DIVIDEND CAPITAL
RESEARCH

CYCLE FORECAST — Real Estate Market Cycles

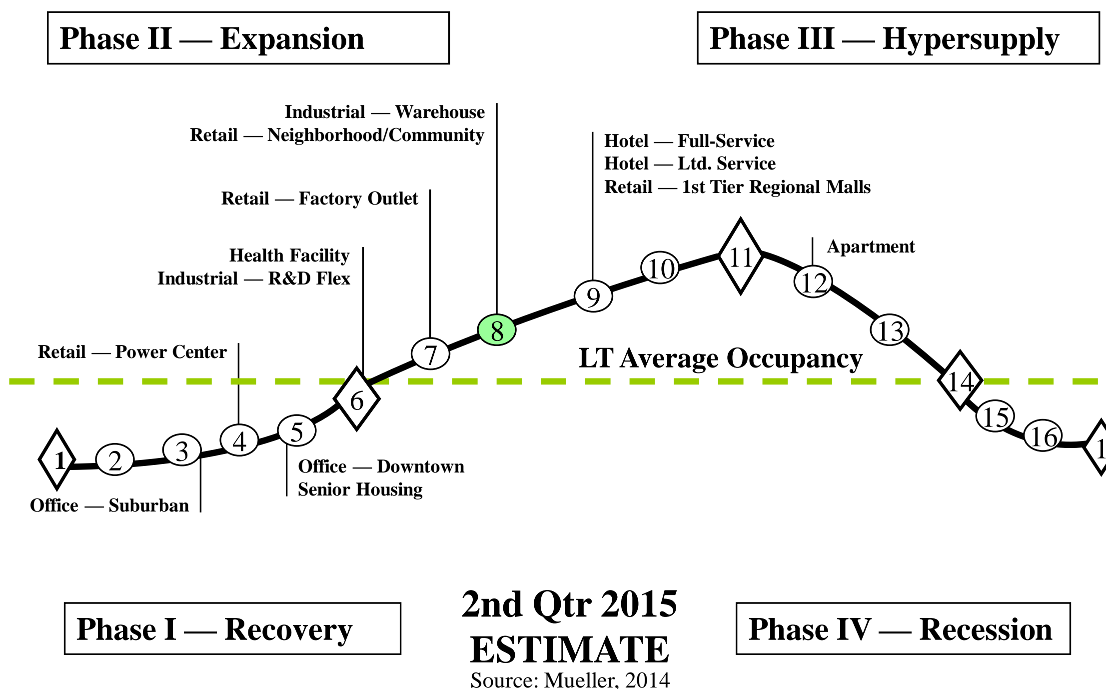
Second Quarter 2015 Estimates

August 2014

Economic forecasts for U.S. GDP and employment growth continue to improve, but are still expected to be at growth rates slightly lower than previous recoveries. It is believed that this slower, but steady growth rate is good for most real estate markets. There is very low supply growth in almost every city covered in the cycle graph, thus occupancy levels should continue to improve. The one exception is the apartment market where supply is being added too quickly in 2014. Forecasts do indicate that apartment oversupply should start to slow in 2015 and return to reasonable levels in 2016. If the economy continues to expand through 2016, apartment markets should move out of the hypersupply phase and back into a recovery or growth phase of the occupancy cycle.

Office occupancies are forecast to **improve** 0.2% in 2Q15, with rents improving 0.7% quarter-over-quarter.
Industrial occupancies are forecast to **improve** 0.1% in 2Q15, with rents improving 0.5% quarter-over-quarter.
Apartment occupancies are forecast to **decline** 0.1% in 2Q15, with rents improving 0.3% quarter-over-quarter.
Retail occupancies are forecast to **improve** 0.1% in 2Q15, with rents improving 0.8% quarter-over-quarter.
Hotel occupancies are forecast to be flat in 2Q15, with quarterly room rates improving 3.0% quarter-over-quarter.

