Industrial Property Trends

A look at what’s happening in port real estate domestically and internationally

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Norfolk, VA
AGENDA

• SUPPLY CHAIN DYNAMICS

• ECONOMIC CYCLE & U.S. LOGISTICS MARKET

• INDUSTRIAL REAL ESTATE INVESTOR TRENDS

• DEMAND DRIVERS

• PORT MARKET RANKINGS
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- ECONOMIC CYCLE & U.S. LOGISTICS MARKET
- INDUSTRIAL REAL ESTATE INVESTOR TRENDS
- DEMAND DRIVERS
- PORT MARKET RANKINGS
SUPPLY CHAIN DYNAMICS

POPULATION, CONSUMPTION, & ECONOMY

World Cities – Population 1M+

SUPPLY CHAIN
Shippers decide on how to import product largely based on four criteria:

SPEED
COST
RELIABILITY
COMPLEXITY
SUPPLY CHAIN ANALYSIS
MOVEMENT CHARACTERISTICS BY MODE

- Faster
- More expensive
- More reliable
KEY SHIPPER QUESTION
Where shall I locate my facility to reach the most consumers with the lowest transportation costs?
SUPPLY CHAIN ANALYSIS
LOGISTICS COST AS % OF SALE

From year to year, logistics costs as a percentage of sales vary and are mostly derived from distribution fixed / handling along with inbound and outbound transportation cost.

*Other includes reverse logistics, customer services, planning and administrative functions.

Source: CBRE analysis of *2017 CSCMP State of Logistics Report*
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GROWTH BETTER IN 2018

**FIGURE 1: GROWTH BETTER IN 2018**

Year-over-year GDP growth comparison, measured from year-end.
DOES U.S. ECONOMIC CYCLE EQUAL U.S. INDUSTRIAL CYCLE
NONFARM EMPLOYMENT GROWTH (Y-o-Y, %)
US INDUSTRIAL MARKET YTD 2018

<table>
<thead>
<tr>
<th>Metric</th>
<th>Q1 2018</th>
<th>Last 12 Months</th>
</tr>
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<tbody>
<tr>
<td>Vacancy</td>
<td>4.5%</td>
<td>Flat</td>
</tr>
<tr>
<td>Net Ask Rent</td>
<td>$7.01</td>
<td>5.9%</td>
</tr>
<tr>
<td>Completions</td>
<td>35 msf</td>
<td>203 msf</td>
</tr>
<tr>
<td>Net Absorption</td>
<td>41 msf</td>
<td>223 msf</td>
</tr>
</tbody>
</table>

Source: CBRE Research, Q1 2018
## THE U.S. LOGISTICS MARKET
Where are we compared to the previous peak?

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Total Deliveries</td>
<td>566 MSF</td>
<td>680 MSF</td>
</tr>
<tr>
<td>Total Absorption</td>
<td>715 MSF</td>
<td>1,023 MSF</td>
</tr>
<tr>
<td>Average YOY Rent Growth</td>
<td>5.3%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Availability Rate</td>
<td>7.2 - 7.6%</td>
<td>6.7 - 4.5%</td>
</tr>
</tbody>
</table>
POSITIVE NET ABSORPTION STREAK EXTENDS RECORD LONGEST STREAK IN MORE THAN 20 YEARS
RENT GROWTH IN
U.S. INDUSTRIAL REAL ESTATE

6 YEARS
...AND COUNTING
WHAT IF THE CYCLE HAS THREE MORE YEARS?
Based on the average “last three years” of every cycle since 1980...

- UP TO 750 MILLION SQUARE FEET OF NET ABSORPTION
- 10-12% GROWTH IN NET ASKING RENTS

Source: CBRE Econometric Advisors, Q1, 2018; NAIOP
US HISTORICAL & FORECASTED SUPPLY
Deliveries as Percent of Stock

Source: CBRE Econometric Advisors, Q1 2018
US HISTORICAL BTS VS SPEC CONSTRUCTION
Speculative Construction unusually Constrained

