

# Mueller

## Real Estate Market Cycle Monitor

### Third Quarter 2019 Analysis

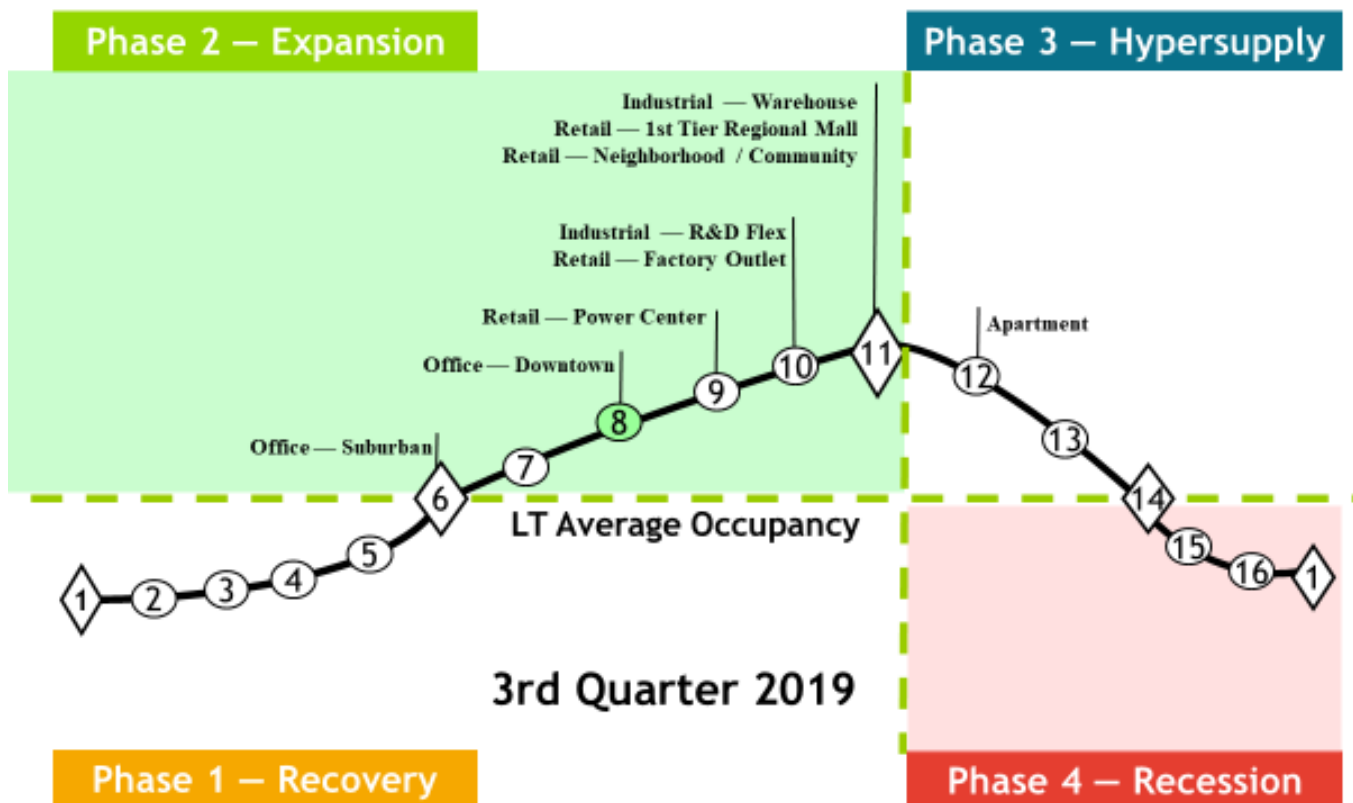
November 2019

#### The Physical Market Cycle Analysis of 5 Property Types in 54 Metropolitan Statistical Areas (MSAs).

Job growth continued at a constrained rate that has averaged 157,000 jobs per month over the last 9.5 years. Consumption continued at a 2% rate and the Consumer Price Index also continued at the 2% level. This moderate economic growth and inflation level bode well for a continued economic expansion. The 10-year treasury rate remains below 2% as well, producing low interest rates for commercial real estate. Equilibrium point #11 level occupancy continues in many markets in most property types with some bouncing back and forth between the expansion and hyper-supply phases of the cycle.

