FREIGHTWAVES FREIGHTINTEL

AMAZON - FINAL REPORT

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Executive Summary

This research report gathers information about **Amazon's likely impact on transportation and logistics** from three sources: a sentiment survey of carriers, brokers and shippers; a thorough lane analysis of Amazon and DAT rates; and an equities market analysis that looks at the stock prices of companies competing with Amazon.

This executive summary synthesizes data from those three sources to understand the **risks posed by Amazon's brokerage platform** and to assess whether the industry perceives those risks accurately.

Based on FreightWaves' sentiment analysis – the results of a survey with more than 800 industry respondents – **We do not think that the transportation and logistics industry accurately perceives the risks associated with Amazon's entrance into the space**.

Carriers are the most pessimistic about Amazon's effect on freight markets, believing that Amazon will undercut the rates paid to them. **Shippers are the most optimistic**, apparently expecting Amazon to help them lower transportation costs and efficiently move their goods. Meanwhile, **freight brokers were fairly neutral**, likely because they believe they can adapt their business models to play any future scenario.

Based on our rate analysis we think that carriers have the least to lose from Amazon's brokerage, because as Amazon scales its platform, it will be most concerned that carriers perform at high service levels. To the extent that Amazon wants to automate freight brokerage, it will try to minimize exceptions by paying carriers reasonably.

Shippers should perhaps be more wary of Amazon's brokerage offering than they were in the survey responses. Analysis of Amazon competitors' stock prices reveal that the only companies Amazon has been able to hurt significantly are in Amazon's core business segment of consumer discretionary (examples include Barnes & Noble and Bed Bath and Beyond). **Retail shippers in particular should think hard before letting Amazon handle their transportation needs and sharing their data with a direct competitor**. Toys 'R Us trusted Amazon to run 100 percent of its e-commerce business; after Amazon learned the toy business and sourced the top 1,000+ SKUs, Toys 'R Us was cut out and ended up in bankruptcy.

Brokerages should also be concerned, but not because Amazon will force down rates to shippers. Amazon Freight's platform is unlikely to capture enough share to make markets (set rates). Instead, **the threat to brokerages will come from Amazon's ability to disrupt individual customer relationships**. Amazon will be able to take business that it wants if freight brokerages do not work proactively with their customers. **Brokers should warn their customers about the risk of working with Amazon and offer high-touch consultative services that cannot be automated. Brokers should also make the point to retail customers that their freight on Amazon's platform will be competing for capacity with Amazon's freight. During peak season, retailers will be exposed to capacity squeezes or sudden rate hikes, and they will be dependent on their most powerful and ruthless competitor.**

Our equities analysis and lane analysis support this thesis. As stated above, Amazon is most successful at destroying consumer discretionary companies (not grocery, entertainment, advertising or telecommunications).

In its initial article announcing the existence of freight.amazon.com, FreightWaves analyzed quotes for four random lanes. In this report we dove deeper into a **thorough lane analysis, comparing Amazon's shipper rates to DAT contract and spot rates**. Although comparisons are affected by pickup date and the specific character of each lane (backhaul or headhaul), some general conclusions can be drawn. **It appears that Amazon is charging shippers roughly what brokers pay to carriers; if Amazon pays carriers a fair rate it is operating its brokerage at no margins.**

Therefore **our lane analysis supports its thesis that carriers should be largely unaffected by Amazon's brokerage, while brokers may lose customers if Amazon targets them**. The biggest cost savings in the ecosystem is the one Amazon offers to shippers, suggesting that **one of Amazon's goals is to buy visibility into its competitors' networks and data. The other goal seems to be to acquire a flexible network of truckload capacity that it can deploy for its own purposes.**

In summary, carriers should not be as paranoid; brokers should understand the threat to their customer relationships; and shippers that compete with Amazon should in-source a logistics operation before giving their freight to Amazon.

Amazon Logistics, Inc. Background Information

Amazon Logistics, Inc. first applied for its brokerage authority on June 6, 2013. This initial application process does not appear to have been completed and an operating authority was never granted by the Federal Motor Carrier Safety Administration (FMCSA). Amazon did secure a surety bond at this time, which it held for the next 40 months until the company finally completed an application and was granted a brokerage authority in October 2016.

Technology vendors we have spoken with confirm that Amazon began freight brokerage activities in late 2016/early 2017, assembling the tools freight brokerages need to operate. Several turned down Amazon's business due to its contracts, which have been described by vendors and carriers as heavily one-sided toward Amazon.

Chicago-based freight brokerages that have been competing with Amazon for talent in Chicago tell us that like all traditional freight brokerages in the city, Amazon has lured away talent. Amazon has also had plenty of talent leave, too, facing the same turnover pressure as other large technology-focused freight brokerages in Chicago like Echo, Coyote and Redwood.

These same industry sources have heard Amazon now has between 200 and 300 freight brokers based in Chicago and Atlanta. Estimates regarding gross revenue are difficult to pinpoint for Amazon Logistics, but compared to other brokerages with the same employee size, more than $200 million should be a conservative estimate.

Amazon Logistics' growth to date has been built more or less on the model of a traditional brokerage, with mostly off-the-shelf technology and tools like load boards, powered by freight brokers "pounding the phone" for customers and trucks.

Freight.Amazon.com

While freight.amazon.com is only in beta and covers a small geographic region in the Northeast, all market disruptions start small. For example, there is the story of a small online bookseller based in the Pacific Northwest that grew to become the biggest, baddest retailer in the world.

It is unclear if Amazon's freight matching capabilities are as advanced as other digital brokerages like Uber, Convoy or Transfix. Freight.amazon.com's zip-to-zip lane inputs and automatic pricing have a sleek design and incredible ease of use, with rates that are generated in a fraction of a second.

Sleek design and ease of use are hallmarks of digital freight matching, but it is the guts of the operations that are the most important variable in the matching equation. What is this process? Is it automated? Artificial intelligence? Machine learning? Or is it 100 carrier sales reps "smiling and dialing" in the background? Finally, assuming that there are algorithms matching freight, what variables are they optimized to solve for?

We ask these questions because all digital freight brokers that tout matching begin their existence operating as traditional freight brokers. Once they acquire customers and start moving freight, the process is automated where it can be automated. The initial step is to automate the highest volume lanes before moving to the ultimate goal of full automation.

Until a digital freight broker can consistently match shippers with carriers in a predictable and repeatable process, they are simply a traditional freight brokerage with a massive research and development line item expense on the income statement.

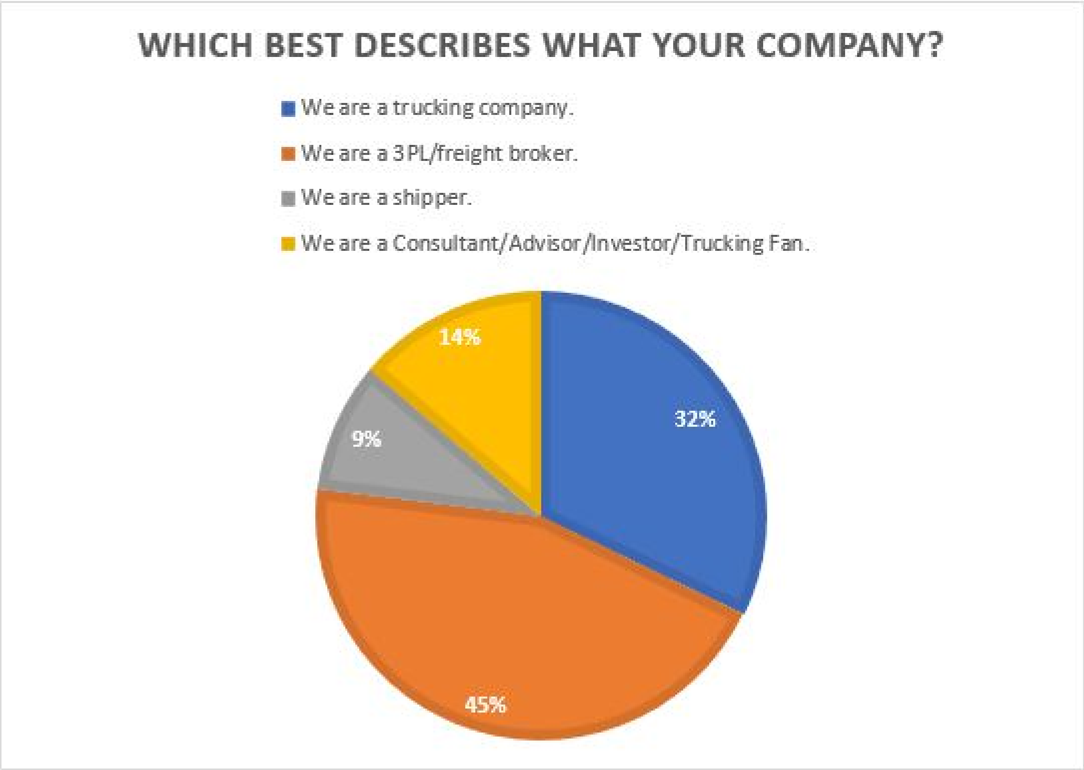
One only needs to read the famous Business Insider article in 2016 on Cargomatic to get a sense of the difficulties in the process of automating freight.

