

Mueller

Real Estate Market Cycle Monitor

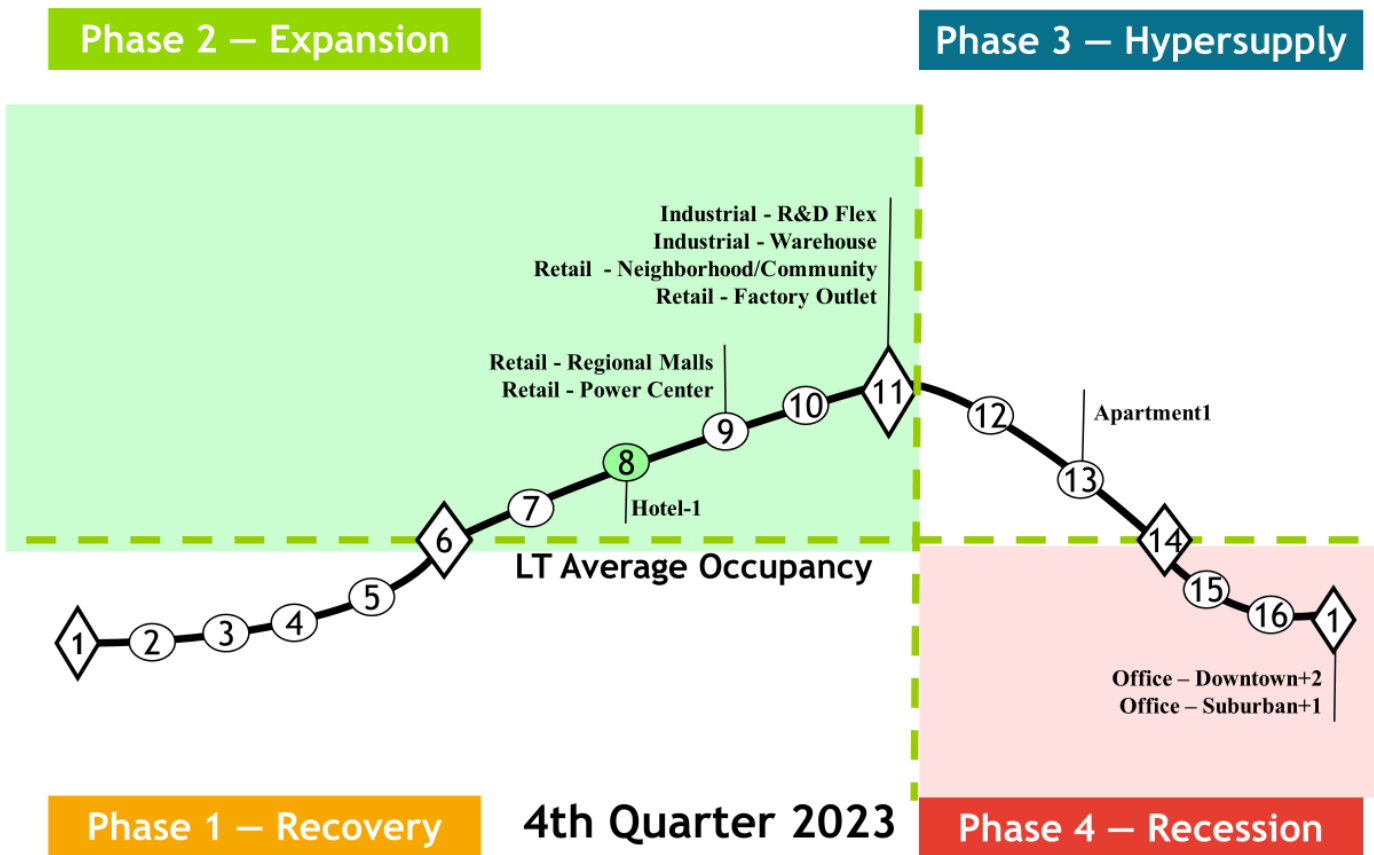
Fourth Quarter 2023 Analysis – February 2024

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

The prospect of a recession has finally been dropped by most economists, as GDP remained positive, and employment grew at a modest pace in 2023. The Fed stopped raising rates but has postponed dropping interest rates until they see wage inflation stabilize. We expect the 10-year treasury benchmark rate to hover around 4.0% in 2024. Office problems make borrowing in other property types more difficult, reducing transaction volume and depressing new construction starts. We believe this may keep many markets in better balance. The world is still awash in cash looking for good investments.

