashville (54 → 69)</td>
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<tr>
<td>Minneapolis (25 → 40)</td>
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<tr>
<td>Orlando (32 → 41)</td>
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<tr>
<td>Salt Lake City (29 → 41)</td>
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<tr>
<td>San Diego (32 → 38)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>WORSE: GREEN → YELLOW</th>
<th>WORSE: YELLOW → RED</th>
<th>WORSE: GREEN → RED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honolulu (75 → 65)</td>
<td>Orange County (34 → 26)</td>
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</tbody>
</table>

**The Best and the Worst**

The three suburban office markets of all 52 markets scored with the strongest and weakest measures on several variables are listed below.

*Highest overall score:* Nashville (G: 69); Honolulu (Y: 65); Long Island and Stamford, both Yellow 57.

*Lowest overall score:* Las Vegas (R: 2); Tampa (R: 5); Edison (R: 8).

*Least construction:* Seventeen markets have zero construction, including Atlanta (R: 23), Chicago (R: 20), and New York (Y: 56).

*Most construction:* Baltimore (Y: 45), 2.3%; Indianapolis (R: 26), 1.9%; St. Louis (Y: 44), 1.7%.

*Most absorption:* Fort Worth (Y: 51), 2.3%; Austin (Y: 46), 1.8%; Tucson (Y: 56), 1.6%.

*Least absorption:* Edison (R: 8), -2.9%; Houston (R: 26), Albuquerque (R: 30), and Detroit (R: 10), all -2.5%.

*Best supply-demand relationship:* Fort Worth (Y: 51), 2.3%; Phoenix (R: 21), 1.2%; Columbus (Y: 42), 1.0%.

*Worst supply-demand imbalance:* Indianapolis (R: 26), -4.2%; Edison (R: 8), -3.6%; Detroit (R: 10), -2.8%.

*Lowest vacancy:* Honolulu (Y: 65), 8.6%; Long Island (Y: 57), 11.5%; Nashville (G: 69), 12.0%.

*Highest vacancy:* Phoenix (R: 21), 27.3%; Las Vegas (R: 2), 24.8%; Tampa (R: 5), 24.3%.

*Best year-over-year vacancy change:* Wilmington (Y: 51), -3.4%; Indianapolis (R: 26), -0.9%; Charlotte (Y: 41), -0.3%.

*Worst year-over-year vacancy change:* Las Vegas (R: 2), 5.3%; Miami (R: 16), 4.8%; Seattle (R: 28), 4.2%.
**FIGURE 13**

**Suburban Office Market Diagnostic**

<table>
<thead>
<tr>
<th>Vacancy High or Increased Significantly</th>
<th>Vacancy Moderate or Increased Somewhat</th>
<th>Vacancy Low or Stable to Falling</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SUPPLY SIGNIFICANTLY GREATER THAN DEMAND OR SUPPLY GROWTH ALONE VERY HIGH</strong></td>
<td><strong>RED (0-16)</strong></td>
<td><strong>YELLOW (34-66)</strong></td>
</tr>
<tr>
<td>Las Vegas 2</td>
<td>Indianapolis 26</td>
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<td>Tampa 5</td>
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<td>Edison 8</td>
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<tr>
<td>Sacramento 14</td>
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<tr>
<td>Miami 16</td>
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<tr>
<td><strong>SUPPLY SOMEWHAT GREATER THAN DEMAND OR SUPPLY GROWTH ALONE SOMEWHAT HIGH</strong></td>
<td><strong>RED (17-33)</strong></td>
<td><strong>YELLOW (34-66)</strong></td>
</tr>
<tr>
<td>Chicago 20</td>
<td>Ventura County 34</td>
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<tr>
<td>San Jose 20</td>
<td>Oakland 35</td>
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<tr>
<td>Phoenix 21</td>
<td>Los Angeles 37</td>
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<td>Honolulu 65</td>
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<td>Fort Lauderdale 33</td>
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<tr>
<td><strong>SUPPLY NO MORE THAN SLIGHTLY GREATER THAN DEMAND OR SUPPLY GROWTH ALONE RESTRAINED</strong></td>
<td><strong>YELLOW (34-66)</strong></td>
<td><strong>GREEN (67-83)</strong></td>
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<tr>
<td>Cincinnati 38</td>
<td>Nashville 69</td>
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<td>Hartford 38</td>
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<td>Fort Worth 51</td>
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<td>Newark 53</td>
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<td>Washington DC 55</td>
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<td>New York 56</td>
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<td>Tucson 56</td>
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<td>Stamford 57</td>
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<tr>
<td><strong>COMPOSITE 35</strong></td>
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</table>
INDUSTRIAL CONTINUES TO REBOUND AS SUPPLY-DEMAND MISMATCH MODERATES

