

## CMBS Research

# Store It, Stuff It, and Ship It--CMBS Exposure to Amazon Industrial Space

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### Morningstar Perspective

Thanks to Amazon.com Inc. and e-commerce as a whole, the industrial sector has emerged as the leader of growth in commercial real estate. In fact, industrial logistics space outperformed office, retail, apartment, and even light industrial space in terms of supply, demand, occupancy, and rent growth, according to CoStar Group, Inc., in the first half of 2017. Amazon's industrial space backs \$2.41 billion in commercial mortgage-backed securities. Given the quality of Amazon as a tenant, with a Morningstar Credit Ratings, LLC rating of A and a Stable outlook, and the strength of the U.S. industrial market, Morningstar is comfortable with more Amazon industrial representation in CMBS.

### Amazon's Fulfillment Network: Amazon's Bridge Between Seller and Customer

Amazon's fulfillment network, composed of fulfillment and sortation centers, is key to the company's operations and makes up 87.2% of CMBS exposure by loan balance to Amazon logistics/industrial space where the Seattle-based online retailer is a tenant. Amazon fulfills orders to direct customers and to third-party customers via its Fulfillment by Amazon process. The FBA process starts when businesses send their inventory to fulfillment centers, where Amazon stores them. When a customer orders a product, Amazon selects, packs, and ships the item and provides customer service including returns. Sortation centers serve as the last leg of the journey, where orders are delivered regionally. Table 1 shows the fulfillment and sortation centers that back CMBS loans, all of which are current.

**Table 1: CMBS Loans Backed by Fulfillment and Sortation Centers**

Deal ID	Loan Balance as of October 2017 (\$)	Loan Balance: Allocated Property Balance or Portfolio Balance	Property Address	Metropolitan Statistical Area	Square Feet	Year Built
CSMC 2015-GLPB, CSAIL 2016-C6, CSAIL 2016-C7, MSC 2016-UBS9	964,000,000	PB	800 North 75th Avenue Phoenix, AZ	Phoenix	1,267,110	2009
CORE 2015-WEST	822,000,000	PB	3837 Bay Lake Trail Las Vegas, NV	Las Vegas	513,240	2007
WFCM 2010-C1	164,547,083	PB	1150 South Columbia Avenue Campbellsville, KY	Louisville	727,000	1999
JPMCC 2016-JP3	48,587,500	APB	6835 West Buckeye Road Phoenix, AZ	Phoenix	1,009,351	2011
MSBAM 2013-C7	40,800,000	APB	7200 Discovery Drive Chattanooga, TN*	Chattanooga	1,016,145	2011
JPMCC 2012-LC9	38,500,000	APB	225 Infinity Drive Charleston, TN	Chattanooga	1,016,148	2011
COMM 2015-LC21	20,911,916	APB	2250 Roswell Drive Pittsburgh, PA	Pittsburgh	510,531	1967
Total	2,099,346,499				6,059,525	

\* Morningstar toured in August 2017

Source: Morningstar Credit Ratings, LLC

Morningstar took a public tour of the fulfillment center in Chattanooga, Tennessee, which backs a \$40.8 million loan in MSBAM 2013-C7. According to online newspaper chattanoogan.com, there were 400 employees at this location when it opened in September 2011, but that number has grown to more than 3,000 as of October 2016. In this center, no items are larger than the yellow bins distributed throughout the facility, which are comparable to the white mail bins used by the U.S. Postal Service. Interestingly, items are not paired with similar items in this huge space. According to the tour guide, Amazon's algorithms provide the human pickers (people who pick up the items for shipping) with an order of objects that maximizes efficiency by minimizing walking.

Many sellers find it more valuable to pay to keep their products at Amazon and use FBA than to store and ship their products themselves. We spoke with an FBA seller on the tour and learned that the physical Amazon box offers value to his company. Customers can order his products, adult diapers and feminine hygiene products, through Amazon, and the nondescript Amazon box removes any

stigma or embarrassment. Not only is there value in the way that Amazon handles logistics, but the process has resulted in value created for vendor products shipped in Amazon-labeled boxes.

There is a fulfillment center at 225 Infinity Drive in Charleston, Tennessee, that serves as collateral for a loan in another commercial mortgage trust. This center is 27 miles away via Interstate 75, and its employee population grew to more than 1,200 as of October 2016 from 300 when it first opened in September 2011, according to [chattanooga.com](http://chattanooga.com). The Campbellsville, Kentucky, facility is operated differently as it lacks robots. A 2016 renovation included a new front entrance, an employee locker room, an updated break room, additional office space, an on-site career choice classroom, and specialized material-handling equipment. The 800 North 75th Avenue building in Phoenix is the largest fulfillment center in a CMBS transaction, with 1.3 million square feet and 32-foot high ceilings. CoStar reported 908 employees on site as of July 2017.

Amazon does not disclose the exact number of fulfillment and sortation centers it operates; it reports on its website only that there are more than 50 fulfillment centers and over 20 sortation centers. However, TaxJar, a company that assists online sellers in tracking and filing sales tax, uses independent research to maintain a list of fulfillment and sortation centers and reports a higher number. As of October, TaxJar reported at least 171 operating and announced fulfillment and sortation centers in the United States. Because seven Amazon fulfillment and sortation centers collateralize CMBS loans, if we use Amazon's publicly reported number of 70, then 10.0% of its operating centers back CMBS. But we believe that the percentage could be significantly lower based on research by TaxJar and others.

