

Mueller

Real Estate Market Cycle Monitor

Second Quarter 2021 Analysis

August 2021

The Physical Market Cycle Analysis of 4 Property Types in 54 Metropolitan Statistical Areas (MSAs).

Economic growth and inflation were both strong in 2Q21 sending US total dollar GDP above its pre-COVID amount, even with a minor concern from the COVID Delta variant. Strong employment growth continued and the worst problem was many firms not being able to return to full capacity due to labor shortages (especially restaurants). Consumers gathered over \$4 trillion in savings during COVID a rate four times higher than the past four-year average. This capital should support strong economic growth for the next several years, but also allow for potential higher inflation. Real estate demand growth should be strong in the higher growth economy.

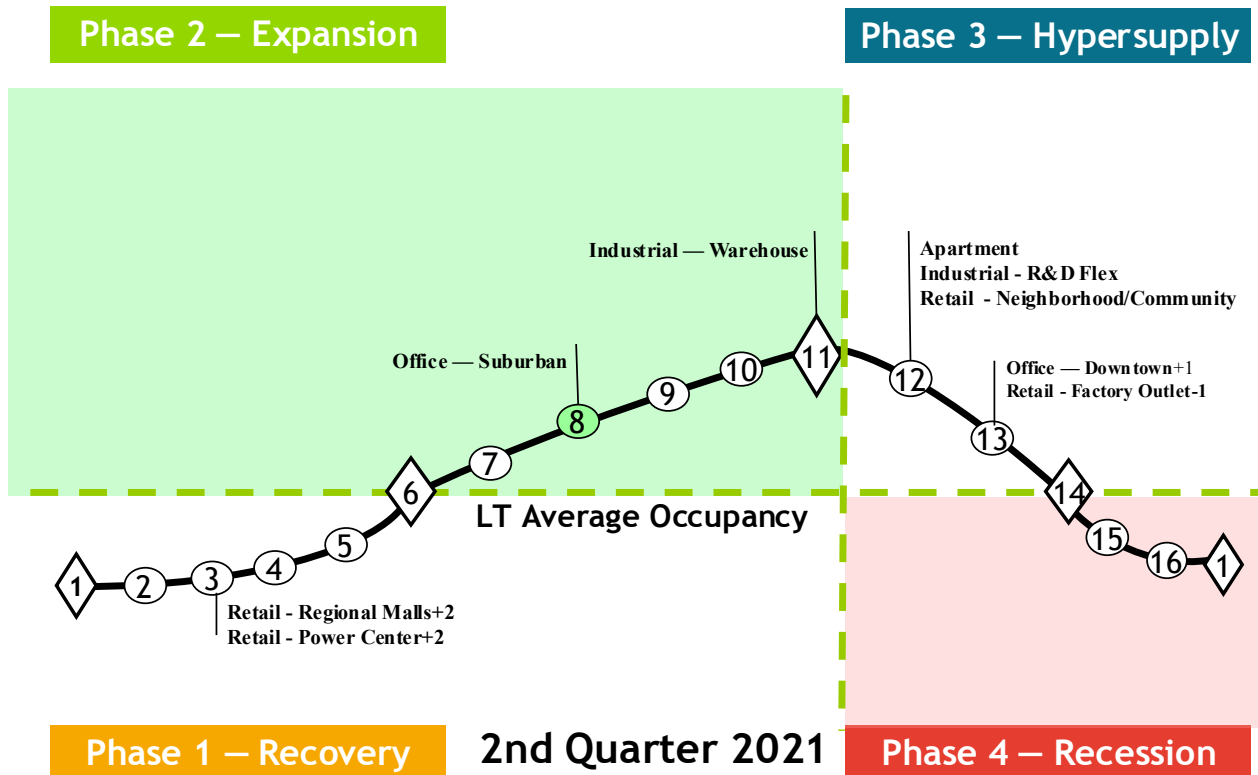
Office occupancy **declined 0.3%** in 2Q21, and rents **declined 0.1%** for the quarter and were down 0.2% annually.

Industrial occupancy **improved 0.3%** in 2Q21, and rents **grew 1.6%** for the quarter and 6.3% annually.

Apartment occupancy **improved 0.9%** in 2Q21, and rents **grew 2.1%** for the quarter, and up 10.7% annually.

