



Black Creek Research

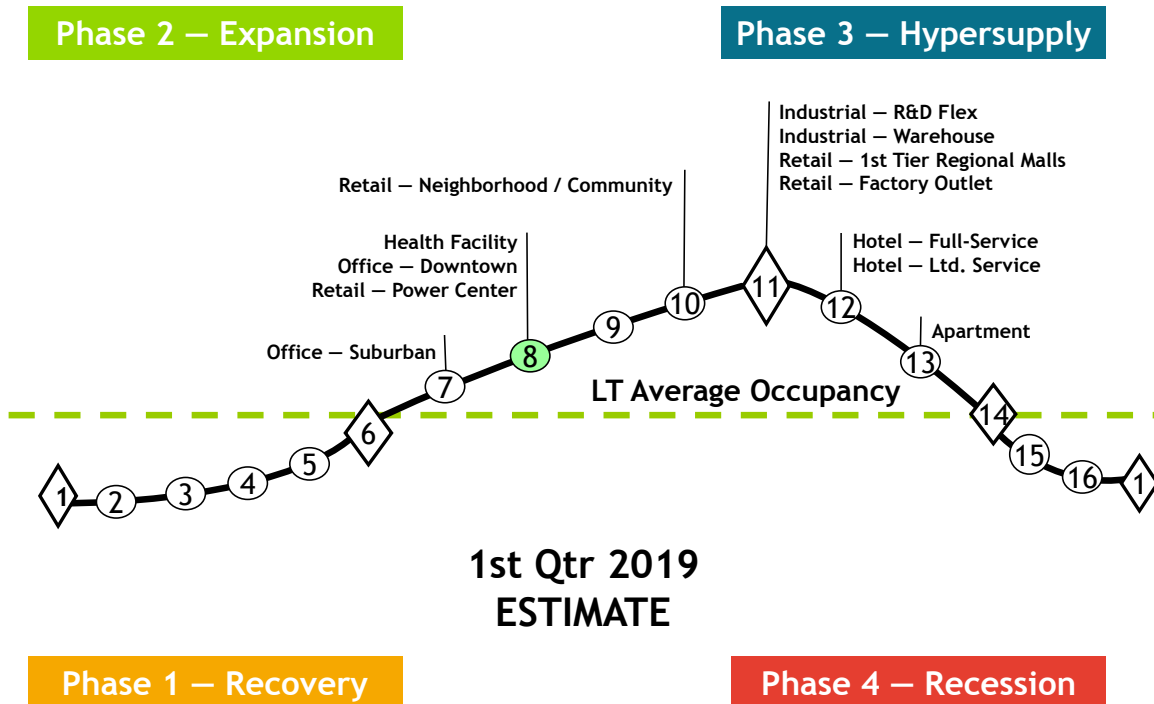
Cycle Forecast – Real Estate Market Cycles
First Quarter 2019 Estimates

Gross Domestic Product (GDP) is expected to grow 3.1% in 2018 due to new tax legislation and 2.6% in 2019. Employment growth is expected to increase 1.7% in 2018 and only 1.2% in 2019. These moderate economic predictions provide continued moderate demand growth for all real estate property types. Equilibrium levels of demand and supply over the next two years are a good precursor for continued growth in occupancies and rents in most property

types and markets. Moderate interest rate increases are expected, but real estate income growth has historically outpaced interest rate rises and there are no indicators that real estate might act differently this time – because of this, real estate performance should mirror previous expansionary times. Lower loan-to-value lending should also reduce down-side risk in real estate investments.

- Office occupancies are forecast to be flat in 1Q19, with rents improving 0.3% quarter-over-quarter
• Industrial occupancies are forecast to be flat in 1Q19, with rents improving 1.1% quarter-over-quarter
• Apartment occupancies are forecast to decline 0.1% in 1Q19, with rents improving 0.5% quarter-over-quarter
• Retail occupancies are forecast to be flat in 1Q19, with rents improving 0.4% quarter-over-quarter
• Hotel occupancies are forecast to decline 0.2% in 1Q19, with room rates improving 1.8% quarter-over-quarter

