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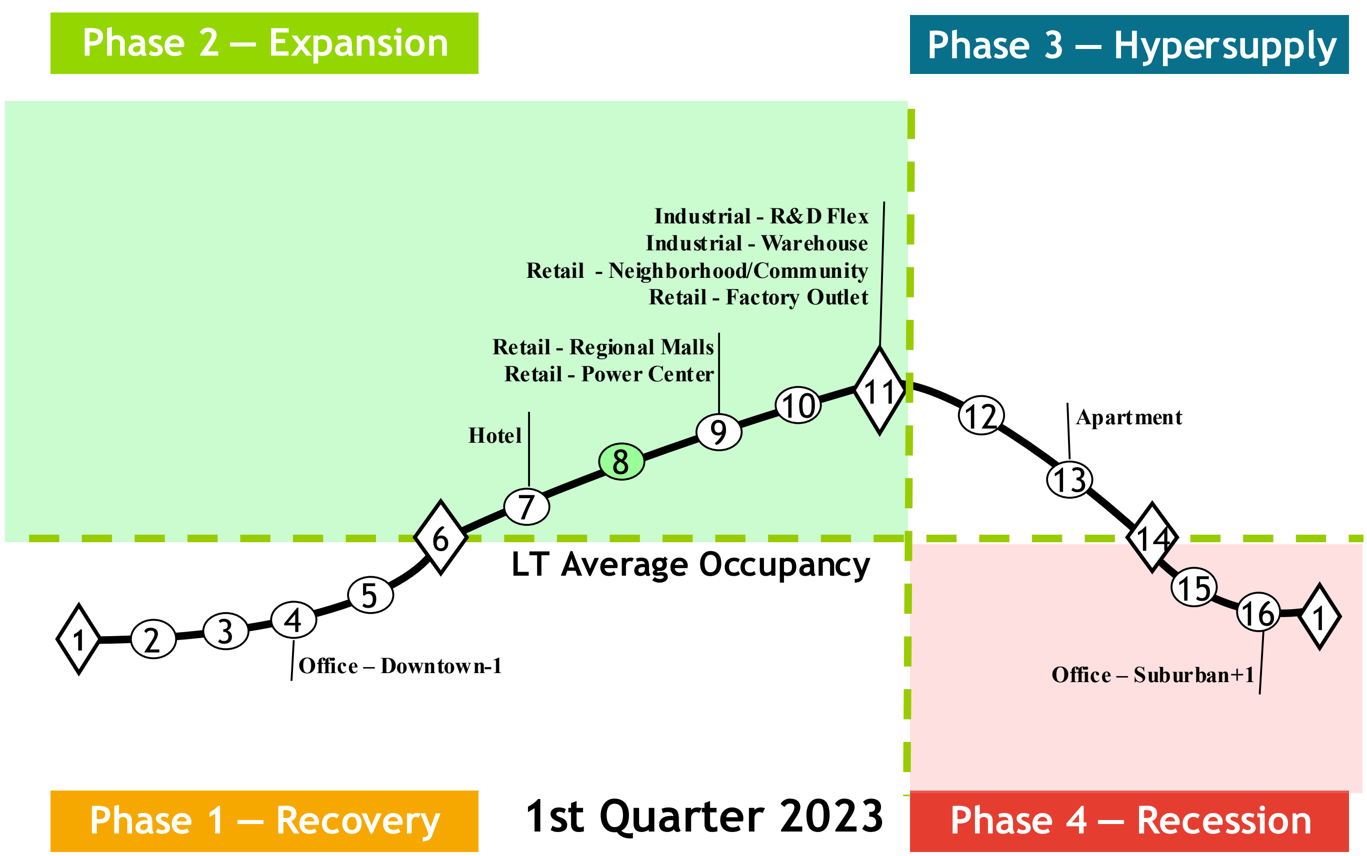
Mueller
Real Estate Market Cycle Monitor
First Quarter 2023 Analysis – May, 2023

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

The economy slowed in 1Q23 with the Fed continuing to increase interest rates, which also slowed inflation moderately, but their increases are not over yet, as the Fed wants to see wage inflation contained more. Construction and permanent loans became much harder to obtain – thus slowing new construction and all real estate transactions substantially. A short recession is now predicted, and consumer confidence has dropped. It appears unlikely, however, that employment could turn negative due to the large numbers of jobs available.

