

## AMB Industrial Business Indicator (IBI)

### Overview

AMB's Industrial Business Indicator (IBI) is a monthly diffusion index that integrates customer-supplied insights with macroeconomic data to provide leading indications of the:

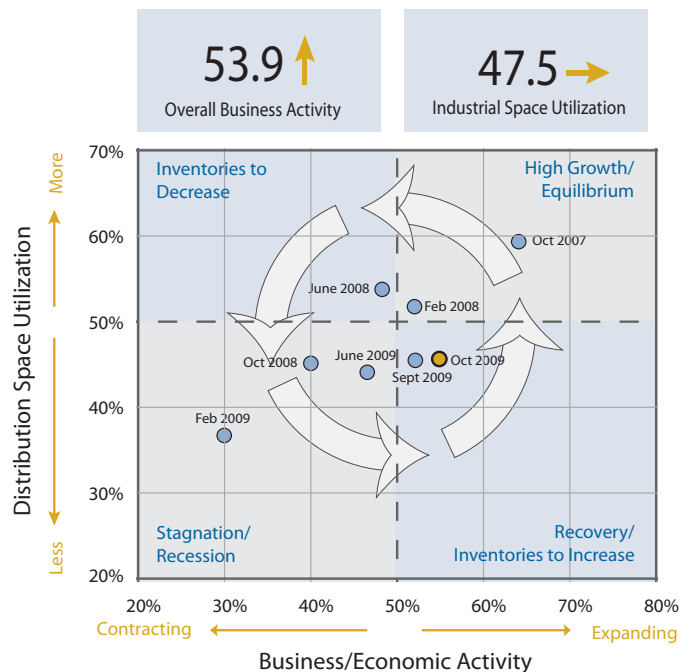
- strength and direction of our customers' businesses;
- directional trend of the overall U.S. economy; and
- demand for distribution and industrial space.

The IBI collects primary data from geographically diverse industrial facility customers representing a variety of "on the ground" business sectors—moving inventory through the global supply chain. The IBI consists of two indices: an overall **business activity index** and a **distribution space utilization index**. Index values above 50 represent expansion and values below 50 represent contraction. Both indices are individually tabulated for AMB's markets and industry groups within our customer base. The responses include the collective insights from corporate contacts as well as from on-site industrial users; the indices have averaged more than 350 participants per month.

Monthly changes in the trend line of the IBI are useful for identifying turning points in business activity and space utilization as well as relative changes between markets and industry groups. Within the two years of data collected, the IBI started to soften at the same time as the national economy. There is compelling statistical evidence that the IBI is a leading indicator of local and national economic and market conditions including port traffic, trade and net absorption.

### Findings & Links to Industrial Space Demand

Our findings indicate that the IBI is highly correlated with, and a leading indicator of, key macroeconomic variables. Of greatest significance, the IBI leads net industrial space absorption by a quarter with a correlation of 97% and an



$R^2$  of .93 and seaborne container volume by one month with a correlation of 85% and an  $R^2$  of .73.

- **The October IBI measures 53.9 for overall business activity, up from 51.3 in September; this implies that our customers' businesses have been collectively expanding for the past two months. Furthermore, the IBI indicates that the recovery began in February.**
- The index also implies that container volume will continue improving and net industrial space absorption will be far less negative in the fourth quarter than earlier in the year.
- The trend indicates positive net absorption in 2010, consistent with the lag between the change in business activity and the execution of actual space changes.