Office occupancy **was flat%** in 3Q19, and rents **grew** 0.8% for the quarter and 2.4% annually.  
 Industrial occupancy **declined -0.1%** in 3Q19, and rents **grew** 1.0% for the quarter and 4.0% annually.  
 Apartment occupancy **increased** 0.1% in 3Q19, but rents **declined** 0.4% for the quarter, and 2.5% annually.  
 Retail occupancy **was flat** in 3Q19, and rents **grew** for the quarter and 1.5% annually.

## National Property Type Cycle Locations



Source: Mueller, 2019

The National Property Type Cycle Locations graph shows relative positions of the sub-property types.

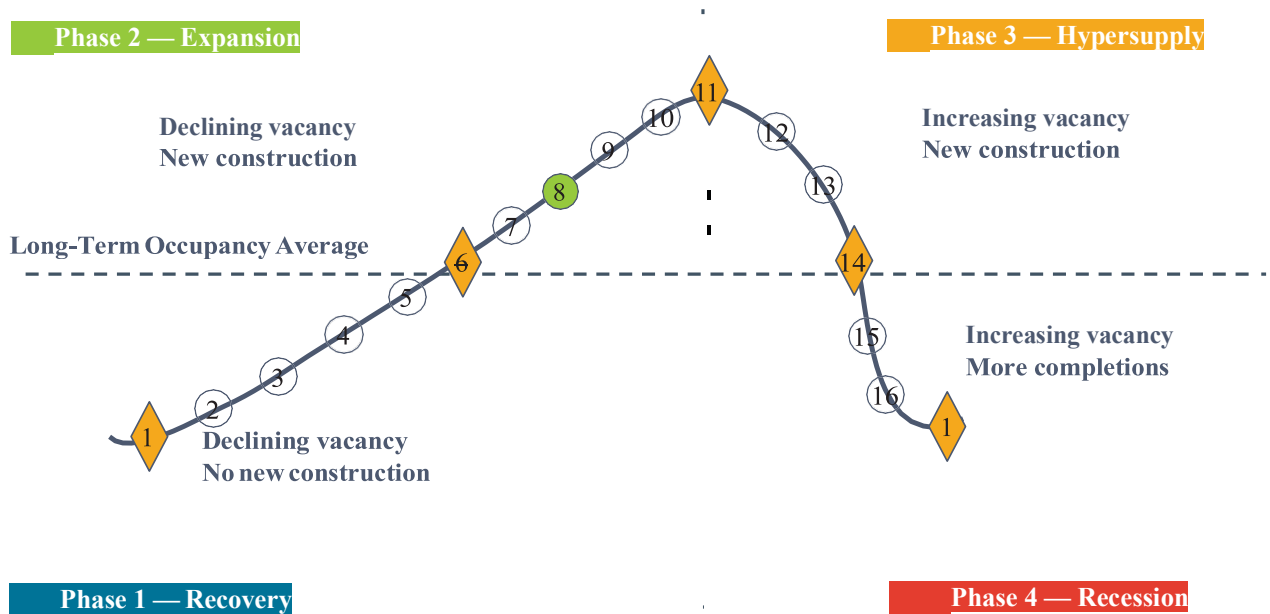
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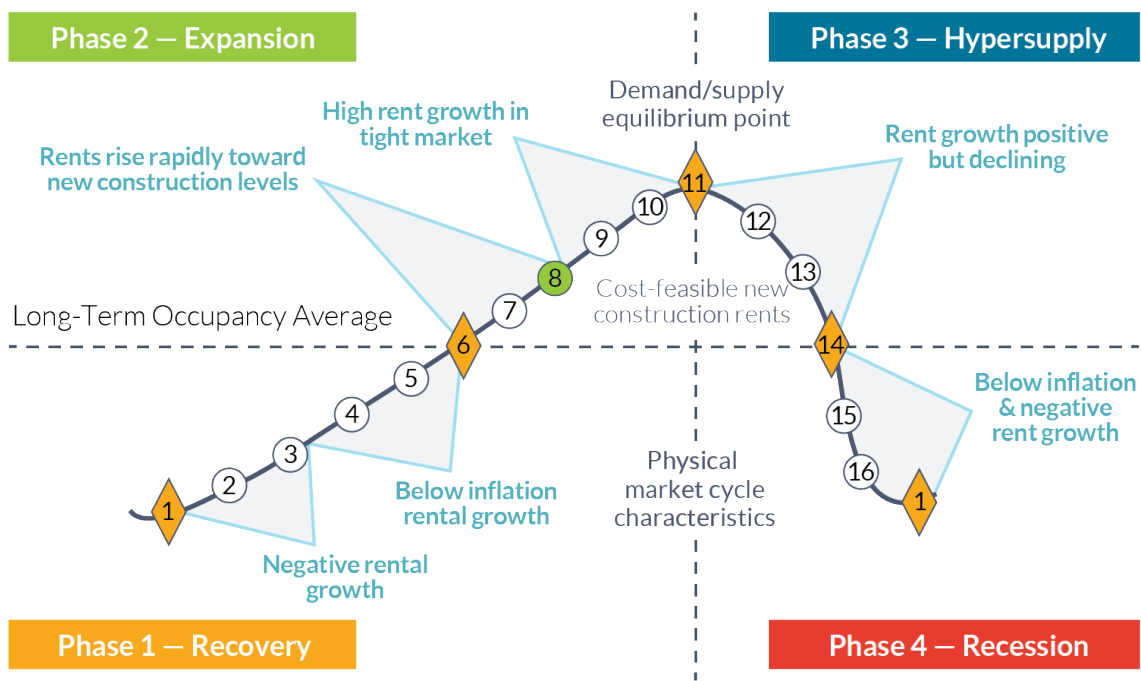
The cycle monitor analyzes occupancy movements in five property types in 54 MSAs. Market cycle analysis should enhance investment-decision capabilities for investors and operators. The five property type cycle charts summarize almost 300 individual models that analyze occupancy levels and rental growth rates to provide the foundation for long-term investment success. Commercial 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 commercial real estate income and thus returns.

