DIVIDEND CAPITAL RESEARCH

Cycle Monitor — *Real Estate Market Cycles*

Second Quarter 2014 Analysis

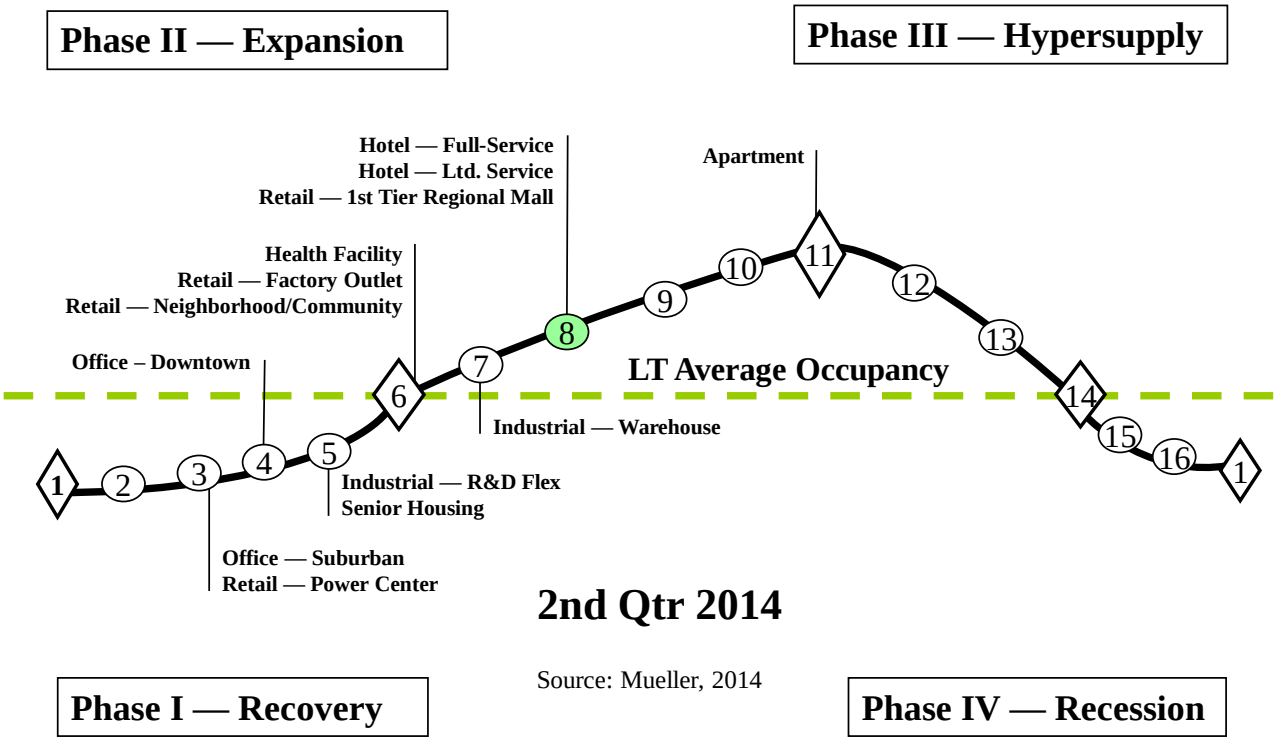
August 2014

Physical Market Cycle Analysis of All Five Major Property Types in More Than 50 MSAs.

Economic forecast opinions are changing and we like to think that the economy is moving from a slow recovery phase into a moderate growth phase of the cycle. Gross domestic product is growing at above 2% and employment growth is sustaining at a level of more than 200,000 jobs per month. This seems to have created moderate, but sustainable demand for most real estate. It has also kept new supply at low and sustainable levels for the foreseeable future, except in the case of apartments. New apartment supply is too high, mainly due to low interest rate government financing availability.

Office occupancies **improved** 0.1% in 2Q14, and rents grew 1.0% for the quarter and 3.8% annually.
Industrial occupancies **improved** 0.1% in 2Q14, and rents grew 1.1% for the quarter and 4.6% annually.
Apartment occupancies **declined** 0.1% in 2Q14, but rents grew 0.8% for the quarter and 2.5% annually.
Retail occupancy **improved** 0.1% in 2Q14, and rents grew 1.3% for the quarter and 3.0% annually.
Hotel occupancies **improved** 0.8% in 2Q14, while rents grew 3.9% for the quarter and improved 4.7% annually.