National Property Type Cycle Forecast



1st Qtr 2019 ESTIMATE

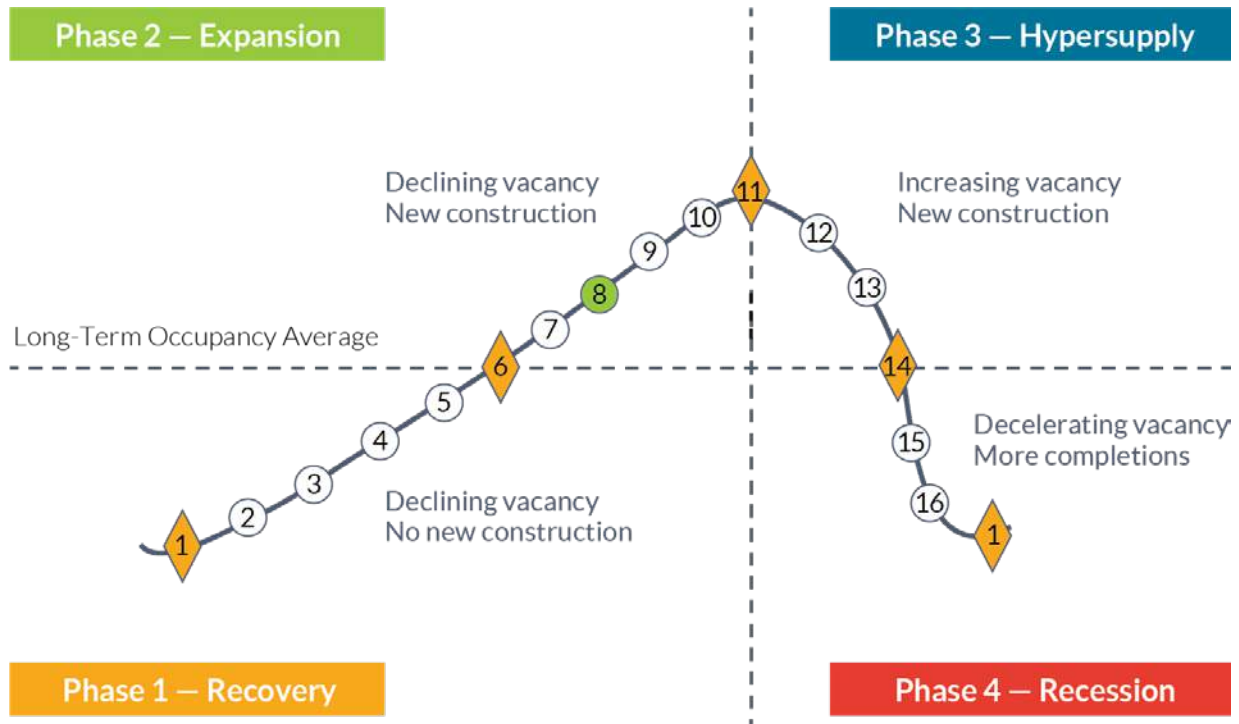
Source: Mueller, 2018

National Property Type Cycle Forecast graph shows relative positions of sub-property types.

The cycle monitor analyzes occupancy movements in five property types in 54 Metropolitan Statistical Areas (MSAs). Market cycle analysis should enhance investment-decision capabilities for investors and operators. The five property type cycle charts summarize 270 individual models that analyze occupancy levels and rental growth rates to provide the foundation for long-term investment success.

