Yardi Matrix

National Industrial Report

December 2022

E-Commerce Continues to Propel Industrial

- The e-commerce boom that occurred in 2020 transformed the industrial market. Its impact is still being felt, as firms have spent the last two years trying to adjust to increased online sales. According to the U.S. Census Bureau, e-commerce sales volume in the third quarter of this year was 66.4% higher than it was in the first quarter of 2020, but nearly half of that growth occurred in the early months of the pandemic.

- Even as e-commerce sales growth has returned to normal in recent quarters, supply chains have still not fully adapted to the shock that the pandemic created. Backlogs and bottlenecks along the supply chain were one of the major drivers of inflation, and while the pressures have cooled, industrial space is still hard to come by in some key places. In port and logistics markets, vacancy rates are still minuscule and competition for space among tenants is fierce. Retailers began bulking up inventories in 2021 in response to delayed receipt of goods, and now many are using discounts to try to draw inventories down, with varying degrees of success.

- Amazon expanded rapidly in 2021 but pulled back this year, admitting it was too aggressive. The e-commerce giant has spent the second half of 2022 pausing projects, slowing hiring and subleasing space. Amazon also has big-box retailers like Target and Walmart to contend with now. These companies were forced to play catch-up to Amazon when the pandemic hit, and have since been attempting to leverage their physical footprints. Both retailers have expanded delivery and in-person pick-up options and have begun using their stores as last-mile delivery centers.

- Data around holiday shopping season has been mixed: Adobe Analytics reported record levels of online sales for Black Friday and Cyber Monday, but retail sales were down 0.6% in the month of November, according to the U.S. Census Bureau. Inflation has been putting a dent in consumers' pockets, and reporting suggests that consumers are dipping into savings and credit to pay for holiday purchases. With the first normal holiday travel season in three years, it is likely that spending on airfare and hotels will also eat into retail sales for the holiday season.

- We expect that e-commerce growth will continue to drive high levels of demand in the industrial sector for the foreseeable future, though it will not reach 2020 levels again. New supply has yet to match demand, and even a potential recession is unlikely to cause e-commerce sales volume to fall.

Rents and Occupancy:
Record New Supply Can't Keep Vacancy Rates From Falling

- National in-place rents for industrial space averaged $7 per square foot in November, growing 6.5% year-over-year and five cents over the previous month, according to Yardi Matrix.

- In-place rents have grown the most in the Inland Empire (13.1%), Los Angeles (10.7%) and New Jersey (8.9%). The lowest rates of rent growth were found in Tampa (2.5%), St. Louis (2.6%), Memphis and Houston (both 2.8%).

- The national vacancy rate measured 3.8% in November, falling 20 basis points from October. Despite record levels of new supply delivering in 2022, the vacancy rate fell throughout the year. The year started with supply-chain backlogs and bottlenecks, and while many of the issues eased in the second half of the year, finding suitable industrial space in port markets remains one of the biggest challenges for the supply chain. The Inland Empire's vacancy rate was 1.3%, Los Angeles' was 2.2% and in New Jersey it was 2.0%.

- In-demand markets in the inner portion of the country also have low vacancy rates, including Nashville (1.2%), Columbus (1.7%), Indianapolis (2.5%), Kansas City (2.5%) and Phoenix (2.9%). The abundance of space available on the outskirts of these markets for new development keeps rent growth lower than what is being seen in most port markets.

- Rent growth has accelerated this year, and tenants signing new leases are paying more than ever for space. The average rate of a lease signed in the last 12 months was $9.07 per square foot, $2.07 more than the average for all in-place leases.

- The markets with the highest premiums for new leases were Los Angeles ($7.47 more per square foot), the Inland Empire ($5.95), Nashville ($5.77) and Orange County ($5.27).