All this is to say that it is not yet known how automated Amazon's operations are at this time. We have heard Amazon Logistics is still out in the market aggressively recruiting personnel for sales and operations roles.

Survey Methodology

During the week of April 30 to May 3, 2019, FreightWaves subscribers were surveyed via email to gauge their reactions to the breaking news that Amazon had entered the freight brokerage sector. This survey measured the sentiment of carriers, freight brokers, shippers and market observers to capture their thoughts on how Amazon may move the industry.

The survey had 811 respondents. The breakout of market segments is as follows:

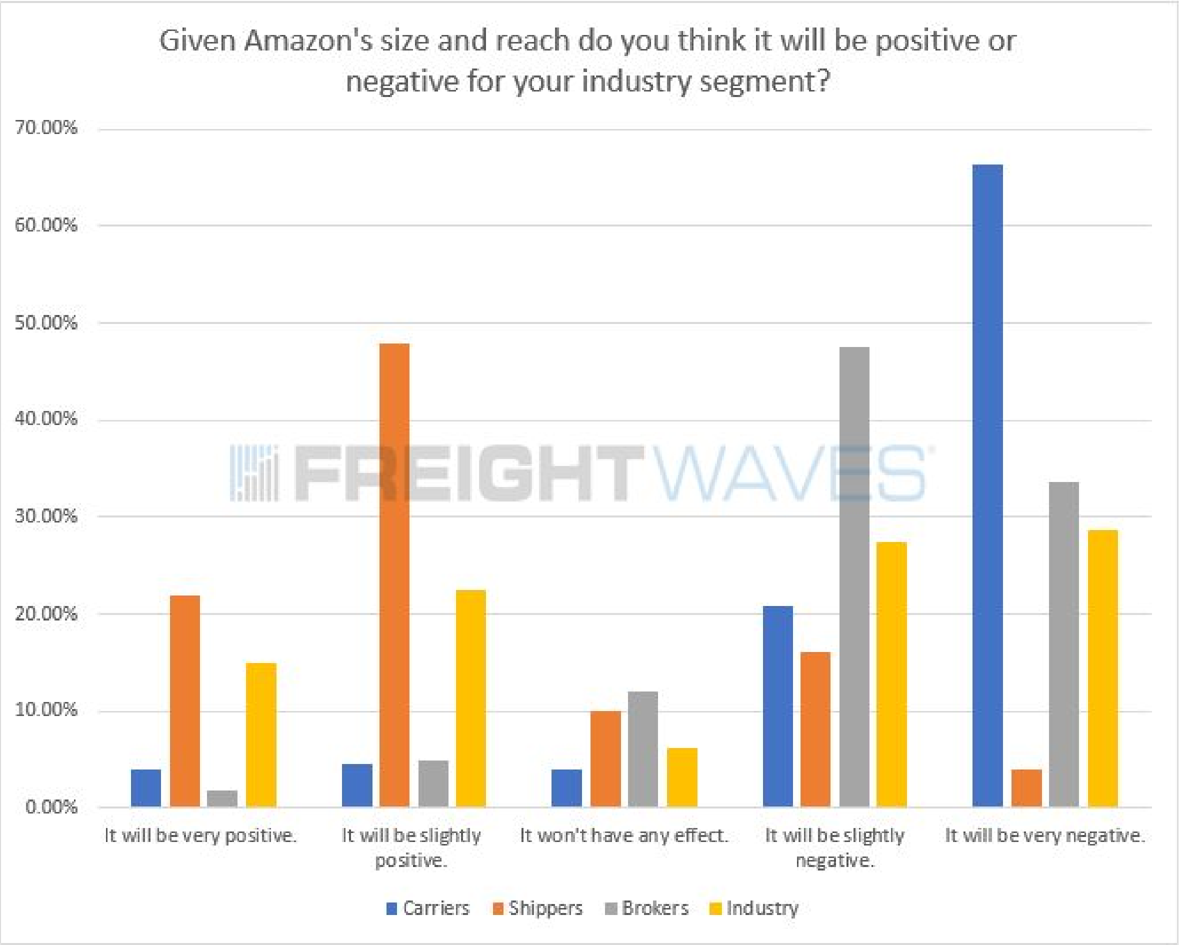


Amazon – The Logistics Industry's Frenemy

Amazon can be your best friend as a consumer. The company offers great prices, free two-day shipping for Prime members (soon to be one-day), on-demand movies and TV shows, etc. On the other hand, when Amazon enters your industry it can keep you awake at night wondering how to defend yourself against the giant.

Based on the FreightWaves survey, it appears carriers and brokers are very concerned about the effect Amazon might have (lowering rates and squeezing margins) as it roars into the freight brokerage business.

Two-thirds of respondents who identified as "carriers" believe Amazon breaking into freight brokerage and accelerating its logistics operations is "very negative" for them. Adding in another 21 percent who believe it will be "slightly negative" means that **up to 9 of 10 carriers have a negative opinion of working with Amazon**.

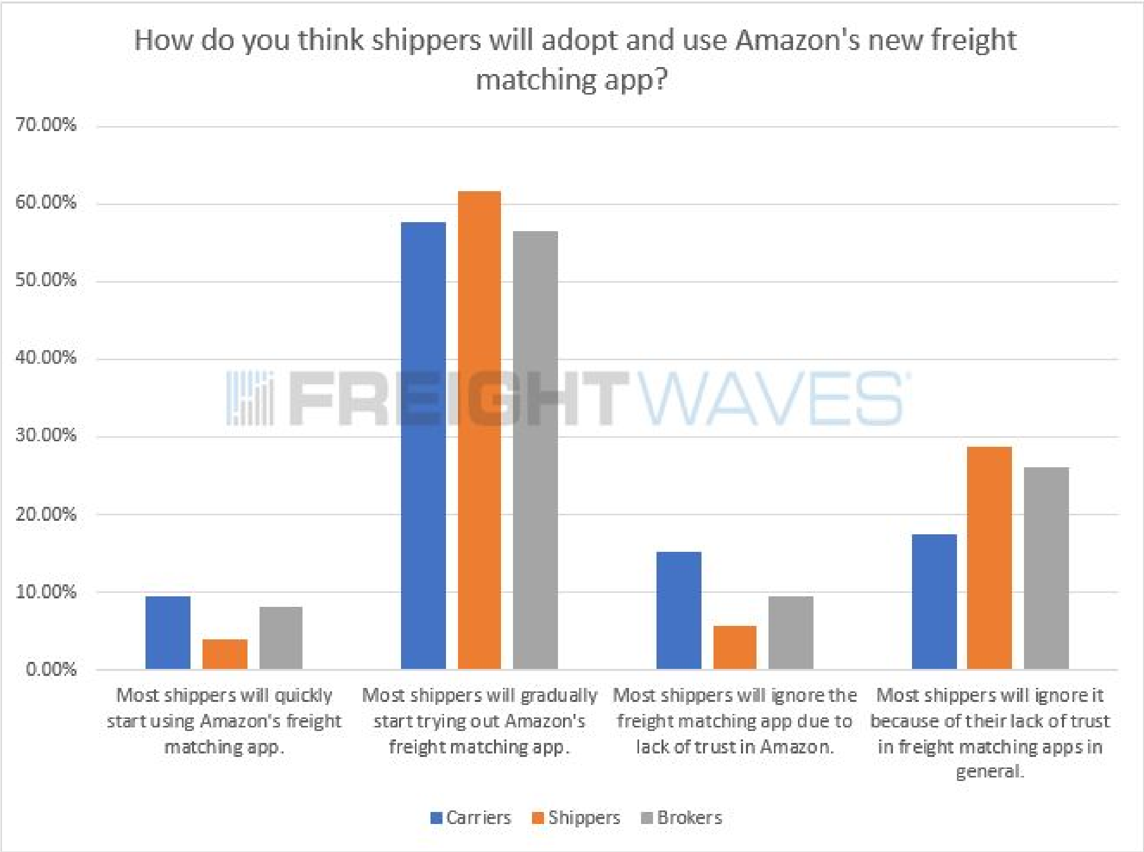


As one carrier explained, "*Do they really understand the challenges of this industry or do they just understand their own challenges within their transportation world, which are not universal. They don't have a positive reputation with their other vendors; why do we believe they will have a positive reputation with carriers?*"

Brokers should feel worried though, and they do. **Amazon's rates are undercutting their margin by 10 percent to 33 percent** (there is more information on this in the Amazon Rate Analysis section). **Brokers are almost as negative about Amazon as carriers at 81 percent.**

Shippers are the only category with a positive opinion about Amazon entering freight matching. Almost half (48 percent) believe it will be slightly positive, while 22 percent believe it will be very positive.