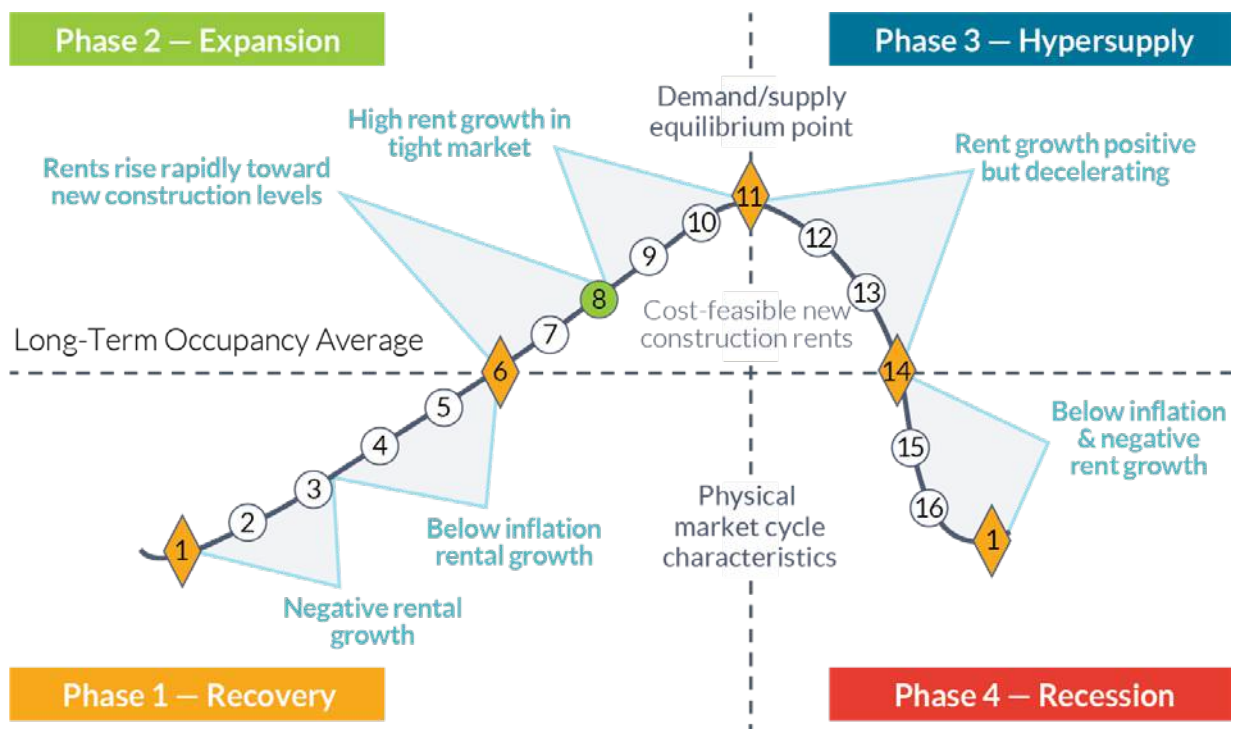
Commercial real estate markets are cyclical due to the lagged relationship between demand and supply for physical space. The long-term occupancy average is different for each market and each property type. **Long-term occupancy average** is a key factor in determining rental growth rates — a critical indicator of commercial real estate 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.



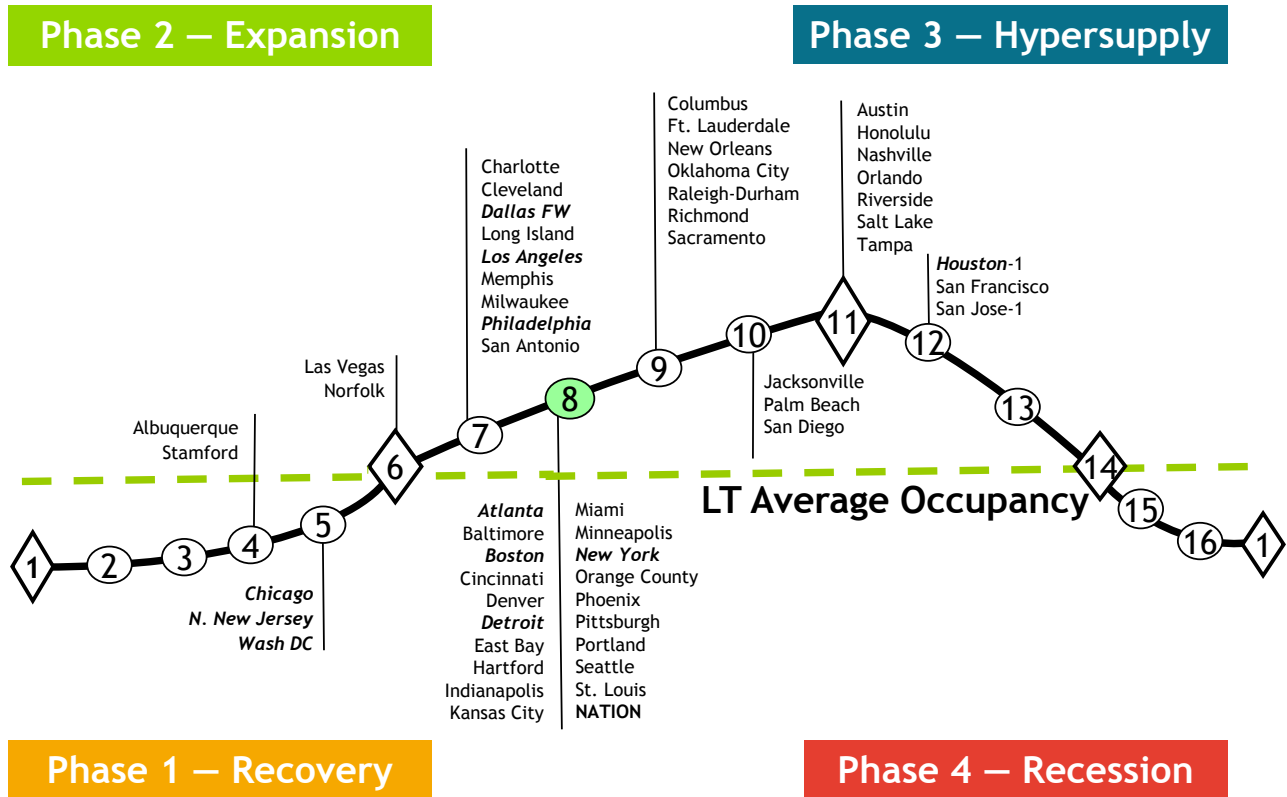
Source: Mueller, Real Estate Finance, 1996

