



**DIVIDEND CAPITAL**  
RESEARCH

## ***CYCLE FORECAST — Real Estate Market Cycles***

**Third Quarter 2009 Estimates  
November 2008**

A recession started in 3Q08 and is expected to continue through 2Q09 (optimistic) or 3Q09 (pessimistic). World GDP is also declining, which may hinder the U.S. economic recovery in 2009. But job losses affect commercial real estate demand the most. Job losses started in January 2008 and are expected to continue through 2009 — usually two quarters after the recession ends. We expect landlords to offer plenty of concessions to keep existing tenants whose leases expire and to attract new tenants. There is no way to forecast when commercial debt capital will become available as the Treasury is changing its plans, but history shows that the housing market usually leads the recovery and we hope the government understands that relationship.

Office occupancies are forecast to decline by 2.3% in 2009, and office rents may decline by as much as 6% in 2009.

Industrial occupancy declines of 1.6% are expected in 2009 and should produce a 2% rental decline in 2009.

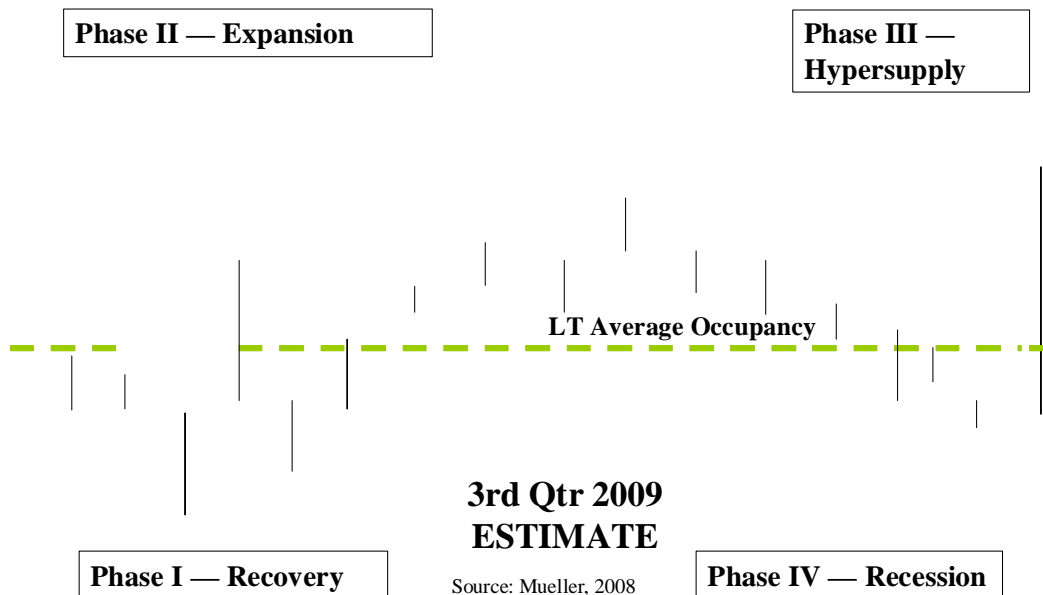
Apartment occupancies are expected to decline 1.6% for 2009 causing rental decline of 1.5%.

Retail occupancies are expected to decline a full 4% in 2009 and we see a 6% rental decline for the full year.