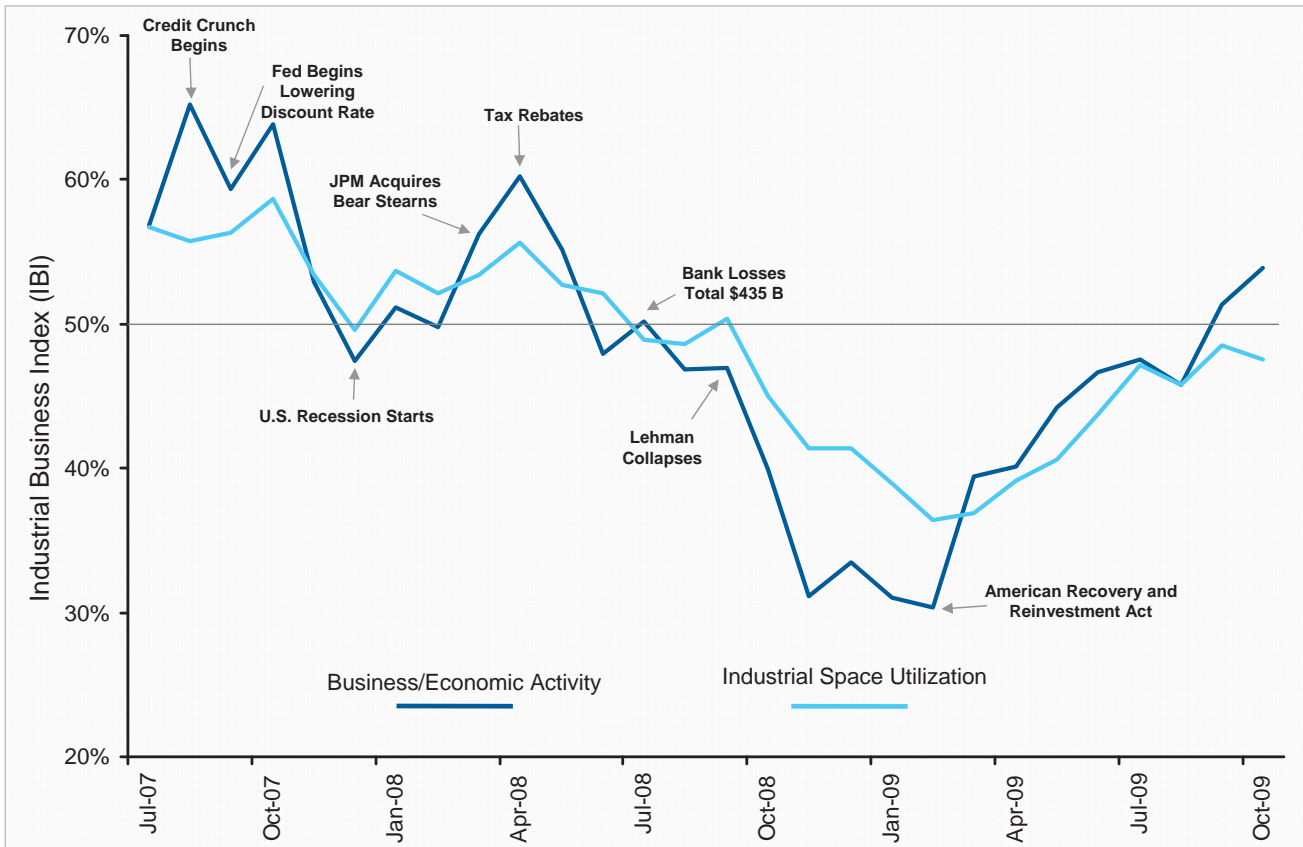
**Performance of the IBI**

The inception in July 2007 of the IBI index was timely, as it coincided with a seismic shift in economic and business conditions. The survey commenced with an indication of strong business sentiment from our customers as indicated in Exhibit 1. The business portion of the survey averaged 60.1 from July through September 2007, which

2008 that the National Bureau of Economic Research pronounced December 2007 as the official beginning of the recession.

The slowdown in the economy continued through the winter with a brief pickup in spring of 2008, due likely to

Exhibit 1:  
**The IBI Since Inception**



indicated strong expansion in business activity. The space survey averaged 56.3 over that same period, coinciding with observed levels of healthy industrial space absorption. Both indices dipped significantly starting in November — just before the national economy started to contract. We believe that the IBI signaled the start of the recession when it fell below 50 in December 2007. It wasn't until December

an early Easter, strong exports and an increase in retail sales, fueled by the government's rebate checks. The index stood at an all-time low in February of 2009, with business activity and space utilization measuring record lows of 31.1 and 36.4, respectively. Since February, the index has exhibited an upward trend in conjunction with an improving economy.