## Market Cycle Quadrants



Source: Mueller, Real Estate Finance, 1996.

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



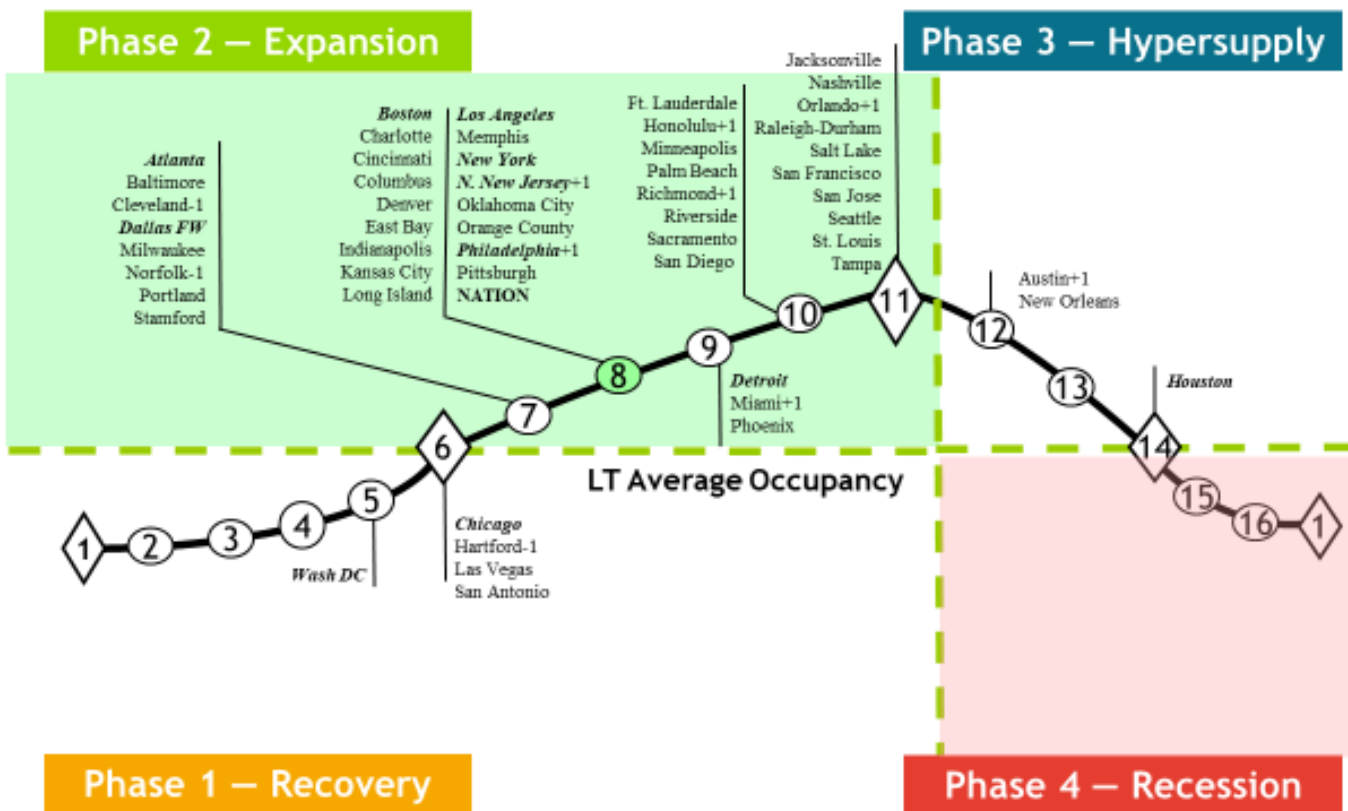
Source: Mueller, Real Estate Finance, 1996.

