

## **DIVIDEND CAPITAL** RESEARCH **CYCLE FORECAST** — Real Estate Market Cycles

Fourth Quarter 2017 Estimates February 2017

2017 began on a positive economic note with higher than expected employment growth in January with 228,000 new jobs. Many economists expect small businesses to be encouraged by less regulation. The potential for GDP or employment growth above 3% is not very likely. With wage growth of only 2.5% for 2016 and a similar rate in January 2017, we assume inflation may also not be a big issue for 2017. Construction labor is hard to find and construction material prices are growing faster than the CPI. Thus, new supply is also somewhat constrained, helping keep balance in most markets (except for apartments). We expect 2017 and 2018 to be good years for increased real estate occupancy and rent growth.

Office occupancies are forecast to **improve** 0.1% in 4Q17, with rents improving 0.7% quarter-over-quarter. Industrial occupancies are forecast to **improve** 0.1% in 4Q17, with rents improving 0.8% quarter-over-quarter. Apartment occupancies are forecast to **decline** 0.1% in 4Q17, with rents being flat quarter-over-quarter. Retail occupancies are forecast to **be flat** in 4Q17, with rents improving 0.6% quarter-over-quarter. Hotel occupancies are forecast to **decline** 0.2% in 4Q17, with quarterly room rates improving 0.2% quarter-over-quarter.

# Phase 2 — Expansion Phase 3 — Hypersupply Retail — 1st Tier Regional Malls

National Property Type Cycle Forecast

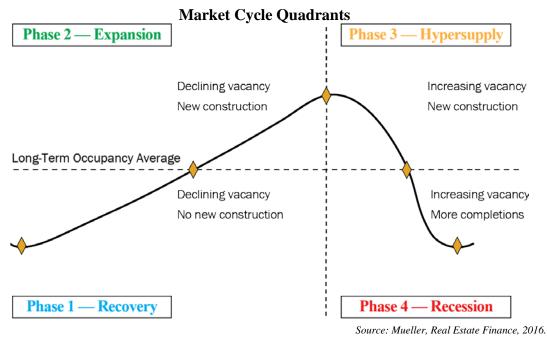


National Property Type Cycle Graph shows relative positions of sub-property types - major markets are reviewed inside.

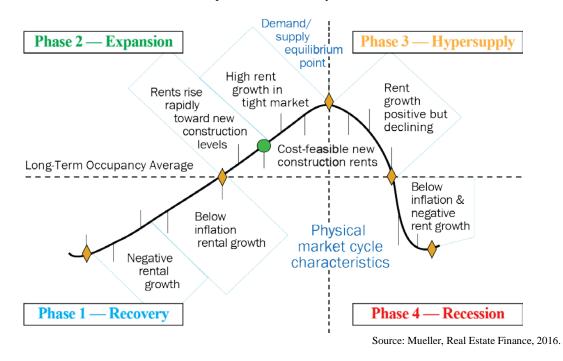
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The cycle forecast analyzes occupancy movements in five property types in more than 50 Metropolitan Statistical Areas (MSAs). The market cycle analysis should enhance investment-decision capabilities for investors and operators. The five property type cycle charts summarize almost 300 individual models that analyze occupancy levels and rental growth rates to provide the foundation for long-term investment success. Commercial 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 commercial real estate returns.

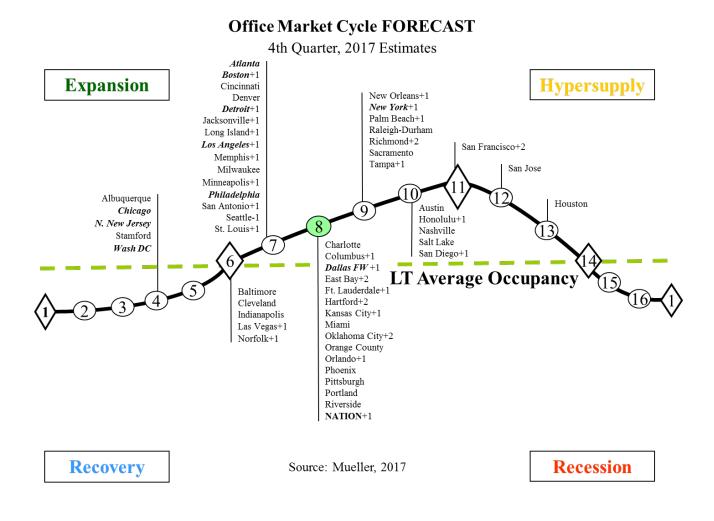


Rental growth rates can be characterized in different parts of the market cycle, as shown below.