Retail occupancy **improved 0.1%** In 2Q21, and rents **grew 0.8%** for the quarter and were up 2.4% annually.

National Property Type Cycle Locations



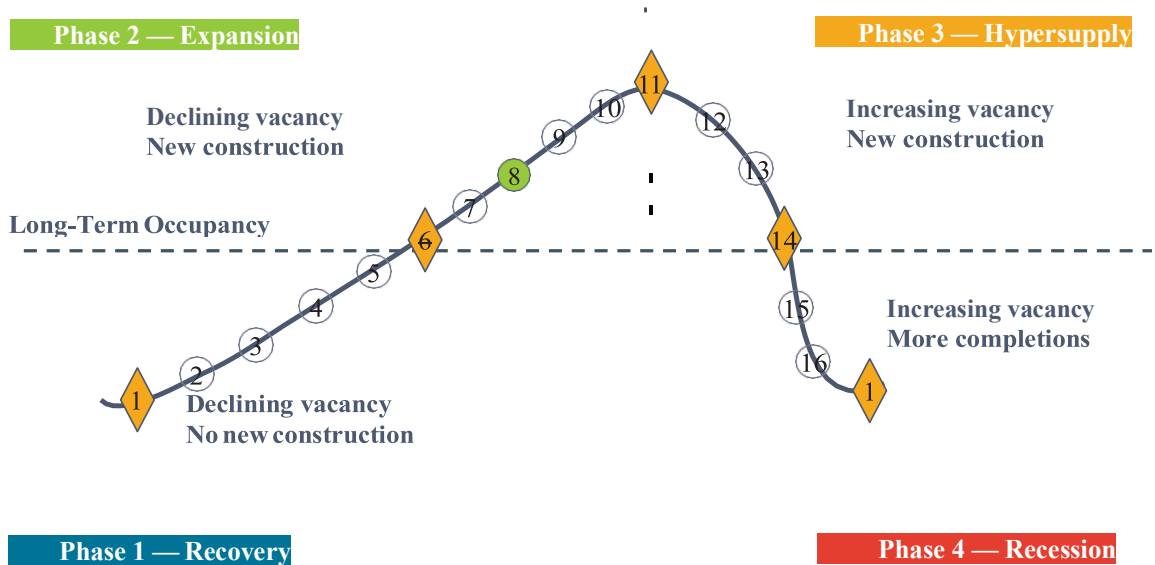
Source: Mueller, 2021

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

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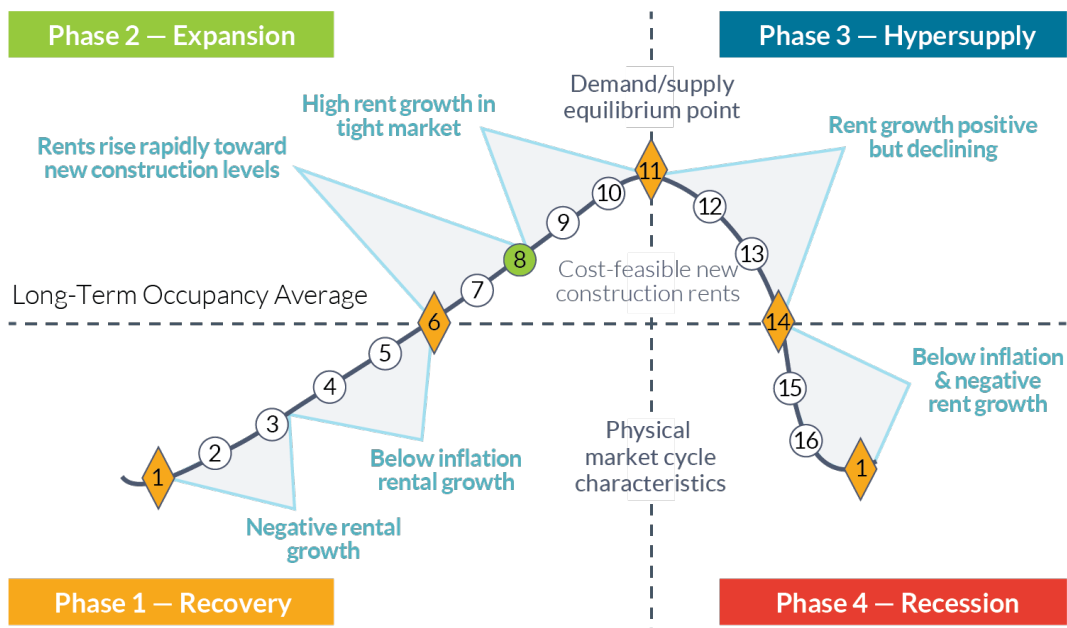
The cycle monitor analyzes occupancy movements in four property types in 54 MSAs. Market cycle analysis should enhance investment-decision capabilities for investors and operators. The five property type cycle charts summarize almost 300 individual models that analyze occupancy levels and rental growth 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.