National Property Type Cycle Locations



Source: Mueller, 2014

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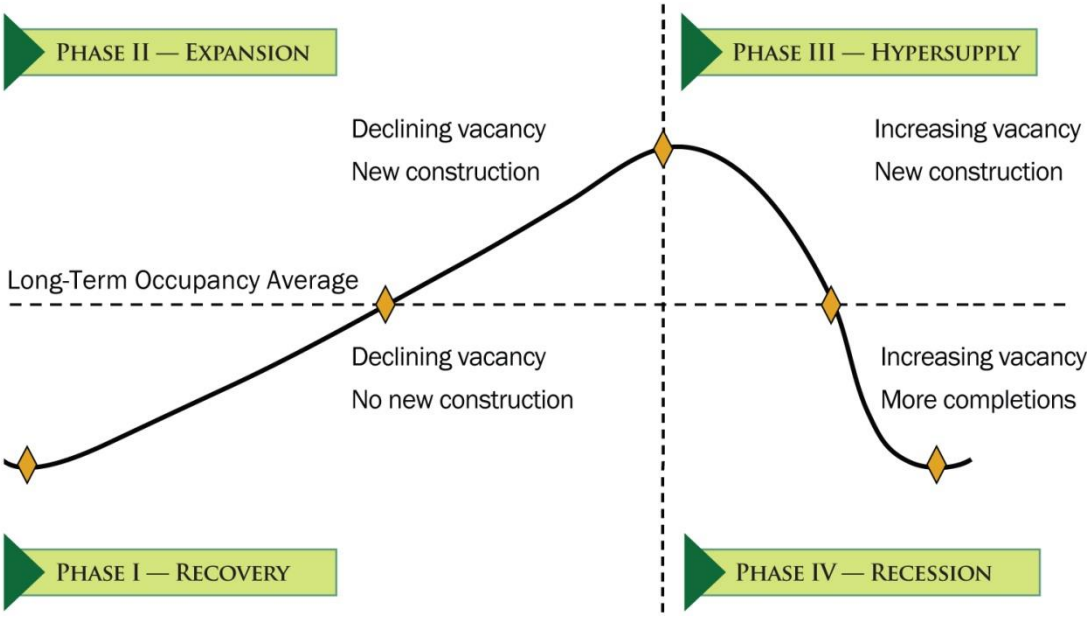
All relevant disclosures and certifications appear on page 9 of this report.

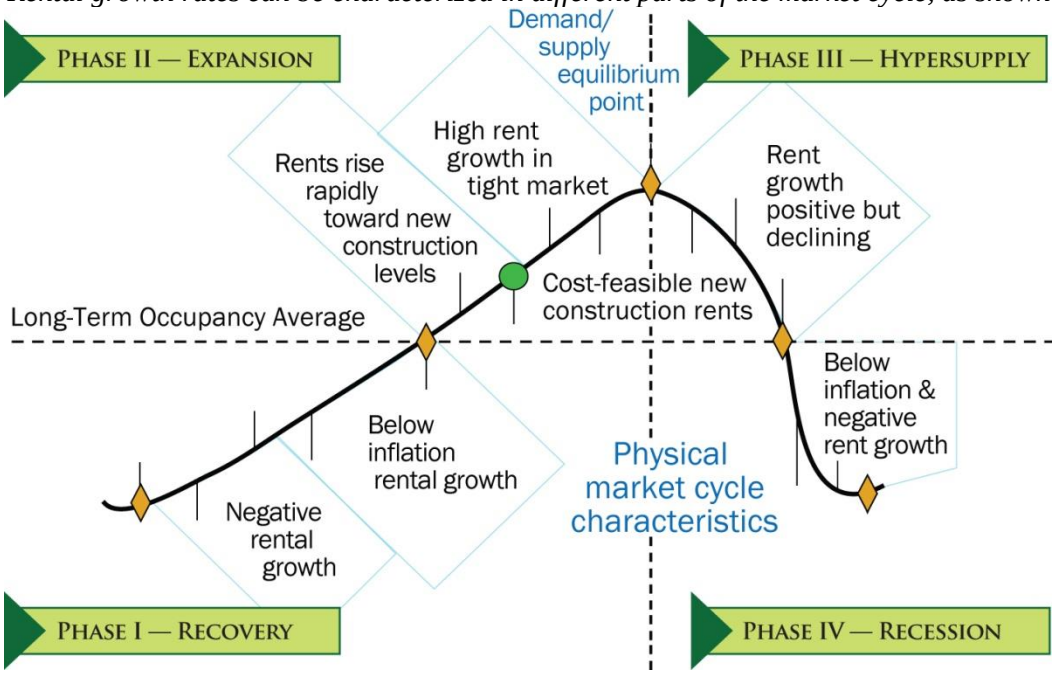
The cycle monitor analyzes occupancy movements in five property types in more than 50 Metropolitan Statistical Areas (MSAs). Market cycle analysis should enhance investment-decision capabilities for investors and operators. The five property type cycle charts summarize almost 300 individual models that analyze occupancy levels and rental growth rates to provide the foundation for long-term investment success. Real estate markets are cyclical due to the lagged relationship between demand and supply for physical space. The long-term occupancy average is different for each market and each property type. ***Long-term occupancy average*** is a key factor in determining rental growth rates — a key factor that affects real estate returns.