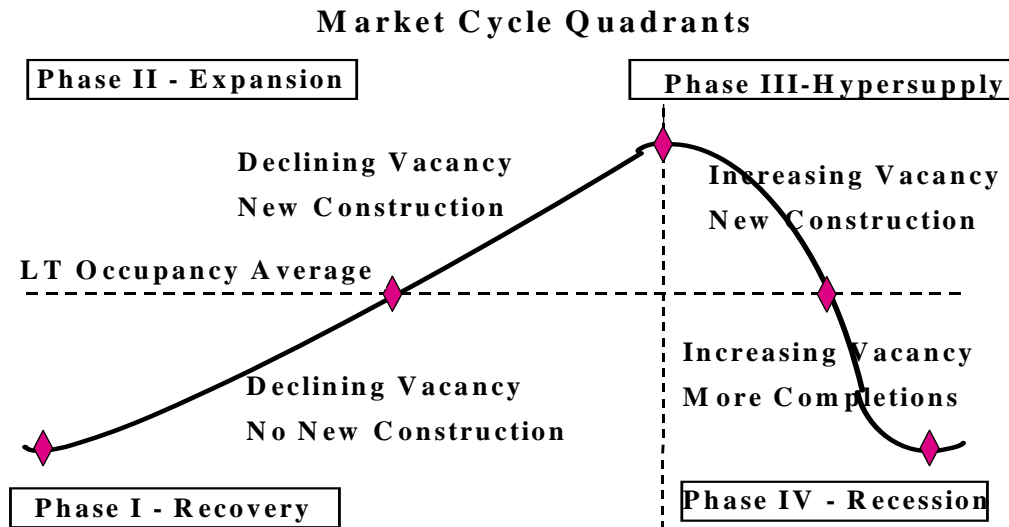
Hotels should see a 4.2% occupancy decline in 2009 and a full-year RevPAR decline of 4.5%.

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

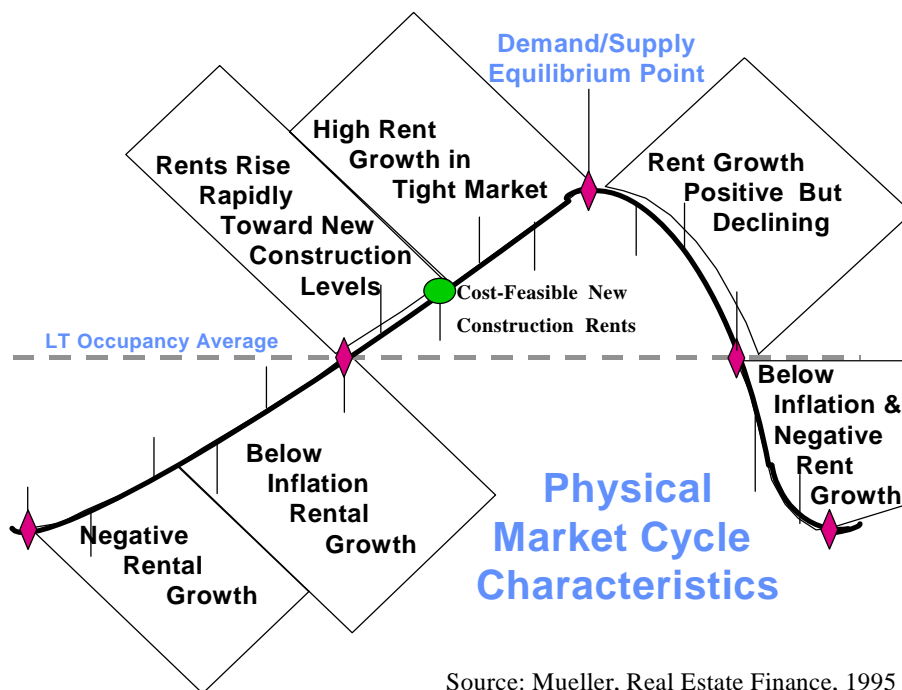
### **National Property Type Cycle Forecast**



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. 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 real estate returns.