Office occupancy **declined -0.3%** in 1Q23, while rents **grew 0.1%** for the quarter and were up 1.0% annually.
Industrial occupancy **declined -0.3%** in 1Q23, and rents **grew 2.2%** for the quarter and were up 10.4% annually.
Apartment occupancy **decreased -0.3%** in 1Q23, but rents **grew 1.0%** for the quarter, and were up 2.7% annually.
Retail occupancy was **flat** in 1Q23, and rents **grew 0.8** for the quarter and were up 3.9% annually.
Hotel occupancy in 1Q23, and average RevPAR **grew 6.0%** for the quarter and was up 19.1% annually.

National Property Type Cycle Locations



Source: Mueller, 2023

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

Glenn R. Mueller, Ph.D. – *Professor* – Denver University - Burns School RECM- glenn.mueller@du.edu
Academic Director - Family Office Real Estate Institute – glenn.mueller@fore.institute

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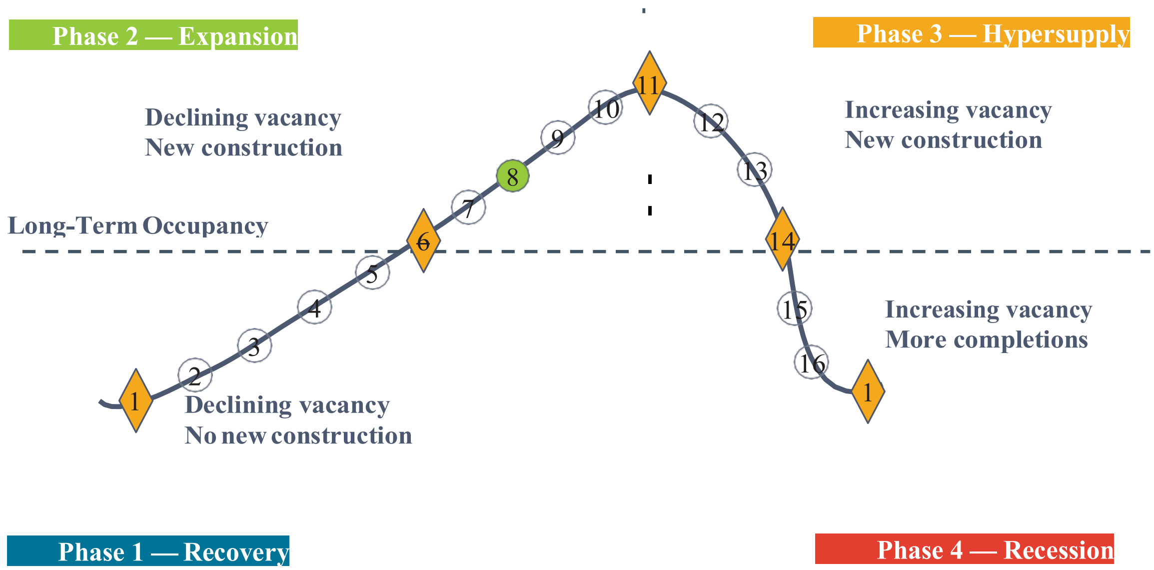
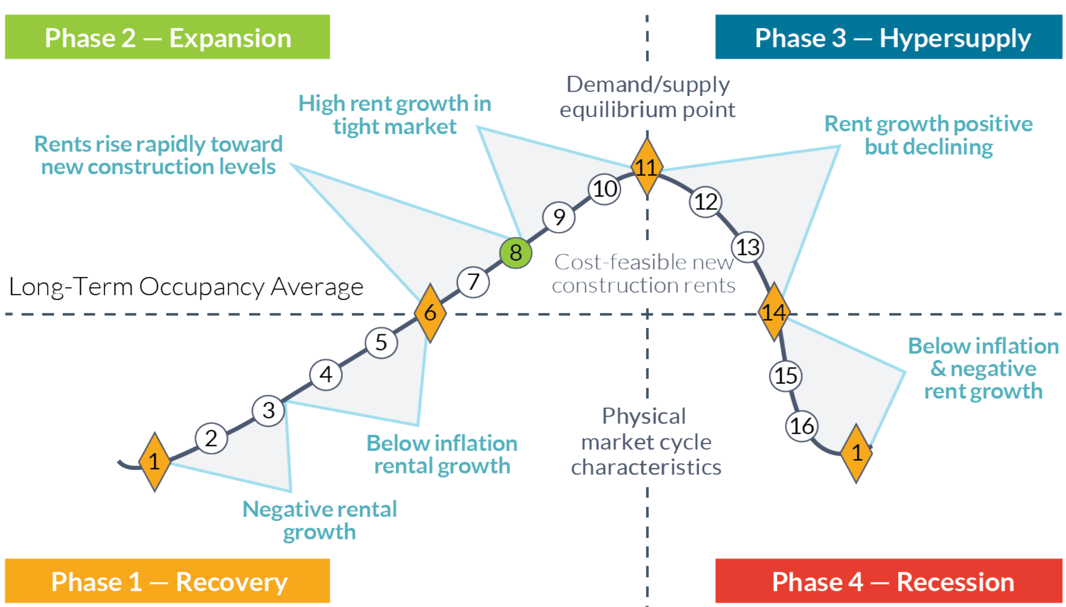
The cycle monitor analyzes occupancy movements in four property types in 54 MSAs. Market cycle analysis should enhance investment-decision capabilities for investors and operators. The five property type cycle charts summarize almost 300 individual models that analyze occupancy levels and rental growth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