For the second quarter in a row, the industrial composite score increased by more than ten points. The sector’s score improved by 14 points from Yellow 41 to a score of Yellow 55.

Supply-demand fundamentals continued to recover. Projected absorption moved from -0.7% to 0.1%. This is the first time since the fourth quarter 2008 in which projected absorption was positive. Additionally, the supply-demand imbalance contracted from -0.8% to 0%. Overall, these significant movements are the main reasons for the industrial composite score’s improvement.

Vacancy remains fairly stable and high. The vacancy rate increased from 13.9% to 14% this quarter. All but one market has vacancy rate in the double digits. Los Angeles has the lowest vacancy rate at 8.1% while Detroit and Trenton have the highest vacancy rates, both in the 20% range.

Following the supply-demand trends that helped improve the composite score, Wilmington (Yellow 42) and Albuquerque (Yellow 50) were the two markets that showed the most improvement this quarter, gaining 35 and 31 points respectively. Stamford experienced the largest deterioration as its score moved from Yellow 46 to Red 7. Driving the decline in score was the unfavorable movement of its supply-demand relationship from 0.4% to -2.9%. On the whole this quarter, eight markets moved into yellow territory from red while two markets fell from yellow territory to red. The net result leaves four red markets compared to eight last quarter.

The Best and the Worst

The three industrial markets of all 51 markets scored with the strongest and weakest measures on several variables are listed below.

Highest overall score: Los Angeles and Portland, both Green 69; Orange County (Y: 64).
Lowest overall score: Stamford (R: 7); Trenton (R: 29); Phoenix (R: 32).
Least construction: Twenty markets have zero construction, including Atlanta (Y: 41), Chicago (Y: 55), and Cleveland (Y: 56).
Most construction: Nashville (Y: 37) and Riverside (Y: 49), both 0.5%; Houston (Y: 56) and Trenton (R: 29), both 0.3%.
Most absorption: Hartford (Y: 33), 1.8%; Austin (Y: 48), 1.7%; Portland (G: 69), 1.5%.

Least absorption: Stamford (R: 7), -2.9%; Nashville (Y: 37), -1.5%; Tucson (Y: 34), -1.1%.

Best supply-demand relationship: Austin (Y: 48), 1.7%; Hartford (Y: 33) and Portland (G: 69), both 1.5.

Worst supply-demand imbalance: Stamford (R: 7), -2.9%; Nashville (Y: 37), -2.0%; San Francisco (Y: 50), -1.2%.

Lowest vacancy: Los Angeles (G: 69), 8.1%; Kansas City (Y: 58) and Portland (G: 69) both 10.3%.

Highest vacancy: Detroit (Y: 34), 20.3%; Trenton (R: 29), 20.0%; Phoenix (R: 32), 19.8%.

Best year-over-year vacancy change: Trenton (R: 29), -0.1%; Columbus (Y: 55), 0.1%; Baltimore (Y: 54), 0.2%.

Worst year-over-year vacancy change: Tucson (Y: 34), 5.0%; Hartford (Y: 33), 4.8%; Charlotte (R: 40), 4.1%.
# FIGURE 15
Industrial Market Diagnostic