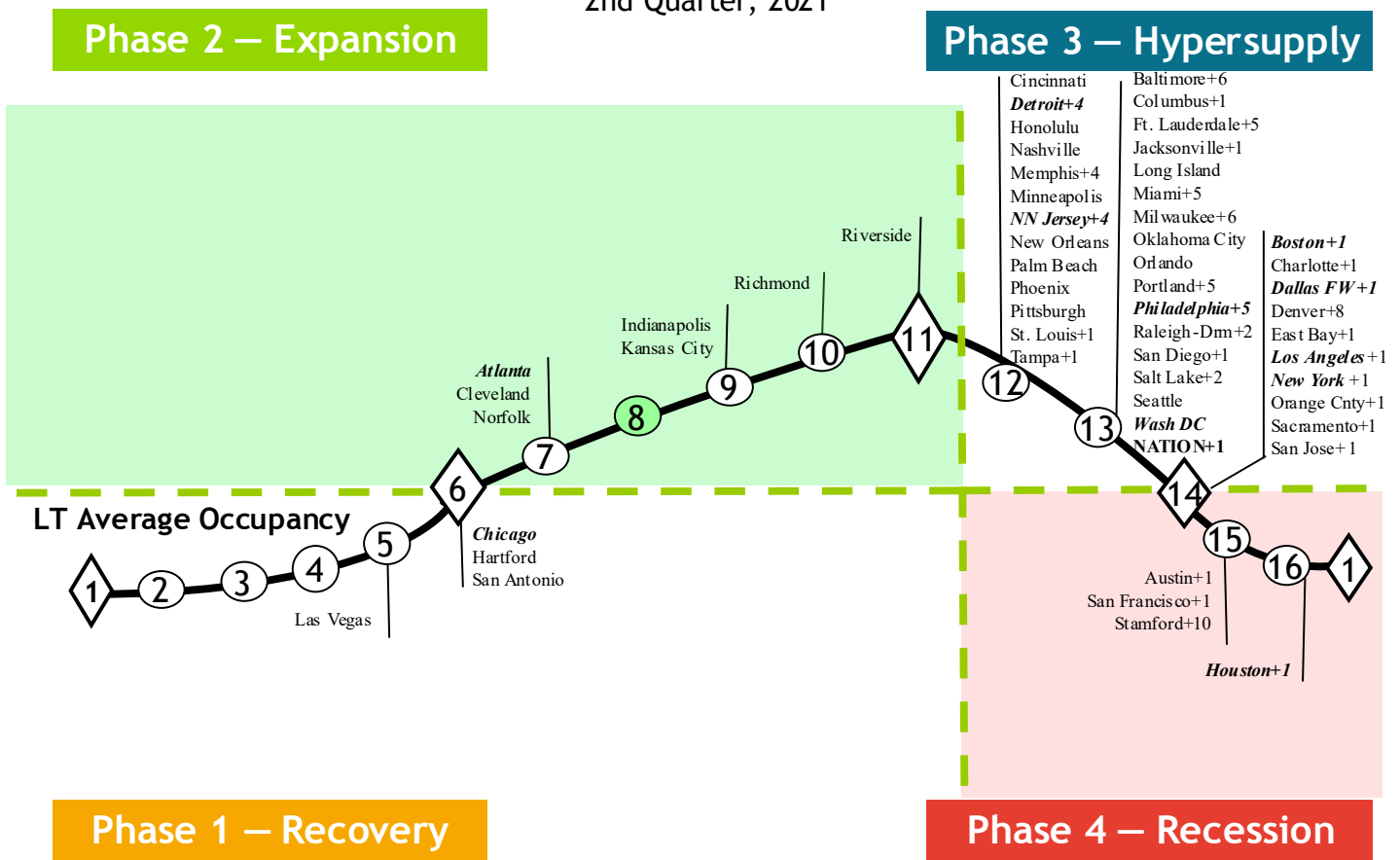


Source: Mueller, Real Estate Finance, 1996.