We see this in how the industry believes shippers will start trying Amazon's freight matching services.



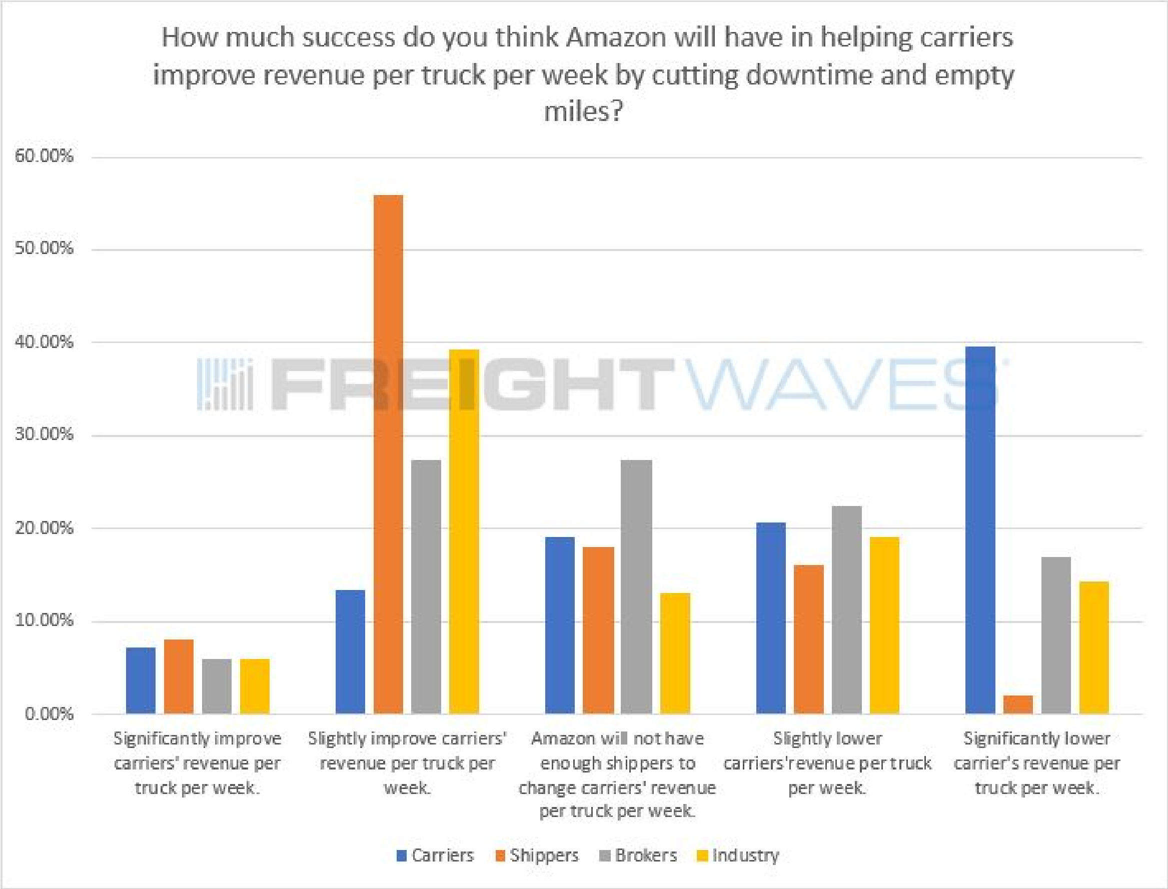
Most shippers, brokers and carriers believe shippers will gradually start using Amazon when it goes live. Interestingly enough, the second most popular answer with all three market segments is that shippers will likely ignore Amazon's platform, because of a lack of trust in freight matching apps in general.

As one broker said, *"This app is specifically tailored for shippers that have plenty of time and not a lot of money to spend. I'm sure some will try it but may later be turned off by the amount of freight that piles up and does not move due to the low rates."*

The answer to the pace of adoption of Amazon's platform (or any other digital freight platform) would be more clear if it was known why shippers might switch. The answer appears to be that **shippers want to leverage Amazon's purchasing power for rates and save time when booking and managing loads.**

The same motivations were identified by carriers and brokers as well. They also feel **shippers are looking for more transparency and better technologies when selecting transportation providers**.

Speaking of rates, which is always a hot topic, we asked how successful Amazon will be in negotiating lower rates from carriers.



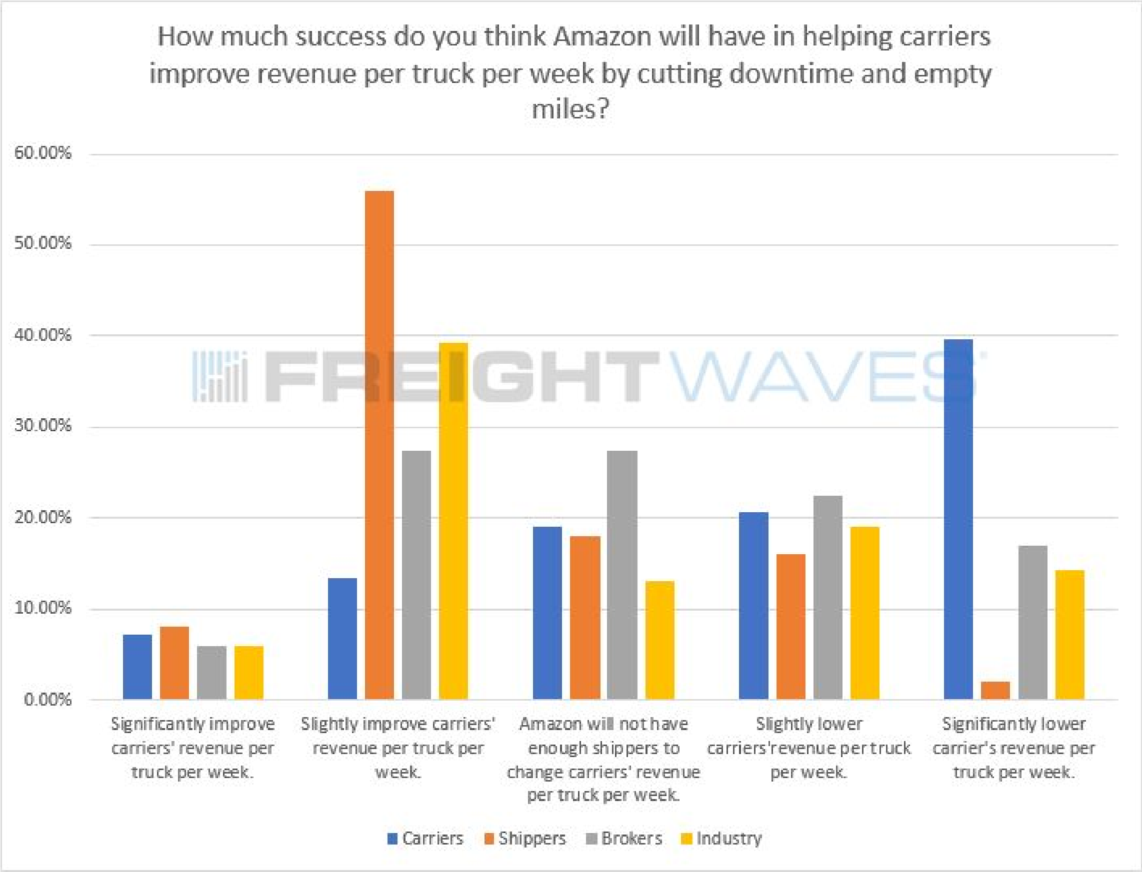
Of the shippers who replied, 82 percent think Amazon can negotiate lower rates with carriers, compared with 60 percent of brokers and only 55 percent of carriers.

One broker made a great point about Amazon's busy season and rates, *"From what I have observed, the peaks and valleys of Amazon's pricing could be more dramatic for both carriers and shippers. Internally Amazon is willing to pay 'anything' during peak but has dropped rates in some markets well below the cost to operate. I also would like to see what happens during peak season. I think it is foolish to think Amazon will prioritize a shippers' needs over their own."*[1]

In other words, **relying on Amazon's network during its peak season might not be optimal**. Amazon will have to decide who is more important – Amazon's retail customers or its shipper customers? We think the answer to this question is clear – its retail customers.

[1] Additional selected comments from respondents to the freight.amazon.com survey can be found in Appendix A.