<table>
<thead>
<tr>
<th>Category</th>
<th>VACANCY HIGH OR INCREASED SIGNIFICANTLY</th>
<th>VACANCY MODERATE OR INCREASED SOMEWHAT</th>
<th>VACANCY LOW OR STABLE TO FALLING</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUPPLY SIGNIFICANTLY GREATER THAN DEMAND OR SUPPLY GROWTH ALONE VERY HIGH</td>
<td>RED (0-16)</td>
<td>RED (17-33)</td>
<td>YELLOW (34-66)</td>
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<td>Stamford 7</td>
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<tr>
<td>SUPPLY SOMEWHAT GREATER THAN DEMAND OR SUPPLY GROWTH ALONE SOMEWHAT HIGH</td>
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<td>YELLOW (34-66)</td>
<td>GREEN (67-83)</td>
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<td>Hartford 33</td>
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<tr>
<td>SUPPLY NO MORE THAN SLIGHTLY GREATER THAN DEMAND OR SUPPLY GROWTH ALONE RESTRAINED</td>
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<tr>
<td><strong>COMPOSITE 55</strong></td>
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</table>
FULL-SERVICE HOTEL SCORE GROWS WITH IMPROVED REVPAR METRICS

After five straight quarters with a score of Red 0, the full-service hotel sector finally broke the trend with a score of Red 24. While the metrics behind the composite score had been improving for the past two quarters, they remained too weak to boost the score above zero. However, improving RevPAR and favorable projections broke the barrier this quarter.

Year-over-year RevPAR declines had been the main driver behind the lack of movement in the full-service score. This quarter though, RevPAR grew by 0.3% over the same quarter a year ago, marking the first quarter of RevPAR growth since 2008. Just over half (28) of the 50 markets also experienced year-over-year growth whereas, last quarter, all but one market saw RevPAR declines. It is important to note though, that this quarter’s RevPAR growth is relative to the very low RevPAR number from the first quarter of 2009. Illustrating this point, current RevPAR relative to its baseline target (the average of 1998 and 1999 RevPAR adjusted for inflation and seasonality) is down 23.5%, the lowest it has been in the history of this report. Only Fort Worth (Yellow 43) and Miami (Yellow 53) have RevPAR exceeding the baseline target.

Like most commercial sectors, the upcoming supply of full-service hotels continued to decrease. Over the next year, an increase of only 1.3% of current inventory is expected, a number not seen since 2004. In addition, projected demand (measured by forecasted RevPAR growth over the next year) finally turned positive after three years of negative forecasts. Demand is expected to grow 1.8% compared to last quarter’s projected decline of 0.6%. With both supply and demand moving in encouraging directions, demand outpaced supply for the first time since 2006, by 0.5%, while last quarter, the ratio was -2.3%.

In the previous quarter, 37 markets had scores of Red 0. This quarter, that number shrunk to ten. Last period’s lone yellow market, Honolulu (Yellow 60) remains the market with the highest score, though it is now joined in yellow territory by 11 additional markets. The remaining markets are still red.

**FIGURE 16**
Full-Service Hotel Markets That Improved or Deteriorated

<table>
<thead>
<tr>
<th>BETTER: RED → YELLOW</th>
<th>BETTER: YELLOW → GREEN</th>
<th>BETTER: RED → GREEN</th>
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<tbody>
<tr>
<td>Atlanta (0 → 44)</td>
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<tr>
<td>Boston (0 → 47)</td>
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<td>Cincinnati (0 → 35)</td>
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<td>Fort Lauderdale (0 → 50)</td>
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<td>Fort Worth (7 → 43)</td>
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<tr>
<td>West Palm Beach (0 → 42)</td>
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<thead>
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</table>
The Best and the Worst

The three full-service hotel markets of all 50 markets scored with the strongest and weakest measures on each of several variables are listed below.

*Highest overall score:* Honolulu (Y: 60); Miami (Y: 53); Fort Lauderdale (Y: 50).

*Lowest overall score:* Ten markets have a score of Red 0, including Chicago, Tampa, and Washington DC.

*Least construction:* Twenty-one markets have zero construction, including Los Angeles (Y: 47), Phoenix (R: 7), and San Francisco (R: 32).

*Most construction:* Indianapolis (R: 0), 7.4%; Pittsburgh (R: 5), 6.7%; New York (Y: 43), 5.6%.

*Most expected growth in RevPAR:* Honolulu (Y: 60), 13.7%; New York (Y: 43), 12.2%; West Palm Beach (Y: 42), 7.6%.

*Least expected growth in RevPAR:* Fort Worth (Y: 43), -12.2%; Miami (Y: 53), -11.9%; Pittsburgh (R: 5), -11.8%.