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

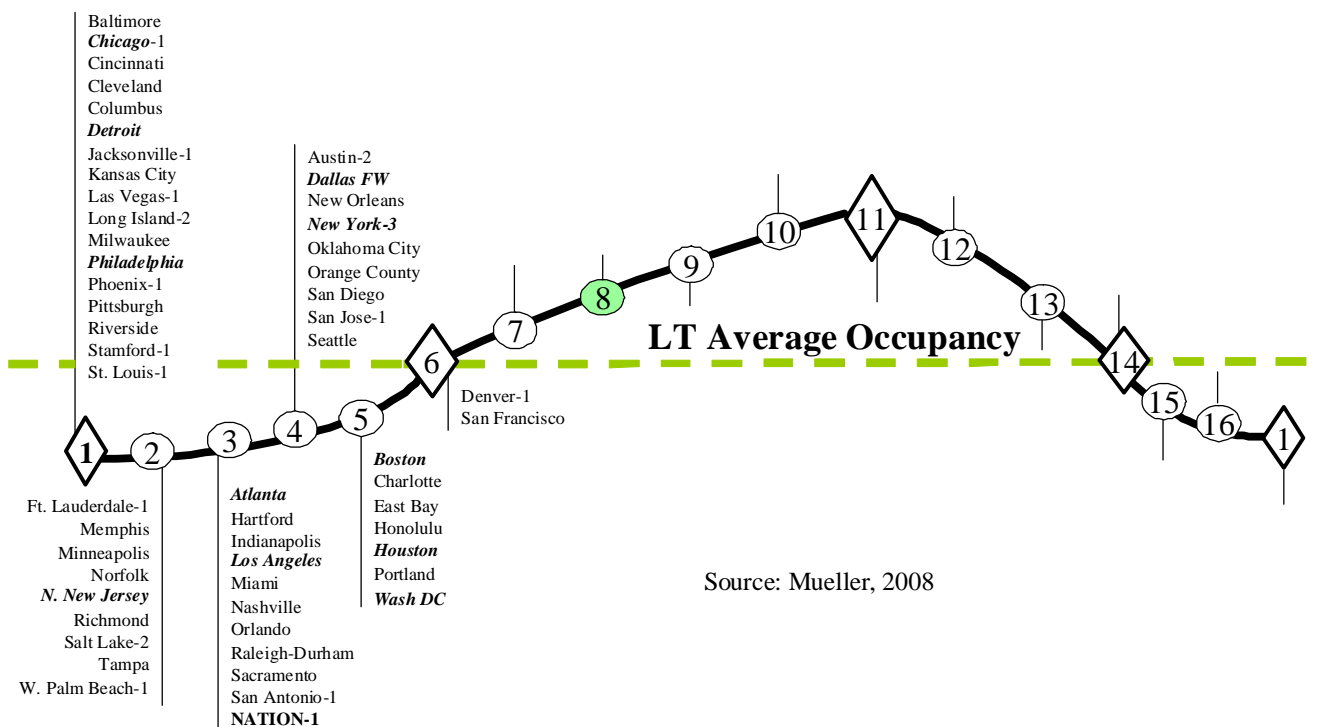


## OFFICE FORECAST

Occupancies are forecast to decline 0.5% in 3Q09, creating a year-over-year decline of 2.3% for office space nationally. The mounting job losses that are now more than 1 million for the first 10 months of 2008 are expected to total another 1 million in 2009. Office occupancy declines lag behind job losses, which should continue through 2009. Our forecast shows that 14 markets may have large enough declines to move them lower on the cycle chart, noting that the growth phase of the cycle points #7 to #11 are now clear of any office markets, placing all markets back in the recovery phase of their occupancy cycle. Since markets did not go through the growth phase to a peak, we did not move them to the recession phase (points 14 to 16 on the graph) but most markets should feel like they are going through a recession during most of 2009. With asking rents dropping during 3Q08 we are forecasting a 0.3% rent decline in 3Q09 and a full-year 2009 rent decline that may be as high as 6%.

### Office Market Cycle FORECAST

3rd Quarter, 2009 Estimates



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.