Market Cycle Quadrants



Source: Mueller, Real Estate Finance, 1995.

Rental growth rates can be characterized in different parts of the market cycle, as shown below.



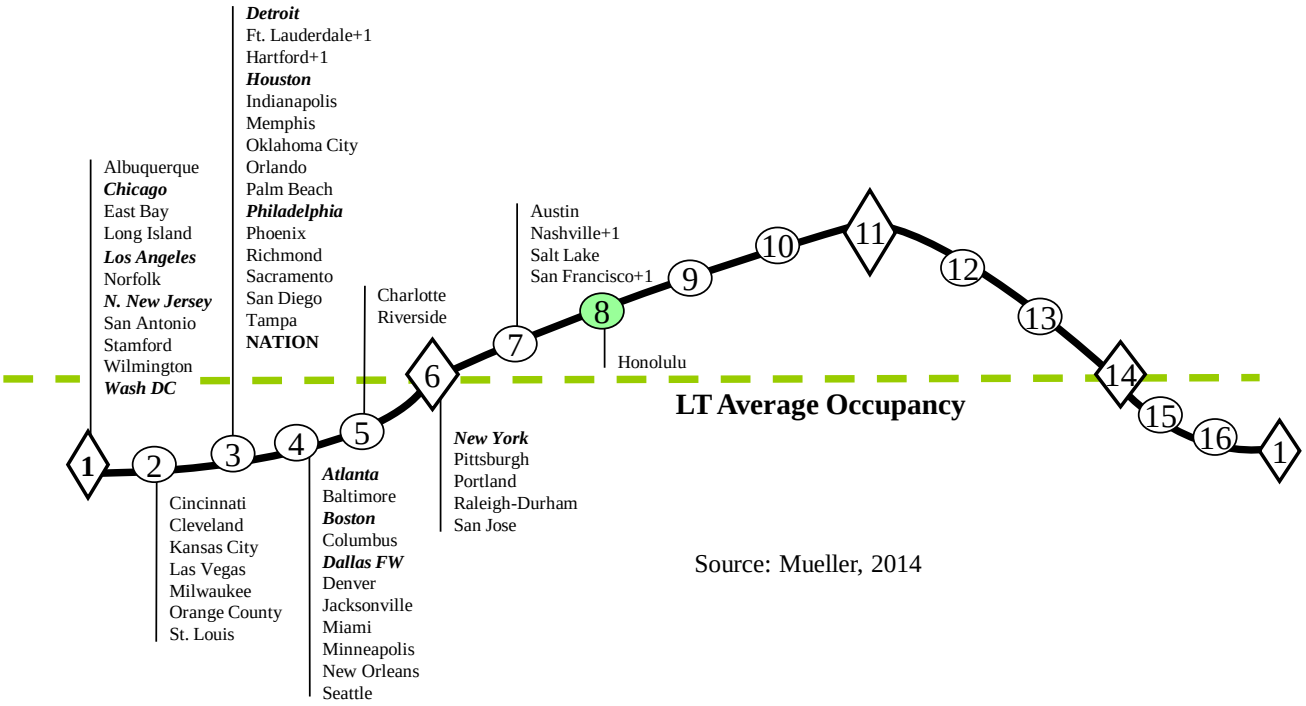
Source: Mueller, Real Estate Finance, 1995.

OFFICE

The national office market occupancy level improved 0.1% in 2Q14, and was up 0.4% year-over-year. Office employment continues to grow at a rate close to 100,000 jobs per month, but space utilization has declined from the long-term average of 200 square feet per person (SFPP) usage to about 170 SFPP. Thus, office space demand continues at a moderate pace that appears to be sustainable over the next year. Most office markets had very little movement in occupancies, thus the recovery phase continues. Average national rents were up 0.1% in 2Q14 and rents were up 3.8% year-over-year.