National Property Type Cycle Forecast



Source: Mueller, 2014

National Property Type Cycle Graph shows relative positions of sub-property types — major markets are reviewed inside.

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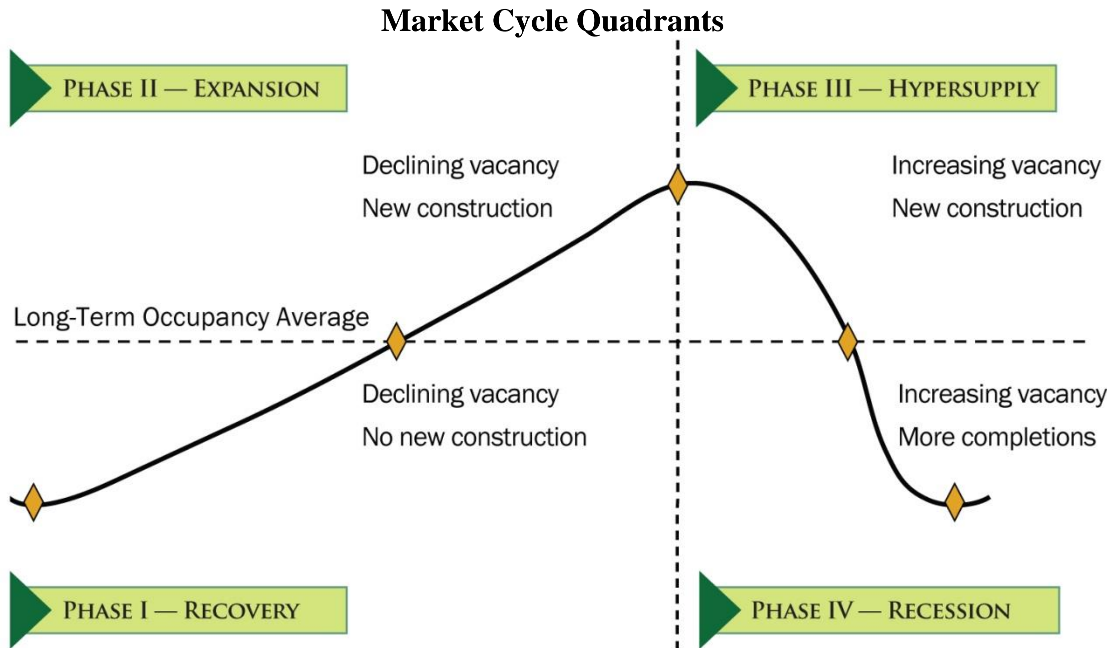
All relevant disclosures and certifications appear on page 9 of this report.