## Office

The national office market occupancy level was flat in 3Q19 and up 2.4% year-over-year. Good demand growth continued and produced 13 million square feet of net absorption for the quarter. Completions were similar keeping the national market at the same occupancy level. Only five markets moved higher in the cycle chart as slow employment growth has not created fast cyclical office demand movement. Some fast growth tech driven markets like Austin, Charlotte, Nashville, and San Jose may see high levels of new supply. Average national rents increased 0.8% in 3Q19 and produced a 2.4% rent increase year-over-year.

### Office Market Cycle Analysis

3rd Quarter, 2019



Source: Mueller, 2019

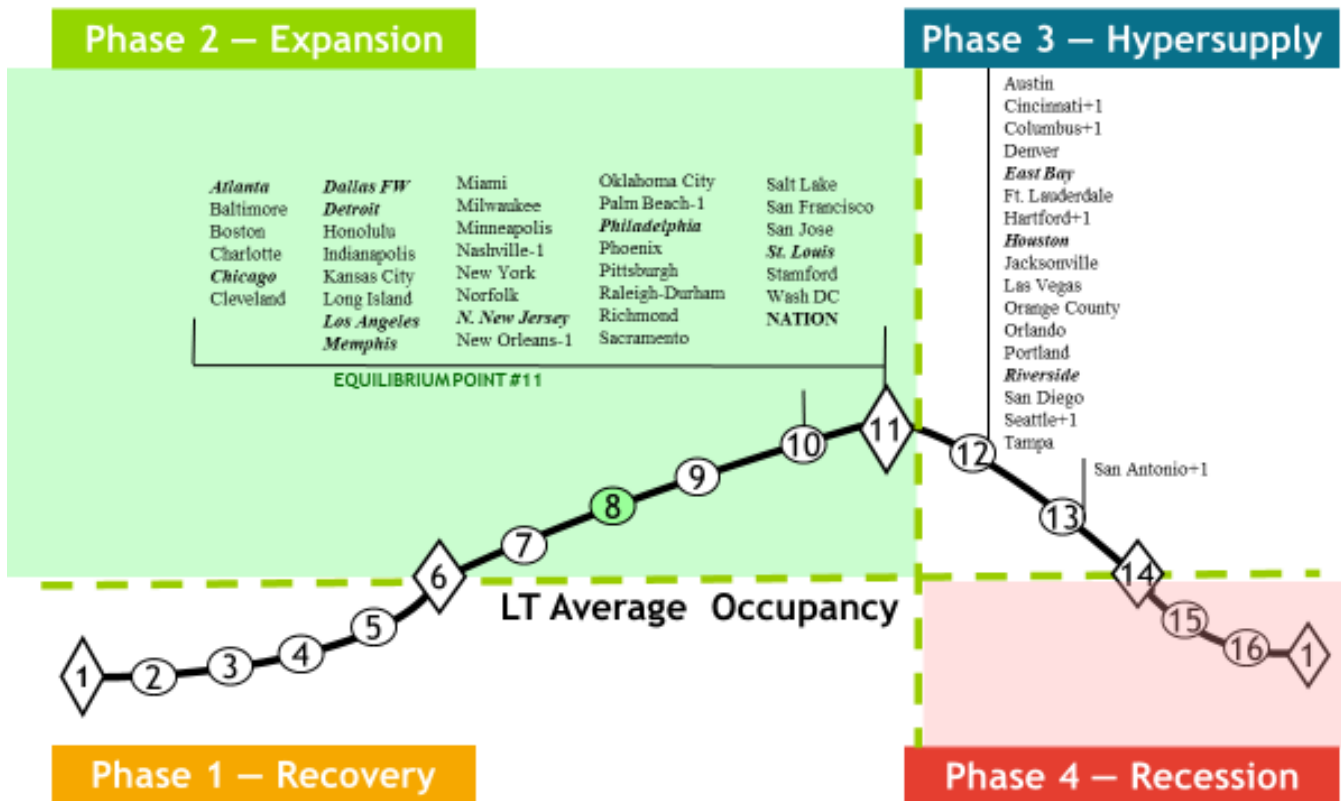
Note: The 11-largest office markets make up 50% of the total square footage of office space we monitor. Thus, the 11-largest office markets are in ***bold italic*** type to help distinguish how the weighted national average is affected.