Office Market Cycle Analysis

2nd Quarter, 2014



Source: Mueller, 2014

Note: The 11-largest office markets make up 50% of the total square footage of office space we monitor. Thus, the 11-largest office markets are in ***bold italic*** type to help distinguish how the weighted national average is affected.

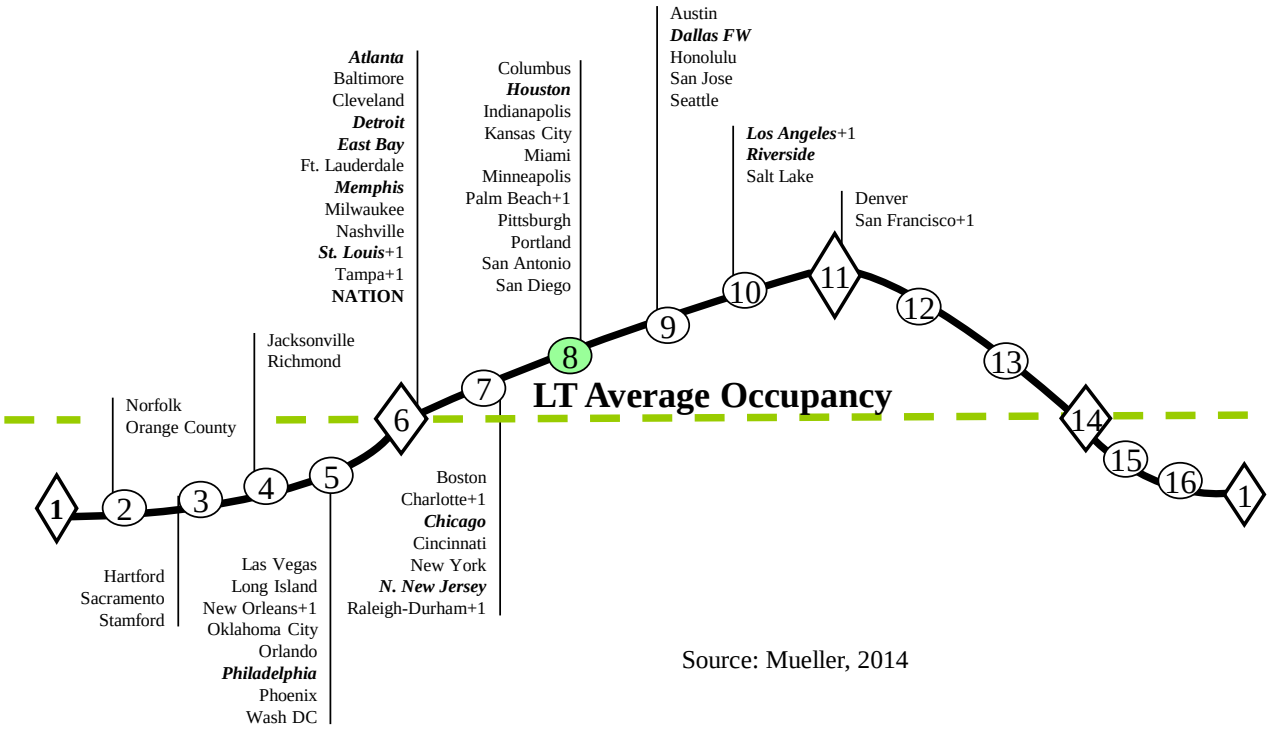
Markets that have moved since the previous quarter are now shown with a + or - symbol next to the market name and the number of positions the market has moved is also shown, i.e., +1, +2 or -1, -2. Markets do not always go through smooth forward-cycle movements and can regress, or move backward in their cycle position when occupancy levels reverse their usual direction. This can happen when the marginal rate of change in demand increases (or declines) faster than originally estimated or if supply growth is stronger (or weaker) than originally estimated.

INDUSTRIAL

Industrial occupancies improved 0.1% in 2Q14, and were up 0.8% year-over-year. Absorption was almost 38 million square feet in 2Q14 and has been higher than completions (29 million square feet in 2Q14) for almost four years in a row. Manufacturing, utility and transportation employment correlates well with industrial demand and has been quite strong. Strong demand in energy driven cities like Austin, Dallas and Denver have pushed double digit rent growth in those industrial markets. While new completions are growing in some major port markets, it has not been high enough to cause concern by investors. The industrial national average rent index increased 1.1% in 2Q14 and was up 4.6% year-over-year.

Industrial Market Cycle Analysis

2ndQuarter, 2014



Source: Mueller, 2014

Note: The 12-largest industrial markets make up 50% of the total square footage of industrial space we monitor. Thus, the 12-largest industrial markets are in ***bold italic*** type to help distinguish how the weighted national average is affected.

