

Third Quarter 2013 Report

Robust Net Absorption of Industrial Space Expected to Continue into 2015

An analysis of second quarter 2013 data by Dr. Randy Anderson, University of Central Florida, and Dr. Hany Guirguis, Manhattan College, indicates that robust net absorption of industrial space is expected to continue into the first half of 2015.

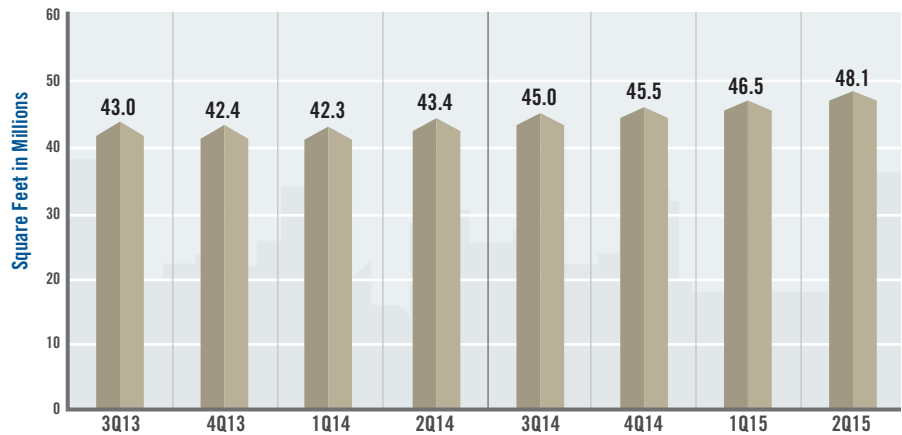
The market is well on track to reach 150 million square feet of net absorption in 2013. The expectation is that quarterly net absorption figures through 2014 and into the first half of 2015 will consistently range between 40 and 48 million square feet. With job growth occurring in non-office using sectors such as manufacturing, retail, healthcare and construction, industrial buildings are in high demand.

“Demand relating to e-commerce is expected to play an important role in shaping the short- and long-term forecasts of net absorption and could explain the strong demand in the last quarter of 2012 and the first quarters of 2013,” said Guirguis.

TABLE 1
The NAIOP Industrial Space Demand Forecast
U.S. Markets, Quarterly Net Absorption

Forecast Square Feet

Third Quarter 2013



Key Inputs and Disclaimers

The predictive model is funded by the NAIOP Research Foundation and was developed by Anderson and Guirguis. The model, which forecasts demand for industrial space at the national level, utilizes variables that comprise the entire supply chain and lead the demand for space, resulting in a model that is able to capture the majority of changes in demand.

While leading economic indicators have been able to forecast recessions and expansions, the indices used in this study are constructed to forecast industrial real estate demand expansions, peaks, declines and troughs. The Industrial Space Demand model was developed using the Kalman filter approach, where the regression parameters are allowed to vary with time and thus are more appropriate for an unstable industrial real estate market.

The forecast is based on a process that involves testing more than 40 economic and real estate variables that theoretically relate to demand for industrial space, including varying measures of employment, GDP, exports and imports, and air, rail and shipping data.

Leading indicators that factor heavily into the model include the Federal Reserve Board's Index of Manufacturing Output (IMO), the Purchasing Managers Index (PMI) from the Institute of Supply Management (ISM) and net absorption data from CBRE Econometric Advisors.

ISM, the Federal Reserve and CBRE Econometric Advisors assume no responsibility for the Forecast. The absorption forecast tracks with CBRE data and may vary when compared with other data sets. Data includes warehouse, distribution, manufacturing, R&D and special purpose facilities with rentable building areas of 10,000 square feet or more.

Actual versus Forecast

The Annual Data Table actual versus forecast net absorption. The model successfully projected a drop and rebound in net absorption in 2009 and 2010, as inventory supplies dwindled.

Initial and Ongoing Research

In 2009, the NAIOP Research Foundation awarded a research grant to Anderson and Guirguis to develop a model for forecasting net absorption of industrial space in the United States. That model led to successful forecasting two quarters out. **A white paper describing the research and testing behind the model for NAIOP's Industrial Space Demand Forecast is available on the NAIOP Research Foundation website.**

The model was revised in 2012 to forecast eight quarters out. For this longer term forecast, Anderson and Guirguis utilize the average central tendency forecast of the unemployment rate and growth rate of real GDP, provided by the seven members of the Board of Governors and the 12 presidents of the Federal Reserve Banks during the most recent Federal Open Market Committee meeting. Their forecasts are the independent variables in the equations. The forecasts usually vary from one year to another, so different techniques are applied to convert the yearly forecast to a quarterly one, in order to create the quarterly forecasts for net absorption. The estimated coefficients on the independent variables are estimated with the time-varying Kalman filter.

For more information about the work of the Research Foundation, contact **Bennett Gray** at 703-674-1436 or gray@naiop.org.

TABLE 2
The NAIOP Industrial Space Demand Forecast
U.S. Markets, Annual Net Absorption