Office Forecast

Office occupancies are forecast to be flat in 1Q19, producing a 0.1% increase year-over-year. Office space demand was historically determined at a rate of 200 square feet per employee. Technology and job sharing reduced that demand number to 110 square feet per employee in 2017. In 2018 that trend reversed, as a tighter labor market made employers realize that more space was needed to attract

and retain good talent. This reversal bodes well for office demand in the future. Supply growth continues at moderate equilibrium level rates. The current national average cap rate for office is forecast to increase only 0.1% by 1Q19. National average office rents are expected to increase 0.3% in 1Q19 and 1.7% year-over-year.

Office Market Cycle FORECAST 1st Quarter, 2019 Estimates



Source: Mueller, 2018

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.

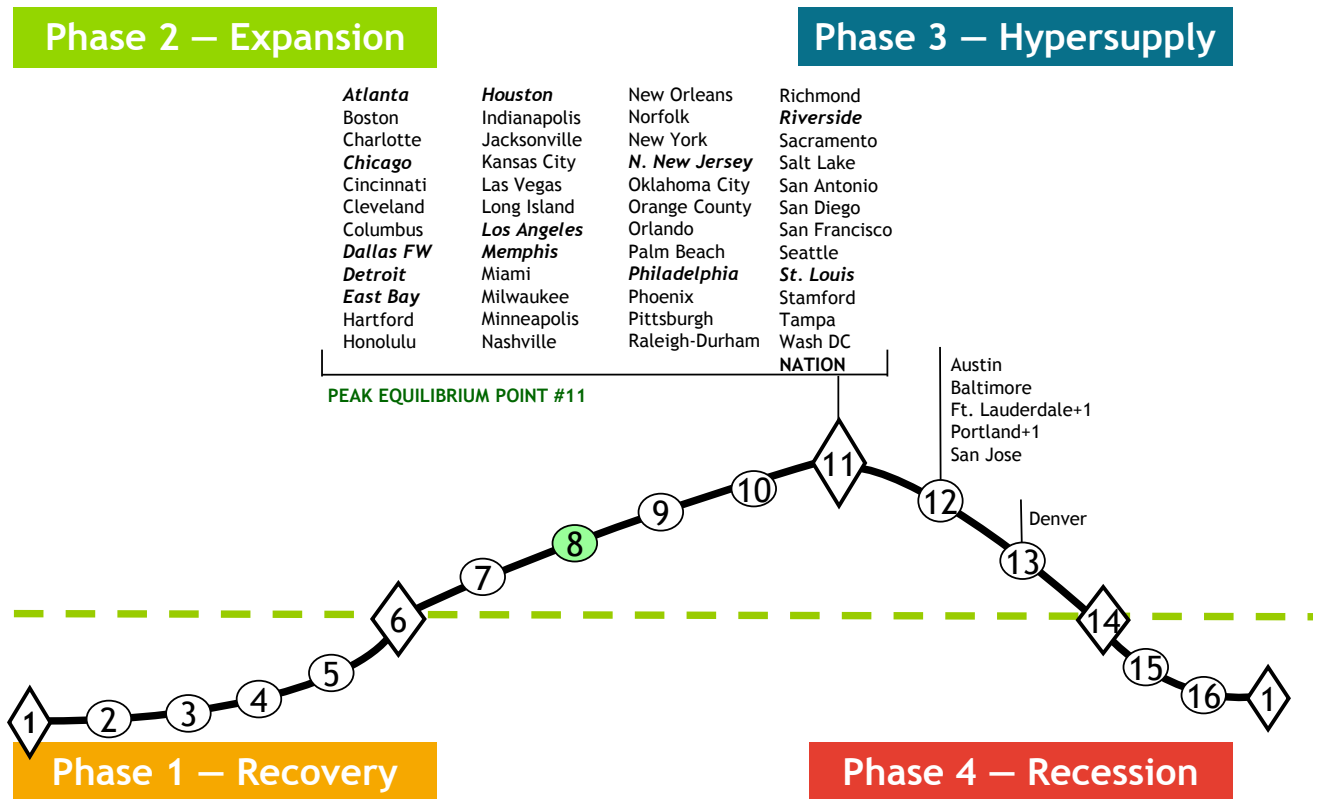
Industrial Forecast

Industrial occupancies are forecast to be flat in 1Q19 and year-over-year as equilibrium level peak occupancies are forecast to continue. This balanced market condition is now forecast to continue into 2020. Buildout by retailers due to e-commerce fundamentals is expected to provide up to a 10-year runway of strong demand for both bulk warehouse and smaller last-mile warehouse delivery space. With short