Approx. 30% pre-committed
TOP LOGISTICS MARKETS

RANKED BY UNDER CONSTRUCTION (MSF)
WHERE IS THE CONSTRUCTION?
44% OF PIPELINE IN JUST EIGHT MARKETS

Measured Million Sq. Ft.
Source: CBRE Research, Q4
Locations in Virginia, Pennsylvania & Maryland can provide two-day ground service with UPS to all Atlantic Coast states and most/all areas east of the Mississippi River.
Pennsylvania & Norfolk Logistics Reach
# Industrial Market, Buildings Over 100,000 Square Feet

<table>
<thead>
<tr>
<th></th>
<th>PENNSYLVANIA I-78/I-81</th>
<th>NORFOLK</th>
<th>VIRGINIA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MARKET SIZE</strong></td>
<td>296,419,007</td>
<td>50,098,304</td>
<td>212,584,649</td>
</tr>
<tr>
<td>(SQ. FOOTAGE)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2017 NET</strong></td>
<td>11,599,557</td>
<td>1,855,699</td>
<td>4,716,149</td>
</tr>
<tr>
<td><strong>ABSORPTION</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2017 NEW</strong></td>
<td>11,899,200</td>
<td>1,173,290</td>
<td>5,695,439</td>
</tr>
<tr>
<td><strong>CONSTRUCTION</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2018 UNDER</strong></td>
<td>14,248,182</td>
<td>675,000</td>
<td>1,899,299</td>
</tr>
<tr>
<td><strong>CONSTRUCTION</strong></td>
<td></td>
<td></td>
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</tr>
</tbody>
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Source: CBRE Research
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INVESTOR TRENDS

- Bigger is better, portfolios are generating pricing premiums
- Foreign Sovereign Wealth Funds prefer $1+ Billion deals
- Sweet spot for offerings is $50M - $100M

- Cap rates compressed in 2017 (2% - 5%)
- ROC spreads for spec development range from 75 – 125 bps

- New Construction is accelerating, but still lower than absorption
- Spec development is the best opportunity value add returns
- Smaller buildings (less than 250K SF) have the best risk / return profile

- Continued strong operating fundamentals
- Potential for rental rate / NOI appreciation
- Glut of global equity and debt capital
- Foreign capital is actively targeting U.S. logistics »»11 of the last 22 portfolio sales have been to foreign investors
THE U.S. LOGISTICS MARKET
TOTAL U.S. INDUSTRIAL ACQUISITIONS

Source: Real Capital Analytics

<table>
<thead>
<tr>
<th>Year</th>
<th>Excluding Entity Level Transactions</th>
<th>Including Entity Level Transactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007 (peak)</td>
<td>$57.2 B</td>
<td>$60.9 B</td>
</tr>
<tr>
<td>2015</td>
<td>$57.0 B</td>
<td>$77.7 B</td>
</tr>
<tr>
<td>2016</td>
<td>$57.2 B</td>
<td>$60.3 B</td>
</tr>
<tr>
<td>2017</td>
<td>$67.2 B</td>
<td>$72.2 B</td>
</tr>
<tr>
<td>Year-Over-Year % Change</td>
<td>16%</td>
<td>19%</td>
</tr>
</tbody>
</table>
THE U.S. LOGISTICS MARKET:
INVESTOR DEMAND & PRICING: CLASS A CAP RATES
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WHO IS DRIVING THE DEMAND IN US NATIONALLY?

- E-COMMERCE
- MEDICAL
- FOOD/BEVERAGE
- CONSUMER GOODS

50% OF LARGEST DEALS
THE U.S. LOGISTICS MARKETS

RETAIL E-COMMERCE SALES GROWTH

$1 Billion in e-commerce sales = 1.25 MSF distribution space → Annual requirements of 50-60 MSF of additional DC space

*Projected
Source: US Census Bureau
WHAT DOES THIS MEAN FOR INDUSTRIAL?

The **e-commerce** emergence into industrial is only in the beginning stages. Lots of growth moving forward!