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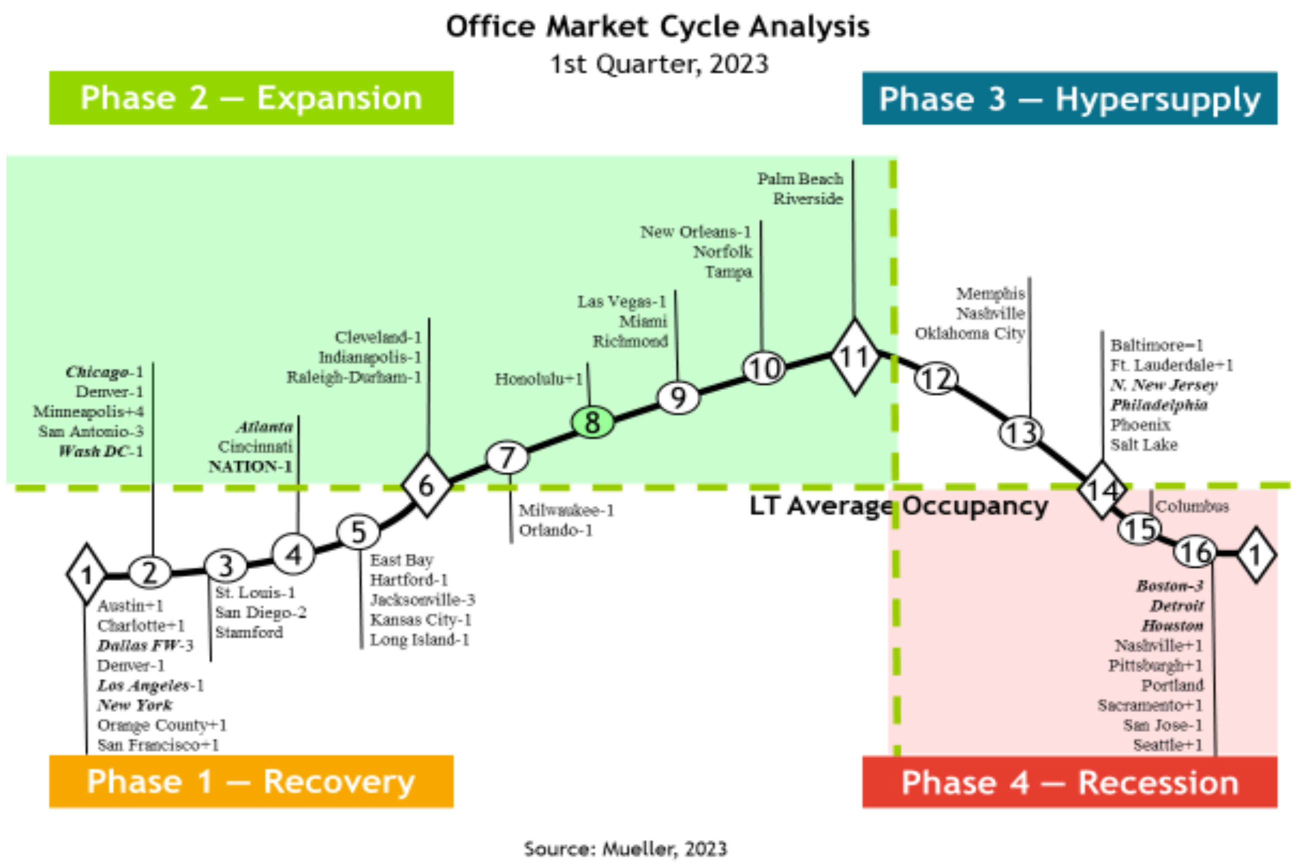
Office