## **OFFICE FORECAST**

Office occupancies are forecast to improve 0.1% in 4Q17, producing a 0.2% increase year-over-year. At this point in time, we do not expect to see office occupancies peak until mid-year 2019. If the higher than 200,000 job increase of January 2017 can be sustained for the entire year, office jobs could grow at 2.5% — creating demand that may outpace current projections. Fast rising construction labor and material costs are holding supply growth to moderate (and hopefully sustainable) levels. National average office rents are expected to increase 0.7% in 4Q17 and be up 3.0% year-over-year.

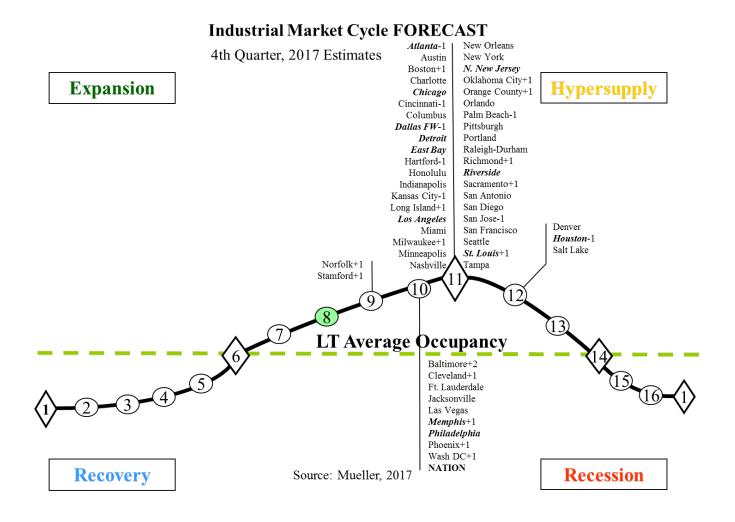


Note: The 11-largest office markets make up 50% of the total square footage of office space that we monitor. Thus, the 11-largest office markets are in *bold italics* to help distinguish how the weighted national average is affected.

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 4Q17 and increase 0.2% year-over-year. We currently forecast a national average occupancy peak in 1Q18, however many markets we cover have already reached their peaks. Strong absorption is expected to continue all year, as expanded internet sales from brick and mortar retailers continues. Local warehouse expansion from internet fulfillment is also expected to be very strong in 2017. Smaller R&D / Flex industrial demand is also expected to be strong as small businesses are encouraged with the expectation of less red tape. New supply should be constrained — thus balanced. Industrial is expected to be the best performing property type again in 2017. We expect rents to increase 0.8% in 4Q17 and increase 4.3% for the year.

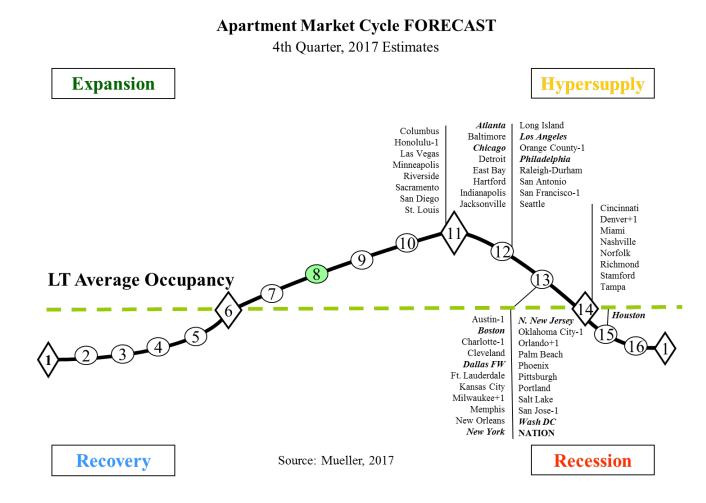


Note: The 12-largest industrial markets make up 50% of the total square footage of industrial space that we monitor. Thus, the 12-largest industrial markets are in *bold italics* to help distinguish how the weighted national average is affected.

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 4Q17 and decrease 0.5% year-over-year. We do not see a great deal of movement in cycle positions as supply growth is expected to slow a little bit in 2017 — not outpacing demand as strongly as it has over the past three years. The shift from downtown locations to suburban locations is expected to continue as developers try to provide a lower cost alternative to many millennials. Another strategy is smaller units, but the long-term demand for these tiny sub 500 square foot apartments is in question. The national apartment asking rental rate is expected to be flat in 4Q17 and we estimate an annual rental increase of 2.3%.