delivery time on new industrial construction, it is highly likely that the balanced supply delivery of the last three years could continue for the foreseeable future. Well located land is now the one major constraint to new supply. National average cap rates for industrial are expected to rise only 0.1% over the next year. We expect rents to increase 1.1% in 1Q19 and 4.7% year-over-year.

Industrial Market Cycle FORECAST

1st Quarter, 2019 Estimates



Source: Mueller, 2018

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.

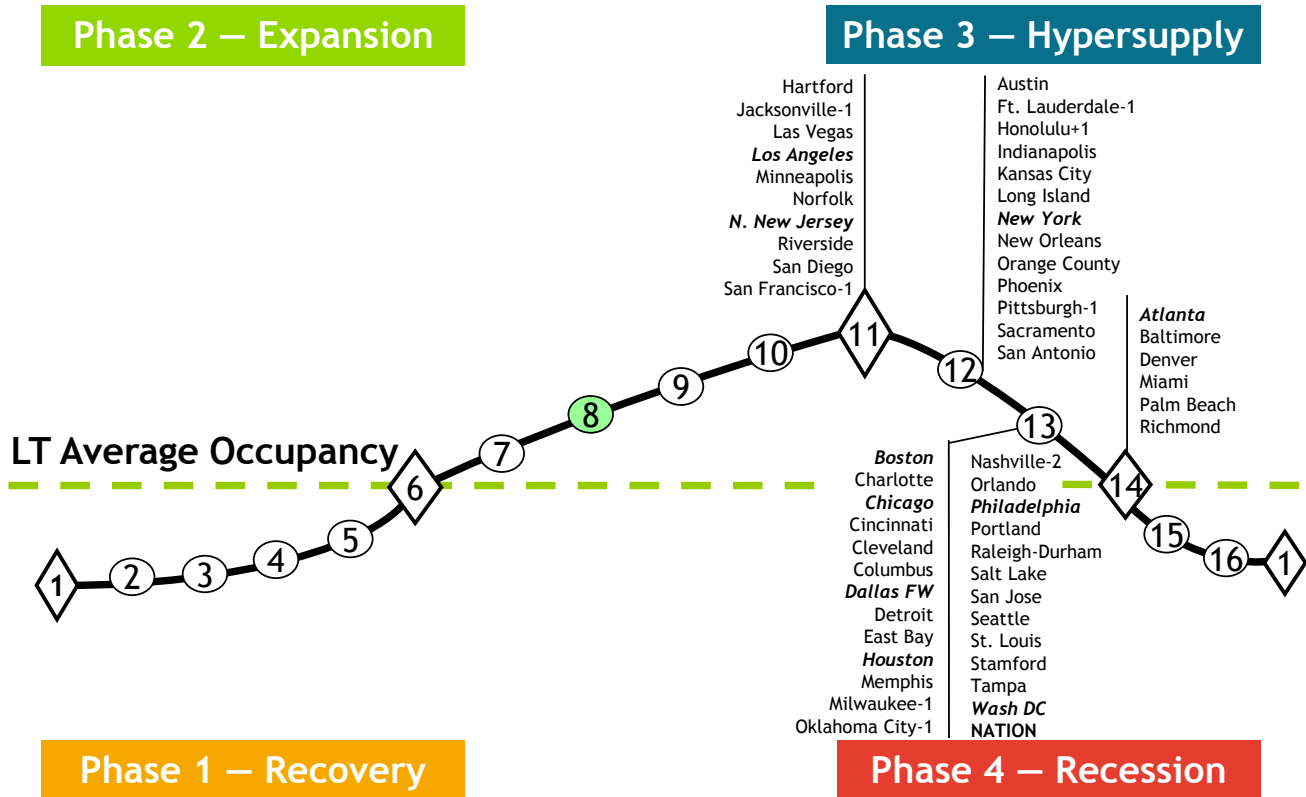
Apartment Forecast

Apartment occupancies are forecast to decline 0.1% in 1Q19 and 0.3% year-over-year. The moderate positive demand fundamentals of the past seven years are expected to continue as millennials graduate from school and get their first job, allowing them to afford an apartment, but not buy a house. Supply growth is still forecast at a level above demand growth, which is creating continued hyper-supply in

2019. Our models show that this could finally resolve itself in 2020 as higher interest rates, higher construction costs and tight construction labor markets finally slow apartment supply growth. National average cap rates are forecast to increase 0.1% over the next year. The national apartment asking rental rate is expected to increase 0.5% in 1Q19 and we estimate a 2.6% rent increase year-over-year.