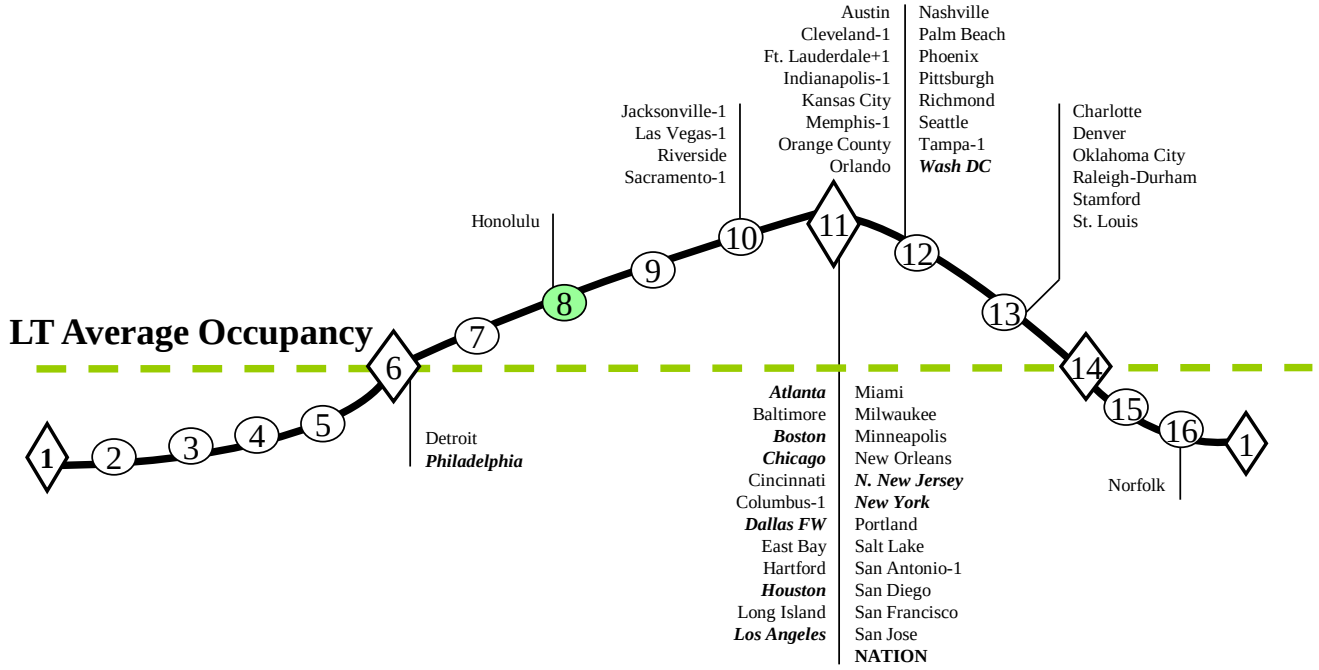
Markets that have moved since the previous quarter are shown with a + or - symbol next to the market name and the number of positions the market has moved is also shown, e.g., +1, +2 or -1, -2. Markets do not always go through smooth forward-cycle movements and can regress, or move backward in their cycle position when occupancy levels reverse their usual direction. This can happen when the marginal rate of change in demand increases (or declines) faster than originally estimated or if supply growth is stronger (or weaker) than originally estimated.

APARTMENT

The national apartment occupancy average declined 0.1% in 2Q14, and was down 0.2% year-over-year. Most markets are past their peak occupancy levels and are starting a moderate occupancy decline with all the new completions coming on-line in 2014. The cycle chart shows that three markets had improving occupancies that moved them from peak occupancy (point #11) backwards into the growth phase (point #10). There were five markets that had less dramatic occupancy changes that moved them backward (up) in the hypersupply phase of the cycle (points #11 and #12). It should be interesting to see if the development community picks up on the hypersupply issue and slows new starts over the next year. Remember that rents still grow in the hypersupply phase of the cycle (as occupancies are above the long-term average), but the rate of growth slows down. Average national apartment rent growth was 0.8% in 2Q14 and was up 2.5% year-over-year (a lower growth rate than the previous quarter).

Apartment Market Cycle Analysis

2nd Quarter, 2014



Source: Mueller, 2014

Note: The 10-largest apartment markets make up 50% of the total square footage of multifamily space we monitor. Thus, the 10-largest apartment markets are in ***bold italic*** type to help distinguish how the weighted national average is affected.