Office

The national office market occupancy level declined 0.3% in 2Q21 and was down 2.1% year-over-year, pushing the national average further into the Hypersupply phase of the cycle at point #13. While many firms were planning full return to office after Labor Day, but the COVID Delta variant postponed many decisions till further notice. Speculation on future office needs and floorplan design continues to be the biggest question for many firms and new and/or release decision have been further postponed, limiting demand growth forecasts. The other problem is a lot of new office construction is being completed in 2021 causing further over-supply in many markets. The outlook is for further occupancy declines for at least the rest of 2021. Average national rents decreased 0.1% in 2Q21 and produced a negative 0.2% asking rent decline year-over-year.

Office Market Cycle Analysis 2nd Quarter, 2021



Source: Mueller, 2021

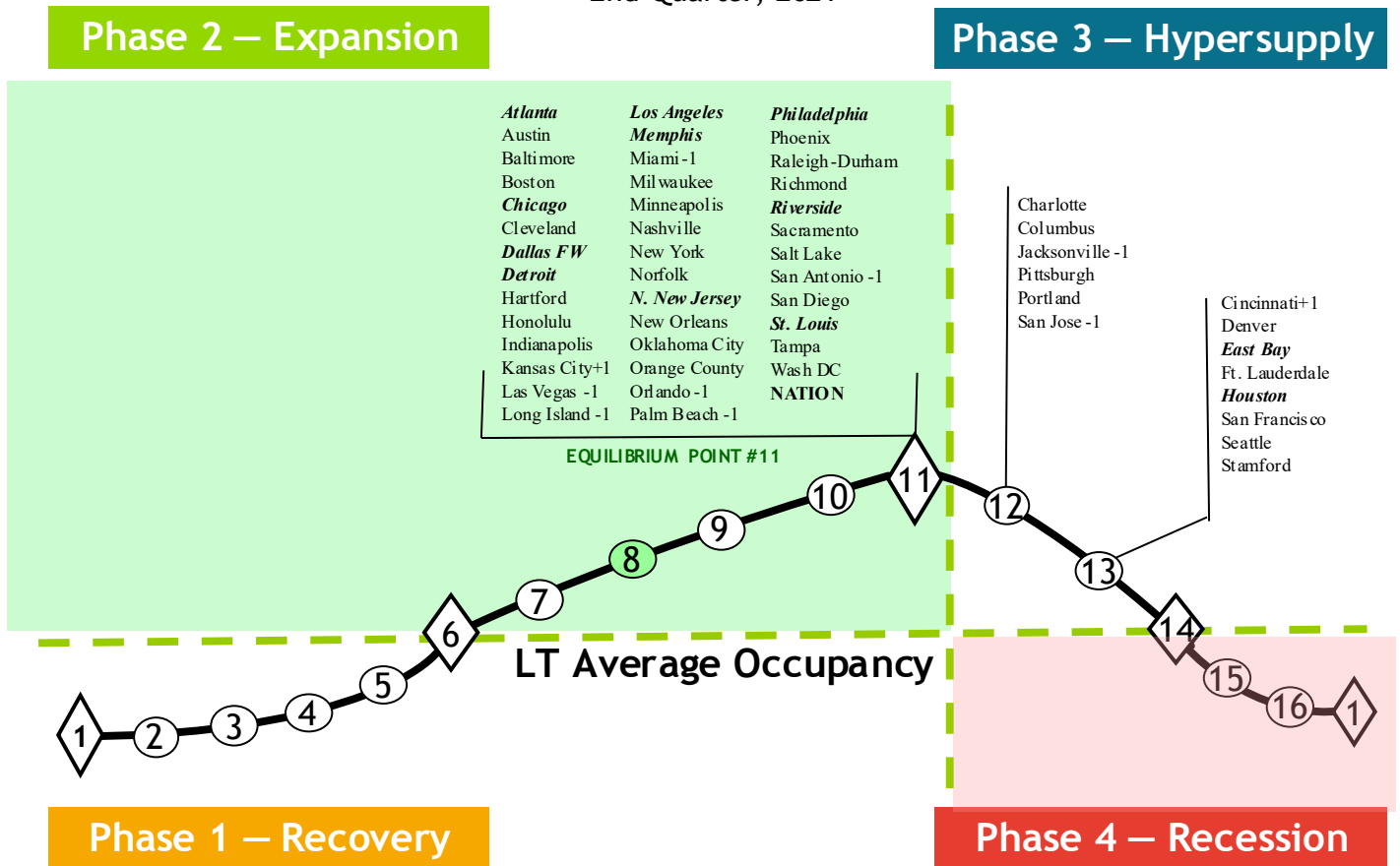
Note: The 11-largest office markets make up 50% of the total square footage of office space we monitor. Thus, the 11-largest office markets are in ***bold italic*** type to help distinguish how the weighted national average is affected.