Apartment Market Cycle FORECAST

1st Quarter, 2019 Estimates



Source: Mueller, 2018

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.

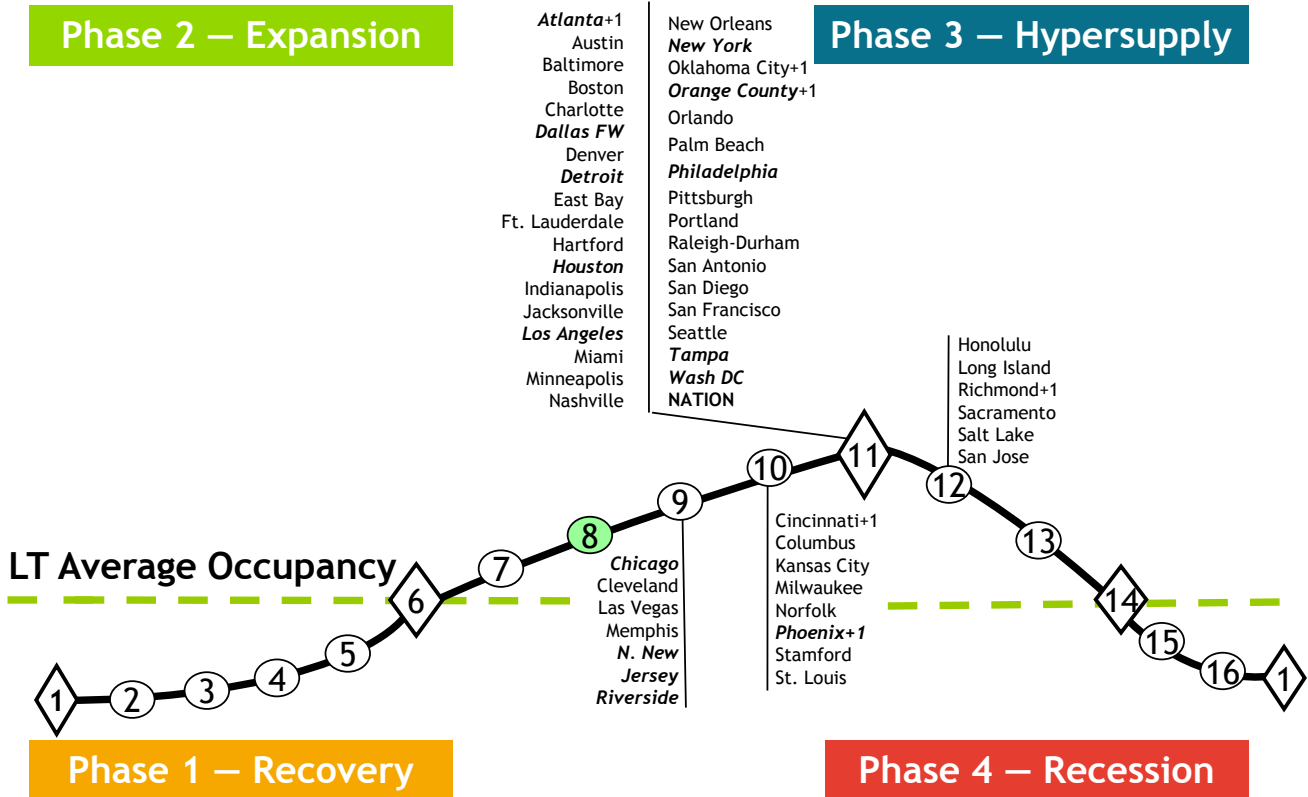
Retail Forecast

Retail occupancy is forecast to be flat in 1Q19 and increase 0.1% year-over-year. Contrary to popular opinion, demand for retail space has continued to grow since the great recession and is expected to continue to grow for the foreseeable future. The older retail “goods for sale” concept is being replaced with “experience-based” concepts — the main type being food and

beverage (especially brew pubs). Location and building quality are the two major factors for retail success in the future. National average cap rates for retail are expected to rise only 0.1% over the next year. Retail rental rates are expected to increase 0.4% in 1Q19 and 1.7% year-over-year.