Office occupancy **declined -0.1%** in 4Q23, while rents **were flat** for the quarter and were up **0.2%** annually. Industrial occupancy **declined -0.4%** in 4Q23, and rents **declined 1.3%** for the quarter and were up **0.8%** annually. Apartment occupancy **decreased -0.4%** in 4Q23, and rents **were flat** for the quarter, and were down **-3.0%** annually. Retail occupancy **improved 1.3%** in 4Q23, and rents **grew 0.5%** for the quarter and were up **3.0%** annually. Hotel occupancy **declined -0.2%** in 4Q23, and average RevPAR **grew 1.8%** for the quarter and was up **4.9%** annually.

National Property Type Cycle Locations



Source: Mueller, 2024

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

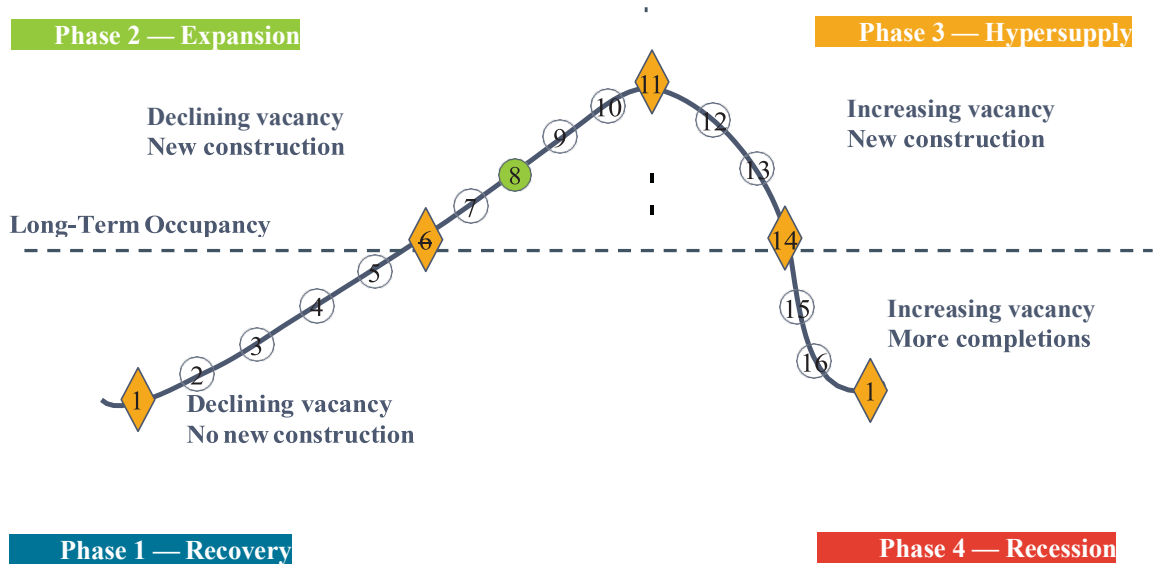
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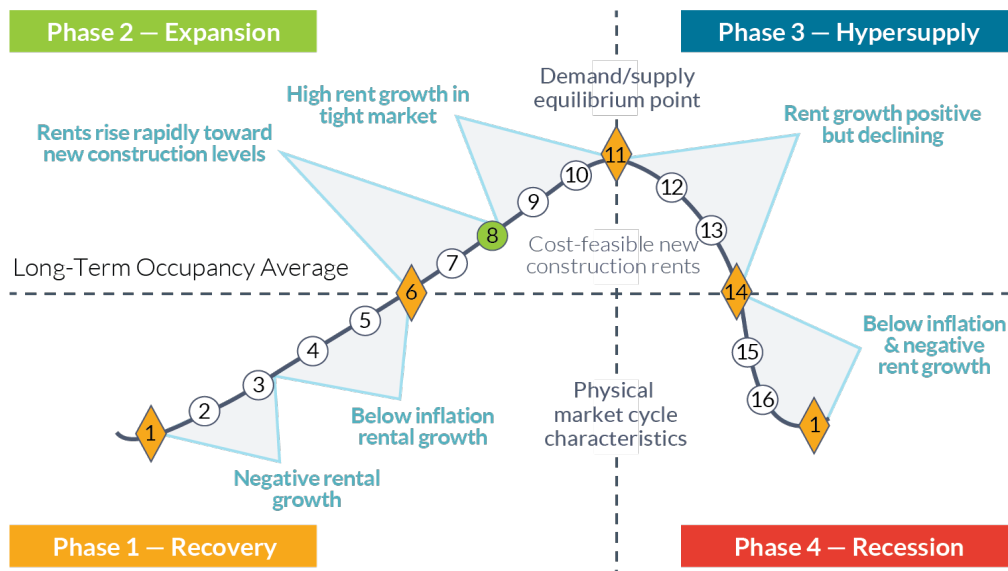
The cycle monitor analyzes occupancy movements in four property types in 54 MSAs. Market cycle analysis should enhance investment-decision capabilities for investors and operators. The five property type cycle charts summarize almost 300 individual models that analyze occupancy levels and rental growth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