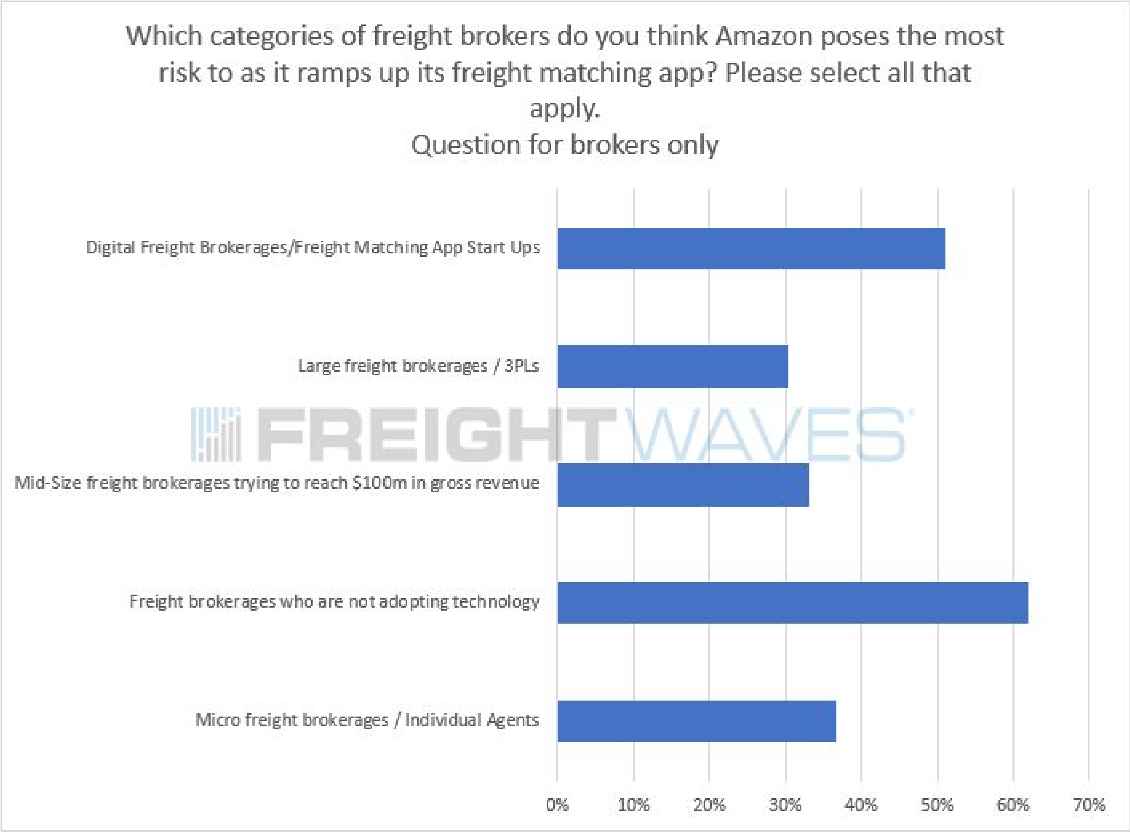
We then asked if Amazon could use its network to increase revenue per week per truck by eliminating empty miles and dwell time.



Shippers and industry observers are the most optimistic, though most believe it would be only a slight gain for carriers. The most pessimistic of the four groups were carriers.

Since Amazon Logistics is a direct competitor to freight brokers, we wanted to know which freight brokerages were most at risk if Amazon succeeds.

Almost **two-thirds of freight brokers think competitors that aren't adopting new technologies are most at risk**. Interestingly enough, the **most technologically advanced brokers, the digital freight brokers, came in second, most likely because they are direct competitors in the matching game with Amazon**.



One broker summed up what freight brokers need to do in this competitive landscape: *"To some extent, it is all of the above. The most risk might be to any brokerage that has not embraced technology to improve visibility, service and reduce operating costs. Niche strategies and equipment types with inherent operational complexities (i.e., flat-bed) have some defense against market aggregators/consolidators that seek to leverage their scale – because they can't respond well to the mass customization that we deal with daily as 'shipper requirements.'"*

What if Amazon succeeds? Will we see other large retailers get into a brokerage war with Amazon to secure capacity?

Respondents mostly don't see this happening, though the margins of difference aren't that wide, and at least one or two large retailers always seem to follow where Amazon leads.

As one industry observer noted, *"It will be a wait and see, see how it goes for Amazon, then make a move one way or the other. It is no small undertaking. So, for bigger retailers, they will want to take notes now, play catchup if they have not already been paying close attention."*

Survey Summary

The **FreightWaves survey clearly shows carriers and brokers are very concerned** regarding the news that Amazon is entering freight matching. The company's size and scope can make it a very difficult partner for carriers to work with and make it **a very dangerous competitor for freight brokers**.

What are the numbers though? Will Amazon really depress rates for carriers and margins for brokers?

To answer these questions, an examination shows what rates Amazon is offering shippers on freight.amazon.com.

Where's the margin? – **Rate analysis of 30 freight lanes from freight.amazon.com**

On May 3 and 4, 2019, the Freight Intel Group ran quotes on 30 lanes in both freight.amazon.com and DAT RateView. The objective was to compare Amazon rates to shippers with industry benchmark rates from DAT.

In the Amazon portal, all rates were based on scheduled pick-up dates of May 9, 2019. In DAT all quoting was done using rates from the minimum time frame and geography.[2]

All rates are based on a 53-foot full truckload dry van rates.

The following table includes dry van rates for the following lanes based in Maryland, New Jersey, New York and Pennsylvania where Amazon is beta-testing its freight matching app. AMZN Rate Quote are quotes from freight.amazon.com. DAT All-In Contract is the carrier-to-shipper contract rate. The DAT Spot All-In rates are the broker-to-carrier spot rates.

The AMZN to DAT spot +12 percent margin and +18 percent margin columns represent the lower and upper ranges of average broker margins that have been added to broker-to-carrier spot rates.

[2] Changing any of the variables in the search can affect the rates quoted. This includes pick-up day in Amazon, along with time-frame and geography settings in DAT.