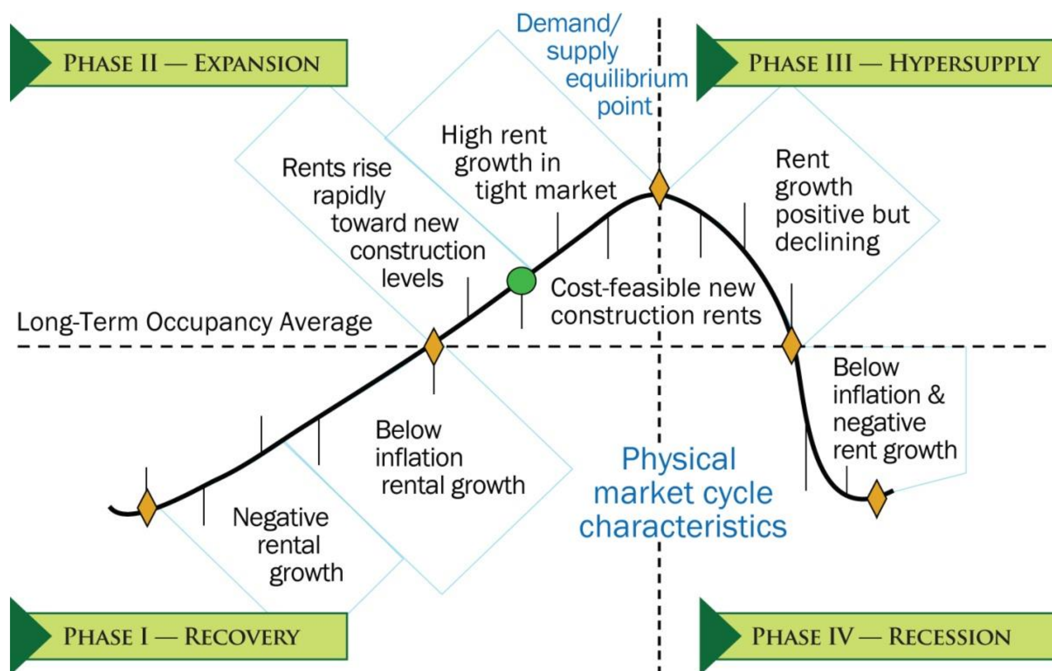
The cycle forecast analyzes occupancy movements in five property types in more than 50 Metropolitan Statistical Areas (MSAs). The market cycle analysis should enhance investment-decision capabilities for investors and operators. The five property type cycle charts summarize almost 300 individual models 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 supply and demand 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.



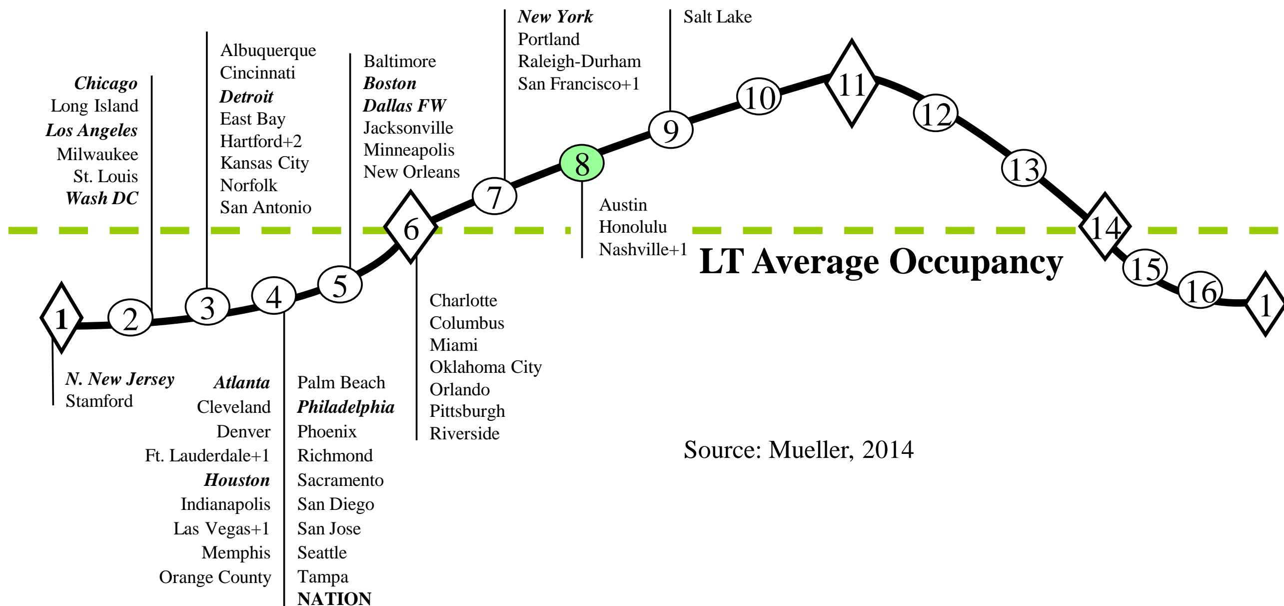
Source: Mueller, Real Estate Finance, 1995.