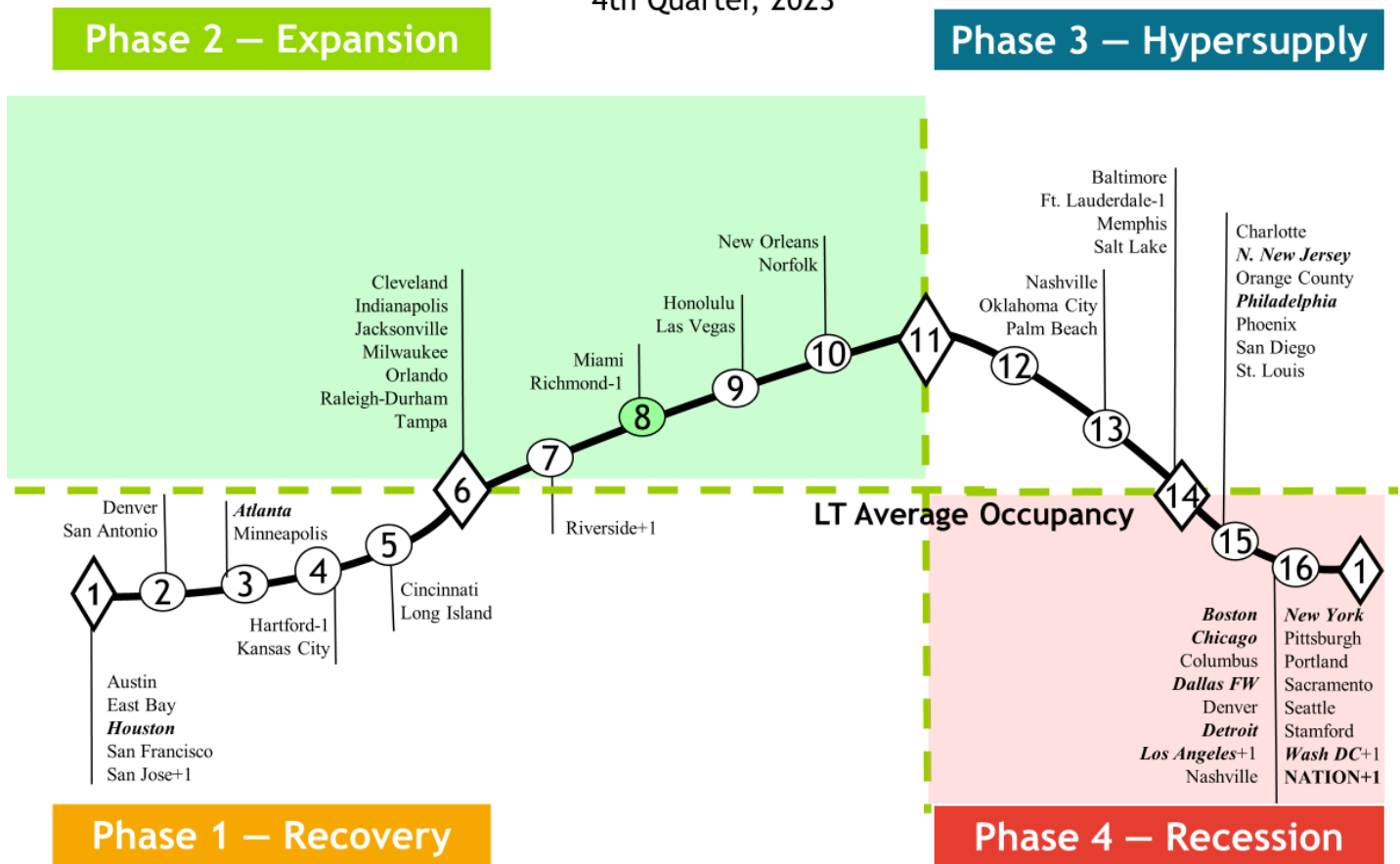
Source: Mueller, Real Estate Finance, 1996.