- **For Owners** – Creating additional pressure on a very tight industrial market.
- **Result** – Lease rates will continue to **appreciate 6% - 8% annually** over the next 24 months.
- **Cap Rates** – Continued compression.
- **E-commerce** – Related demand from users will move more aggressively to the infill sites.
- **Light industrial** (20-150,000 sq. ft.) will see the greatest appreciation and rent growth
TRADITIONAL VS E-COMMERCE LOGISTICS SCHEMA

Traditional:
- Regional distribution platform
- Local warehouse
- Stores/mass distribution

E-commerce:
- Urban logistics space
  - Parcel hub
  - Consumers
  - E-fulfillment center
  - Parcel hub
  - Lockers/pick up points
  - Consumers
Online shopping is clearly important to millennials, and they like to take advantage of home delivery. There are regional differences, however. Almost half of millennials surveyed in India and China, for example, opt for office delivery.
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2017 TEU VOLUME & NEW INDUSTRIAL CONSTRUCTION

[Bar chart showing TEU volume and new construction completions for various cities in 2017.]
CBRE 2017 LOGISTICS REPORT
OVERALL RANKINGS

1. Los Angeles
2. Long Beach
3. New York/New Jersey
4. Seattle/Tacoma Alliance
5. Norfolk / Port of Virginia
6. Savannah
7. Houston
8. Vancouver, Canada
9. Oakland
10. Charleston

THE UNIFIED VOICE OF THE SEAPORT INDUSTRY

www.aapa-ports.org
CBRE 2017 LOGISTICS REPORT
Overall Ranking

<table>
<thead>
<tr>
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<th>2017 Overall Rank</th>
<th>2016 Overall Rank</th>
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<tbody>
<tr>
<td>Los Angeles</td>
<td>1</td>
<td>3</td>
<td>↑2</td>
</tr>
<tr>
<td>Long Beach</td>
<td>2</td>
<td>1</td>
<td>↑1</td>
</tr>
<tr>
<td>New York/New Jersey</td>
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</tr>
<tr>
<td>Seattle/Tacoma Alliance</td>
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<tr>
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<td>9</td>
<td>↑4</td>
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<tr>
<td>Savannah</td>
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<td>4</td>
<td>↑2</td>
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<tr>
<td>Houston</td>
<td>7</td>
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<td>↓2</td>
</tr>
<tr>
<td>Vancouver, Canada</td>
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CBRE Seaport & Logistics Index Ranking Methodology
The CBRE Seaports & Logistics Index blends two major criteria – port infrastructure capabilities and real estate fundamentals. Under each criteria, scores were weighted by importance and summed to provide a port’s score for that criterion. A market that ranked first in each criteria would receive a total score of 1.0.
## CBRE 2017 LOGISTICS REPORT PORT INFRASTRUCTURE RANKING

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### CBRE Port Infrastructure Index Ranking Methodology

Larger ports tend to rise to the top, but outsized growth—both short and long term—helped boost the Port of Virginia into the top five.

Infrastructure index criteria include:
- Cargo throughput (TEU)
- Long-term TEU growth
- Year-over-year TEU growth
- Local population density
- Projected population growth
- Class I rail lines
- Number of container terminals
- Mean-low water channel depth
- Total number of cranes
- Total number of neo-Panamax cranes
# CBRE 2017 Logistics Report Real Estate Ranking

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### CBRE Real Estate Index Ranking Methodology

In the overall index, real estate carries a lower weight than port infrastructure. The index views markets from the perspective of both owners and occupiers, with the goal of identifying markets that have healthy real estate fundamentals overall.

Markets that skewed too far toward owners (with rents beyond peak) or occupiers (with stagnant rent and relatively high ability) did not fare as well in the index.

Real estate index criteria include:
- Total size of market (sq. ft.)
- Availability of existing space
- Demand activity
- Historical and forecast construction rates
- Rental growth
- Position in economic cycle
Virginia’s Global Gateway
Thank you

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Q1 shows slowdown in U.S. net absorption, as compared to the previous quarter; demand remains stable

- After a stellar fourth quarter (81.7 million square feet of absorption), the U.S. industrial market’s total net absorption slowed down to 48.9 million square feet, but remains consistent with the absorption levels from a year ago.

Vacancy drops to 4.8%—U.S. industrial off to a good start

- Vacancy dropped by 20 basis points to an all-time-low rate of 4.8 percent.
- Strength in demand also served as indicator for coming current landlord-favorable market conditions, continuing with the trend seen in 2017.