FreightWaves Rate Analysis of freight.amazon.com

										AMZN TO DAT COMPARISIONS					
From	State	Zip	To		To Zip	Date	AMZN QUOTE	Miles	DAT All-In Contract	AMZN to DAT CONTRACT	AMZN TO DAT SPOT + 12% MARGIN	AMZN TO DAT SPOT + 18% MARGIN	DAT SPOT + 12% MARGIN	DAT SPOT + 18% MARGIN	DAT SPOT ALL-IN
Erie	PA	16501	Hartford	CT	6101	43594	$ 1,610	485	$ 1,664	-3.2%	-4.8%	-11.4%	$ 1,691	$ 1,817	$ 1,489
Erie	PA	16501	Allentown	PA	18001	43594	$ 1,123	374	$ 1,530	-26.6%	-20.6%	-26.1%	$ 1,415	$ 1,519	$ 1,245
Allentown	PA	18001	Erie	PA	16501	43594	$ 785	374	$ 987	-20.5%	-14.8%	-20.7%	$ 922	$ 990	$ 812
Hartford	CT	6101	Baltimore	MD	21201	43594	$ 688	311	$ 852	-19.3%	-9.5%	-15.7%	$ 760	$ 816	$ 669
Baltimore	MD	21201	Hartford	CT	6101	43594	$ 995	311	$ 1,228	-19.0%	-6.1%	-12.6%	$ 1,060	$ 1,138	$ 933
Albany	NY	12084	Buffalo	NY	14201	43594	$ 642	284	$ 795	-19.3%	-4.3%	-10.9%	$ 671	$ 721	$ 591
Buffalo	NY	14201	Albany	NY	12084	43594	$ 901	284	$ 1,031	-12.6%	-4.3%	-10.9%	$ 942	$ 1,012	$ 829
Brooklyn	NY	11223	Elmira	NY	14901	43594	$ 665	248	$ 856	-22.3%	-18.4%	-24.0%	$ 814	$ 874	$ 717
Elmira	NY	14901	Brooklyn	NY	11223	43594	$ 1,007	248	$ 1,235	-18.4%	-17.4%	-23.1%	$ 1,220	$ 1,310	$ 1,074
Hartford	CT	6101	Allentown	PA	18001	43594	$ 503	214	$ 640	-21.3%	-13.1%	-19.1%	$ 579	$ 622	$ 510
Allentown	PA	18001	Hartford	CT	6101	43594	$ 738	214	$ 743	-0.6%	-19.5%	-25.0%	$ 917	$ 985	$ 807
Brooklyn	NY	11223	Baltimore	MD	21201	43594	$ 744	191	$ 951	-21.8%	-9.4%	-15.7%	$ 821	$ 882	$ 723
Baltimore	MD	21201	Brooklyn	NY	11223	43594	$ 972	191	$ 1,086	-10.5%	-9.2%	-15.4%	$ 1,070	$ 1,149	$ 942
Wilkes-Barre	PA	18703	Baltimore	MD	21201	43594	$ 618	181	$ 693	-10.8%	-5.8%	-12.3%	$ 657	$ 705	$ 578
Baltimore	MD	21201	Wilkes-Barre	PA	18703	43594	$ 641	181	$ 693	-7.6%	-6.0%	-12.5%	$ 682	$ 732	$ 600
Albany	NY	12084	Elizabeth	NJ	7114	43594	$ 534	164	$ 784	-31.9%	-19.4%	-25.0%	$ 662	$ 711	$ 583
Elizabeth	NJ	7114	Albany	NY	12084	43594	$ 658	164	$ 859	-23.4%	-16.3%	-22.0%	$ 786	$ 844	$ 692
Baltimore	MD	21201	Allentown	PA	18001	43594	$ 585	147	$ 681	-14.1%	-10.1%	-16.3%	$ 651	$ 699	$ 573
Allentown	PA	18001	Baltimore	MD	21201	43594	$ 564	147	$ 599	-5.8%	-10.0%	-16.2%	$ 627	$ 673	$ 552
Hartford	CT	6101	Brooklyn	NY	11223	43594	$ 574	129	$ 724	-20.7%	-13.4%	-19.4%	$ 663	$ 712	$ 584
Brooklyn	NY	11223	Hartford	CT	6101	43594	$ 632	129	$ 680	-7.0%	-11.8%	-17.9%	$ 717	$ 770	$ 631
Wilkes-Barre	PA	18703	Philadelphia	PA	19116	43594	$ 488	123	$ 589	-17.2%	-18.7%	-24.3%	$ 600	$ 644	$ 528
Philadelphia	PA	19116	Yonkers	NY	10701	43594	$ 664	109	$ 779	-14.8%	-19.1%	-24.6%	$ 820	$ 881	$ 722
Philadelphia	PA	19116	Baltimore	MD	21201	43594	$ 541	102	$ 613	-11.8%	-10.4%	-16.5%	$ 603	$ 648	$ 531
Brooklyn	NY	11224	Philadelphia	PA	19116	43594	$ 495	97	$ 652	-24.0%	3.5%	-3.6%	$ 478	$ 514	$ 421
Harrisburgh	PA	17101	Buffalo	NY	14201	43594	$ 781	286	$ 924	-15.4%	-13.8%	-19.7%	$ 906	$ 973	$ 798
Elizabeth	NJ	7201	Pittsburgh	PA	15222	43594	$ 765	363	$ 1,020	-34.8%	-10.4%	-16.6%	$ 854	$ 917	$ 751
Baltimore	MD	21201	New York	NY	10011	43594	$ 983	191	$ 1,086	-9.5%	-9.6%	-15.8%	$ 1,087	$ 1,168	$ 957
Albany	NY	12084	Washington	DC	20016	43594	$ 809	365	$ 1,048	-31.3%	-25.5%	-30.6%	$ 1,086	$ 1,167	$ 956
Pittsburgh	PA	15222	King of Prussia	PA	19484	43594	$ 862	288	$ 1,172	-7.4%	1.3%	-5.7%	$ 851	$ 914	$ 749

*Datasources: freight.amazon.com and DAT, https://rateview.dat.com. A fuller version of this table is in Appendix B.

For the **30 lanes selected, almost all Amazon quotes are well below contracted rates to shippers and broker margin spreads**. For carrier rates, the data shows that Amazon is quoting shippers on average within 50 basis points of DAT's average broker-to-carrier spot rate – **Amazon may be paying carriers at market prices, but taking no margin for itself**.

AVG ALL IN RATES TO DAT CONTRACT

AMZN QUOTE	DAT Contract WITH FSC	DIFF %
$ 748.51	$ 897.29	-16.6%

AVG ALL IN RATES TO DAT SPOT

AMZN QUOTE	DAT SPOT WITH BROKER MARGIN	DIFF %
$ 748.51	$ 917.01	-18.4%

This suggests **two likely strategies for Amazon's pricing**:

1. Amazon is negotiating rates with carriers below the average broker-to-carrier spot rate, then charging the shipper well below the average broker margin.

2. Amazon is paying the average broker the carrier spot rate to build capacity and charging shippers at cost. The strategy appears to be to scale a network of shippers and carriers to leverage the movement of its own freight throughout the year, but especially during peak times.

Our thesis is that **option two is the most likely pricing strategy for Amazon**. The primary reason is that **strategy number one is not sustainable, and strategy number two is most advantageous for Amazon** as a whole. In addition, it follows Amazon's disintermediation strategy it has used to enter a variety of other industries, most notably Amazon Web Services (AWS).

FreightWaves' survey of the logistics industry in this report highlights the issues with pursuing the first scenario. Carriers are already bracing for Amazon to offer cheap rates at below market value. If Amazon does pursue the first scenario, then its carrier base will churn at a high rate, attracting only below-average carriers to its network. This in turn will cause its shipper base to churn and eventually only below-average shippers will remain.

Freight matching and automation cannot work with both below-average carriers and below-average shippers. These two groups will produce an exception rate that will demand constant human intervention in almost every load.

Scenario two is a sustainable model given that it assists Amazon's main business of e-commerce. Delivering Amazon purchases to customers is Amazon's core business, especially with its recent announcement of one-day delivery. Any logistics ventures should support this core strategy first. **By offering fair market rates to carriers, while offering below brokerage prices to shippers, Amazon can attract reputable parties on both sides.**

Amazon's primary goal should be scaling its network to more efficiently move products to its own customers. This places scale, network effects and cost savings as the primary objectives, which eliminates the need to make margin like a normal broker.

This scenario should concern freight brokers much more than carriers. The latter should still receive fair market rates along with consistent volumes. Freight brokers, on the other hand, will be competing against the largest company on earth.

Amazon: The Death Star is now within striking range of logistics stocks

The usual Amazon playbook goes something like this:

A media source announces breaking news that Amazon has entered into a new market or industry outside of its core e-commerce business. Immediately, algorithms set their sights on the likely winners and losers and begin their relentless block selling.

Within a matter of minutes (and before any human shareholders have had a chance to sell), this announcement has shaved billions in cumulative market capitalization off the industry in question and resulted in the diminution of any legacy company's stock that will now be facing Amazon as a competitor.

To add insult to injury, on the flip side, Amazon's stock typically rallies strongly into the green, resulting in a massive zero-sum game and transferring of market capitalization.

This has become so commonplace in the stock market that it has almost become a joke – so long as it's not your company standing in the way. Amazon's quest for total domination has made this almost a weekly occurrence.

Further, Amazon is notoriously secretive and almost never comments publicly regarding its ambitions, and thus leaves behind a trail of rubble and uncertainty that can take months (if not years) for companies and their executives to prove that they can survive the behemoth's onslaught.

Legendary cable investor John Malone coined the best explanation for this phenomenon: *"Amazon is a 'Death Star' moving into striking range of every industry on the planet."*

Building on this notion, in the stock market, participants routinely classify companies in the following 11 Global Industry Classifications, or "GICS" sectors. At its IPO in 1997, when Amazon was simply an online bookseller, it participated in just one category – "consumer discretionary."

Today, however, **Amazon is now doing business in eight of 11 GICS sectors** (FreightWaves classifies AWS as both technology and utility)! As of now, Amazon participates in: communication services, consumer discretionary, consumer staples, financials, health care, industrials, information technology and utilities. And no one should rule out Amazon becoming an energy, materials or real estate company one day.

The GICS framework
- Communication services
- Consumer discretionary
- Consumer staples
- Energy
- Financials

- Health care
- Industrials
- Information technology
- Materials
- Real estate
- Utilities

In summary, it's hard to paint a more negative picture. As a result, most people would probably think that the announcement of Amazon entering a new industry would be a great shorting opportunity, perhaps even days or weeks after the initial selloff. At the very least, we guess that most people would be scared and heavily tempted to sell their stock (if they owned any).

But an odd thing happens – a buying opportunity usually emerges in the wake of this announcement. Most stocks in the category that Amazon is "attacking" actually *outperform* in the ensuing three, six and 12 months and retake their old highs (or closing prices on the day before the announcement). This is not always the case, as will be demonstrated, but by and large it is statistically true.

In the following sections, we outline a host of examples that prove that companies can and often do reemerge to be stronger companies whose stocks go on to hit new highs in the aftermath of Amazon becoming a competitor. Finally, there are several examples that Amazon may have in fact had a direct hand in demolishing companies or at least their stocks.

Amazon Enters Freight Brokerage Leading to Widespread Selloff of Trucking & Logistics Stocks

With that as a backdrop, there is the latest news (broken by FreightWaves) that Amazon has entered the freight brokerage market. **Following the publication of the article, several trucking and logistics stocks were immediately and severely hit. For the basket of publicly traded carriers and brokers examined s, there was approximately a $2 billion or greater loss in aggregate market capitalization in one day**, with 50 percent of the total (or $1 billion) coming from the 8 percent sell-off of CHRW alone.

