How much do paper and packaging companies spend on transportation?

WHITE PAPER

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The Top 5 Paper and Packaging Companies in the U.S. Spent $7-$9 billion on transportation in 2019

FreightWaves estimates that the Top 5 paper and packaging companies in the U.S. had a combined revenue of $68 billion in 2019. Following a massive wave of consolidation over the past decade, these companies have a combined market share of the U.S. paper and packaging market of about 75%. Assuming each spends 10% of its revenue on transportation, then as a group the top five paper and packaging companies spent approximately $7 billion on transportation in 2019.

Figure 1: Top 5 Paper and Packaging Companies in the U.S. - 2019 Revenue and Transportation Spend (at 10% of Revenue)

Top 5 Paper & Packaging Companies in the U.S.		
	FY19 Revenue ($ billions)	Transportation Spend at 10% ($ millions)
#1 Paper and Packaging Company in U.S.	$ 22.4	$ 2,240
#2 Paper and Packaging Company in U.S.	$ 18.3	$ 1,830
#3 Paper and Packaging Company in U.S.	$ 14.0	$ 1,400
#4 Paper and Packaging Company in U.S.	$ 7.0	$ 696
#5 Paper and Packaging Company in U.S.	$ 6.2	$ 620
Total	$ 67.9	$ 6,786

The estimate for each paper and packaging company's transportation spend as a percentage of revenue is based on the leading paper and packaging company spending $2 billion on U.S. transportation in 2015 compared to total 2015 revenue of $20.7 billion (according to a 2015 *Wall Street Journal* article and interview with the CEO). Note that this figure is said to be only for U.S. transportation, and given this leading packaging and paper company derives about 25% of its revenue internationally, the implied 2015 total global transportation spend was actually $2.7 billion (or 13% of total revenue). Consistency across the five leading paper and packaging companies in terms of transportation spend intensity is assumed. If one instead assumes the Top 5 paper and packaging companies spent 13% of their revenue on transportation in 2019, it amounts to a combined nearly $9 billion spent on transportation.

Figure 2: Top 5 Paper and Packaging Companies in the U.S. - 2019 Revenue and Transportation Spend (at 13% of Revenue)

Top 5 Paper & Packaging Companies in the U.S.		
	FY19 Revenue ($ billions)	Transportation Spend at 13% ($ millions)
#1 Paper and Packaging Company in U.S.	$ 22.4	$ 2,912
#2 Paper and Packaging Company in U.S.	$ 18.3	$ 2,379
#3 Paper and Packaging Company in U.S.	$ 14.0	$ 1,820
#4 Paper and Packaging Company in U.S.	$ 7.0	$ 905
#5 Paper and Packaging Company in U.S.	$ 6.2	$ 806
Total	$ 67.9	$ 8,822

For the leading paper and packaging company, $2 billion spent on U.S. transportation in 2015 equated to about 9.7% of its total revenue. To arrive at the 2019 estimate for the leading paper and packaging company's transportation spending, this figure was adjusted for the revenue growth of the business over the last five years. Given the revenue of the leading paper and packaging company increased by about 10% since 2015, and after accounting for 25% of the business being global, a conservative estimate is that the leading paper and packaging company in the U.S. spent at least $2.5 billion globally on transportation in 2019 (which works out to 11% of 2019 revenue; or $2.9 billion assuming 13%).

This means that **if FreightWaves (through its data intelligence and SONAR) can drive a 1% savings on transportation spend ($25 million in annual savings) that it would drive a 3% increase in net income for the leading paper and packaging company in 2020**.

Even if one assumes 2020 earnings are depressed (FreightWaves staff think they will be) and that there will be a substantial rebound in earnings in 2021, the potential savings still work out to a 2-5% boost to net income. This means **there is a multiplier effect to transportation efficiencies and to driving shareholder value at the U.S.' leading paper and packaging companies**.

Figure 3: Hypothetical Transportation Savings from SONAR for the #1 Paper and Packaging Company in the U.S.

Base		
2020 Estimated Trans. Spend	$	2,500,000,000.00
Trans Eff. Savings (theoretical) with SONAR		1.0%
Potential Trans. Savings Annually	$	25,000,000.00
2020 Adjusted Net Income Estimate (BofA Secs.)	$	762,000,000.00
Potential Boost to Net Income from SONAR		3%
Multiplier		3 to 1

Bear		
2020 Estimated Trans. Spend	$	2,500,000,000.00
Trans Eff. Savings (theoretical) with SONAR		0.5%
Potential Trans. Savings Annually	$	12,500,000.00
2020 Adjusted Net Income Estimate (BofA Secs.)	$	762,000,000.00
Potential Boost to Net Income from SONAR		2%
Multiplier		2 to 1

Bull		
2020 Estimated Trans. Spend	$	2,500,000,000.00
Trans Eff. Savings (theoretical) with SONAR		1.5%
Potential Trans. Savings Annually	$	37,500,000.00
2020 Adjusted Net Income Estimate (BofA Secs.)	$	762,000,000.00
Potential Boost to Net Income from SONAR		5%
Multiplier		3.33 to 1

Though this example is entirely hypothetical, SONAR is likely a very small investment relative to the potential transportation savings and return on investment (ROI). Even if the savings from implementing SONAR company-wide are merely a fraction of the above, it makes sound business sense for paper and packaging companies to consider FreightWaves as a resource for their transportation needs.
Further, a smoother and faster running supply chain is effectively equivalent to a boost in capacity for paper and packaging companies, allowing them to boost asset turns and returns on assets with very limited incremental investment.