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 declined 0.1% in 3Q19 and were down 0.4% year-over-year. Demand was strong with internet fulfillment centers continuing to be the major user in need of space. Construction levels increased further creating the minor oversupply that tipped occupancy levels down slightly in some markets. The better logistics markets like Las Vegas and Sacramento saw rent growth of over 9%. Industrial average rents nationally increased 1.1% in 3Q19 and increased 4.4% year-over-year over twice the rate of inflation.

### Industrial Market Cycle Analysis 3rd Quarter, 2019



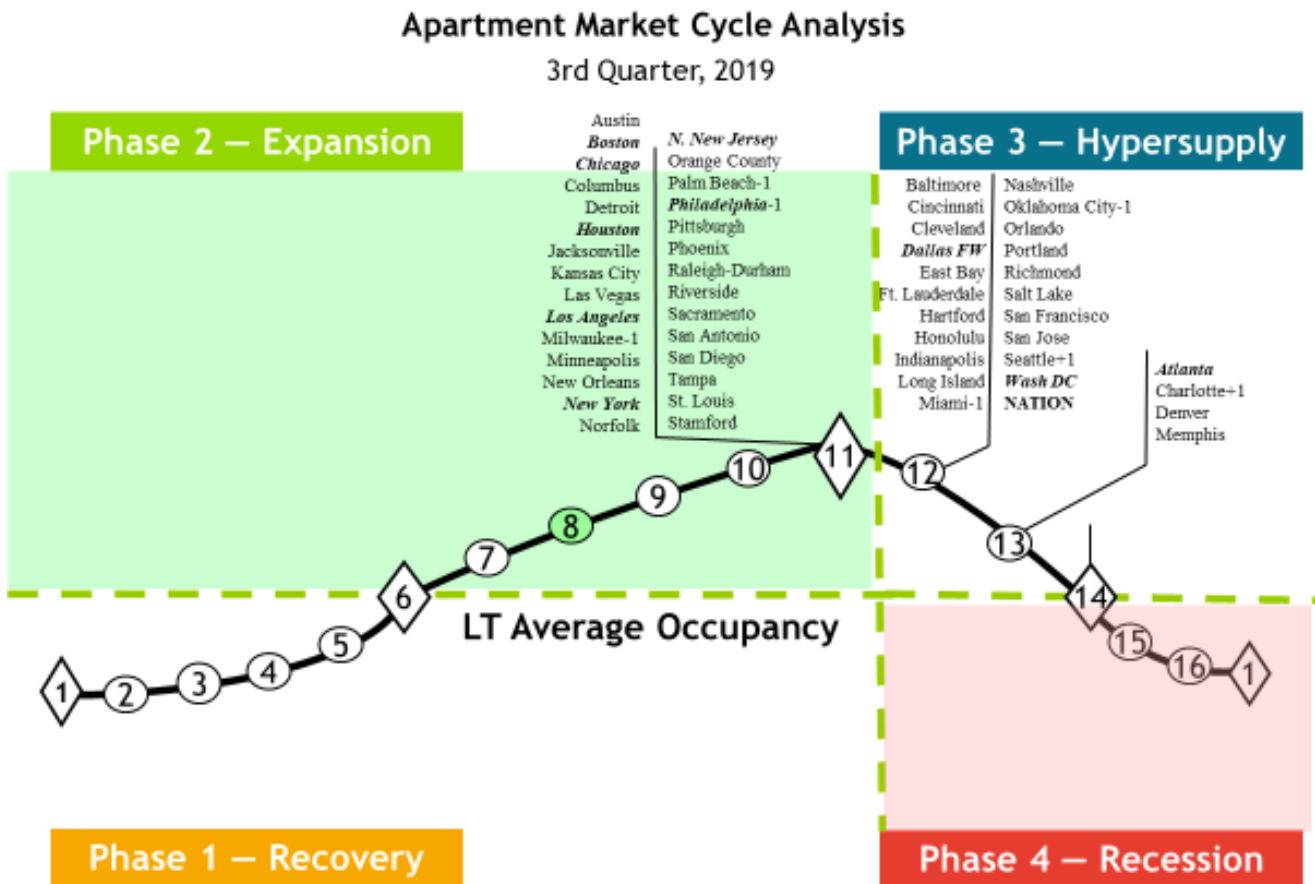
Source: Mueller, 2019

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.

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## Apartment