### An Example in Accuracy

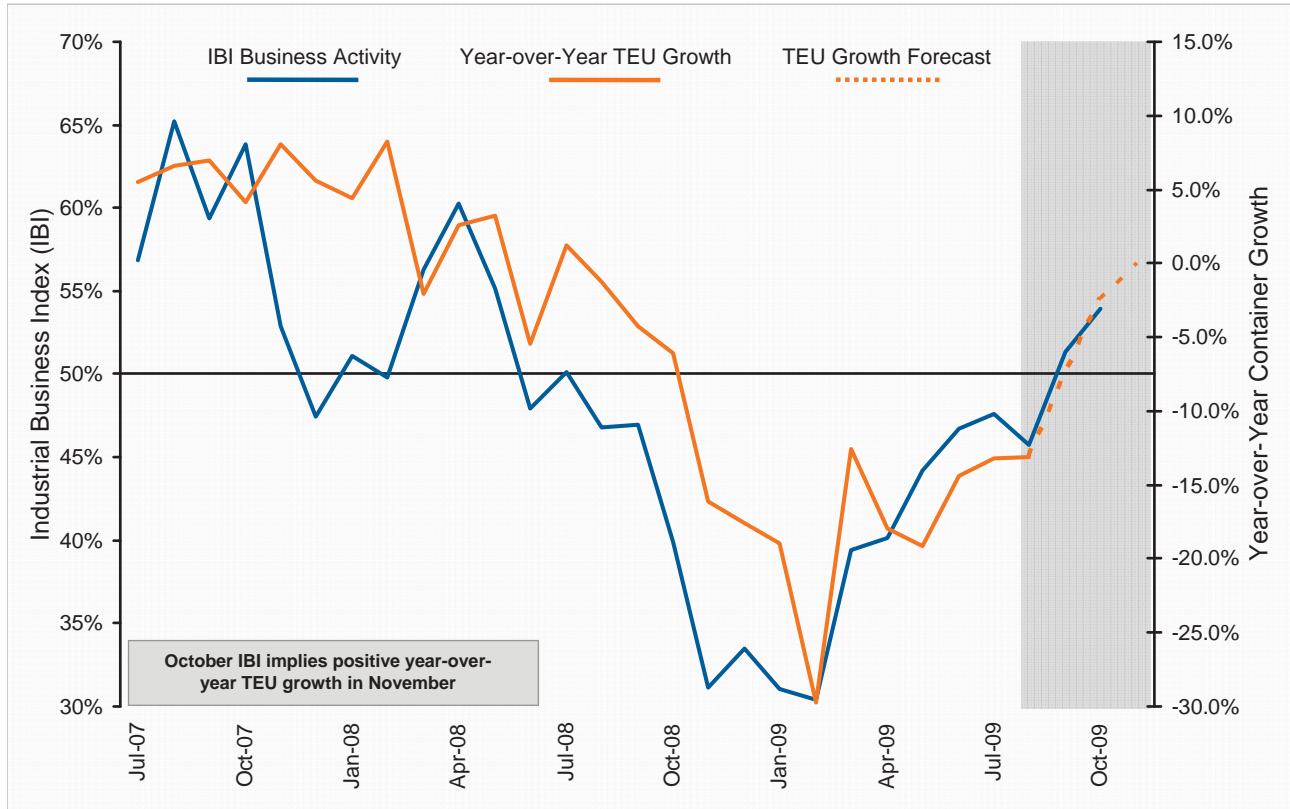
The IBI is highly correlated, and exhibits causal qualities, with many economic variables at the national, metro and industry segment levels. Key to our business is container volume. When we tested the IBI for correlation with this variable, it indicated significant correlation of 85% and R<sup>2</sup> of .73, and forecasts container volume for leading ports by one month. Exhibit 2 shows the IBI business activity index plotted against year-over-year U.S. container volumes, represented in twenty-foot equivalent units (TEUs). If this relationship continues to hold the year-over-year growth in TEU traffic will continue to improve, with declines dipping to single digits in September and October. **In fact, November year-over-year port traffic is expected to turn positive. This would be the first positive year-over-year month since July 2008.**

### Conclusion

Our customers' collective businesses have now been expanding for two consecutive months (including adjustments for seasonality). The October 2009 business activity index at 53.9 is up sharply from 39.9 of October 2008. **This is the highest reading in the business activity index since May 2008, and marks the second consecutive year-over-year increase and a first for the data series.**

While the national space utilization index has yet to cross the expansion threshold of 50; it has been trending upward since March. Retailers are likely building inventories as retail space utilization continues to expand. Imports should continue growing, as indicated by recent monthly gains in business activity. With coastal hub markets leading the way, we expect net absorption will continue to improve in the coming quarters.

Exhibit 2:  
IBI Highly Correlated with Container Volumes



### About the Author

David C. Twist is vice president, Research for AMB Property Corporation, responsible for the company's global research initiatives. Twist has been in real estate related research since 1990. He is a member of the National Association of Industrial & Office Properties (NAIOP) and the CFA Institute. Twist received a Bachelor's degree in Quantitative Economics from the University of California, San Diego.

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### AMB Property Corporation®

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