*Best supply-demand relationship:* Honolulu (Y: 60), 13.7%; West Palm Beach (Y: 42), 7.6%; New York (Y: 43) and San Diego (R: 19), both 6.6%.

*Worst supply-demand imbalance:* Pittsburgh (R: 5), -18.4%; Miami (Y: 53), -13.7%; Indianapolis (R: 0), -13.3%.

*Highest margin over baseline RevPAR:* Miami (Y: 53), 4.5%; Fort Worth (Y: 43), 3.2%; Washington DC (R: 0), -2.9%.

*Smallest margin over baseline RevPAR (or greatest lag):* Chicago (R: 0), -46.5%; Detroit (R: 4), -43.7%; Newark (R: 0), -43.3%.

*Most year-over year RevPAR growth:* Miami (Y: 53), 15.0%; Boston (Y: 47), 9.2%; Atlanta (Y: 44), 8.3%.

*Least year-over year RevPAR growth:* Washington DC (R: 0) and Tampa (R: 0), both -13.2%; Houston (R: 8), -10.3%.
## Figure 17: Full-Service Hotel Market Diagnostic

<table>
<thead>
<tr>
<th>REVPAR YEAR-OVER-YEAR</th>
<th>REVPAR YEAR-OVER-YEAR</th>
<th>REVPAR YEAR-OVER-YEAR</th>
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<td>INCREASED SIGNIFICANTLY OR UP FROM BASE</td>
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<td><strong>SUPPLY SOMEWHAT GREATER THAN DEMAND OR SUPPLY GROWTH ALONE</strong></td>
<td><strong>SUPPLY NO MORE THAN SLIGHTLY GREATER THAN DEMAND OR SUPPLY GROWTH ALONE</strong></td>
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LIMITED-SERVICE IMPROVES DESPITE CONTINUED REVPAR DECLINES

The limited-service hotel sector generally echoed the improvements of its full-service counterpart, though not quite as pronounced. The limited-service score grew from Red 0 to Red 15 this quarter.

While the full-service sector finally saw year-over-year RevPAR growth, limited-service RevPAR is still down 3.8% over last year. This marks significant progress from last quarter’s 13.9% decline, though the sector has not reached a level where RevPAR is growing. Conversely, current RevPAR’s lag behind its baseline target tightened to -21.6% from last quarter’s -23.5%. Only 11 markets had positive RevPAR growth this quarter, though all were negative last quarter.

The supply pipeline continued its contraction this quarter, with only 0.7% growth expected over the next year. Demand forecasts also improved slightly from last quarter’s 0.8%¹ to 0.9%. The resulting supply-demand imbalance is 0.2%, up from -0.1% last period. So, demand outpaced supply this quarter, a change from the opposite which persisted through eight of the last nine quarters.

The number of markets with scores of Red 0 is down to 11 from 36 last quarter. Ten markets joined Pittsburgh (Yellow 53) in yellow territory, while Miami jumped from Red 20 to Green 69, marking this quarter’s only green score in either hotel sectors and the first green hotel score since the third quarter of 2008. Miami’s score increased due to a significant reversal of RevPAR movement, from -11.8% last quarter to 9.6%.

The Best and the Worst

The three limited-service hotel markets of all 49 markets scored with the strongest and weakest measures on several variables are listed below.

Highest overall score: Miami (G: 69); Fort Lauderdale (Y: 58); Long Island (Y: 55).
Lowest overall score: Eleven markets have a score of Red 0, including Chicago, Dallas, and Houston.
Least construction: Twenty-four markets have zero construction, including Atlanta (R: 18), Orange County (Y: 39), and Orlando (R: 28).

¹ Projected demand for the composite limited-service hotel sector was incorrectly reported as 2.6% last quarter. Thus, the supply-demand imbalance was also incorrectly reported as 1.7%. The correct numbers are 0.8% and -0.1% respectively. The correction had no impact on last quarter’s composite score of Red 0.
Most construction: Austin (R: 10) and San Antonio (R: 24), both 3.0%; New York (Y: 52), 2.5%.

Most expected growth in RevPAR: Baltimore (R: 29), 9.7%; Philadelphia (R: 29), 7.0%; Trenton (R: 6), 6.8%.