Office

The national office market occupancy level decreased **0.1%** in 4Q23 and was down **0.6%** year-over-year. Office attendance seems to have settled in at 60% of pre-COVID rates. Then add slower office worker employment growth to get over 20% less office space needed by most firms today. Expiring leases allowed office tenants to let go of 65 million Sq.Ft. of space. In addition, space up for sub-lease is double the 2019 level and sublease rents are going at a 30-40% discount to market. Asking rental rates were flat in 4Q23 and up 0.2% year-over-year – but growing concessions continue to depress net effective rents.

Office Market Cycle Analysis

4th Quarter, 2023



Source: Mueller, 2024

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.

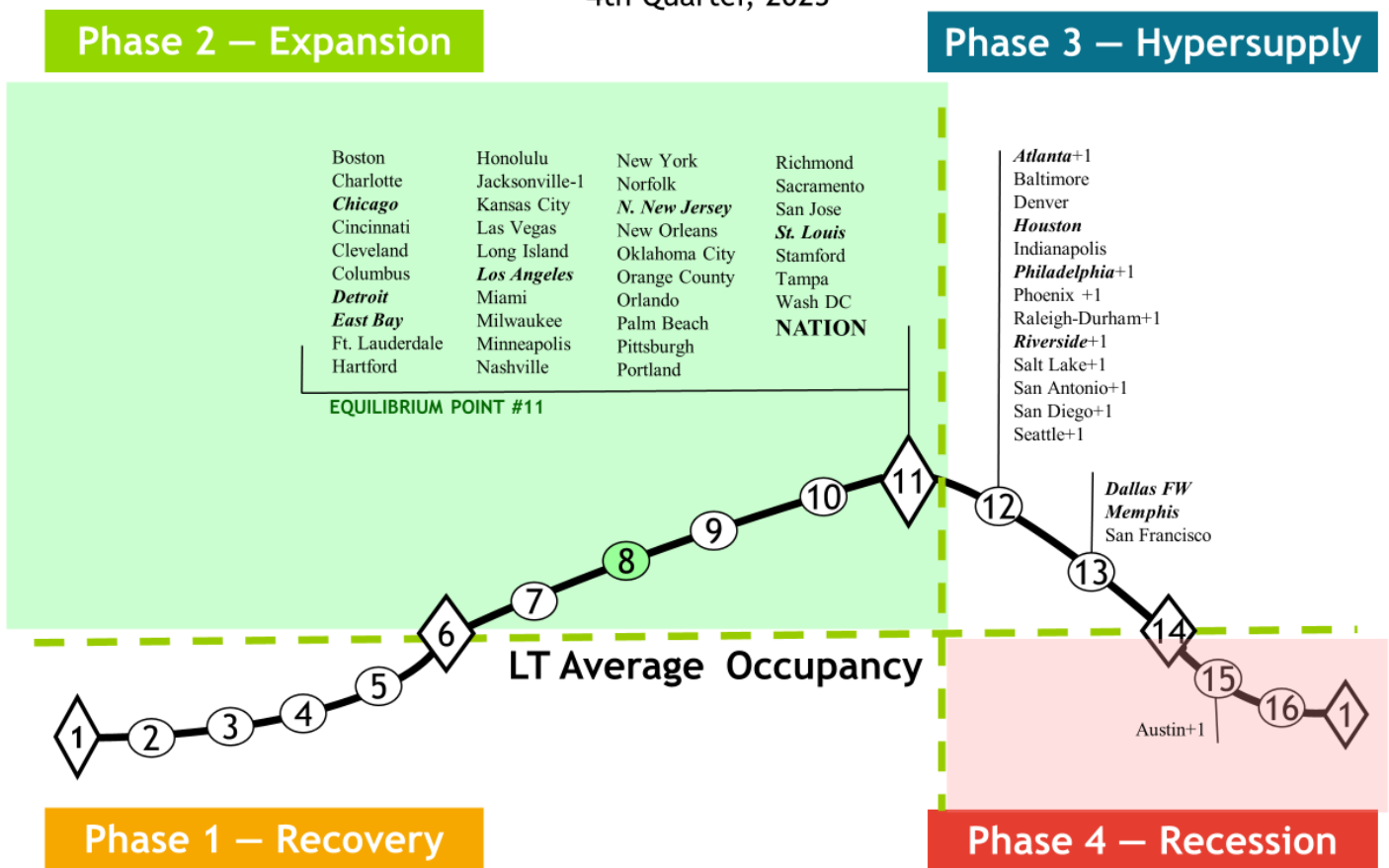
Markets that have moved since the previous quarter are now shown with a + or - symbol next to the market name and the number of positions that the market has moved is also shown, i.e., +1, +2 or -1, -2. Markets do not always go through smooth forward-cycle movements and can regress or move backward in 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 decreased **0.4%** in 4Q23 and were down **1.3%** year-over-year. While 645 million Sq.Ft. were absorbed in 2023, that is the lowest rate in over a decade. The low home sales from high interest rates have reduced sales of building materials, appliances & furniture - causing retailers to reduce inventories and the need for more storage space. The strong wage growth and moderate inflation is allowing improvement in most other goods that helped provide increased warehouse demand in non-housing sectors. Asking rent growth was down **1.3%** in 4Q23 and annual rent growth averaged **0.8%** year-over-year.