The national apartment occupancy average improved 0.1% in 3Q19 and improved 0.3% year-over-year. Demand continues at sustainable levels and the US home ownership rate has declined back to the long-term average 64% from a peak 69% in 2004, which helps maintain the renter pool. The oversupply has been market specific, and 3 more markets found their demand/supply balance that brought them back to their peak/equilibrium Point #11 occupancy level on the cycle chart this quarter. Average national apartment rent growth declined -0.4% in 3Q19, while national average rents increased 2.4% year-over-year.



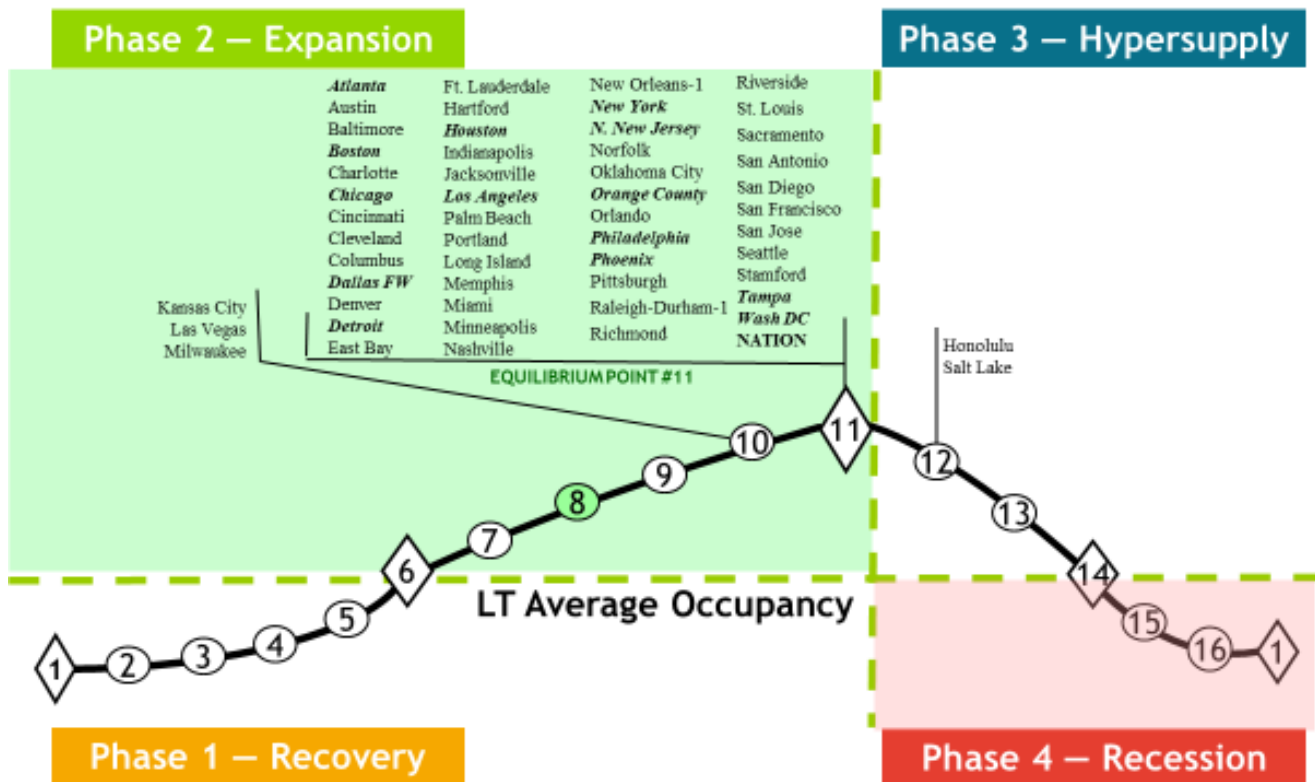
Note: The 10-largest apartment markets make up 50% of the total square footage of multifamily space we monitor. Thus, the 10-largest apartment markets are in ***bold italic*** type to help distinguish how the weighted national average is affected.