Retail Market Cycle FORECAST

1st Quarter, 2019 Estimates



Note: The 15-largest retail markets make up 50% of the total square footage of retail space we monitor. Thus, the 15-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.

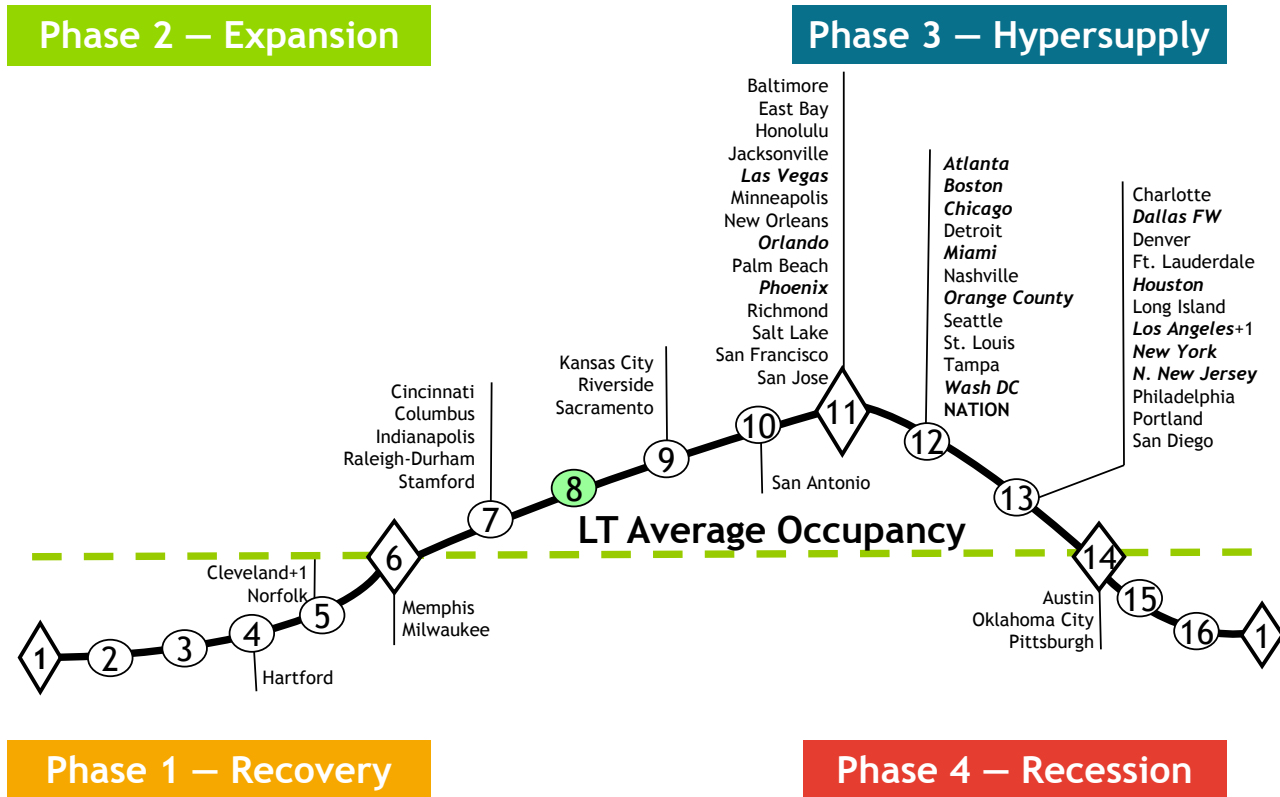
Hotel Forecast

Hotel occupancy is forecast to decrease 0.2% in 1Q19 and 0.8% year-over-year. Occupancies are forecast to stay above 70%, which is higher than all previous cycles over the last 35 years. The high occupancy levels of 2016 and 2017 have driven new construction starts to rates above forecast demand growth for 2019. Demand should increase in 2019, but at slower rates than seen in the past three years. Expect

smaller, less expensive rooms to capture more millennial demand in higher cost cites, while budget rooms grow in lower cost areas. National average cap rates for hotels are forecast to increase 0.4% over the next year. Room rate growth is expected to increase 1.8% in 1Q19 and 3.7% year-over-year.

Hotel Market Cycle FORECAST

1st Quarter, 2019 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 boldface italics 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.