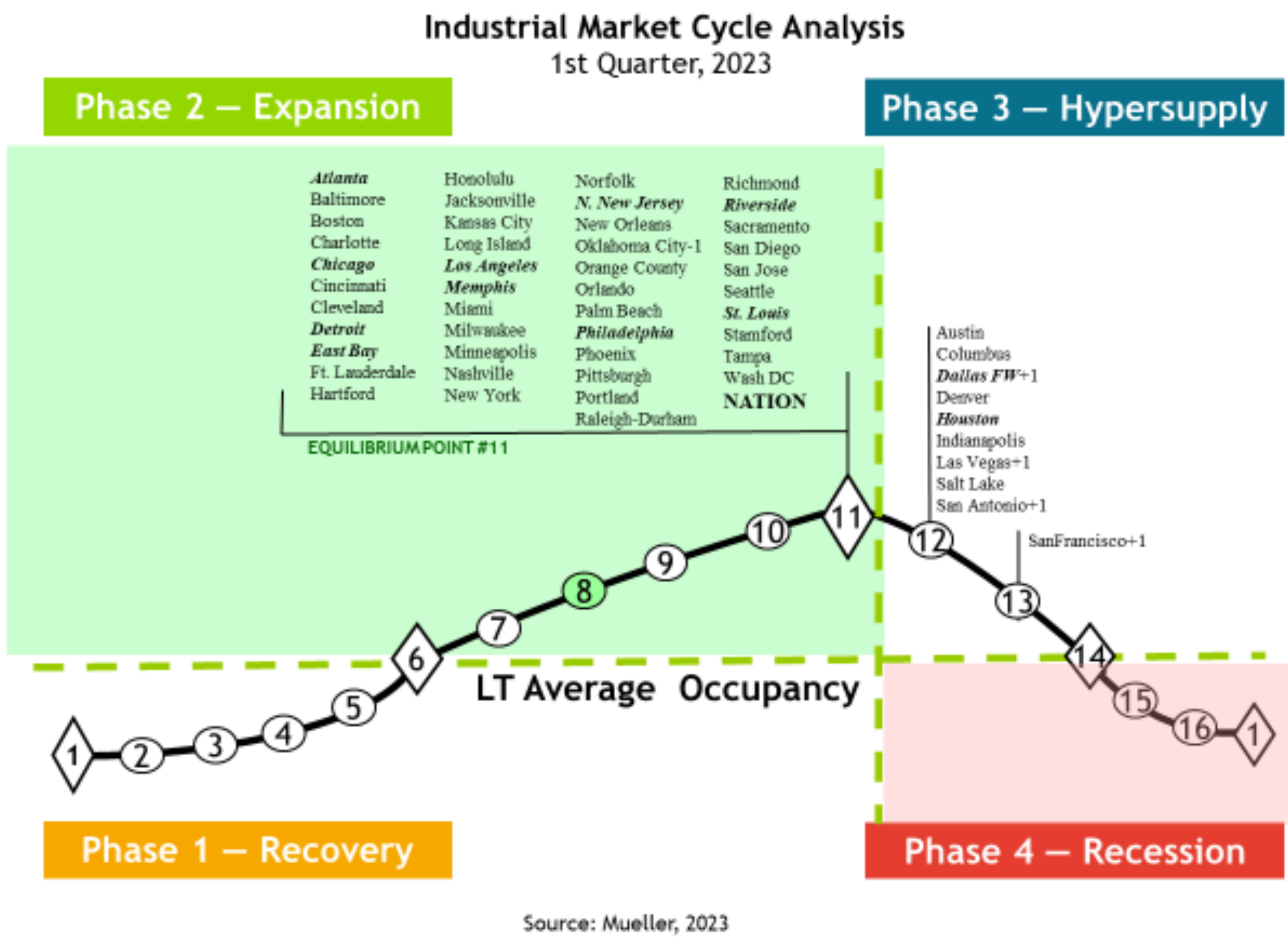
The national office market occupancy level decreased 0.3% in 1Q23 and was down 0.7% year-over-year. Occupancy is now lower than during the great recession at 87% national average. Office using jobs are now 6% above pre-pandemic levels, but office leased space is 2% below pre-pandemic levels and sub-leased space on the market is doble pre-pandemic levels. Unfortunately, office job growth in 1Q23 has slowed to ¼ the rate of 2022. The other headwind is that 67 million Sq Ft came on-line in 1Q23 the most since 2009. Asking rental rates which improved 0.1% in 1Q23 and were up 1.0% year-over-year, but this was on new and less than 10 year old class A space with newer flexible design. Concessions have caused effective rents to decline.