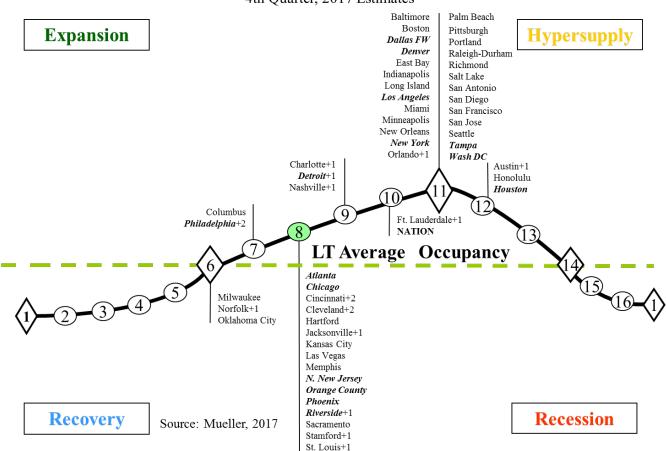
Note: The 10-largest apartment markets make up 50% of the total square footage of apartment space that we monitor. Thus, the 10-largest apartment markets are in *bold italics* to help distinguish how the weighted national average is affected.

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 occupancy is forecast to be flat in 4Q17 and increase 0.1% year-over-year. The great shuffle of tenants continues as old retail formats close and new formats mainly based on shopper experiences — including more restaurants, local brewery / winery formats — continue to rise. Many millennials want experiences, not things. Supply should be very restrained as lenders become more cautious. Retail rental rates are expected to increase 0.6% in 4Q17 and 2.9% for the year.

### **Retail Market Cycle FORECAST**

4th Quarter, 2017 Estimates



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.

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.

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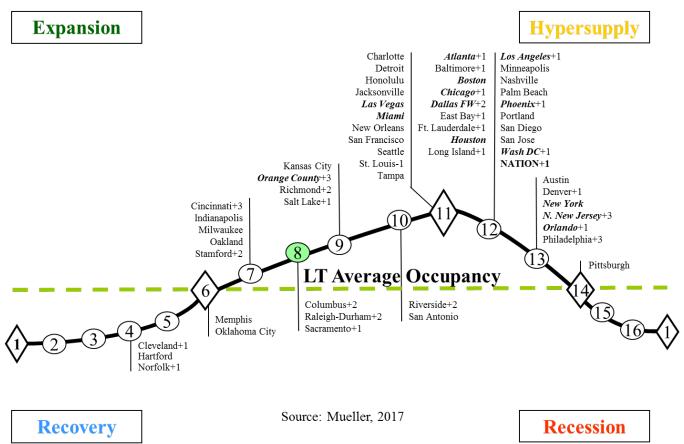
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## HOTEL FORECAST

Hotel occupancy is forecast to decline 0.2% 4Q17 and decrease 0.8% year-over-year. We expect the national average to move into the hyper-supply phase at point twelve on the cycle as more new supply comes on line. We do believe demand should continue to expand in 2017, but not at the same pace as the new supply in the pipeline. Internet rentals of homes, like Airbnb, is expected to continue to put a small drain on regular hotel demand and keep room rate growth moderate. Room rate growth is expected to increase 0.2% in 4Q17, and annual room rate growth is expected to be 3.9% for the year.

## Hotel Market Cycle FORECAST

4th Quarter, 2017 Estimates



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.

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#### MARKET CYCLE ANALYSIS - Explanation

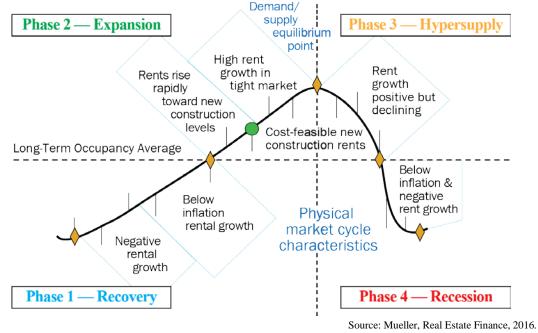
**Supply and demand interaction is important to understand. Starting in Recovery Phase I at the bottom of a cycle** (see chart below), the marketplace is in a state of oversupply from previous new construction or negative demand growth. At this bottom point, occupancy is at its trough. Typically, the 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.



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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