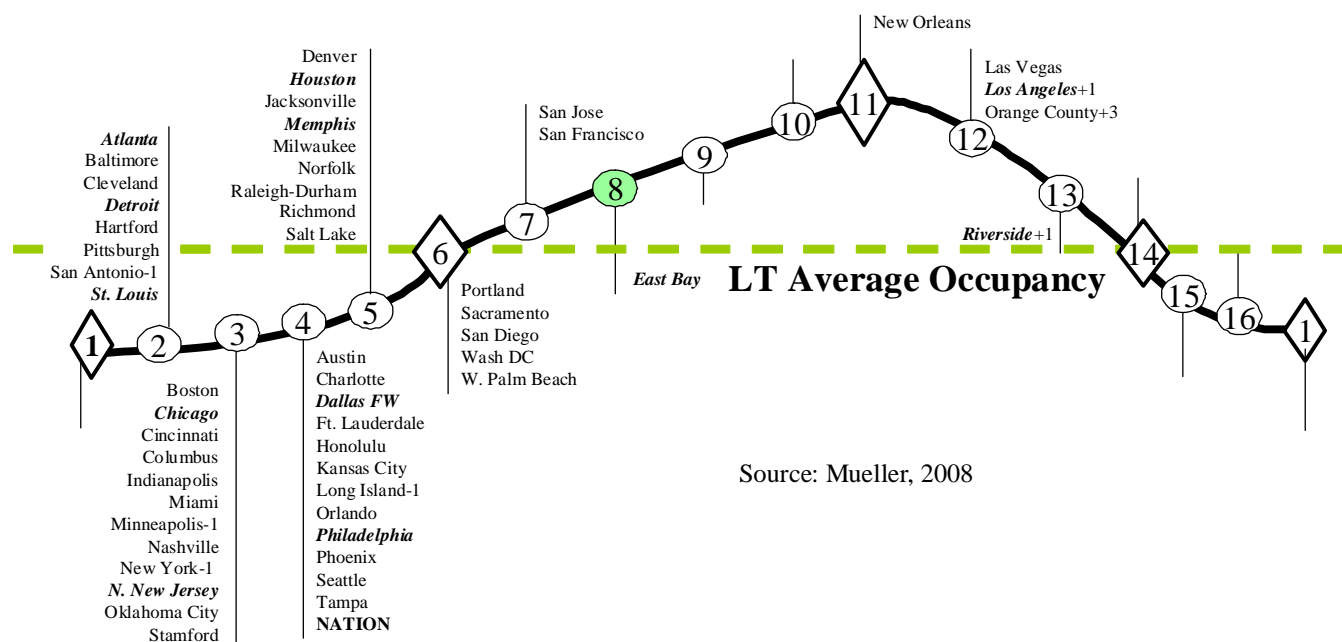
Markets that have moved since the previous quarter are shown with a + or - symbol next to the market name and the number of positions the market has moved is also shown, e.g., +1, +2 or -1, -2. Markets do not always go through smooth forward-cycle movements and can regress, or move backward in their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

The recession has started and should hit industrial space with a forecast 0.2% decline in occupancies in 3Q09. We expect the year-over-year decline to be a moderate 1.6%, which produces an 88.5% occupancy level. The strengthening dollar and slowing international economy should slow exports over the next year and dampen demand for industrial space. We still believe this will be a shallow down cycle for industrial and expect improved space demand in 2010 when credit should be flowing again. We estimate rental growth to decline 0.2% in 3Q09 and forecast a moderate 1% - 2% rental decline in 2009.

### Industrial Market Cycle FORECAST

3rd Quarter, 2009 Estimates



Source: Mueller, 2008

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.

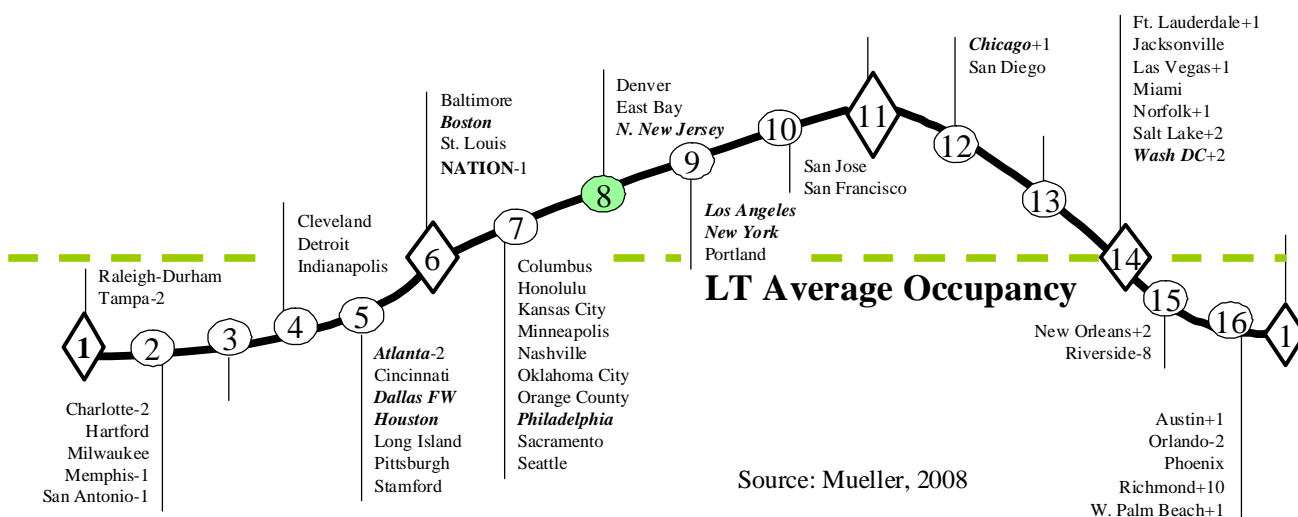
Markets that have moved since the previous quarter are shown with a + or - symbol next to the market name and the number of positions the market has moved is also shown, e.g., +1, +2 or -1, -2. Markets do not always go through smooth forward-cycle movements and can regress, or move backward in their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