OFFICE FORECAST

Office occupancies are forecast to improve 0.2% in 2Q15, producing a 0.5% increase year-over-year. Absorption is expected to continue its slow and steady pace, as approximately half of the 200,000 jobs created each month are using office space. This is a 20% lower job growth projection than previous recoveries. While the U.S. has now recovered all the lost jobs from the great recession, it appears the growth phase of the economic cycle may continue at this slow pace. Moderate supply growth is expected to allow office markets to continue to move through the recovery phase into the growth phase of the real estate cycle (points #6 to #10). Office rents are expected to increase 0.7% in 2Q15 and be up 3.1% year-over-year.

Office Market Cycle FORECAST

2nd Quarter, 2015 Estimates

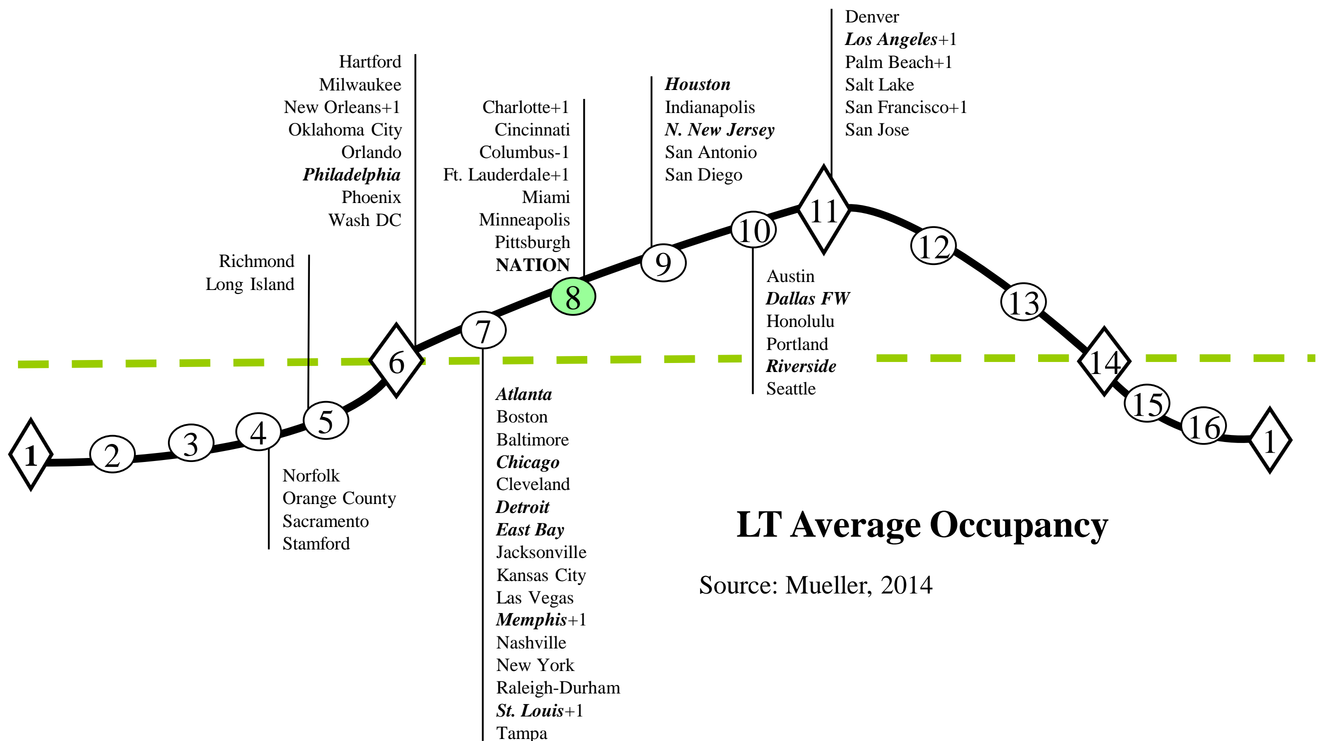


Note: The 11-largest office markets make up 50% of the total square footage of office space that we monitor. Thus, the 11-largest office markets are in ***bold italics*** to help distinguish how the weighted national average is affected.