Industrial Market Cycle Analysis 4th Quarter, 2023



Source: Mueller, 2024

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.

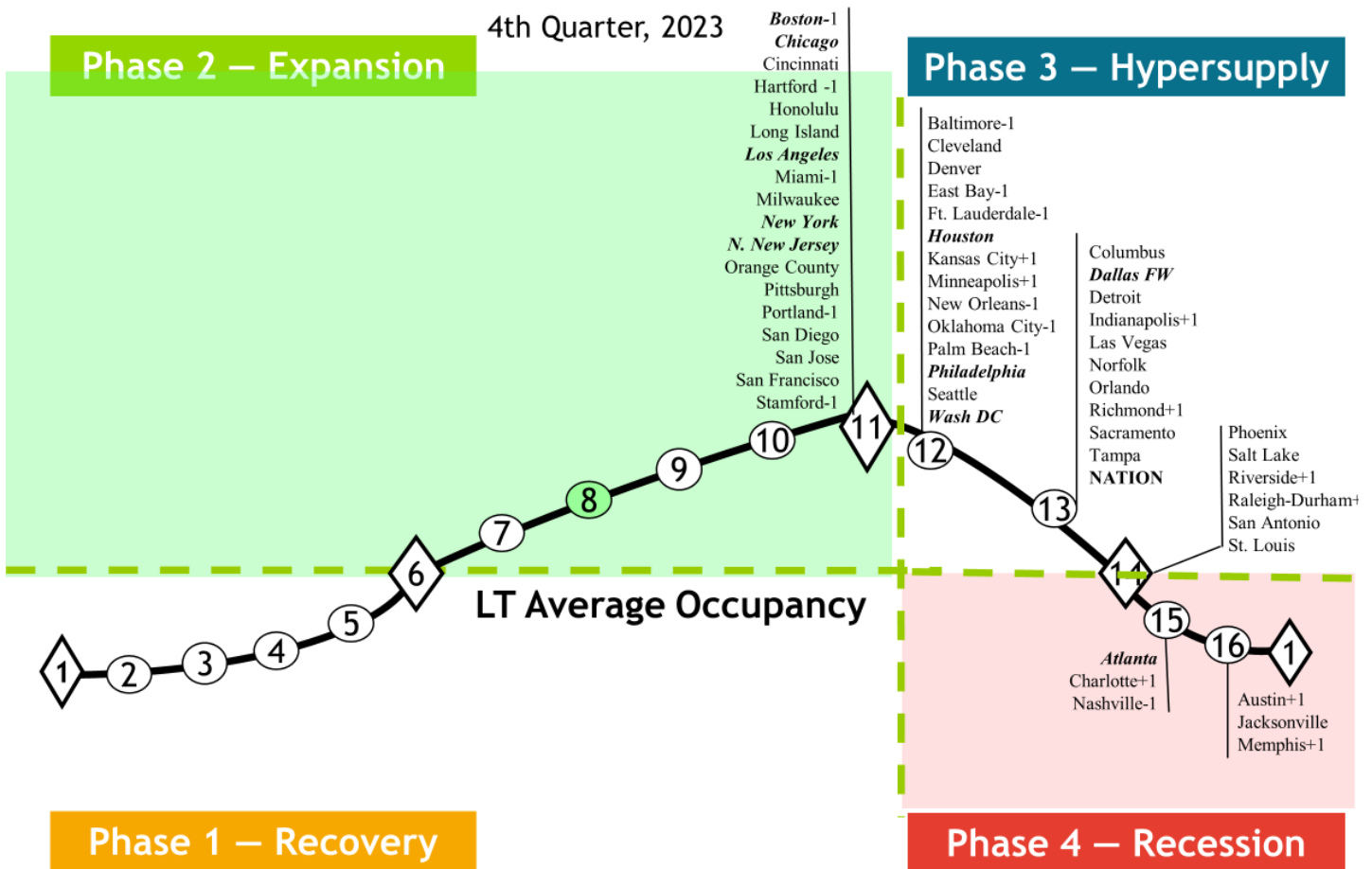
Markets that have moved since the previous quarter are now shown with a + or - symbol next to the market name and the number of positions the market has moved is also shown, i.e., +1, +2 or -1, -2. Markets do not always go through smooth forward-cycle movements and can regress or move backward in their 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.