Least expected growth in RevPAR: Cincinnati (R: 14), -10.6%; Nashville (R: 14), -9.8%; Cleveland (R: 0), -8.9%.

Best supply-demand relationship: Baltimore (R: 29), 9.7%; Philadelphia (R: 29), 7.0%; Trenton (R: 6), 6.8%.

Worst supply-demand imbalance: Cincinnati (R: 14), -11.7%; Nashville (R: 14), -10.6%; Cleveland (R: 0), -10.1%.

Highest margin over baseline RevPAR: Los Angeles (Y: 42), 11.1%; Pittsburgh (Y: 53), 10.7%; Washington DC (Y: 38), 9.1%.

Smallest margin over baseline RevPAR (or greatest lag): Detroit (R: 0), -37.6%; Chicago (R: 0), -36.9%; Phoenix (R: 0), -34.3%.

Most year-over-year RevPAR growth: New York (Y: 52), 11.4%; Miami (G: 69), 9.6%; Boston (Y: 42), 8.3%.

Least year-over-year RevPAR growth: Houston (R: 0), -26.6%; Tampa (R: 0), -15.0%; Baltimore (R: 29), -12.3%. 
### Limited-Service Hotel Market Diagnostic

<table>
<thead>
<tr>
<th>SUPPLY SIGNIFICANTLY GREATER THAN DEMAND OR SUPPLY GROWTH ALONE VERY HIGH</th>
<th>REVPAR YEAR-OVER-YEAR DECLINED OR DOWN SIGNIFICANTLY FROM BASE</th>
<th>REVPAR YEAR-OVER-YEAR INCREASED SOMEWHAT OR DOWN SOMEWHAT FROM BASE</th>
<th>REVPAR YEAR-OVER-YEAR INCREASED SIGNIFICANTLY OR UP FROM BASE</th>
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<th>REVPAR YEAR-OVER-YEAR INCREASED SOMEWHAT OR DOWN SOMEWHAT FROM BASE</th>
<th>REVPAR YEAR-OVER-YEAR INCREASED SIGNIFICANTLY OR UP FROM BASE</th>
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<th>REVPAR YEAR-OVER-YEAR INCREASED SIGNIFICANTLY OR UP FROM BASE</th>
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FULL-SERVICE AND LIMITED-SERVICE SECTORS BEGIN TO DIVERGE WITHIN SAME MARKET

As the hotel sectors begin to emerge from their slump at Red 0, some disparity between the full- and limited-service sectors may become apparent. Figure 20 lists those markets in which the scores differ by more than 16.7 points (one-half of a color) as well as a composite or aggregate score for the entire hotel market (full- and limited-service combined) in each of those markets. The combined score in the table below is a weighted average of both segments of each market. Since there is some degree of interchangeability between demand for full- and limited-service hotels, the aggregate scores for these markets provide further insight as to where the overall hotel market falls in the Red-Yellow-Green spectrum. Last quarter, only five markets had notable differences in their full- and limited-service scores, while this quarter, 14 fit that profile. However, close to three-quarters of all markets were Red 0 last quarter, while this quarter, only about 21% are Red 0. No clear pattern has emerged showing either the full- or the limited-service sector consistently outperforming the other, though with most markets in state of instability, some divergence is inevitable.

FIGURE 20
Comparison of Scores for Full-Service and Limited-Service Hotel Sectors

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<tr>
<th>MARKET</th>
<th>FULL-SERVICE HOTEL SCORE</th>
<th>LIMITED-SERVICE HOTEL SCORE</th>
<th>DIFFERENCE (LIMITED MINUS FULL)</th>
<th>COMBINED SCORE</th>
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### Assessment of Each Market by Property Type

(Red = less than 33; Yellow = 34-66; Green = 67 or more)