Average Rent by Metro

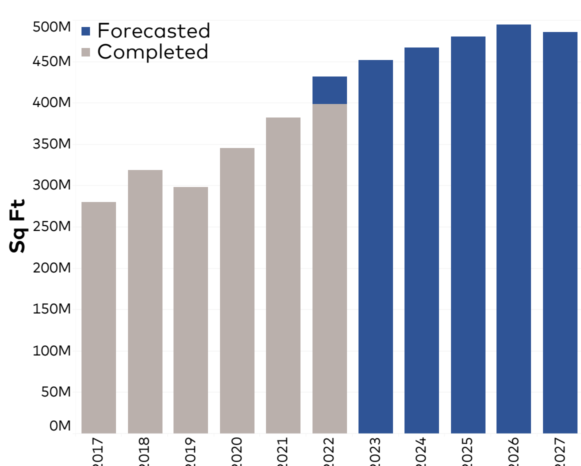
Market	Nov-22 Average Rent	12-Month Change	Avg Rate Signed in Last 12 Months	Vacancy Rate
National	$7.00	6.5%	$9.07	3.8%
Inland Empire	$7.85	13.1%	$13.80	1.3%
Los Angeles	$11.85	10.7%	$19.32	2.2%
New Jersey	$9.22	8.9%	$13.36	2.0%
Boston	$8.87	7.4%	$13.13	8.6%
Phoenix	$7.81	7.3%	$8.77	2.9%
Orange County	$12.79	7.2%	$18.06	3.0%
Philadelphia	$6.79	7.1%	$7.76	3.8%
Atlanta	$5.03	6.6%	$5.74	2.6%
Portland	$8.64	6.4%	$10.18	4.8%
Nashville	$5.52	6.4%	$11.29	1.2%
Miami	$9.72	6.3%	$11.60	3.0%
Bay Area	$11.91	6.3%	$14.50	3.8%
Detroit	$6.13	6.2%	$6.62	4.9%
Seattle	$9.57	6.2%	$10.30	6.0%
Cincinnati	$4.49	5.9%	$5.07	6.5%
Dallas–Ft Worth	$5.24	5.9%	$6.16	4.0%
Baltimore	$7.16	5.8%	$8.93	3.5%
Central Valley	$5.58	5.1%	$7.22	2.6%
Denver	$8.30	4.1%	$8.18	4.9%
Twin Cities	$6.25	3.8%	$6.30	6.9%
Columbus	$4.19	3.2%	$5.13	1.7%
Indianapolis	$4.21	3.2%	$5.07	2.5%
Kansas City	$4.21	3.2%	$5.07	2.5%
Charlotte	$6.26	3.0%	$6.17	3.1%
Chicago	$5.59	2.9%	$7.41	4.1%
Houston	$6.15	2.8%	$6.17	7.2%
Memphis	$3.66	2.8%	$4.01	5.6%
St. Louis	$4.27	2.6%	$4.42	3.2%
Tampa	$6.66	2.5%	$7.35	5.6%

Source: Yardi Matrix. Data as of November 2022. Rent data provided by Yardi Market Insight. National rent and occupancy data is a weighted average of the top 30 markets.

Supply:
Top Markets Dominate New Supply Pipeline

- A total of 742.3 million square feet of industrial space are currently under construction, representing 4.2% of national stock, according to CommercialEdge. An additional 684.5 million square feet are in the planning stage.
- With the national vacancy rate for the top 30 markets at just 3.8%, there is still plenty of demand from occupiers for new space. In the hottest markets, space is already pre-leased before it is delivered, or in some cases before construction even begins. While demand for new space remains elevated in spite of economic uncertainty, there are concerns that rising interest rates increasing the cost of capital could dampen new development. Pre-leased properties with strong tenants will continue to be built, but developers may wait and see when it comes to speculative construction.
- Many markets are experiencing an industrial construction boom, but much of the new supply is concentrated in a handful of markets. The top five, Dallas-Fort Worth (62.6 million square feet), Phoenix (52.5 million), the Inland Empire (30.7 million), Chicago (26.2 million) and Houston (26.0 million) account for more than a quarter of all under-construction space. Half of all new supply is in just 18 markets.