Apartment

The national apartment occupancy average declined **0.4%** in 4Q23 and was down **1.1%** year-over-year. Full year absorption was 315,000 units, which was more than double 2022, but new completions totaled 583,000 units (a 40 year high in production)! This demand / supply imbalance has happened for nine quarters in a row. Too many in-city class A properties have been built, creating the problem, when affordable and work-force housing have the highest unfilled need. Markets with moderate supply have maintained their peak occupancy levels (point 11 on the cycle chart) and are seeing better than average rent growth. The national average apartment asking rent growth was **flat** in 4Q23, but rents declined **3.0%** year-over-year.

Apartment Market Cycle Analysis



Source: Mueller, 2024

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

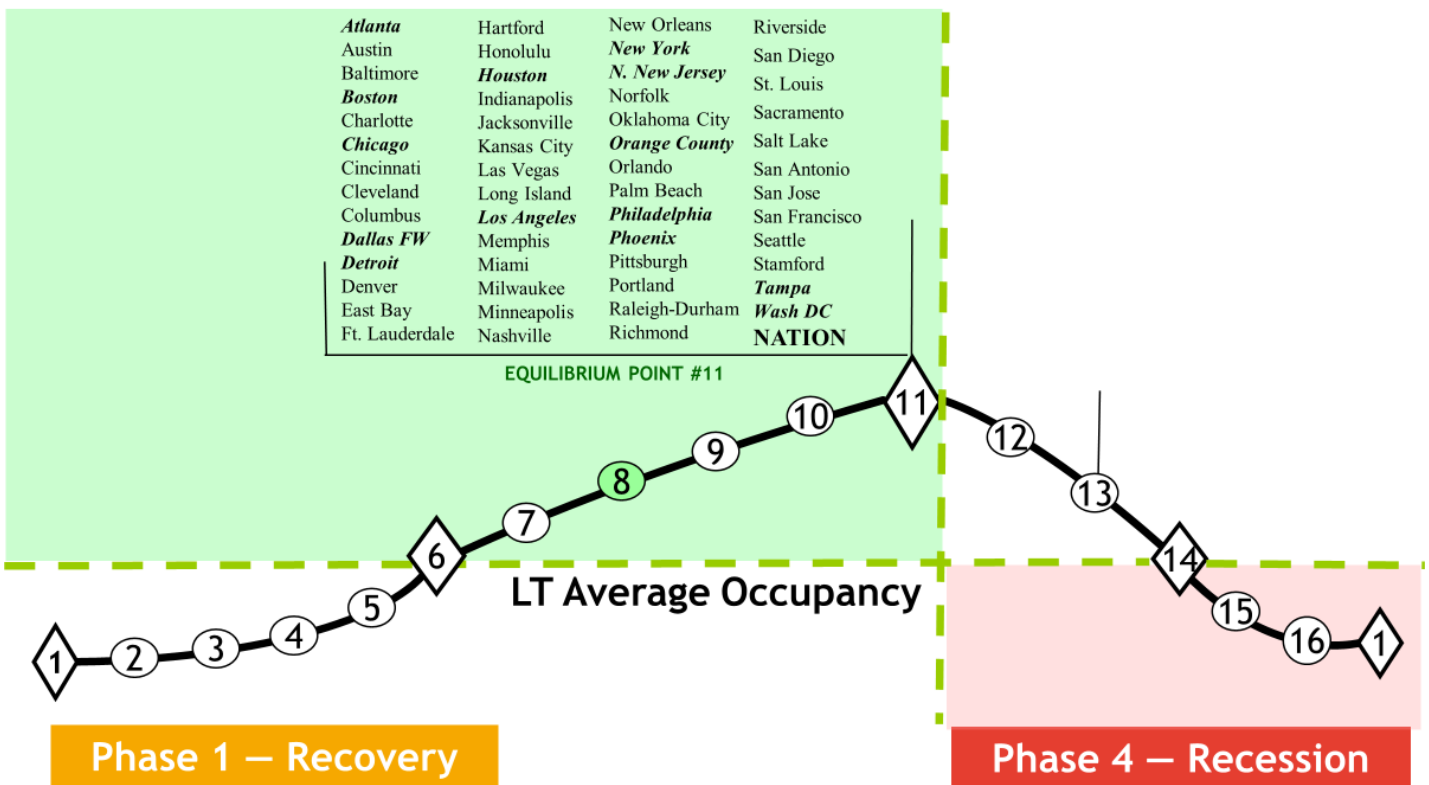
Retail occupancies increased **0.1%** in 4Q23 and were up **0.3%** year-over-year, improving the all-time peak occupancy level for retail. 95 million SF were leased in 2023 and only 49 million SF delivered, providing a very positive demand / supply ratio. There have been 3 years of demand growth with low speculative supply, as over 80% of new construction was pre-leased. The top demand came from experience-retail, food, beverage, discount, and off-price sectors. Higher interest rates and labor costs have kept retail expansion at conservative growth levels. National average retail asking rents were up **0.5%** for the quarter and were up **3.0%** year-over-year.