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 increased 0.3% in 2Q21 and were up 0.4% year-over-year hitting historic peak occupancy nationally. Demand grew 300 million square feet in 2Q2021 a higher amount than ever recorded a single quarter before. Low availability in major distribution markets drove demand into secondary markets like Las Vegas creating new highs. Construction was slowed slightly from COVID restricted material supply and labor shortages. Landlords took advantage of the strong demand, as industrial national average rents increased 1.6 % in 2Q21 and grew 6.3% year-over-year.

Industrial Market Cycle Analysis 2nd Quarter, 2021



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.

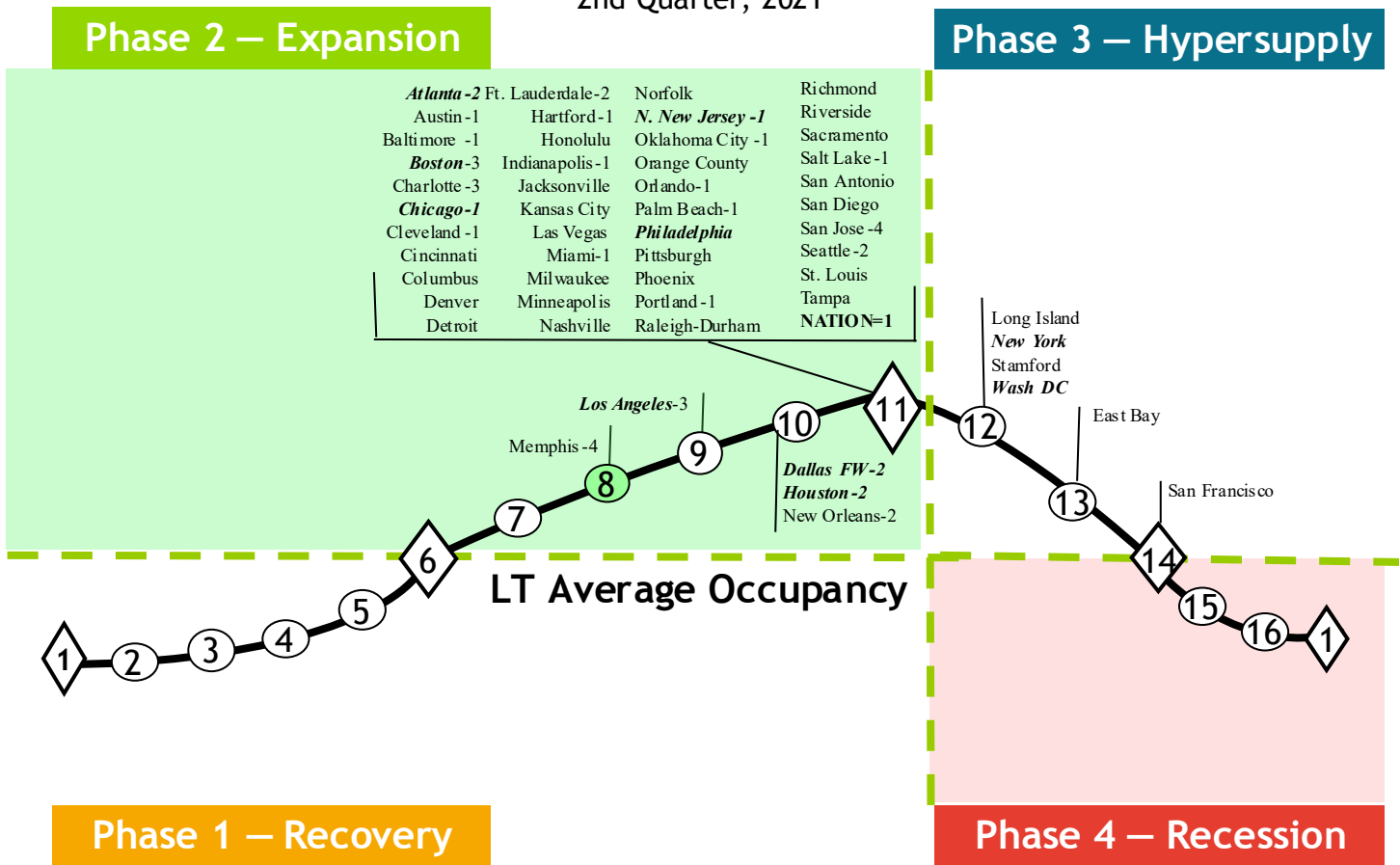
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Apartment