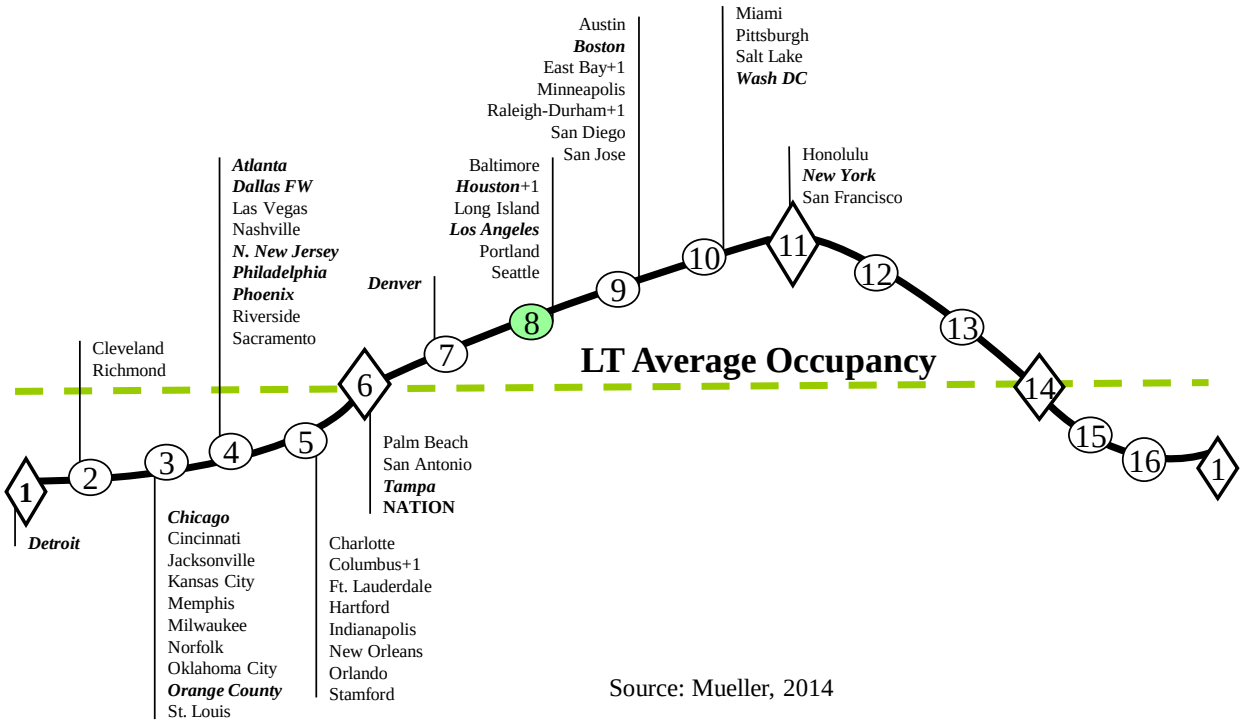
Markets that have moved since the previous quarter are shown with a + or - symbol next to the market name and the number of positions the market has moved is also shown, e.g., +1, +2 or -1, -2. Markets do not always go through smooth forward-cycle movements and can regress, or move backward in their cycle position when occupancy levels reverse their usual direction. This can happen when the marginal rate of change in demand increases (or declines) faster than originally estimated or if supply growth is stronger (or weaker) than originally estimated.

RETAIL

Retail occupancies improved 0.1% in 2Q14, and were up 0.3% year-over-year. Retail employment growth continues at a moderate pace of 40,000 jobs per month, which is a good indicator of demand for retail space. Retail sales also continued to grow at a moderate and potentially sustainable pace for the next year. The strong 2013 holiday sales caused many retailers to plan expansion in 2014 which should create positive occupancy increases in 2014 and 2015. National average retail rents increased 1.3% in 2Q14 and were up 3.0% year-over-year.

Retail Market Cycle Analysis

2nd Quarter, 2014



Source: Mueller, 2014

Note: The 15-largest retail markets make up 50% of the total square footage of retail space we monitor. Thus, the 15-largest retail markets are in ***bold italic*** type to help distinguish how the weighted national average is affected.