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<th>Office: CBD</th>
<th>Office: Suburban</th>
<th>Industrial</th>
<th>Hotel: Full SVC</th>
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<td>G: 81</td>
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<td>Y: 34</td>
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<td>R: 29</td>
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<td>N.D.</td>
<td>N.D.</td>
<td>N.D.</td>
</tr>
<tr>
<td>Fresno CA</td>
<td>N.D.</td>
<td>G: 78</td>
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<td>N.D.</td>
<td>N.D.</td>
<td>N.D.</td>
<td>N.D.</td>
</tr>
<tr>
<td>Greensboro NC</td>
<td>G: 77</td>
<td>N.D.</td>
<td>N.D.</td>
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<td>N.D.</td>
<td>N.D.</td>
<td>N.D.</td>
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<tr>
<td>Greenville SC</td>
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<td>N.D.</td>
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<td>N.D.</td>
<td>N.D.</td>
<td>N.D.</td>
</tr>
<tr>
<td>Hartford CT</td>
<td>N.D.</td>
<td>N.D.</td>
<td>Y: 44</td>
<td>Y: 38</td>
<td>R: 33</td>
<td>R: 6</td>
<td>R: 18</td>
</tr>
<tr>
<td>Houston TX</td>
<td>Y: 65</td>
<td>Y: 64</td>
<td>Y: 50</td>
<td>R: 26</td>
<td>Y: 56</td>
<td>Y: 8</td>
<td>R: 0</td>
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<tr>
<td>Indianapolis IN</td>
<td>Y: 61</td>
<td>Y: 37</td>
<td>Y: 51</td>
<td>R: 26</td>
<td>Y: 57</td>
<td>R: 0</td>
<td>R: 3</td>
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<tr>
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<td>R: 25</td>
<td>Y: 52</td>
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<td>N.D.</td>
</tr>
<tr>
<td>Las Vegas NV</td>
<td>G: 77</td>
<td>R: 33</td>
<td>Y: 41</td>
<td>R: 2</td>
<td>Y: 54</td>
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<td>N.D.</td>
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<td>N.D.</td>
<td>N.D.</td>
<td>N.D.</td>
<td>N.D.</td>
<td>N.D.</td>
</tr>
<tr>
<td>Memphis TN 2</td>
<td>G: 72</td>
<td>N.D.</td>
<td>Y: 42</td>
<td>N.D.</td>
<td>N.D.</td>
<td>Y: 34</td>
<td>R: 6</td>
</tr>
<tr>
<td>City</td>
<td>Multi-Family</td>
<td>Retail</td>
<td>Office: CBD</td>
<td>Office: Suburban</td>
<td>Industrial</td>
<td>Hotel: Full SVC.</td>
<td>Hotel: LTD. SVC.</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------</td>
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<td>-------------</td>
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<td>New Orleans LA</td>
<td>N.D.</td>
<td>N.D.</td>
<td>N.D.</td>
<td>N.D.</td>
<td>N.D.</td>
<td>N.D.</td>
<td>N.D.</td>
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<td>Y: 61</td>
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<td>N.D.</td>
<td>N.D.</td>
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<td>N.D.</td>
<td>N.D.</td>
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<tr>
<td>Orange Cty. CA</td>
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<td>N.D.</td>
<td>N.D.</td>
<td>N.D.</td>
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<td>Raleigh NC²</td>
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<td>N.D.</td>
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<td>R: 0</td>
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<td>Riverside CA</td>
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<td>N.D.</td>
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<td>Y: 52</td>
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<tr>
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<td>N.D.</td>
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<td>R: 2</td>
<td>R: 27</td>
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<td>N.D.</td>
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</tr>
<tr>
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<td>N.D.</td>
<td>N.D.</td>
</tr>
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N.D.: No data.
1 For the hotel sector, the data is for Oahu Island rather than Honolulu.
2 The CBD office sectors for Memphis, Pittsburgh, Raleigh and San Antonio are based on total metro market data.
**FIGURE 22**

**Market Score: Average of All Property Types**

The average is a straight average of all property types for which a score is calculated. For the office sector, this average is based on a metro-area score, a weighted average of the CBD and suburban scores. Similarly, for hotels, this average is based on a weighted average of the full-service and limited-service segments. The goal is to count only one office and one hotel score for each market. Averages are only calculated for markets that have scores in at least three property types, as this allows for a more accurate relative comparison of these markets. Cities marked in **bold** are those most frequently represented in CMBS transactions.