To improve logistics, Amazon in 2012 acquired robot manufacturer Kiva Systems, Inc. for approximately \$775 million and added more than 15,000 robots to 10 U.S. fulfillment centers during the 2014 holiday period. As of year-end 2016, Amazon increased the number of robots to 45,000 operating in 20 centers as reported by *the Seattle Times*. According to the presentation during the Amazon tour, the company is creating the ninth generation design for fulfillment centers.

Michael Hines, who is vice chairman of CBRE Group, Inc. and brokers the sale of fulfillment centers, said that CBRE last year brokered the \$105.5 million sale of an Amazon fulfillment center in Windsor, Connecticut, totaling over 1 million square feet. The center had automated pick models where an employee would take the item from the robot, check it, and put it on a truck. Amazon is now looking at sites between 600,000 square feet and 650,000 square feet with more parking spaces for employees and tractor trailers.

## Other Amazon Industrial Space in CMBS

Fulfillment and sortation centers are not the only type of industrial space serving as collateral in CMBS that Amazon occupies. The following table illustrates all CMBS exposure to Amazon industrial space, including the fulfillment and sortation centers. In addition to the centers, there are four other property types securing eight other loans. All loans are current.

**Table 2: CMBS Exposure to Amazon Industrial Space**

Type of Amazon Use	Number of Properties	# of Loans	Loan Balance: Allocated Property Balance or Portfolio Balance	Loan Balance as of October 2017 (\$)	Square Feet
Fulfillment and Sortation Centers	7	10	PB and APB	2,099,346,499	6,059,525
Amazon Locker	1	3	APB	139,000,000	291,151
Amazon Fresh and Prime	1	3	APB	140,000,000	1,506,716
Amazon Web Services	1	1	APB	25,000,000	299,387
Flex Warehouse	1	1	APB	4,471,558	43,635
Totals	11	18		2,407,818,057	8,200,414

Source: Morningstar Credit Ratings, LLC

An Amazon Locker serves as an alternate pickup location that customers can use instead of a home or business address. Amazon Web Services, one of Amazon's three business operations segments, leases space in a 299,387-square-foot building in Hayward, California, that serves as CMBS loan collateral.

Meanwhile, Amazon's recent announcement that it is looking for a second headquarters has mayors, governors, and other public officials seeking to woo the retailing behemoth. Amazon has pledged to invest \$5 billion to construct its new headquarters and hire some 50,000 employees. The company is seeking a 100-acre location with at least a million people within a few miles from highways and less than an hour from an international airport. Initially, it's seeking a building of at least 500,000 square feet, which may be expanded to 8 million feet after 10 years. The CMBS office sector, however, experienced a loss when Amazon left a former headquarters upon lease expiration but not because of an issue with Amazon's performance. Amazon had occupied 1200 12th Avenue South in Seattle from 1998 to 2011. The office loan was in CSFB 2000-C1 at an original amount of \$23.0 million. In 2011, Amazon vacated when its lease expired, and the loan defaulted on debt service two months later. The property was foreclosed upon and a subsequent liquidation in August 2012 resulted in a \$20.2 million realized loss.

## Industrial Space is a Hot Commodity

Industrial warehouse is performing well compared with other commercial asset types. In its second-quarter 2017 presentation on the sector, CoStar noted that logistics' year-over-year supply growth (3.3%), demand growth (3.7%), occupancy growth (0.4%), and rent growth (6.9%) exceeded that of office, retail, apartments, and light industrial (see Table 4). Sales for logistics and light industrial combined dropped 6.0% year over year, presumably because owners simply do not want to sell this valuable asset type. E-commerce has climbed every quarter since the end of 2008, reaching 10.5% of total retail sales (excluding automobiles and gas) as of the first quarter of 2017. Additionally, annual growth for online sales was about 15% as of first-quarter 2017, so there is potentially significant demand going forward. The table below provides the current size and characteristics of the U.S. industrial market.

**Table 3: Performance of Distribution and Warehouse Space**

Type	Square Feet of Rentable Building Area	Vacancy Rate (%)	Availability Rate (%)	Square Feet Under Construction	Square Feet Under Construction as % of Total	Rental Growth (%)
Distribution and Warehouse	5,560,740,000	6.7	9.9	155,988,000	2.8	6.5

Source: CoStar National Logistics Report as of Aug. 12, 2017

Table 4 below outlines how well logistics space is performing in comparison with light industrial, apartments, office, and retail.

**Table 4: Performance by Property Type – Second Quarter 2017 - % Change From Prior Year**

	Supply	Demand	Occupancy	Rent	Sales
Logistics	3.3	3.7	0.4	6.9	-6.0
Apartment	2.1	1.8	-0.2	2.5	-11.0
Office	0.8	1.0	0.1	1.7	-1.0
Retail	0.7	0.9	0.2	2.1	-18.0
Light Industrial	0.3	0.6	0.3	5.9	-6.0

Source: CoStar State of the U.S. Industrial Market: 2017 Q2

## The Amazon Benefit

With some \$2.41 billion of CMBS loans backed by industrial properties where Amazon is a tenant, all are performing. Given the minimal exposure to Amazon among industrial properties backing CMBS loans, there is room for more CMBS investment. With a Morningstar

Credit Ratings rating of A and a Stable outlook, Amazon is a tenant with a strong credit profile, and CMBS concentration could increase. R.J. Hottovy, an analyst from the Morningstar Equity Research Group, noted on July 28, 2017, that third-party seller revenue increased 37.5%, “suggesting Amazon is becoming an indispensable channel for third-party sellers,” which dovetails with the comments of the FBA sellers who prefer to sell their products via Amazon than their own shipping systems. In addition, the Morningstar Equity Research Group provides a 4-star rating for the stock and a Morningstar Economic Moat of wide.

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