National New Supply Forecast



Source: Yardi Matrix. Data as of November 2022

Supply Pipeline (by metro)

Market	Under Construction	Under Construction % Stock	UC Plus Planned % Stock
National	742,260,404	4.2%	8.0%
Phoenix	52,543,804	17.5%	36.3%
Kansas City	11,037,770	4.2%	17.2%
Philadelphia	21,484,244	5.3%	13.3%
Charlotte	14,122,090	4.8%	12.9%
Dallas–Ft Worth	62,572,289	7.3%	12.8%
Indianapolis	22,786,880	6.8%	12.6%
Inland Empire	30,729,759	5.0%	9.9%
Columbus	15,882,734	5.6%	8.9%
Denver	13,008,061	5.2%	7.9%
Houston	26,049,843	4.7%	7.6%
Tampa	5,240,763	2.4%	6.4%
Chicago	26,244,009	2.6%	6.3%
Seattle	10,097,851	3.6%	6.3%
Memphis	9,186,500	3.3%	5.9%
Cincinnati	9,524,433	3.5%	4.8%
New Jersey	13,203,810	2.4%	4.7%
Bay Area	6,863,307	2.4%	4.5%
Central Valley	10,726,160	3.2%	4.4%
Atlanta	12,420,013	2.3%	4.2%
Nashville	6,412,810	3.2%	4.1%
Twin cities	6,011,250	1.9%	4.0%
Baltimore	4,751,971	2.3%	3.6%
Boston	6,516,919	2.8%	3.5%
Portland	2,186,284	1.2%	3.1%
Detroit	9,340,205	1.7%	2.6%
Bridgeport	2,413,668	1.2%	2.6%
Los Angeles	5,067,014	0.7%	2.5%
Cleveland	3,967,036	1.0%	2.5%
Orange County	2,349,088	1.3%	1.6%

Source: Yardi Matrix. Data as of November 2022

Economic Indicators:
E-commerce Share of Retail Sales on the Rise Again

- E-commerce sales continued to expand in the third quarter, according to the U.S. Census Bureau. There were $265.9 billion in e-commerce sales, growing 3.0% quarter-over-quarter and 10.8% year-over-year. Over the last four quarters, there have been more than $1 trillion in e-commerce sales.

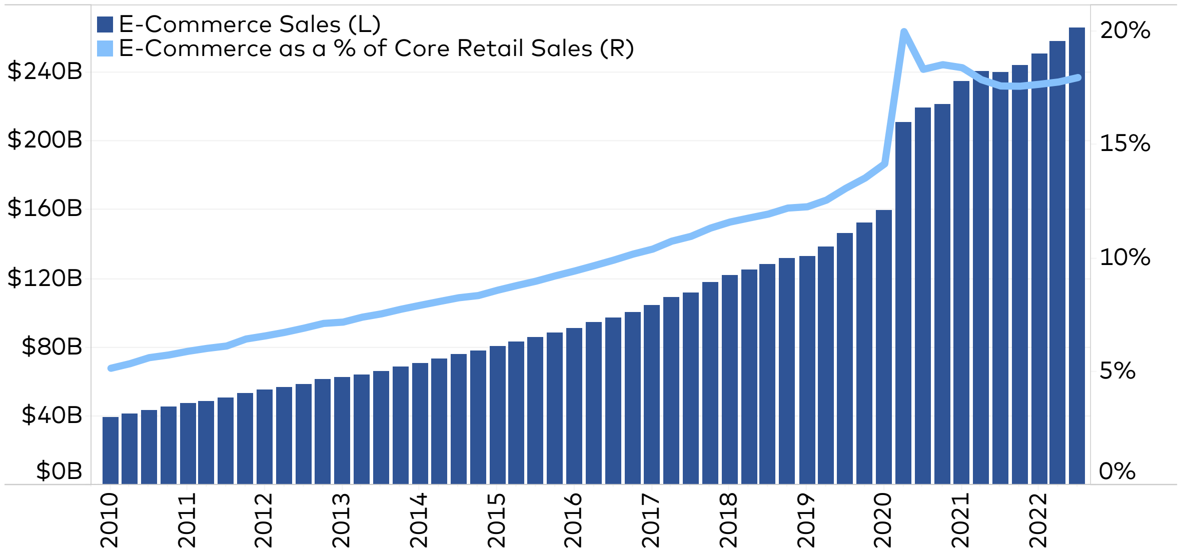
- In the third quarter of 2022, e-commerce accounted for 18% of core retail sales (which excludes motor vehicles, their parts and gasoline), a number that is roughly on par with the pre-COVID-19 trendline. In 2020, many believed that the pandemic had permanently shifted e-commerce's share of retail sales ahead by two to three years, but that share fell as vaccines became available and businesses began to open back up. After peaking at 20.0% in the second quarter of 2020, e-commerce's share of retail sales fell in five of six ensuing quarters, bottoming out at 17.6% in the fourth quarter of last year. Since then, e-commerce's portion of core retail sales has slowly been on the rise again.