<table>
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<tr>
<th>MARKET</th>
<th>AVERAGE</th>
<th>MARKET</th>
<th>AVERAGE</th>
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<td>Albuquerque NM</td>
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<td>Fort WorthTX</td>
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<td>Jacksonville FL</td>
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<tr>
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<td><strong>Houston TX</strong></td>
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<td>Washington DC</td>
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<td>Columbus OH</td>
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<td>Las Vegas NV</td>
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<td>San Diego CA</td>
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<td><strong>Atlanta GA</strong></td>
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<td><strong>COMPOSITE</strong></td>
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<td>Cleveland OH</td>
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<td>Indianapolis IN</td>
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<td>Denver CO</td>
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<td>Tampa FL</td>
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<td>West Palm Beach FL</td>
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<td>Edison NJ</td>
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<td>Trenton NJ</td>
<td>31</td>
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<tr>
<td>Seattle WA</td>
<td>51</td>
<td>Hartford CT</td>
<td>28</td>
</tr>
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</table>
Appendix A: How Red-Yellow-Green® Scores Are Derived

Data source
All data comes from CBRE Econometric Advisors unless otherwise noted. Moody’s occasionally incorporates additional market or sector data to adjust CBRE forecasts.

Scoring
Each market for each property type is scored on a scale of 0-100 with zero being the low and 100 being the high. Markets with a score of 0-33 are red, 34-66 are yellow, and 67-100 are green. Red markets with a very low score, less than 16, typically fare poorly on all the criteria incorporated in this analysis. Likewise, very strong green markets, those with scores over 84, usually are performing well on all criteria.

Color descriptions
Red: Markets that are already under imminent stress. They are experiencing a growth in supply notably in excess of expected demand growth AND either high vacancy rates OR sharply rising vacancy rates (and often both). These might be thought of as “tenant’s markets.”

Yellow: Markets that are on the cusp of imbalance and are therefore fragile. Either an increase in the pace of construction OR a slowdown in demand growth could tip these markets into a higher level of stress. These markets typically are experiencing a growth in supply somewhat in excess of expected demand growth AND vacancy rates that are somewhat above average OR have risen somewhat in the last year. Such markets warrant caution.

Green: Markets in which demand is outpacing supply growth, or the ratio is within one percentage point. These markets also have low and stable-to-falling vacancy rates. These might be thought of as “landlord’s markets.”

Variables
Forward-looking
Upcoming supply: Additions to inventory expressed as a percent of current inventory. The supply-side measure focuses on buildings that are already under construction and expected to be delivered in the upcoming four quarters. Supply-side risk is thus based on the most concrete measure possible: actual construction in progress, or “dug dirt.”

Supply-demand ratio: The supply pipeline is compared to expected growth in demand measured typically by projected absorption for the same four quarters. Projected demand growth in the hotel sectors is measured by anticipated growth in revenue per available room (RevPAR) over the next year.

Current Conditions
Current market well being: The ratio between supply and demand growth is then examined in the context of current market well being, measured typically by existing occupancy/vacancy levels. Even if the supply pipeline slightly exceeds anticipated growth in demand, a market with extremely low vacancy rates might, in some sense, need additional capacity. The variables that define market well being differ for the hotel sectors. Hotel markets are measured by the change in RevPAR, a variable that incorporates both occupancy and average daily rate (ADR), relative to a baseline target (the average of 1998 and 1999 RevPAR adjusted for inflation and seasonality). The years 1998 and 1999 were chosen as the starting point for calculating the baseline because those were deemed to be relatively “balanced” years for revenues in the hotel sector. From the average RevPAR for those two years, an
inflation factor from the research-CPI was used to adjust to a “normal” RevPAR for today. The baseline RevPAR is used to isolate aberrations in that hotel sector that persist after several difficult years. For example, if a hotel market “normally” experiences RevPAR of $100, and if over the last year RevPAR has increased from $60 to $75, then we can acknowledge the 25% growth in RevPAR over the last year, but also take into account the fact that the growth is coming off an abnormally low base and is still 25% below a sustainable level.

**Market momentum:** Finally, we consider the momentum within the market, measured by the change in occupancy levels over the past year (note that a market with high but decreasing vacancy has positive momentum, a market with low but increasing vacancy has negative momentum). Market momentum in the hotel sectors is measured by the growth in RevPAR over the last one-year period. Comparing the same quarter from one year to the next captures the inherent seasonality of the hotel industry.