Development pipeline is robust nearly 58.6 m.s.f of new product delivered

- Spurred by an increase in absorption of warehouse space, U.S. development pipeline remains healthy, delivering nearly 58.6 million square feet of new product. The overall under construction pipeline includes 230.6 million square feet with Dallas, Inland Empire, Eastern and Central Pennsylvania combined making up nearly 26.0 percent of the U.S. total.
Vacancy drops to 4.8%—U.S. industrial off to a good start

Source: JLL Research

**U.S. Leasing stats are based on Q1 2018 preliminary estimates**
In markets like New Jersey and Chicago, net absorption outpaces new development.

Source: JLL Research
Nearly 81% of the U.S. development pipeline is dominated by smaller to mid-sized industrial buildings ranging from 50,000-500,000 s.f. This is in response to an increased leasing demand of smaller to mid-sized spaces and the lack of available buildable land for mega-box warehouses (over 1 m.s.f.). Atlanta, followed by Eastern & Central PA, are the two leading markets with the most number of + 1 m.s.f buildings in the development pipeline.
Industrial rental rate Weather Map

Rental conditions:
- **Rents growing** (greater than 1.5% growth year-over-year)
- **Rents stagnant** (between -0.5% and 1.5% year-over-year)
- **Rents falling** (greater than 0.5% decline year-over-year)

Please note: weather imagery indicates only the direction of movement of rental prices in a particular market and is not designed to indicate favorable or non-favorable conditions for a specific leasing perspective.
Q1 2018 U.S. Industrial clock

Central New Jersey, Dallas / Fort Worth, Denver, Northern New Jersey, Seattle-Bellevue
Baltimore, Washington, DC
Inland Empire, San Diego, Richmond, Tampa Bay
Long Island, Portland
Eastern and Central Pennsylvania, Salt Lake City, **United States**
Atlanta, Central Valley, Chicago, Indianapolis, Los Angeles, Orange County, Sacramento, San Antonio
Charlotte, Cleveland, Houston, Las Vegas, Louisville, Miami-Dade, Nashville, Orlando, St. Louis
Columbus, Greensboro / Winston-Salem, Memphis, Phoenix
Broward County / Fort Lauderdale, Cincinnati, Hampton Roads, Kansas City, Minneapolis / St. Paul
Boston, Detroit, Milwaukee, North Bay, Pittsburgh
Reno
Palm Beach
Jacksonville

Source: JLL Research
Robust investment activity further advances volumes to start 2018

- YOY increase of 17.3 percent for first quarter, closing at just under $15.5 billion.
- Volumes in 2018 are expected to remain propelled, aided by continued surge in portfolio acquisitions.

Persistent cap rate compression throughout all markets as opportunities remain scarce

- Institutional grade industrial assets continued to attract investor interest throughout all market types as exposure to e-commerce and last mile assets pushes strategy.

Primary market spreads over risk-frees narrowing, however still remain healthy in historical perspective

- Available industrial opportunities remain very scarce, as product that becomes available becomes increasingly competitive in terms of underwriting with relatively healthy spreads helping to support record values.
Long lasting growth in Industrial investment volumes advanced further to begin 2018

Total investment volume up over 17.3 percent in first quarter, as volumes expected to remain propelled, aided by continued surge in portfolio acquisitions

Source: JLL Research, Real Capital Analytics (Transactions larger than $5.0m)
Major Real Estate Trends

1. West Coast’s sky-high rents correspond to high occupancy rates
   • West Coast ports rents and port-market occupancy are sky-high with the majority of their rents reaching close to double digits.
   • As rent and port-market occupancy both increase, occupancy conditions are shifting in favor to landlords.

2. Lack of land near the port decrease availability
   • Oakland is seeing a decrease in available properties since land is becoming more scarce.
   • Houston is seeing a large decrease of 6.3% in availability from 2015 to 2016.
   • Over the last two years, East Coast ports of New York / New Jersey and Jacksonville, and West Coast ports of Oakland and Long Beach have seen the largest decline in vacancy rates, over 2.0 percent.

3. Real estate markets strong across the U.S., occupancy levels are over 90.0 percent in all markets.
   • So far in 2017, port-centric submarkets across all cities have seen robust growth and increasing industrial real estate occupancy levels.
   • In JLL PAGI markets, nearly 25.4 million square feet is currently under construction. Of this, nearly 65.0 percent is on the U.S. East and Gulf Coast Ports.
A closer look at growth rate at PAGI ports

Houston and Savannah are top two ports for TEU growth YOY 2016-2017

Source: JLL Research
The TEU volume correlates to the port-market occupancy. As a port handles more TEUs, the port-market occupancy increases with more cargo coming through the ports.