While this sounds like Amazon's foray into brokerage is a big deal, **we do not anticipate any huge near- to medium-term impact to the stocks and financials of any of the brokers or carriers**. However, that doesn't mean Amazon Freight won't continue to grow both its traditional brokerage and freight matching services at a very rapid pace and take market share – we absolutely think it will.

Data Source: FinViz.com.

To highlight why the stock market sell-off of logistics companies is overblown and will likely correct itself, the following are five instances where breaking news of Amazon entering a market created the same conditions recently seen with logistics stocks.

A Classic Example – Amazon Announces its Buying Whole Foods (WFM) on June 16, 2017

On June 16, 2017, news broke of Amazon's $14 billion takeover of Whole Foods and sent the stocks of competing grocery and consumer staples chains plummeting. On the day of the announcement, Sprouts, Target and Walmart stocks sank 5 percent, Costco and Dollar General dropped 7 percent, Kroger stock lost 11 percent and Supervalu lost 13 percent, among others.

To demonstrate how big the impact actually was, Target, Walmart and Costco are all mega-caps with market caps between $40 billion and $300 billion (and collectively $450 billion). The Walmart one-day loss alone was greater than $12 billion, nearly matching the entire price tag of the WFM acquisition. Together, this event shaved close to $50 billion in market cap off of grocery chains (or companies that derive a substantial portion of their revenue from groceries) in one day.

This example is emblematic of the sheer terror Amazon can often inflict on overly emotional market participants who respond with knee-jerk reactions bereft of any analysis.

Costco, a $110 billion market cap company, dropped almost 20 percent in the weeks following the purchase of Whole Foods by Amazon, as analysts and experts endlessly speculated on what technology and aggressive pricing Amazon would bring to the table.

The quote below from the announcement day perfectly exemplifies the fervor, panic and mania that this surprise acquisition caused:

“This is an earthquake rattling through the grocery sector as well as the retail world,” Mark Hamrick, senior economic analyst at Bankrate.com, told CNBC in an email. “We can only imagine the technological innovation that Amazon will bring to the purchasing experience for the consumer. Now, we can see in hindsight that its recent dithering around the brick-and-mortar experience, as an experiment, was only a rumbling of the seismic event in the offing.”

In reality though, since the acquisition, there has been an even further slowing in Whole Foods’ already tepid top line growth prior to the acquisition. Even though numbers are not disclosed, by all accounts Whole Foods has been struggling mightily, perhaps has lost market share, and had to aggressively cut prices to simply maintain its competitive positioning.

Data Source: FinViz.com.

False Reports of Amazon Entering Markets Happen Too

On July 13, 2018, a rumor broke that Amazon would be entering the network switching market and was planning to undercut prices by 70 to 80 percent.

You can imagine what happened next. This report knocked Cisco (a $240 billion market cap) down by 5 percent on monster volume, shaving $12 billion in market cap within seconds. It also knocked down shares of Juniper Networks Inc (JNPR) and Arista Networks Inc (ANET) by 5 percent each as investors feared that Amazon's scale and pricing power could disrupt the sector.

Nevertheless, Amazon later came out and denied the report and Cisco's stock is making new highs today. But it still took weeks for the stocks of Cisco and others to recover and caused a public relations nightmare.

Amazon is rumored to be targeting the network switching business. The move would put it in direct competition with Cisco, HPE, Juniper Networks, and Arista. (Source: Networkworld.com)

"As it does in many other categories, Amazon plans to use price to undercut rivals," the report said. "The company could price its white-box switches between 70 percent and 80 percent less than comparable switches from Cisco, one of the people with knowledge of the program estimated."

Shamus McGillicuddy, senior analyst for the network management practice at Enterprise Management Associates, really unloaded on the story on Twitter.

"Half a dozen companies lost millions, maybe billions in market cap, and AWS doesn't want to explain the situation beyond a terse denial. Cisco was forced to come out and issue a denial on Amazon's behalf. That's unacceptable behavior from a multi-billion dollar company," he tweeted.

Data Source: FinViz.com.

Etsy (ETSY), Wayfair (W) and Best Buy (BBY) Successfully Fight Off Amazon in Arts & Crafts, Furniture and Electronics

The bear case on Etsy since its IPO has been that it's a niche arts and crafts e-commerce marketplace that charges artificially high take-rates for selling tchotchkes and knick-knacks to housewives. Naturally, it was assumed, if Amazon wanted to own this space, it could do so dramatically by lowering seller fees as well as offering free two-day Prime shipping to rapidly take market share.

It made its first officially announced attempt to do so in October 2015 with the launch of its own arts and crafts marketplace "Handmade." That day, Etsy's stock fell 6 percent on heavy volume, but note that Etsy had already halved from its initial IPO in the spring of 2015 because Amazon's looming presence in this space had been long-rumored and speculated.

Then another announcement of Amazon extending its presence in Handmade came in 2017, knocking down Etsy's stock another 6 percent in one day. This is a stark example of why Amazon competition (or even the potential of Amazon competition) can be a dark cloud that follows a company around for years. Fast forwarding from 2017 to today, Etsy's stock has risen from $10 to $70, partially driven by *increasing* the commissions it charges in the face of Amazon competition.

Amazon Takes Aim At Etsy With A New Craft Site, Handmade (Source: NPR 10/8/2015)

Amazon is firing yet another shot at a competitor. This time it's a mega-artisanal shot, at Etsy – the popular craft site. The e-commerce giant on Thursday launched Handmade, a new marketplace for, well, handmade goods. This could be wonderful news for the artisan movement, or terrible news for Etsy, its staunchest supporters to date.

Data Source: FinViz.com.

Wayfair (W), the leading online furniture and household durables marketplace, has also been under similar intense fire the past several years from never-ending rumors and competitive announcements that Amazon is coming for it. Amazon has reportedly invested billions of dollars trying to unseat Wayfair. However, much like Etsy, Wayfair's revenue growth and stock price remain unaffected, rising at a torrid pace the past several years despite having to fight off one of the world's biggest companies willing to lose a great deal of money to dethrone it.

Data Source: FinViz.com.

Finally, most investors have been calling for Best Buy's (BBY) demise for at least a decade now. So much so, that in fact, Best Buy was commonly referred to as "Amazon's showroom." Nonetheless, Best Buy evolved, made some positive changes to better compete (price matching, improved customer service), and hired a superstar CEO in Hubert Joly in 2012. Instead of proceeding down the slow path to bankruptcy, Best Buy's stock has risen eight-fold since bottoming shortly after Joly assumed CEO duties.

Data Source: FinViz.com.

Historical Summary

We developed a list of nearly 40 examples across various sectors where Amazon entered new markets in the past several years, causing rapid, dramatic and sharp stock sell-offs in each and every instance. There are likely other good examples, but those presented in this document demonstrate the point.

In our estimation, only six companies suffered "permanent damage" due to Amazon competition, while the others are either thriving or haven't been affected to any great degree. We define "permanent damage" as suffering a permanent, catastrophic loss in either revenue or stock price directly due to Amazon, from which the chances of recovery are very low. The vast majority of stocks in our examples have gone on to not only eclipse the previous closing price(s) prior to the Amazon announcement(s) but have also gone on to make new all-time highs alongside the general market.

To be fair, we also put together a list of publicly traded companies and stocks that Amazon has played both a large and direct role in their irreversible downfall. Most will be familiar and the list is as follows: Barnes & Noble (BKS), Bed Bath and Beyond (BBBY), Vitamin Shoppe (VSI), GNC Holdings (GNC), JCPenney (JCP) and Sears Holdings (SHLDQ). Two more that we would add to the list because Amazon played a large part in helping to put out of business (in addition to their creditors) would be Circuit City and Borders.

In many instances, but certainly not all, the actual sales and earnings impact to competitors from Amazon entering new markets is negligible at best and difficult to prove. It certainly has some impact, but we would argue definitely not to the degree that the market assumes on day one of the announcement. We also believe the majority of damage is being done to “mom and pop” enterprises and small- to mid-size private companies, while acknowledging that the overall degree of negative impact is undoubtedly being masked by the fact that the economy is strong and the stock market is near all-time highs. In the near-term though, the market rushes to judgement and assumes worst-case scenarios of massive total addressable market, margin and valuation multiple compression that usually don’t come to fruition.