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.

INDUSTRIAL FORECAST

Industrial occupancies are forecast to improve 0.1% in 2Q15 and be up 0.6% year-over-year. Durable goods continue to trend at above average rates and the improving economy supports a continued positive forecast. Import and export growth continues to trend above the long-term average supporting a positive forecast for 2015. Manufacturing continues to return to the U.S. and is strongly supported by low natural gas prices which also supports a strong forecast for 2015. On the supply side, the tightest markets are seeing new construction, most of which is justified. Out of the 54 industrial markets, 23 markets are now above the cost-justified rents on the cycle graph (point #8). Rents are now above long-term averages. We expect rents to increase 0.5% in 2Q15 and be up 2.7% year-over-year.

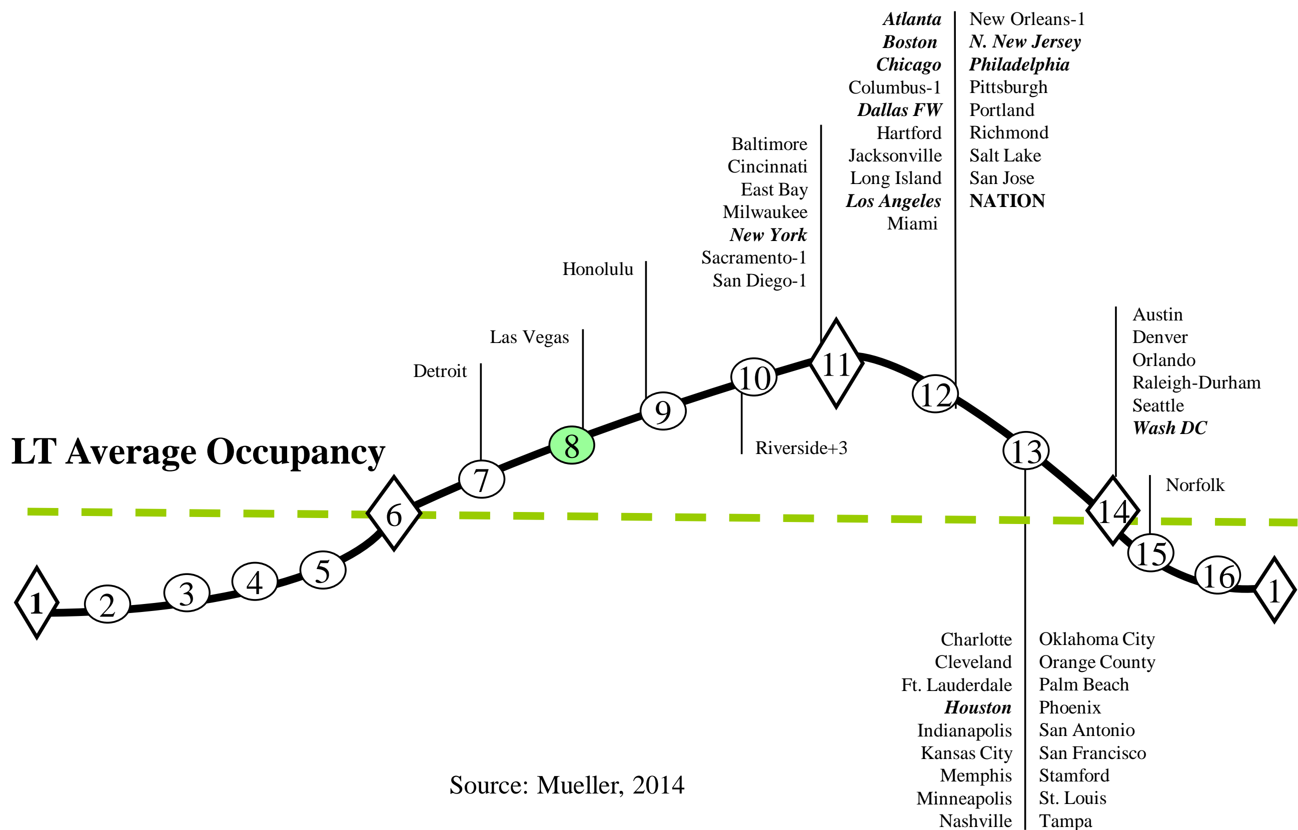


Note: The 12-largest industrial markets make up 50% of the total square footage of industrial space that we monitor. Thus, the 12-largest industrial markets are in ***bold italics*** to help distinguish how the weighted national average is affected.

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.

APARTMENT FORECAST

Apartment occupancies are forecast to decline 0.1% in 2Q15 and be down 0.6% year-over-year. The hypersupply of apartment construction should continue through the rest of 2014, but begin to slow in 2015. The cycle graph shows that apartment occupancies should fall back down to their long-term average some time in 2016 (point #14). After that time, if the economy is still growing and apartment construction starts are moderate, the markets could move back into a growth phase instead of moving into the recession phase of the cycle. It all depends upon how disciplined apartment developers can be in the future. Rental growth rates slow down in the hypersupply phase of the cycle. The national apartment rental rate is estimated to increase 0.3% in 2Q15 and estimate a year-over-year rental increase of only 1.9%.