Note: The <u>11-largest office markets</u> make up 50% of the total square footage of office space we monitor. Thus, the 11-largest office markets are in <u>***bold italic***</u> 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 decreased 0.3% in 1Q23 and were down 0.2% year-over-year, as leasing slowed, and a great deal of new construction was completed. The first quarter of each year is the slowest after the holiday season as plans are formulated for the next year. With slowing absorption developers are also using caution and new construction starts declined in 1Q23. Higher interest rates also made new investment less feasible. These restrictions have allowed rent growth to continue at a strong was 2.2% in 1Q23 and annual rent growth averaged 10.4% year-over-year, well above inflation.

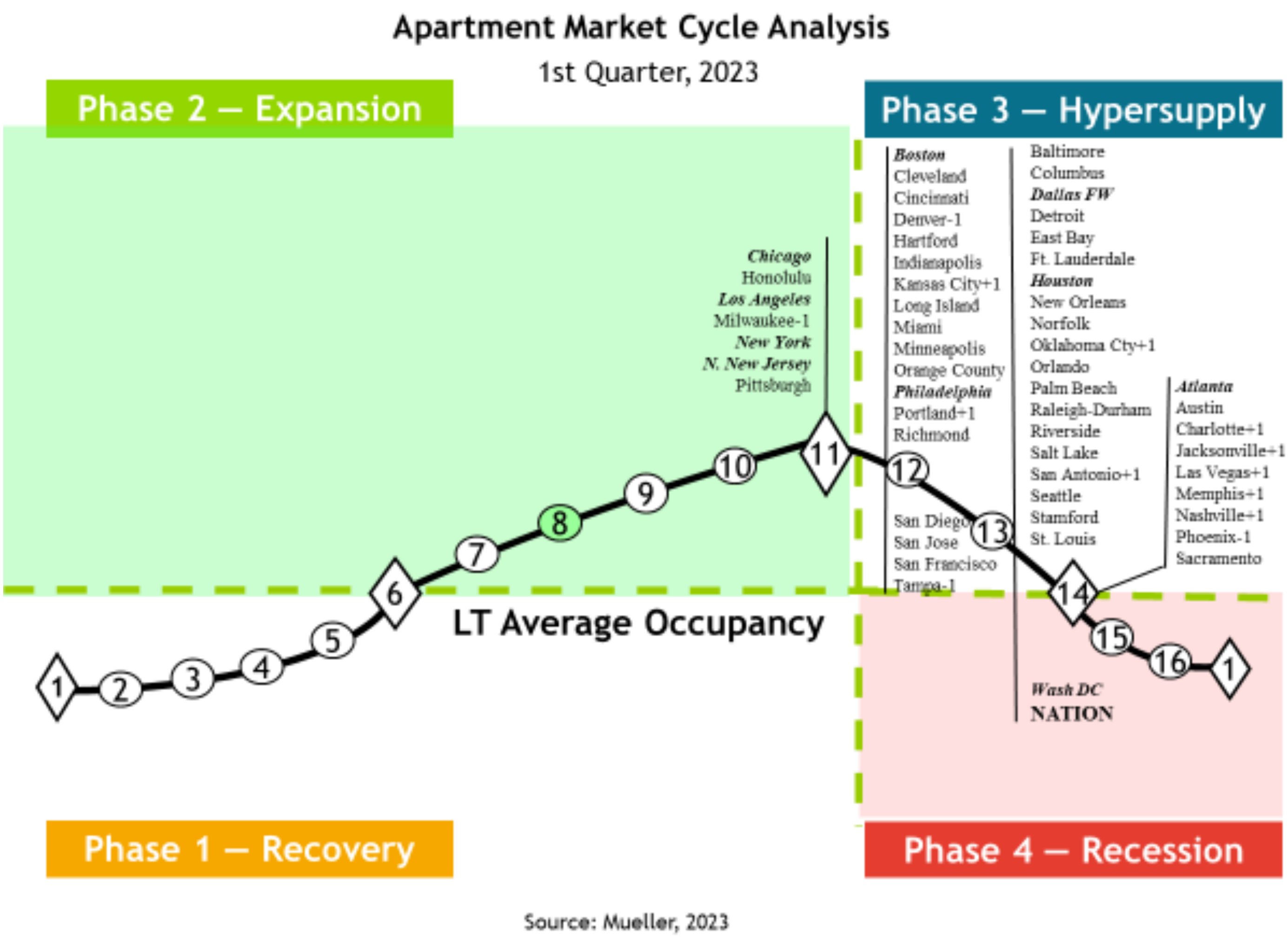


Note: The <u>12-largest industrial markets make up 50%</u> of the total square footage of industrial space we monitor. Thus, the 12-largest industrial markets are in <u>***bold italic***</u> type to help distinguish how the weighted national average is affected.

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 0.3% in 1Q23 and was down 0.7% year-over-year. An uncertain economy and risk of recession slowed household formations in 1Q23 – this muted apartment demand, creating 1Q23 absorption that was half the rate of pre-pandemic years. The Northeast and Midwest markets did the best as their supply did not grow as fast a sunbelt markets. We expect new demand growth to be slow during the year and strong new supply is forecast for 2023 at numbers not seen since the 1980s. The national average apartment asking rent growth increased 1.0% in 1Q23, and rents grew 2.7% year-over-year.