Retail Market Cycle Analysis

4th Quarter, 2023

Phase 2 – Expansion

Phase 3 – Hypersupply



Source: Mueller, 2024

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

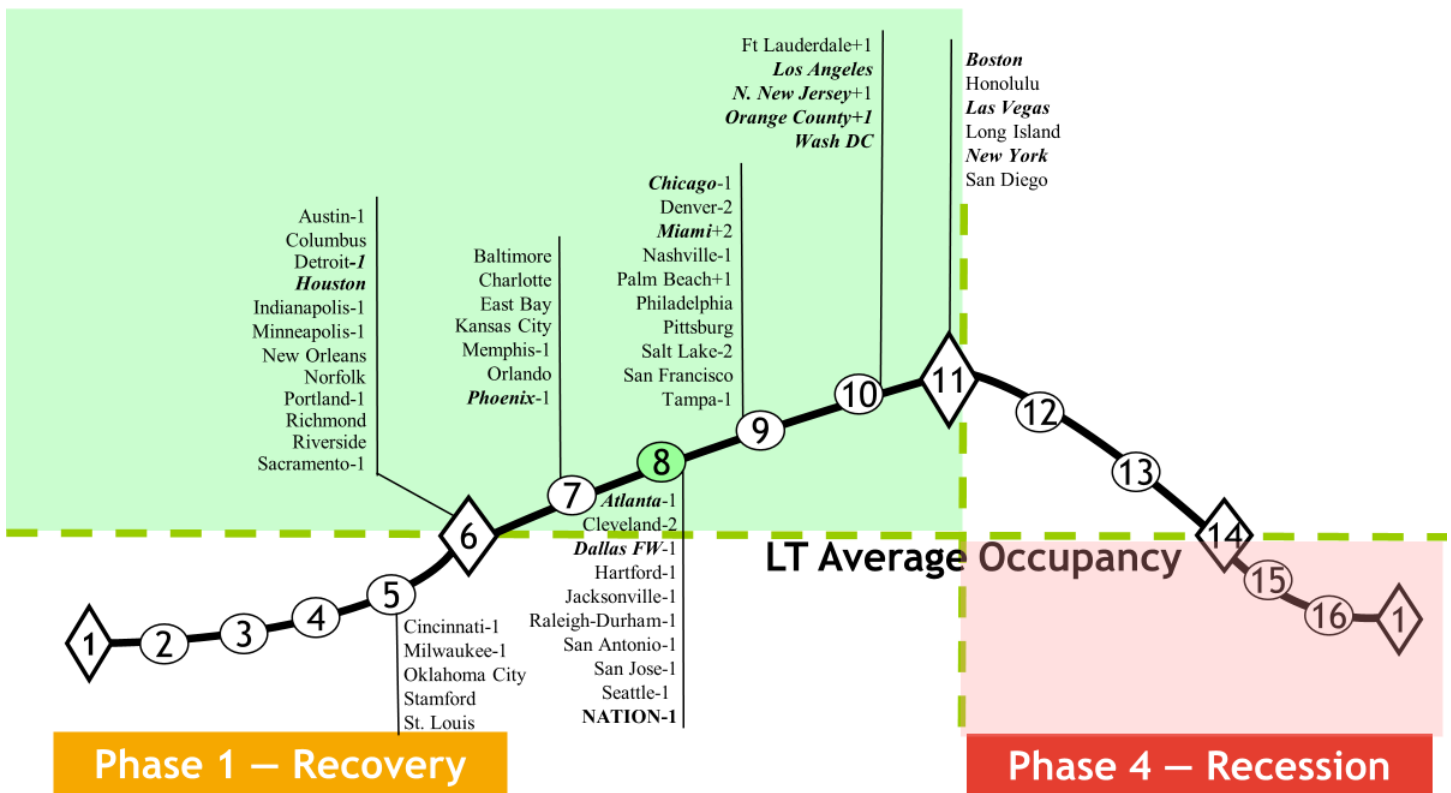
Hotel occupancies were down **0.2%** in 4Q23 and down **0.6%** year-over-year. Continued economic growth propelled travel growth in the leisure and group event sectors. Business travel was still below pre-COVID levels. New supply growth was very low at only 0.3%, well below the long-term average of 1.7%. Small and medium size business have helped the limited-service hotel sector perform well. National