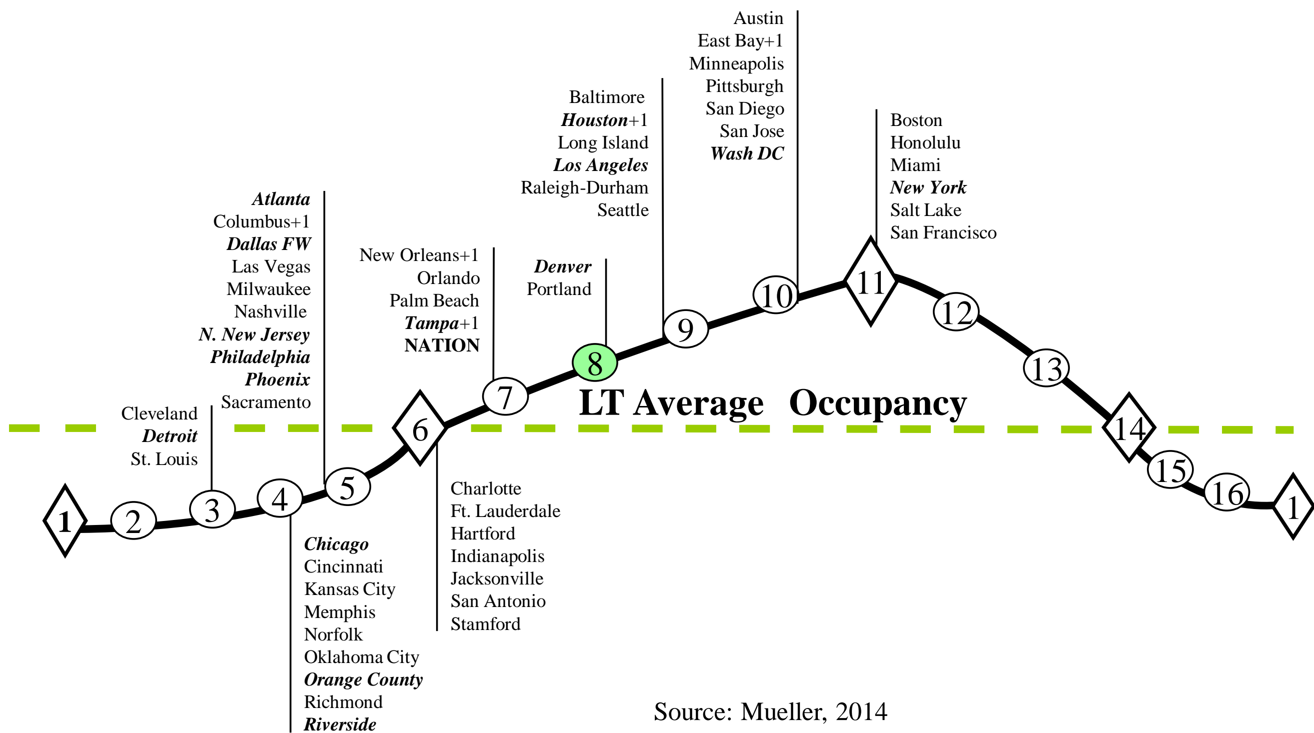


Note: The 10-largest apartment markets make up 50% of the total square footage of apartment space that we monitor. Thus, the 10-largest apartment markets are in ***bold italics*** to help distinguish how the weighted national average is affected.

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.

RETAIL FORECAST

Retail occupancy is forecast to improve 0.1% in 2Q15 and be up 0.4% year-over-year. Consumer confidence indices have been strong and are expected to continue to show strong results in 2015 which should support increased retail sales. New home construction leads to more neighborhood and community retail demand as