The national apartment occupancy average increased 0.9% in 2Q21 and was up 1.6% year-over-year. An almost 1% increase in a quarter has never happened before. Many markets and the national average moved back to peak point #11 or market equilibrium on the cycle. Demand was very strong, as jobs grew and the loss of renters to home ownership slowed substantially as home prices soared, due to strong demand from low interest rates and very limited new and resale home supply. Renters who expected to buy were priced out of many markets with properties selling for 10% to 20% above asking price. Over-supply was not a problem, and downtown apartment rentals returned as people went back to work in many markets. National apartment asking rent growth of 2.2% in 2Q21 and up an amazing 10.7% year-over-year.

Apartment Market Cycle Analysis

2nd Quarter, 2021



Source: Mueller, 2021

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.

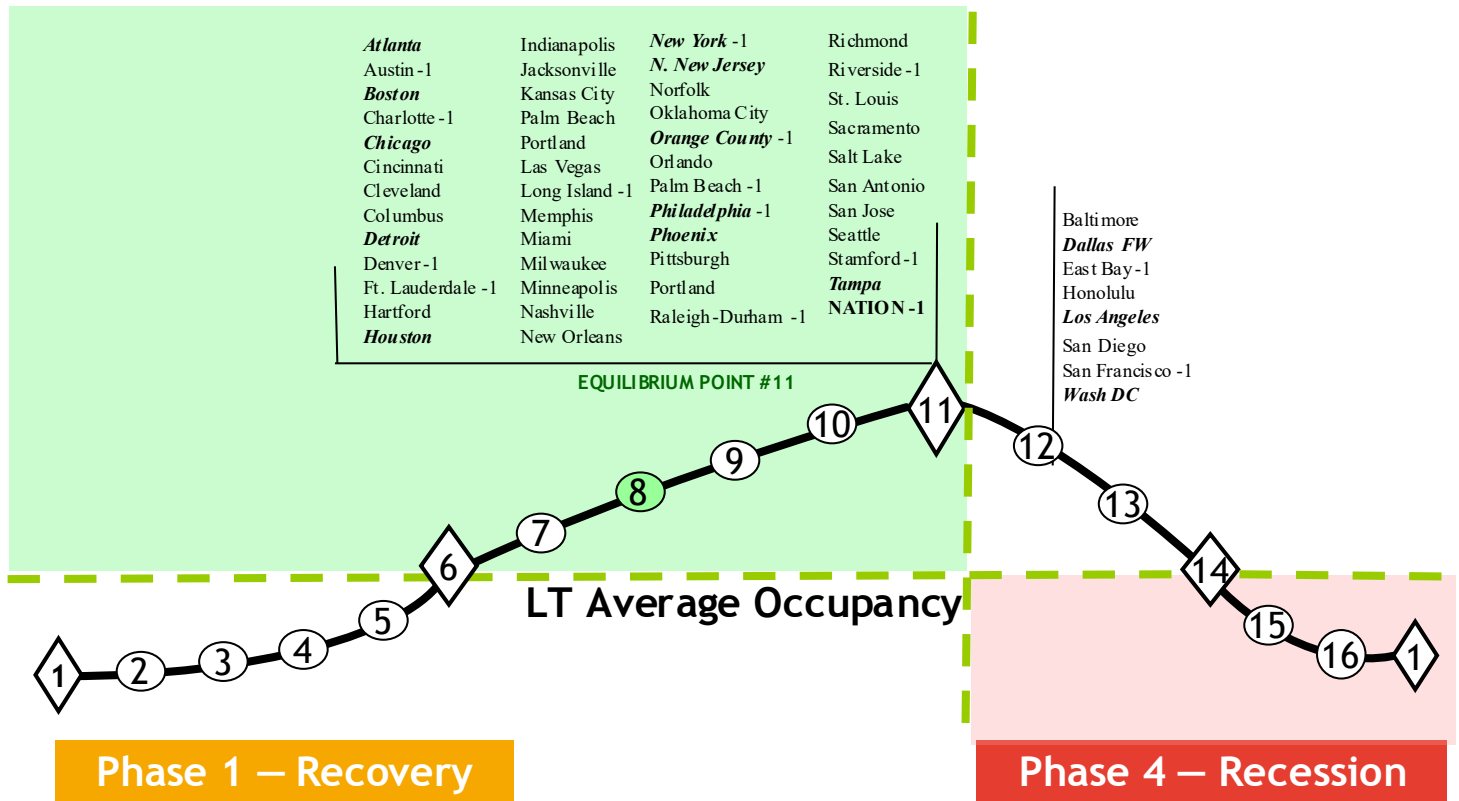
Retail