Incumbents at Risk to Amazon - 38 Companies

Permanently Damaged by AMZN | Not Permanently Damaged by AMZN

Company	Ticker	GICS Sector	Sub-Industry
Ulta Beauty	ULTA	Cons. Disc.	Specialty Retail
Advance Auto Parts	AAP	Cons. Disc.	Specialty Retail
AutoZone	AZO	Cons. Disc.	Specialty Retail
O'Reilly Automotive	ORLY	Cons. Disc.	Specialty Retail
Best Buy	BBY	Cons. Disc.	Specialty Retail
Dick's Sporting Goods	DKS	Cons. Disc.	Specialty Retail
TJX Companies	TJX	Cons. Disc.	Specialty Retail
Ross Stores	ROST	Cons. Disc.	Specialty Retail
Burlington Stores	BURL	Cons. Disc.	Specialty Retail
Barnes and Noble	BKS	Cons. Disc.	Specialty Retail
Bed Bath and Beyond	BBBY	Cons. Disc.	Specialty Retail
Vitamin Shoppe	VSI	Cons. Disc.	Specialty Retail
GNC Holdings	GNC	Cons. Disc.	Specialty Retail
JC Penney	JCP	Cons. Disc.	Multiline Retail
Sears Holdings	SHLDQ	Cons. Disc.	Multiline Retail
Target	TGT	Cons. Disc.	Multiline Retail
Dollar General	DG	Cons. Disc.	Multiline Retail
Costco Wholesale	COST	Cons. Staples	Food & Stpls Ret.
Kroger	KR	Cons. Staples	Food & Stpls Ret.
Sprouts Farmers Market	SFM	Cons. Staples	Food & Stpls Ret.
WalMart	WMT	Cons. Staples	Food & Stpls Ret.
Walgreens Boots Alliance	WBA	Cons. Staples	Food & Stpls Ret.
Taubman Centers	TCO	Real Estate	Mall REITs
Simon Property Group	SPG	Real Estate	Mall REITs
Wayfair	W	Cons. Disc.	Internet
Etsy	ETSY	Cons. Disc.	Internet
eBay	EBAY	Cons. Disc.	Internet
Netflix	NFLX	Comm. Svcs.	Entertainment
Shopify	SHOP	Inf. Tech.	IT Services
MongoDB	MDB	Inf. Tech.	IT Services
Cisco Systems	CSCO	Inf. Tech.	Comm. Equipment
Arista Networks	ANET	Inf. Tech.	Comm. Equipment
Juniper Networks	JNPR	Inf. Tech.	Comm. Equipment
XPO Logistics	XPO	Industrials	Air Freight & Log.'s
FedEx	FDX	Industrials	Air Freight & Log.'s
United Parcel Service	UPS	Industrials	Air Freight & Log.'s
CH Robinson Worldwide	CHRW	Industrials	Air Freight & Log.'s
CVS Health	CVS	Healthcare	HC Prov's & Svcs

Appendix A - Selected Comments of Respondents from FreightWaves Freight.Amazon.Com Sentiment Survey

Given Amazon's size and reach do you think it will be positive or negative for your industry segment?

Carrier Comments:

“Amazon has e-commerce figured out, but when contracting carriers not so much.”

“can’t tell yet will depend on what we book the loads for if the savings is because they cut the broker and not the carrier (or brokers take 27-33%) and carriers deal directly with Amazon then maybe no effect at all ...will have to wait and see.”

”Do they really understand the challenges of this industry or do they just understand their own challenges within their transportation world, which are not universal. They don't have a positive reputation with their own employees, why do we believe they will have a positive reputation with carriers?”

”This is the beginning of the bottoming out of transportation to establish the true value and building a more sustainable market.”

”We are in a very tight market as it is. It will likely drive rates down and profits for carriers, owner operators and drivers. Which would likely force an aging workforce out of the market, leaving us with a much larger gap in market capacity.”

”We cannot continue driving shipping costs down; we are already having a hard time attracting folks into the industry as CDL Class A drivers. Where are the antitrust laws? Amazon is becoming a monopoly. Small companies will not be able to compete.”

“We have been using their platform and they are shopping for the cheapest trucks.”

Shippers:

”Every shipper wants to save money but we are aware of the thin margins... Carrier experience.”

”Overall I think it's bad. It will be more difficult for carriers to be profitable and shippers have to be competitive with peers so we have to go with the market.”

”Low rates are great, but I would be curious to see the service metrics in terms of on-time delivery, on-time pick up, etc.”

”Potential to force other brokerage firms to lower margins to complete, but I do not feel Amazon have enough of a customer base right now to impact the market overall at this time. Looks like a price play in a soft market; will those rates be there when Amazon is taking all that capacity in Q4?”

3PL/Freight Brokers

””Who will schedule appointments at the shipper and receiver? Who will handle tracking and tracing? Who will do all the value-add services that large brokers provide?”

“Shippers will realize their cost savings from using Amazon freight matching is not worth handling the headaches that brokers deal with on a day-to-day basis without the customer knowing.”

“TL brokers who live off the big margins are going to suffer most. Once competitors adopt similar strategies brokers will take a hit. The trick for brokers will be to focus on small- to mid-sized shippers and become a full service traffic department for them.”

“I would like to see how these digital freight brokers do when the market is tight. Anyone can do anything with a loose market. Yes their rates are very aggressive right now. Break even or small profit/loss. But, when the market gets tight (and history repeats itself) or something out there disrupts the industry, how are they going to be on service. In the end sales do not get their cut unless service and product is delivered. If product is unable to move and service suffers the sales team will get loud and operations will have to resort back to service/higher rates in order to move the product.”

”Fringe players and small brokerages without technology solutions, machine learning, AI, and data are going to have an ever increasing time adding value in the supply chain. Small/Medium with non-sensitive freight will enjoy the lower prices and most likely lower service that will come to a race to the bottom.”

How do you think shippers will adopt and use Amazon's new freight matching app?

Carrier:

"When their freight doesn't get moved because of under market rates they will go back to their brokers. DAT load boards are too cheap to work as is."

"The bottom feeders will quickly embrace it. Many others will eventually try it once it becomes established."

"Some will jump in head first and some will hold out a little while longer because of the sheer size of Amazon. Some Shippers still want the personal touch, while others are only concerned with price."

"I think it will have some initial success, particularly with low value, low priority cargo shippers that only care about the margins. But shippers of high value, high priority cargo will realize with the cheapest rate comes the worst service, and most that left for Amazon will return to their traditional carriers."

3PL/Brokers:

"This app is specifically tailored for shippers that have plenty of time and not a lot of money to spend. I'm sure some will try it but may later be turned off by the amount of freight that piles up and does not move due to the low rates."

"The bigger impact is the deterioration of rates. Even if the adoption of the app is slow, the reverberation to the market will be significant."

"Some variation on the Technology/Innovation Adoption cycle will probably apply. I would also say that Amazon as a brand certainly has its admirers, but it may also start to suffer from 'excess ubiquity' from some shippers points of view. As participants, we already know trust is critically important."

"Freight matching is not the same as freight brokering. They are two two very different services. The only area of transportation that I see 'freight matching' being extremely beneficial is ultra-high volume dry van freight. Freight matching has been around for 15 years. This is nothing new it will have no impact. I am surprised it took Bezos this long."

"Amazon is 5 of the retail market and over 50% of the e-commerce market. So 95% of the retail market is still in need of support and value partnerships, teams that know the nuances of their logistics business."

How much success do you think Amazon will have leveraging its carrier network to negotiate lower rates?

Carriers:

"Amazon is offering this at a loss; their goal is to destroy CH Robinson and dominate brokerage."

"Amazon's existing Delivery Service Program could be used to entice contractors to increase their business model to include Class A licensed drivers to service both Brokerage and Delivery Service."

"Arbitrage... carriers must earn an acceptable rate of return to maintain investment in their business. Trucking is not a high margin, high hurdle business (very dissimilar to airlines)."

"Short term they may have a lot. The question will be if carriers can stay in business on the rates they negotiate."

"There are too many carriers taking cheap freight today and it will just get worse because of the size, capacity and ability to keep busy off/with Amazon."

Shippers:

"They haven't seemed to have failed at anything yet."

"It will be market based. Freight Matching is market balancing not leverage."

"Carrier prices typically not driven down by volume, opposite effect. Should be driven primarily by negotiation, ease of interaction and user-friendliness."

"Amazon has already proven its ability to disrupt a business field and their move to 1-day shipping will create a consistent volume in the areas they target."

Brokers:

”Who cares? They can buy at carriers’ normal rates, then sell for 33% less, and do that for months or years, until they have a critical mass of shippers using their network. Voila!

Volume isn't leverage with truckload carriers. the more capacity you take out of a market, the higher the rate for the next load.”

”Unless the high turnover rate has changed in Amazon's Logistics department, I just don't see it.”

”Unless Amazon is taking the losses and still paying carriers at market rates, if they do that for an extended period of time they can take market share and eat up capacity.”

“Operating costs are operating costs. If the rates go too low, capacity will leave the market, as rates go back up over an economic spike, rates will return, capacity will return and even it all out for the cycle to start over. Free market system.”