well, and the improving housing market should push more retail demand in 2015. Finally, add the strong growth in the age group of 25-35 year olds who typically allocate more disposable income from money earned and a positive outlook about retail demand in 2015 is created. Retail supply is also forecast to be moderate in 2015, supporting the forecasts for most markets to be in the recovery and growth phases of the occupancy cycle. Retail rental rates are expected to increase 0.8% in 2Q15 and 3.2% year-over-year.



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

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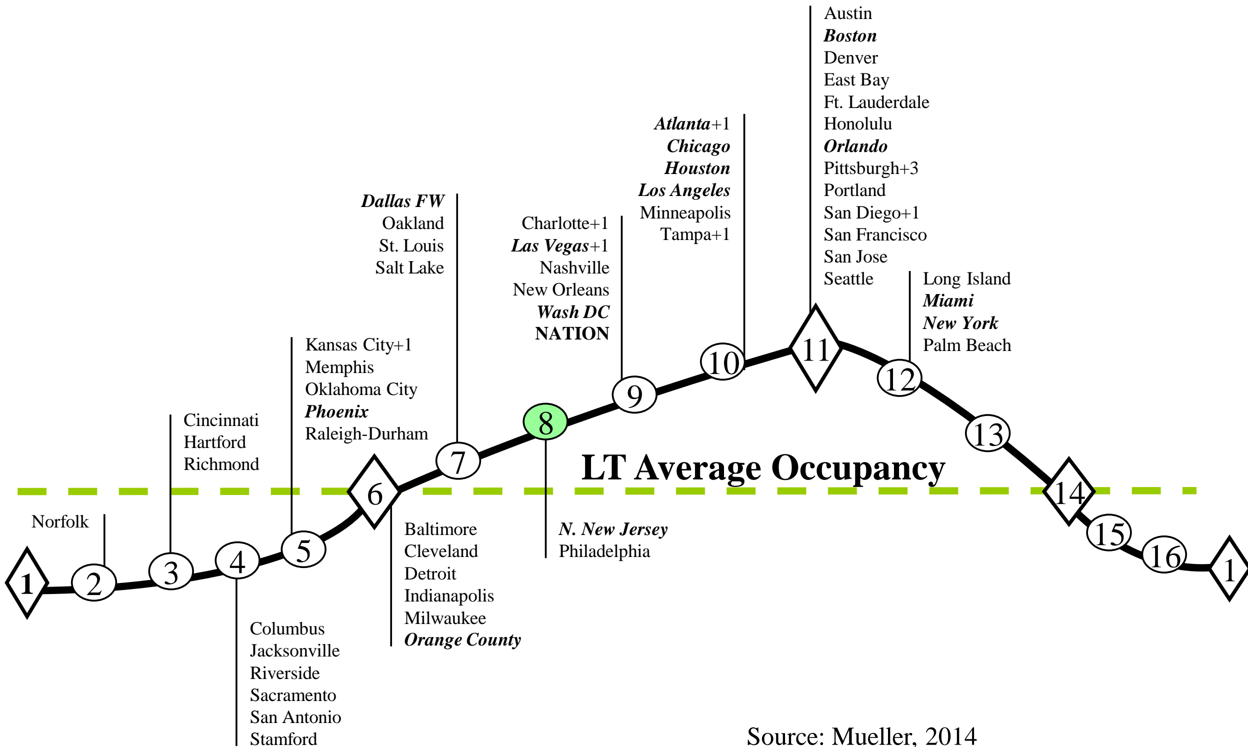
HOTEL FORECAST