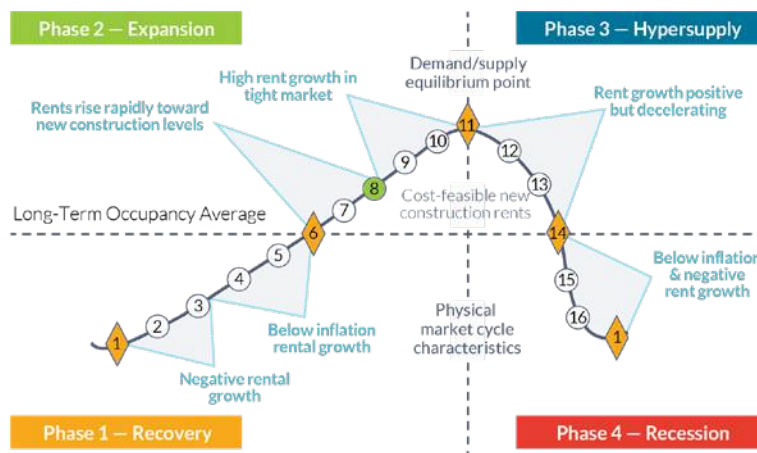
Market Cycle Analysis – Explanation

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 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. 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.

Important Disclosures and Certifications

I, Glenn R. Mueller, Ph.D. certify that the opinions and forecasts expressed in this research report accurately reflect my personal views about the subjects discussed herein; and I, Glenn R. Mueller, certify that no part of my compensation from any source was, is, or will be directly or indirectly related to the content of this research report.

The views expressed in this commentary are the personal views of Glenn R. Mueller and do not necessarily reflect the views of Black Creek Group itself. The views expressed reflect the current views of Mr. Mueller as of the date hereof and neither Mr. Mueller nor Black Creek Group undertakes to advise you of any changes in the views expressed herein.

The information contained in this report: (i) has been prepared or received from sources believed to be reliable but is not guaranteed; (ii) is not a complete summary or statement of all available data; (iii) does not constitute investment advice and is not an offer or recommendation to buy or sell any particular securities; and (iv) is not an offer to buy or sell any securities in the markets or sectors discussed in the report. The main purpose of this report is to provide a broad overview of the real estate market in general.

Any estimates, projections or predictions given in this report are intended to be forward-looking statements. Although we believe that the expectations in such forward-looking statements are reasonable, we can give no assurance that any forward-looking statements will prove to be correct. Such estimates are subject to actual known and unknown risks, uncertainties and other factors that could cause actual results to differ materially from those projected. We expressly disclaim any obligation or undertaking to update or revise any forward-looking statement contained herein to reflect any change in our expectations or any change in circumstances upon which such statement is based.

The opinions and forecasts expressed in this report are subject to change without notice and do not take into account the particular investment objectives, financial situation or needs of individual investors. Any opinions or forecasts in this report are not guarantees of how markets, sectors or individual securities or issuers will perform in the future, and the actual future performance of such markets, sectors or individual securities or issuers may differ. Further, any forecasts in this report have not been based on information received directly from issuers of securities in the sectors or markets discussed in the report. Black Creek Group, LLC disclaims any and all liability relating to this report, including, without limitation, any express or implied representations or warranties for statements or errors contained in, or omissions from, this report.

Tax considerations, margin requirements, commissions and other transaction costs may significantly affect the economic consequences of any transaction concepts referenced in this commentary and should be reviewed carefully with one's investment and tax advisors. Investment concepts mentioned in this commentary may be unsuitable for investors depending on their specific investment objectives and financial position. Past performance is not a guarantee of future results. Investing involves risk, including the possible loss of principal and fluctuation of value.

Dr. Mueller serves as a Real Estate Investment Strategist with Black Creek Group. In this role, he provides investment advice to certain affiliates of Black Creek Group regarding the real estate market and the various sectors within that market. Mr. Mueller's compensation from Black Creek Group and its affiliates is not based on the performance of any investment advisory client, offering or product of Black Creek Group or its affiliates.

Black Creek Group is a real estate investment management company that focuses on creating institutional-quality real estate financial products for individual and institutional investors. Certain affiliates of Black Creek Group also provide investment management services and advice to various investment companies, real estate investment trusts and other advisory clients about the real estate markets and sectors, including specific securities within these markets and sectors.

Dr. Mueller may from time to time have personal investments in real estate, in securities of issuers in the markets or sectors discussed in this report, or in investment companies or other investment vehicles that invest in real estate and the real estate securities markets (including investment companies and other investment vehicles for which an affiliate of Black Creek Group may serve as investment adviser). Real estate investments purchased or sold based on the information in this report could directly benefit Dr. Mueller by increasing the value of his personal investments.