The forecasted end of the recession in 2Q09 should produce a minor occupancy decline of 0.2% for 3Q09 and a year-over-year decline of 1.1%. We now see economists forecasting GDP growth for 3Q09, but it usually takes a quarter or two after GDP growth begins for employment to pick back up. Low employment should make home buying difficult so apartment demand should be relatively stable through 2009 and new supply should be rather moderate. The overbuilt housing markets in Florida, California and a few select other markets should continue to decline as unsold houses and condos are rented. New supply should be slow with the restricted lending environment of 2008 spilling over into 2009. We forecast national apartment rental growth to be negative 0.6% for 3Q09 and an annual 2009 rental growth decline of 1.5%.

### Apartment Market Cycle FORECAST

3rd Quarter, 2009 Estimates



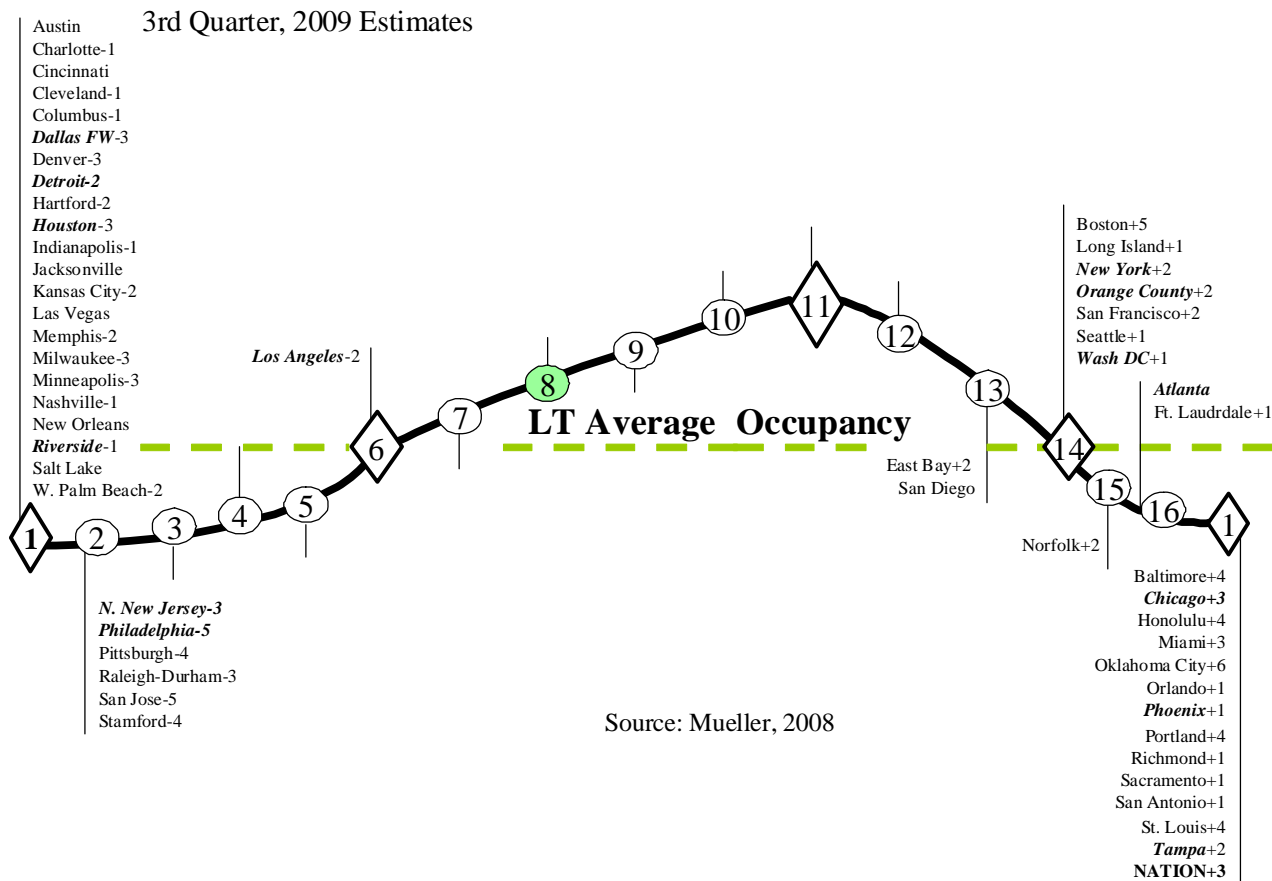
Note: The 10 largest apartment markets make up 50% of the total square footage of apartment space that we monitor. Thus, the 10 largest apartment markets are in **bold italics** to help distinguish how the weighted national average is affected.