Hotel occupancy is forecast to be flat in 2Q15 and improve 0.5% year-over-year. U.S. GDP has historically been the best indicator of hotel demand and the continued moderate GDP forecasts give comfort that positive demand growth for hotel rooms should continue throughout 2015. The new supply forecast is moderate for 2015 in most markets, so expect continued moderate improvement in occupancy levels. The four markets forecasted in the hypersupply phase (point #12) are there because of new rooms coming available that may push occupancies down slightly. Room rates are expected to improve 3.0% in 2Q15, while annual room rate improvement could be 3.2% year-over-year.



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 ***bold 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.

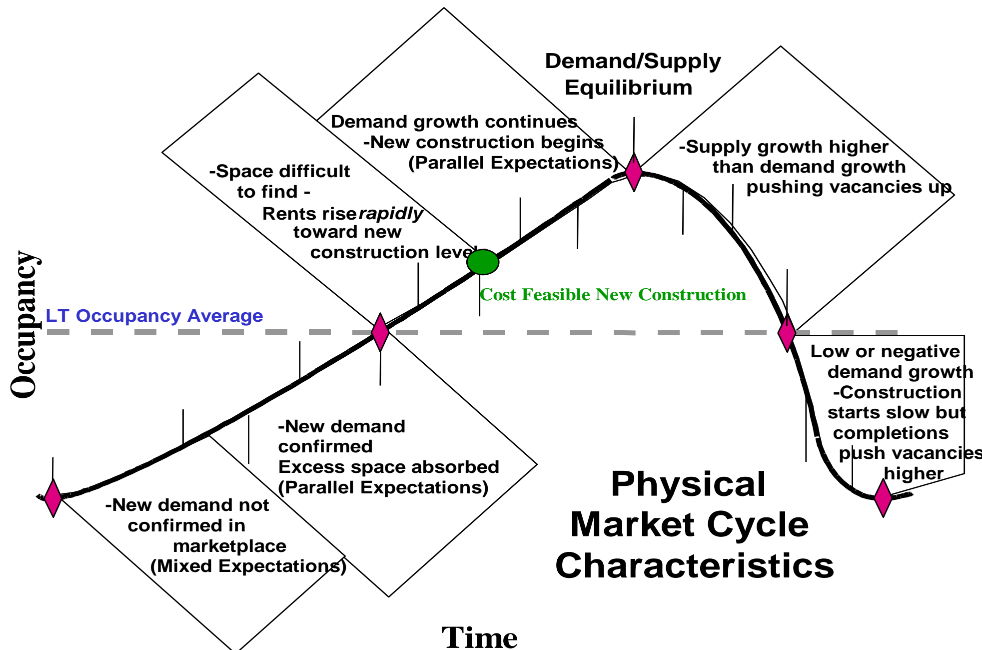
MARKET CYCLE ANALYSIS — Explanation

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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