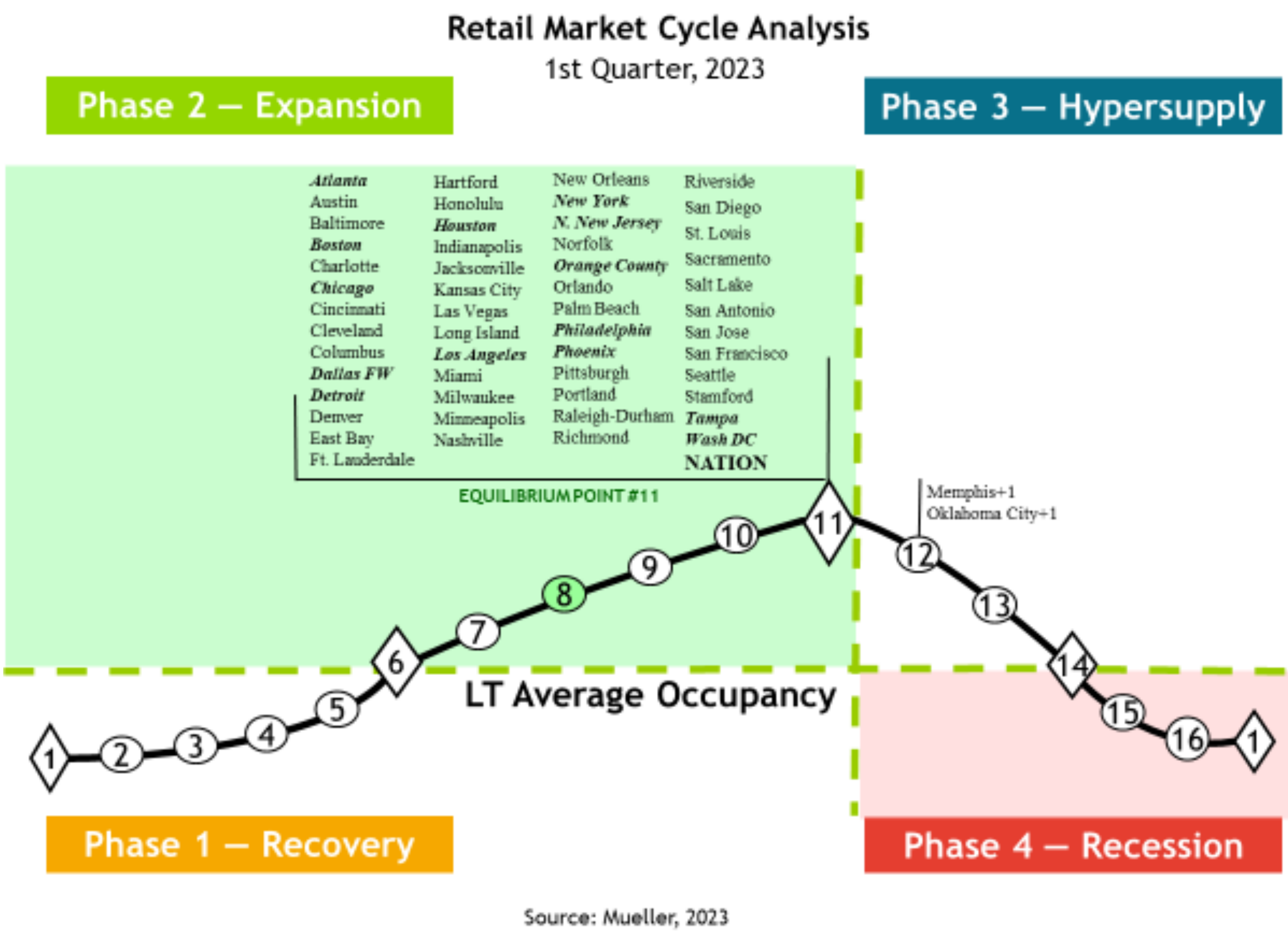


Note: The 10-largest apartment markets make up 50% of the total square footage of multifamily space we monitor. Thus, the 10-largest apartment markets are in ***bold italic*** type to help distinguish how the weighted national average is affected.

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 1Q23 and up 0.3% year-over-year. to yet another new peak occupancy level. Expanding tenants had a hard time finding space, especially in outparcels and mid-size boxes. Single-tenant and ground floor retail space in mixed-use buildings were in greatest demand. 1Q23 is the 8th quarter of positive net absorption with 51 million Sq Ft absorbed in the past year, versus 49 million Sq Ft of new supply. New construction has ben 35% below pre-pandemic levels and over 1444 million Sq Ft of retail space has been demolished in the last 5 years, helping to keep net absorption positive. National average retail asking rents were up 0.8% for the quarter and were up 3.9% year-over-year.