Note: Real estate stats are based on industrial properties in a 15-mile radius from seaports with a minimum building size of 50,000 square feet.

Source: JLL Research
East and Gulf Coast ports gaining share from the West Coast

Container Shares By Coast

- Larger vessels to the East Coast improves All-Water Panama Canal competitiveness
- South Asia container trade via the All-Water Suez Route have increased
- Congestion and labor issues on the West Coast have slowed growth
- Residential real estate market trends negatively impacted Los Angeles and Long Beach
- Gulf Coast benefitting from rail investments

Source: American Association of Port Authorities, JLL
Ships continue to get larger

**EVOLUTION OF CONTAINERSHIP SIZE**

1968
- Encounter Bay: 1,500 TEU

1972
- Hamburg Express: 2,950 TEU

1980
- Neptune Gemini: 4,100 TEU

1984
- American New York: 4,500 TEU

1996
- Regina Maersk: 6,400 TEU

1997
- Susan Maersk: 8,000 TEU

2002
- Charlotte Maersk: 8,890 TEU

2003
- Anna Maersk: 9,000+ TEU

2005
- Gjerrit Maersk: 10,000+ TEU

2006
- Emma Maersk: 11,000+ TEU

2012
- Marco Polo (CMA CGM): 16,000+ TEU

2013
- Maersk Mc-Kinney Moller: 18,270 TEU

2014/2015
- CSCL Global/MSC Oscar: 19,000+ TEU

2018

**Race to build larger ships**

- Few innovations in industry apart from building larger ships

**Scatter chart of all containerships built 1956-2020**

- Containerships delivered
- Converted containerships
- Semi-containerships
- Containerships on order

Source: Alphaliner, World Shipping Council
Industrial market near the ports are growing, albeit at a slower rate than the overall market.

Comparing to 2015, the construction activity levels have doubled showing an increase in demand for warehouse and distribution space.

2016 vs 2010 US Ports Immediate Market size (m.s.f.)

- Immediate Market size (% change)
  - 2016 vs 2010 immediate market size (% change)
  - 2010 immediate market size
  - 2016 immediate market size (m.s.f)

- Immediate Market Size (m.s.f)
  - Los Angeles: 2.8%
  - Long Beach: 2.3%
  - Seattle-Tacoma: 6.8%
  - Oakland: 1.8%
  - New York/ New Jersey: 3.4%
  - Savannah: 12.3%
  - Virginia: 1.4%
  - Houston: 15.5%
  - Charleston: 13.3%
  - Miami: 8.1%
  - Jacksonville: 2.4%
  - Baltimore: 5.6%

- East Coast has slight upper hand in Immediate Market Size
  - 45% West Coast
  - 55% East Coast

Note: Real estate stats are based on industrial properties in a 15-mile radius from seaports with a minimum building size of 50,000 square feet.

Under Construction near the ports

- 25.4 (m.s.f) under construction
- 2x Amount of US construction in 2016 than in 2015
- 65% Of total US construction is at the East Coast

West Coast Ports include Long Beach, Los Angeles, Oakland, Seattle-Tacoma, and Vancouver

East Coast Ports include: Baltimore, Charleston, Houston, Jacksonville, Miami, New York/ New Jersey, Savannah, Virginia, and Montreal
Ecommerce trends

RETAIL AND ECOMMERCE SALES

- Ecommerce share of retail sales has increased from less than 1% in Q4-1999 to 10.5% in Q4-2017
- Ecommerce is expected to continue to gain share as retailers adapt their business models and re-optimize their distribution networks
- The goal is to develop a successful omnichannel strategy

Source: Census Bureau, JLL
Omnichannel strategy

- Omnichannel is about maximizing share of each type of consumer
- Ecommerce requires more inventory in more places
- Successful retail outlets display more and hold less inventory
- Ecommerce fulfillment can be used to replenish retail outlets
- Successful omnichannel strategy requires more locations and types of structures
- Distribution networks development requires a lot more expertise compared to 10 years ago
Questions?