Markets that have moved since the previous quarter are 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.

## Retail

Retail occupancies were flat in 3Q19 and were flat year-over-year. New demand was focused on smaller space as more retailers' stored goods in cheaper industrial space than the back room of the store. Retail starts have steadily declined since 2016, and retail space is being taken out of the available supply, as it is being converted into office, close in warehouse and apartments. This space conversion has helped kept many markets at peak/equilibrium occupancy levels. Discounters, grocery and fitness businesses have been the major tenants to backfill big box retail space that vacated space. National average retail rents increased 0.1% in 3Q19 and were up 1.5% year-over-year.

### Retail Market Cycle Analysis 3rd Quarter, 2019



Source: Mueller, 2019

Note: The 14-largest retail markets make up 50% of the total square footage of retail space we monitor. Thus, the 14-largest retail markets are in ***bold italic*** type to help distinguish how the weighted national average is affected.

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## Hotel

Data is no longer available from my normal source –  
thus Hotel coverage is suspended till further notice



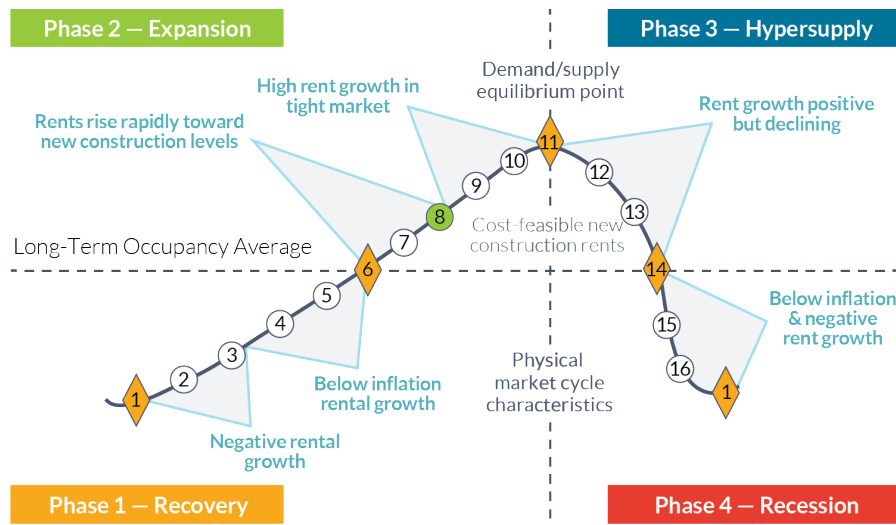
## Market Cycle Analysis — Explanation

**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 either 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 should 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 is 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 could quickly lose market share if their rental rates are not competitive. As a result, 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, 1996

This research currently monitors five property types in 54 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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