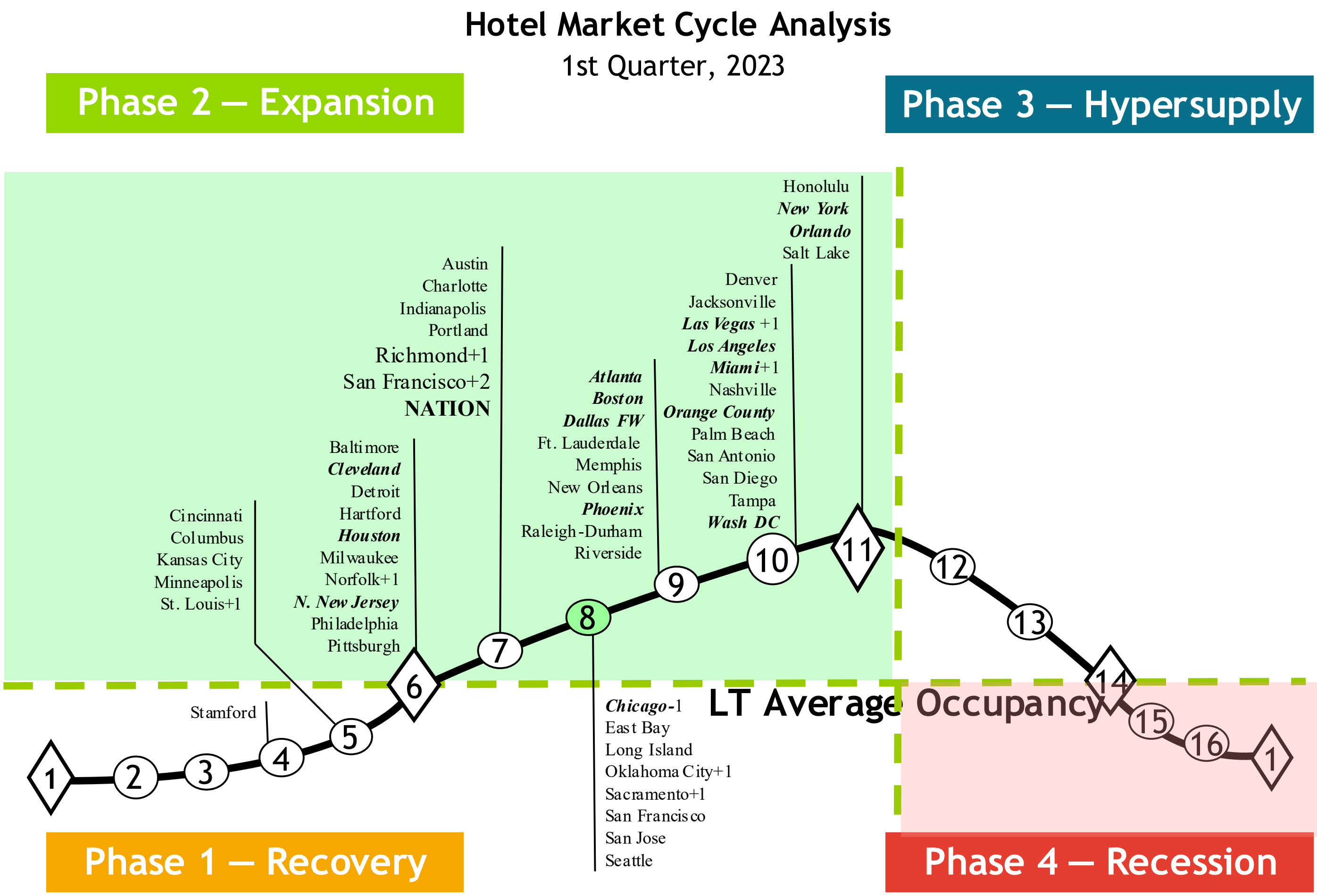
Source: Mueller, 2023

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 up 0.4% in 1Q23 and up 1.5% year-over-year. Demand continued to improve in 1Q23 with corporate meetings and conferences continuing to grow. One weakness was US luxury hotel demand, as the strong dollar sent travelers overseas. The other weakness was downtown business hotels, where downtown foot traffic was still 40%-50% below pre pandemic levels. New construction was down 50% with only 150,00 new rooms added to the inventory over the last year. National