”Market is so soft right now they will be able to push down to accurate market pricing due to brand clout.”

”From what I have observed the peaks and valleys of Amazon's pricing could be more dramatic for both carriers and shippers. Internally Amazon is willing to pay ‘anything’ during peak but have dropped rates in some markets well below the cost to operate. I also would like to see what happens during peak season. I think it is foolish to think Amazon will prioritize a shippers needs over their own.”

”As long as carriers get access to all of their freight as well, had to be a volume play. Amazon will need to pay ‘market rates’ just like other 3PLs. At the end of the day, I believe Amazon will compress the average margin for brokers, but they will not eliminate them from the market.”

Which categories of freight brokers do you think Amazon poses the most risk to as it ramps up its freight matching app? Please select all that apply.

Brokers:
“To some extent, it's all of the above. The most risk might be to any brokerage who has not built a multi-faceted value proposition and embraced technology to improve visibility, service and reduce operating costs. Niche strategies and equipment types with inherent operational complexities (i.e., flat-bed) have some

defense against market aggregators/consolidators who seek to leverage their scale - because they can't respond well to the mass customization that we deal with daily as 'shipper requirements.'"

"I don't think they pose a risk. Freight matching apps have been around for a long time.

"Digital matching will be even more validated plus the added benefit of being an option other than Amazon. Anybody in the retail world wants to avoid Amazon gaining too much power
CH and UPS."

"Again I think their still power in Managed Transportation, offering more than TL freight. 3PL's will turn more to BPO for cost cutting measures to adjust for loss of TL margins. Shippers still need LTL options It costs somebody to provide the labor to manage the systems which book, dispatch, track, provide PODs, claims, returns and handle payments/settlements. 3PLs that can be agile and custom with their technology and provide trusted partnerships will always have a vital role in logistics outsourcing."

Appendix B - Rate quotes from freight.amazon.com and DAT RateView.

For the 30 lanes selected, almost all Amazon quotes are well below contracted rates to shippers and broker margin spreads. For carrier rates the data shows that Amazon is quoting shippers on average within 1 percent of DAT's average broker-to-carrier spot rate: Amazon may be paying carriers at market prices, but taking no margin for itself.

From	State	Zip	To		To Zip	Date	AMZN QUOTE	Miles	DAT All-In Contract	AMZN TO DAT COMPARISIONS: AMZN to DAT CONTRACT	AMZN TO DAT COMPARISIONS: AMZN TO DAT SPOT + 12% MARGIN	AMZN TO DAT COMPARISIONS: AMZN TO DAT SPOT + 18% MARGIN	RPM	DAT PER MILE C	DAT SPOT + 12% MARGIN	DAT SPOT + 18% MARGIN	DAT SPOT ALL-IN
Erie	PA	16501	Hartford	CT	6101	43394	$1,610	485	$ 1,664	-3.2%	-4.8%	-11.4%	$3.43	1663.55	$ 1,691	$ 1,817	$ 1,489
Erie	PA	16501	Allentown	PA	18001	43394	$1,123	374	$ 1,530	-26.6%	-20.6%	-26.1%	$4.09	1529.66	$ 1,415	$ 1,519	$ 1,245
Allentown	PA	18001	Erie	PA	16501	43394	$ 785	374	$ 987	-20.5%	-14.8%	-20.7%	$2.64	987.36	$ 922	$ 990	$ 812
Hartford	CT	6101	Baltimore	MD	21201	43394	$ 688	311	$ 852	-19.3%	-9.5%	-15.7%	$2.74	852.14	$ 760	$ 816	$ 669
Baltimore	MD	21201	Hartford	CT	6101	43394	$ 995	311	$ 1,228	-19.0%	-6.1%	-12.6%	$3.95	1228.45	$ 1,060	$ 1,138	$ 933
Albany	NY	12084	Buffalo	NY	14201	43394	$ 642	284	$ 795	-19.3%	-4.3%	-10.9%	$2.80	795.2	$ 671	$ 721	$ 591
Buffalo	NY	14201	Albany	NY	12084	43394	$ 901	284	$ 1,031	-12.6%	-4.3%	-10.9%	$3.63	1030.92	$ 942	$ 1,012	$ 829
Brooklyn	NY	11223	Elmira	NY	14901	43394	$ 665	248	$ 856	-22.3%	-18.4%	-24.0%	$3.45	855.6	$ 814	$ 874	$ 717
Elmira	NY	14901	Brooklyn	NY	11223	43394	$1,007	248	$ 1,235	-18.4%	-17.4%	-23.1%	$4.98	1235.04	$ 1,220	$ 1,310	$ 1,074
Hartford	CT	6101	Allentown	PA	18001	43394	$ 503	214	$ 640	-21.3%	-13.1%	-19.1%	$2.99	640	$ 579	$ 622	$ 510
Allentown	PA	18001	Hartford	CT	6101	43394	$ 738	214	$ 743	-0.6%	-19.5%	-25.0%	$3.47	743	$ 917	$ 985	$ 807
Brooklyn	NY	11223	Baltimore	MD	21201	43394	$ 744	191	$ 951	-21.8%	-9.4%	-15.7%	$4.98	951	$ 821	$ 882	$ 723
Baltimore	MD	21201	Brooklyn	NY	11223	43394	$ 972	191	$ 1,086	-10.5%	-9.2%	-15.4%	$5.69	1086	$ 1,070	$ 1,149	$ 942
Wilkes Barre	PA	18703	Baltimore	MD	21201	43394	$ 618	181	$ 693	-10.8%	-5.8%	-12.3%	$3.83	693	$ 657	$ 705	$ 578
Baltimore	MD	21201	Wilkes Barre	PA	18703	43394	$ 641	181	$ 693	-7.6%	-6.0%	-12.5%	$3.83	693	$ 682	$ 732	$ 600
Albany	NY	12084	Elizabeth	NJ	7114	43394	$ 534	164	$ 784	-31.9%	-19.4%	-25.0%	$4.78	784	$ 662	$ 711	$ 583
Elizabeth	NJ	7114	Albany	NY	12084	43394	$ 658	164	$ 859	-23.4%	-16.3%	-22.0%	$5.24	859	$ 786	$ 844	$ 692
Baltimore	MD	21201	Allentown	PA	18001	43394	$ 585	147	$ 681	-14.1%	-10.1%	-16.3%	$4.63	681	$ 651	$ 699	$ 573
Allentown	PA	18001	Baltimore	MD	21201	43394	$ 564	147	$ 599	-5.8%	-10.0%	-16.2%	$4.07	599	$ 627	$ 673	$ 552
Hartford	CT	6101	Brooklyn	NY	11223	43394	$ 574	129	$ 724	-20.7%	-13.4%	-19.4%	$5.61	724	$ 663	$ 712	$ 584
Brooklyn	NY	11223	Hartford	CT	6101	43394	$ 632	129	$ 680	-7.0%	-11.8%	-17.9%	$5.27	680	$ 717	$ 770	$ 631
Wilkes Barre	PA	18703	Philadelphia	PA	19116	43394	$ 488	123	$ 589	-17.2%	-18.7%	-24.3%	$4.79	589	$ 600	$ 644	$ 528
Philadelphia	PA	19116	Yonkers	NY	10701	43394	$ 664	109	$ 779	-14.8%	-19.1%	-24.6%	$7.15	779	$ 820	$ 881	$ 722
Philadelphia	PA	19116	Baltimore	MD	21201	43394	$ 541	102	$ 613	-11.8%	-10.4%	-16.5%	$6.01	613	$ 603	$ 648	$ 531
Brooklyn	NY	11224	Philadelphia	PA	19116	43394	$ 495	97	$ 652	-24.0%	3.5%	-3.6%	$6.72	652	$ 478	$ 514	$ 421
Harrisburgh	PA	17101	Buffalo	NY	14201	43394	$ 781	286	$ 924	-15.4%	-13.8%	-19.7%	$3.23	923.78	$ 906	$ 973	$ 798
Elizabeth	NJ	7201	Pittsburgh	PA	15222	43394	$ 765	363	$ 1,020	-34.8%	-10.4%	-16.6%	$2.81	1172.49	$ 854	$ 917	$ 751
Baltimore	MD	21201	New York	NY	10011	43394	$ 983	191	$ 1,086	-9.5%	-9.6%	-15.8%	$5.69	1086	$ 1,087	$ 1,168	$ 957
Albany	NY	12084	Washington	DC	20016	43394	$ 809	365	$ 1,048	-31.3%	-25.5%	-30.6%	$2.87	1178.95	$ 1,086	$ 1,167	$ 956
Pittsburgh	PA	15222	King of Prussia	PA	19484	43394	$ 862	288	$ 1,172	-7.4%	1.3%	-5.7%	$4.07	930.24	$ 851	$ 914	$ 749