Retail occupancies were up 0.1% in 2Q21 but down -0.3% year-over-year. With over \$1 trillion of government support, consumer spending allowed retail sales to rebound strongly. Consumers were also out shopping and freer to visit stores with COVID restrictions mostly gone. Internet retailers like Amazon continued to expand into brick and mortar space. Plus, Amazon announced their move into larger format stores. COVID “*Have*” retailers continued to boom and expand their space use. Total new net supply was very low, as much retail was converted to non-retail uses, including apartments and storage space. National average retail asking rents were up 0.8% for the quarter and were up 2.4% year-over-year.

Retail Market Cycle Analysis 2nd Quarter, 2021

Phase 2 – Expansion

Phase 3 – Hypersupply



Source: Mueller, 2021

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.

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.

Hotel

Hotel Occupancy began to recover in 2Q21, with many hotels reopening. Leisure travel drove strong demand with business travel expected to pick up in the second half of the year.

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

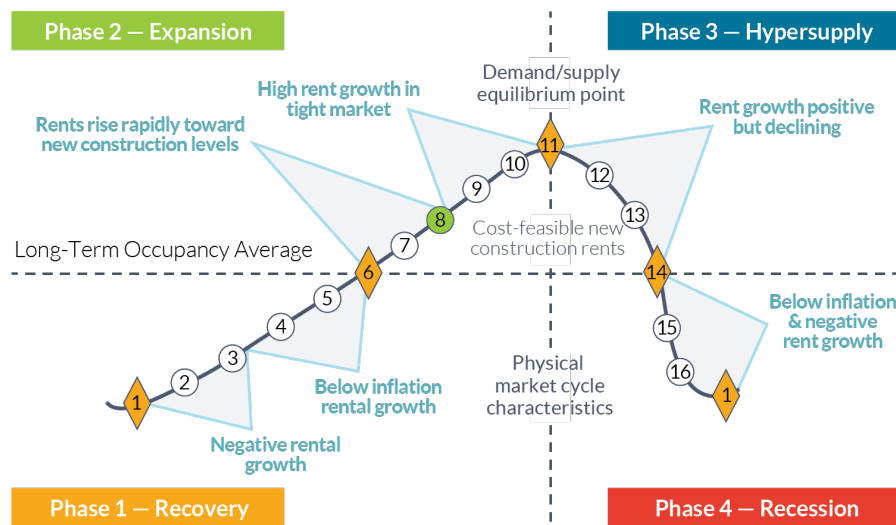
Market Cycle Analysis — Explanation

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.