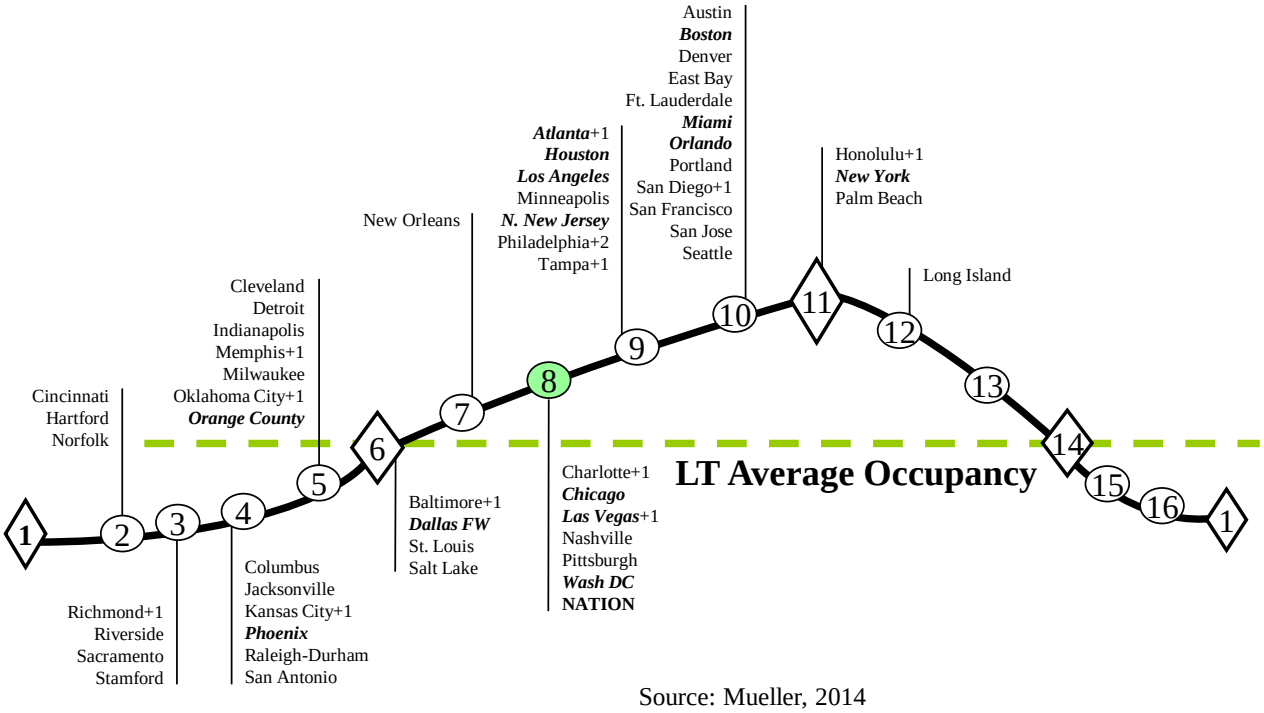
Markets that have moved since the previous quarter are shown with a + or - symbol next to the market name and the number of positions the market has moved is also shown, e.g., +1, +2 or -1, -2. Markets do not always go through smooth forward-cycle movements and can regress, or move backward in their cycle position when occupancy levels reverse their usual direction. This can happen when the marginal rate of change in demand increases (or declines) faster than originally estimated or if supply growth is stronger (or weaker) than originally estimated.

HOTEL

Hotel occupancies improved an average of 0.8% in 2Q14, and were up 1.9% year-over-year. Business expansions and the use of conferences to train employees and promote business with customers have been strong. Industry organizations are experiencing new record attendance levels at their conferences as well. New start-up niche organizations are also creating more conference demand. Many markets are now seeing new construction to meet the increasing demand, but few are in danger of going into the hypersupply phase of the cycle. With more than 60% of all hotel markets in the growth phase of the cycle, hoteliers are now able to raise room rates at above inflation levels. National average hotel rents improved 3.9% in 2Q14 and were up 4.7% year-over-year.

Hotel Market Cycle Analysis

2nd Quarter, 2014



Source: Mueller, 2014

Note: The 14-largest hotel markets make up 50% of the total square footage of hotel space that we monitor. Thus, the 14-largest hotel markets are in boldface italics to help distinguish how the weighted national average is affected.

Markets that have moved since the previous quarter are shown with a + or - symbol next to the market name and the number of positions the market has moved is also shown, e.g., +1, +2 or -1, -2. Markets do not always go through smooth forward-cycle movements and can regress, or move backward in their cycle position when occupancy levels reverse their usual direction. This can happen when the marginal rate of change in demand increases (or declines) faster than originally estimated or if supply growth is stronger (or weaker) than originally estimated.