**Parameters**

In defining the parameters for each of the variables, Moody’s attempted to identify reasonable bands which, in our judgment, marked excesses based on the dynamics of each property type. In general, we believe that supply growth only slightly greater than demand growth is tolerable – within some acceptable margin of error – since the rate at which new space is delivered is never exactly synchronized with the absorption of space in real time.

Similarly, the definition of vacancy rates that are “high” or “moderate” varies for each property type. The bands have been chosen on the basis of long-term averages for each product and are in keeping with Moody’s notion of what constitutes a reasonable balance. Likewise, the identification of a change in vacancy which is deemed to be market-threatening is based on an assessment of the volatility inherent in each property type.

Each of the four variables is scaled on the basis of 0-100. For each, a score of 50 would accompany a market with performance in the middle range. For example, the high range for multifamily vacancy is greater than 10%, the middle band includes markets with vacancy between 6% and 10%, and the lowest band is for markets with vacancy under 6%. On this variable, an 8% vacancy rate (in the center of the middle band) would receive a score of 50. By extension, 6% vacancy – the boundary between moderate and low vacancy – would receive a score of 66.7, and 10% vacancy – the boundary between moderate and high vacancy – would receive a score of 33.3. The scale is linear, so the highest score of 100 would be attributed to markets with vacancy of 2% or less, and a score of zero to markets with vacancy of 14%. The same principle is applied to all four variables.

The specific parameters and their corresponding scores for each factor are outlined in Figure A for each property type.
## Property Type Score Parameters

### MULTIFAMILY

<table>
<thead>
<tr>
<th>SCORE</th>
<th>SUPPLY</th>
<th>SUPPLY VS DEMAND</th>
<th>VACANCY</th>
<th>VACANCY CHANGE</th>
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<td>2.0%</td>
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<tr>
<td>83</td>
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<td>67</td>
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### RETAIL

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<td>100</td>
<td>2.0%</td>
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<td>2.0%</td>
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<tr>
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<tr>
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<tr>
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<tr>
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### OFFICE

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<th>VACANCY</th>
<th>VACANCY CHANGE</th>
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<td>1.0%</td>
<td>4.0%</td>
<td>-1.0%</td>
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### INDUSTRIAL

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<tr>
<th>SCORE</th>
<th>SUPPLY</th>
<th>SUPPLY VS DEMAND</th>
<th>VACANCY</th>
<th>VACANCY CHANGE</th>
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### HOTEL

<table>
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<tr>
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<th>SUPPLY VS DEMAND</th>
<th>Y-O-Y REVPAR</th>
<th>REVPAR VS BASE</th>
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<td>8.0%</td>
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<td>-1.0%</td>
<td>-14.0%</td>
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</tbody>
</table>

If a variable is scored with a negative number in the scale (e.g., a multifamily market with a vacancy rate of more than 14%), then that negative number is incorporated into the final score as an additional penalty. However, the obverse is not true. A favorably-performing variable does not accumulate extra benefit for a score greater than 100. The rationale for this non-parallel treatment is that a super-tight market is in fact at risk of market-distorting rent spikes and therefore should not be progressively rewarded.
### Weighting

The forward-looking variables and the current condition variables are weighted 50-50 in the final, total score. However, among each category, the two variables are not equally weighted.

For the forward-looking dimension that measures supply/demand and supply alone, the worse of the two variables is given a 75% weight, and the better variable is given a 25% weight. Since the forward-looking dimension is given a 50% weight in the total, final score, the worse variable thus earns a 37.5% weight in the total score, and the better variable accounts for 12.5% of the total score.

For the current conditions variables, vacancy always accounts for 75% of the score on that dimension (37.5% of the total score), and the change in vacancy is given a 25% weight (12.5% of the total score). In the hotel sectors, both current conditions variables are weighted equally.

### National Average

For each property type, a national average has been calculated in order to provide some relative assessment of the well being of each product. That score is weighted according to the size of individual markets; it is not based on a raw average of individual market scores. As a result, if many large markets have earned a high score, the national average would be disproportionately shifted in that direction.
1 Formerly known as Torto-Wheaton Research.
2 The source for the research-CPI is the Federal Reserve Bank of Cleveland.