Economic Indicators

National Employment (November)	ISM Purchasing Manager's Index (November)
153.5M	49.0
0.2% MoM ▲	-1.2 MoM ▼
3.3% YoY ▲	-11.6 YoY ▼
Inventories (September)	**Imports** (October)
$2,464.4B	$275.6B
0.4% MoM ▲	0.9% MoM ▲
17.8% YoY ▲	13.0% YoY ▲
Core Retail Sales (October)	**Exports** (October)
$501.0B	$176.0B
0.9% MoM ▲	-2.1% MoM ▼
8.0% YoY ▲	11.7% YoY ▲

Sources: Bureau of Labor Statistics; Institute for Supply Management, U.S. Census Bureau; Bureau of Economic Analysis; Moody's Analytics

Quarterly E-Commerce Sales



Sources: U.S. Census Bureau (BOC), Yardi Matrix

Transactions:
Smaller Sales Drive New Jersey Volume

- Year-to-date, $78.8 billion of transactions have occurred, according to Yardi Matrix. Increasing interest rates have led to a tightening investment market in the second half of the year. After increasing 34.9% year-over-year in the first quarter and 8.6% in the second, industrial sales volume was down 37.5% year-over-year in the third quarter.

- Rising interest rates are leading to declining prices, as well. The average sale price of an industrial property fell for the first time in two years during the third quarter, and so far has decreased in the fourth quarter, as well. After peaking at $134 per square foot in the second quarter, the average sale price dropped to $127 per foot in the third quarter (-5.4%) and sits at $116 through two months of the fourth quarter. Despite the recent decline, average sale prices remain well above where they were last year, with the average sale price 17.8% higher than it was in 2021.

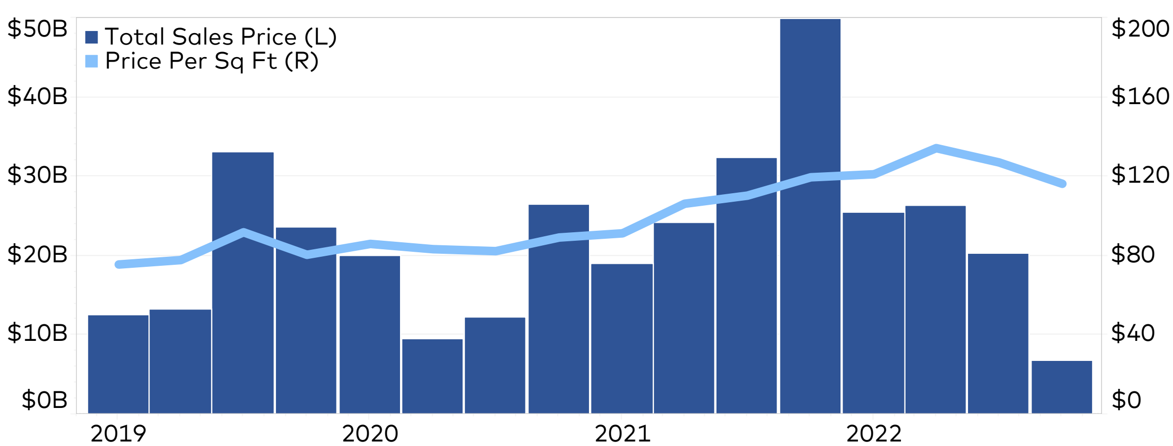
- On an annual basis, the markets where average sale prices have increased the most in 2022 are the Inland Empire (49.6%), Indianapolis (43.2%), Nashville (31.0%) and Philadelphia (29.3%).