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 FORECAST

Retail occupancy is forecast to decline 0.5% in 3Q09 and 4% year-over-year. With the recession forecast to end in the 2<sup>nd</sup> quarter of 2009 and job losses continuing through the end of the 2009 year, retail sales are forecast to have no support during the year. We now believe that retail occupancies should hit their bottom in 3Q09 due to continued store closings and very little new space demanded. Tenants are demanding lower rents to help make ends meet. We estimate 2009 occupancies to decline 5% for the full year. Assume landlords may lower rents by 1.5% in 3Q09 which will produce a 6.2% rent decline year-over-year.

### Retail Market Cycle FORECAST



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.

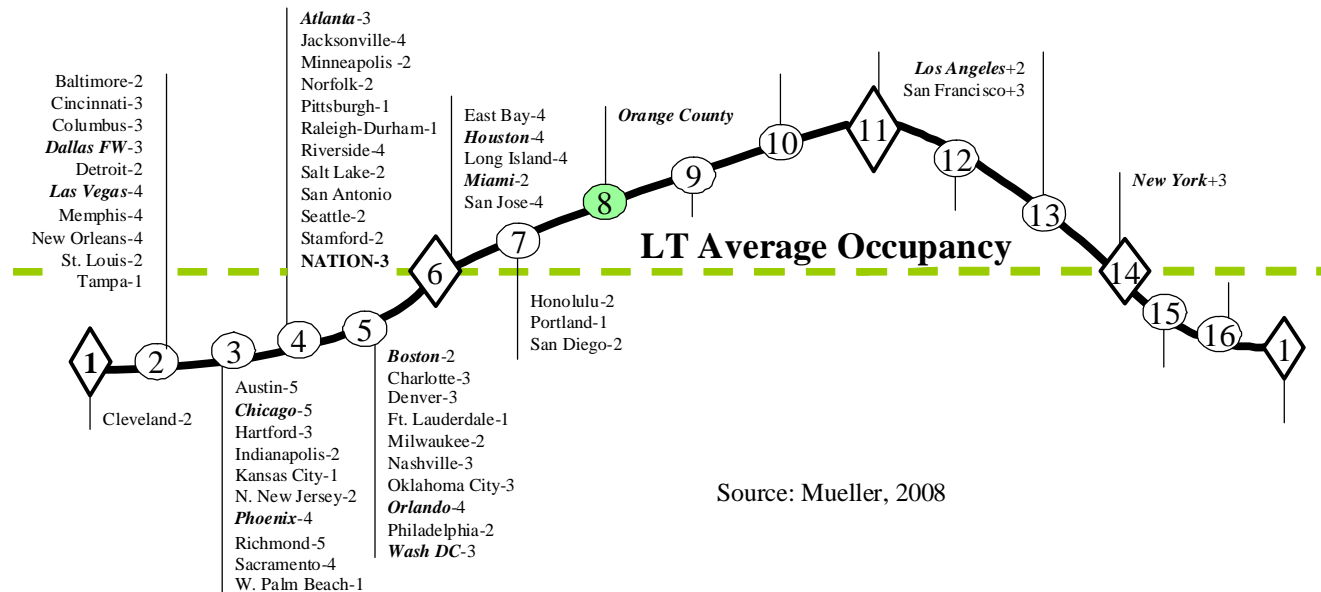
Markets that have moved since the previous quarter are shown with a + or - symbol next to the market name and the number of positions the market has moved is also shown, e.g., +1, +2 or -1, -2. Markets do not always go through smooth forward-cycle movements and can regress, or move backward in their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