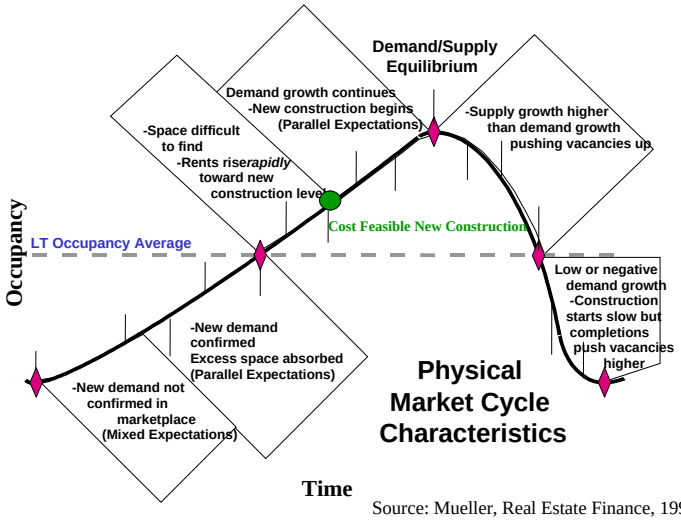
MARKET CYCLE ANALYSIS — Explanation

Supply and demand interaction is important to understand. Starting in Recovery Phase I at the bottom of a cycle (see chart below), the marketplace is in a state of oversupply from previous new construction or negative demand growth. At this bottom point, occupancy is at its trough. Typically, the market bottom occurs when the excess construction from the previous cycle stops. As the cycle bottom is passed, demand growth begins to slowly absorb the existing oversupply and supply growth is nonexistent or very low. As excess space is absorbed, vacancy rates fall allowing rental rates in the market to stabilize and even begin to increase. As this recovery phase continues, positive expectations about the market allow landlords to increase rents at a slow pace (typically at or below inflation). Eventually, each local market reaches its ***long-term occupancy average*** whereby rental ***growth is equal to inflation***.

In Expansion Phase II, demand growth continues at increasing levels, creating a need for additional space. As vacancy rates fall below the ***long-term occupancy average***, signaling that supply is tightening in the marketplace, rents begin to rise rapidly until they reach a cost-feasible level that allows new construction to commence. In this period of tight supply, rapid rental growth can be experienced, which some observers call "rent spikes." (Some developers may also begin speculative construction in anticipation of cost-feasible rents if they are able to obtain financing.) Once cost-feasible rents are achieved in the marketplace, demand growth is still ahead of supply growth — a lag in providing new space due to the time to construct. Long expansionary periods are possible and many historical real estate cycles show that the overall up-cycle is a slow, long-term uphill climb. As long as demand growth rates are higher than supply growth rates, vacancy rates will continue to fall. The cycle peak point is where demand and supply are growing at the same rate ***or equilibrium.*** Before equilibrium, demand grows faster than supply; after equilibrium, supply grows faster than demand.

Hypersupply Phase III of the real estate cycle commences after the peak/equilibrium point #11 — where demand growth equals supply growth. Most real estate participants do not recognize this peak/equilibrium's passing, as occupancy rates are at their highest and well above long-term averages, a strong and tight market. During Phase III, supply growth is higher than demand growth (hypersupply), causing vacancy rates to rise back toward the long-term occupancy average. While there is no painful oversupply during this period, new supply completions compete for tenants in the marketplace. As more space is delivered to the market, rental growth slows. Eventually, market participants realize that the market has turned down and commitments to new construction should slow or stop. If new supply grows faster than demand once the long-term occupancy average is passed, the market falls into Phase IV.

Recession Phase IV begins as the market moves past the long-term occupancy average with high supply growth and low or negative demand growth. The extent of the market down-cycle will be determined by the difference (excess) between the market supply growth and demand growth. Massive oversupply, coupled with negative demand growth (that started when the market passed through long-term occupancy average in 1984), sent most U.S. office markets into the largest down-cycle ever experienced. During Phase IV, landlords realize that they will quickly lose market share if their rental rates are not competitive; they then lower rents to capture tenants, even if only to cover their buildings' fixed expenses. Market liquidity is also low or nonexistent in this phase, as the bid–ask spread in property prices is too wide. The cycle eventually reaches bottom as new construction and completions cease, or as demand growth turns up and begins to grow at rates higher than that of new supply added to the marketplace.



Source: Mueller, Real Estate Finance, 1995

This research currently monitors five property types in more than 50 major markets. We gather data from numerous sources to evaluate and forecast market movements. The market cycle model we developed looks at the interaction of supply and demand to estimate future vacancy and rental rates. Our individual market models are combined to create a national average model for all U.S. markets. This model examines the current cycle locations for each property type and can be used for asset allocation and acquisition decisions.

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