Sales Activity

Market	YTD Sales Price PSF	YTD Sales (Mil, as of 11/30)
National	$126	$78,782
Dallas	$106	$4,711
Los Angeles	$300	$4,545
Inland Empire	$295	$4,425
Houston	$133	$3,849
Chicago	$87	$3,784
Phoenix	$198	$3,071
New Jersey	$175	$2,953
Philadelphia	$122	$2,597
Atlanta	$108	$2,408
Bay Area	$235	$1,909
Boston	$179	$1,737
Denver	$164	$1,725
Seattle	$233	$1,309
Tampa	$125	$1,225
Indianapolis	$86	$1,192
Orange County	$369	$1,145
Baltimore	$109	$1,070
Twin Cities	$104	$1,033
Columbus	$80	$1,031
Nashville	$145	$1,027
Charlotte	$101	$979
Detroit	$67	$930
Memphis	$60	$778
Portland	$155	$588
Central Valley	$105	$574

Source: Yardi Matrix. Data as of November 2022

Quarterly Transactions



Source: Yardi Matrix. Data as of November 2022

Definitions

Yardi Matrix collects listing rate and occupancy data using proprietary methods.

- Average Rents—Provided by Yardi Matrix Expert, a cutting-edge service that uses anonymized and aggregated data from other Yardi platforms to provide the most accurate rental and expense information available.
- Vacancy—The total square feet vacant in a market, including subleases, divided by the total square feet of office space in that market. Owner-occupied buildings are not included in vacancy calculations.

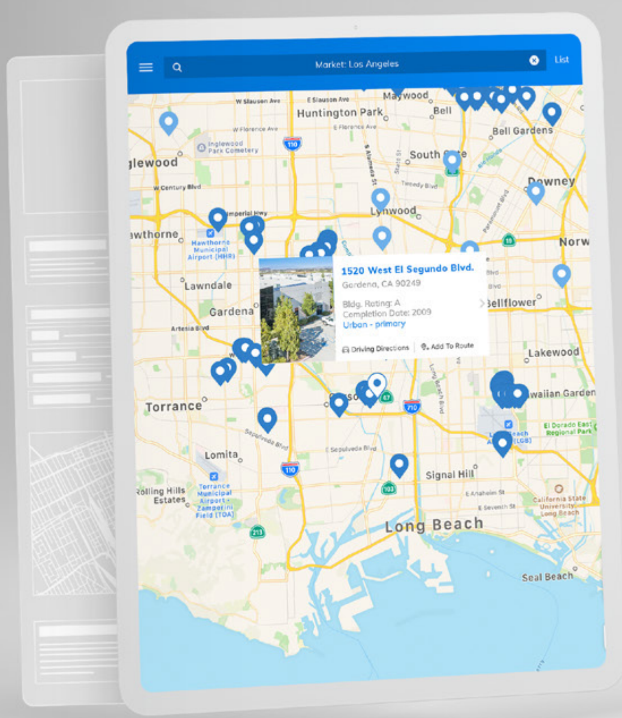
Stage of the supply pipeline:

- Planned—Buildings that are currently in the process of acquiring zoning approval and permits but have not yet begun construction.
- Under Construction—Buildings for which construction and excavation has begun.

Sales volume and price-per-square-foot calculations for portfolio transactions or those with unpublished dollar values are estimated using sales comps based on similar sales in the market and submarket, use type, location and asset ratings, sale date and property size.

Yardi Matrix

Power your business with the industry's leading source for originating, pre-underwriting and managing assets for profitable loans and investments.



Yardi Matrix Industrial delivers comprehensive property-level data, allowing you to make informed business decisions faster than ever.

Key features

- Active in 60+ major markets across the U.S., covering over 12 billion square feet
- Find acquisition prospects based on in-place loans, maturity dates, lenders and originators
- Pierce the LLC with true ownership and contact info
- Gain new supply pipeline information at the asset, competitive set and market level
- Benchmark performance to similar assets
- Access trend reports on sales, lease and listing comps as well as portfolios of owners, managers, buyers and sellers

See how we can help you achieve your investment goals.
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