average Revenue Per Available Room – (RevPAR) was up 2.5% for the quarter and up 7.7% year-over-year.



Source: Mueller, 2023

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.

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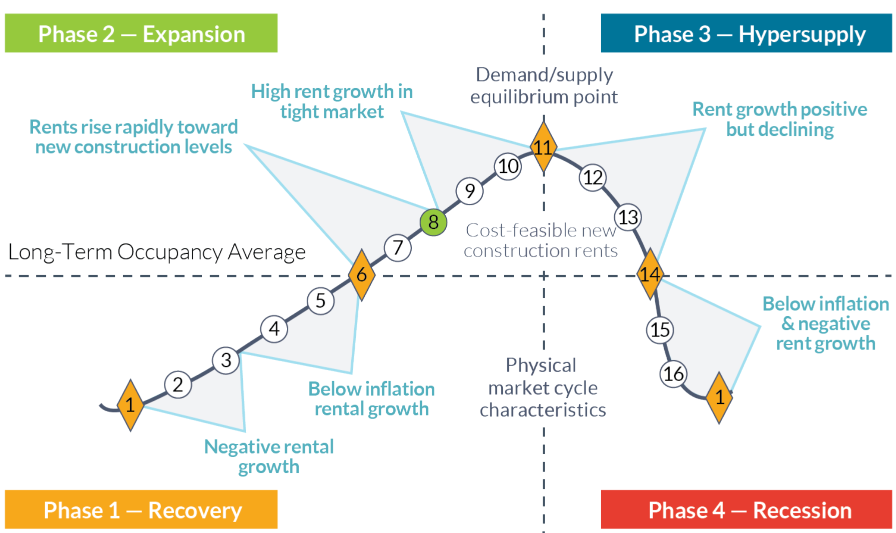
Market Cycle Analysis — Explanation

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 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.

Denver University - Burns School of Real Estate & Construction Management - glenn.mueller@du.edu
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