## HOTEL FORECAST

Hotel occupancy is forecast to decline 1.3% in 3Q09 and 4.2% year-over-year as the economy hits bottom with four quarters of recession and 3Q09 being the potential fifth quarter of recession. Businesses are expected to continue reducing workers and leisure travelers are expected to conserve dollars in a bad economy. The good news is that hotel construction should be very moderate, keeping new supply in check. We forecast that the national average hotel occupancy rate will place hotels back in a recovery phase at point #4 on the cycle graph and the majority of markets in the same recovery phase of their occupancy cycle. We estimate RevPAR could decline 0.6% in 3Q09 as the recession bottoms and full-year 2009 RevPAR declining about 4.5%.

### Hotel Market Cycle FORECAST

3rd Quarter, 2009 Estimates



Source: Mueller, 2008

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.

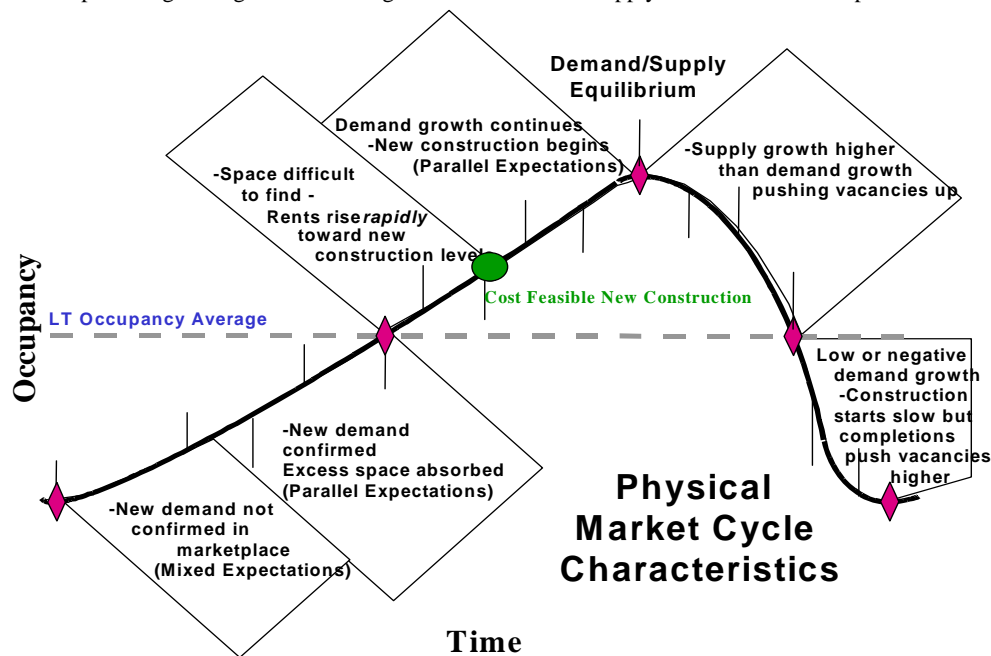
**MARKET CYCLE ANALYSIS — Explanation**

**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.



Source: Mueller, Real Estate Finance, 1995

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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