average Revenue Per Available Room – (RevPAR) was up **1.8%** for the quarter and up **4.9%** year-over-year.

Hotel Market Cycle Analysis

4th Quarter, 2023 Estimates

Phase 2 – Expansion

Phase 3 – Hypersupply



Source: Mueller, 2024

Note: The 14-largest hotel markets make up 50% of the total square footage of retail space we monitor. Thus, the 14-largest hotel 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.



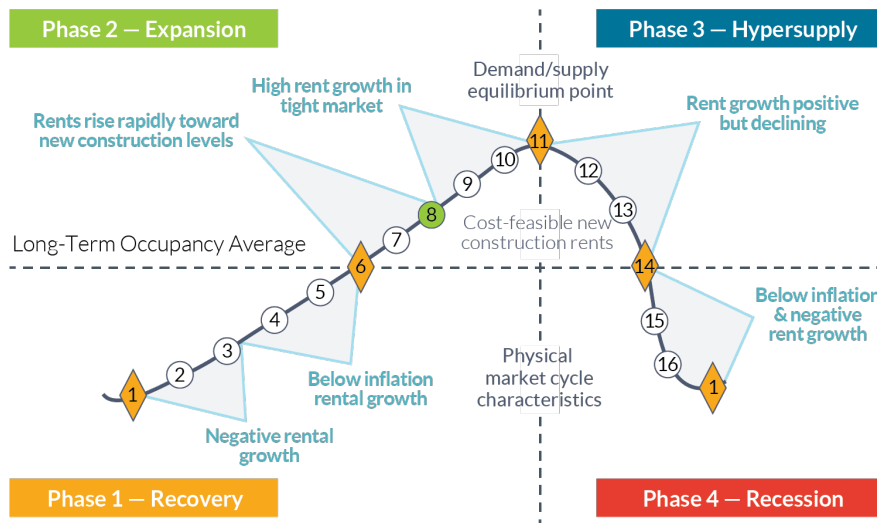
Market Cycle Analysis – Explanation

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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