Regarding the trend of paper and packaging companies spending ever-growing sums on transportation, at a recent investment conference the leading paper and packaging company CEO stated: "I started with the company many, many years ago as an engineer, and it [**transportation**] was a small, almost rounding error of a cost category and now it's as big as chemicals, energy and people. It's **a strategic area and our industry wasn't always the best at that and we're working really hard to be sophisticated consumers of transportation."**

The same CEO told the *Wall Street Journal* (WSJ) in 2015 that **planning, forecasting and efficiency were the keys to getting the most out of its $2 billion in annual transportation spend. SONAR was built to help companies meet this goal.** Investing in software and technology to drive greater efficiencies in transportation spend would seem to make a great deal of sense. According to the WSJ article, **"that level of spending makes the paper giant the largest railroad boxcar customer, the third-largest waterborne U.S. exporter by volume and a leading user of trucks."**

Whether those billions are spent on rail boxcars, intermodal, ocean container ships, truckload or less-than-truckload (LTL), FreightWaves has the relevant market experts and data intelligence in SONAR to keep the paper/packaging companies informed and on top of everything going on in the freight market.
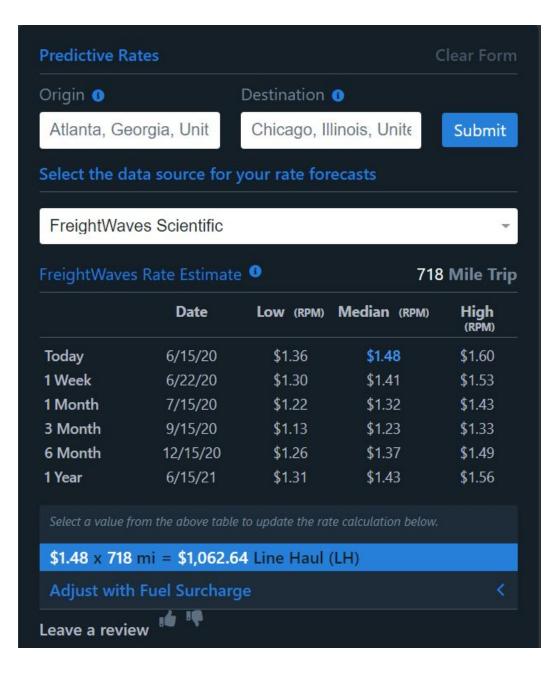
One of the leading drivers of current and future growth for paper and packaging companies is e-commerce merchandise that is shipped in corrugated paper and cardboard boxes. E-commerce is making supply chains more complex and expensive and FreightWaves can assist paper and packaging companies keep their transportation spending in check using SONAR data and market intelligence.

Paper and packaging companies may also have limited revenue visibility beyond a few weeks or months, meaning that they have to tap the spot market or book transportation on short notice to keep up with short order cycle demand. **SONAR can help paper and packaging companies optimize their transportation spend and help them make the correct choices when it comes to using different modes of transportation.**

How paper and packaging companies can use SONAR

When it comes to trucking, SONAR offers unparalleled access to critical freight data and intelligence as they pertain to monitoring and forecasting load volumes, capacity, freight rates (both spot and contract), rates by individual lane, outbound tender market share, etc. FreightWaves even has a rate forecasting tool that was recently developed. Spending hundreds of millions (or billions) annually on trucking without using SONAR means that a company is missing a critical tool in the toolbox.

Figure 4: SONAR Predictive Rates – Atlanta to Chicago

Predictive Rates — Clear Form

Origin: Atlanta, Georgia, Unit
Destination: Chicago, Illinois, Unite — Submit

Select the data source for your rate forecasts

FreightWaves Scientific

FreightWaves Rate Estimate — 718 Mile Trip

	Date	Low (RPM)	Median (RPM)	High (RPM)
Today	6/15/20	$1.36	$1.48	$1.60
1 Week	6/22/20	$1.30	$1.41	$1.53
1 Month	7/15/20	$1.22	$1.32	$1.43
3 Month	9/15/20	$1.13	$1.23	$1.33
6 Month	12/15/20	$1.26	$1.37	$1.49
1 Year	6/15/21	$1.31	$1.43	$1.56

Select a value from the above table to update the rate calculation below.

$1.48 x 718 mi = $1,062.64 Line Haul (LH)

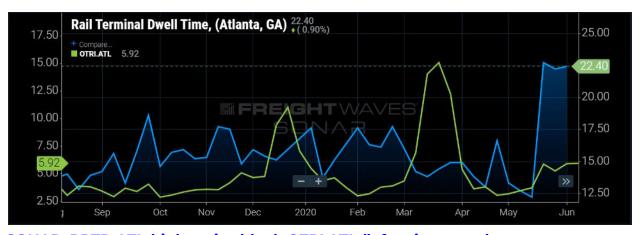Adjust with Fuel Surcharge <

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For paper and packaging companies that use multiple modes of transportation to move their inputs and outputs, that modal flexibility based on rail network fluidity compared to trucking capacity is one key to optimizing transportation spend. SONAR actionable data and intelligence can be beneficial in this regard.

With the historical, legacy transportation mode of choice for paper companies in rail boxcars shrinking (the boxcar count is down 40% in the past 10 years and forecast to shrink another 40% in the next decade), large paper and packaging companies will need to think even more creatively and multi-modally in regard to their transportation needs as time passes.

For example, in March 2020, when demand for paper products was very high, trucking capacity tightened significantly in Atlanta (outbond tender rejections hit 15%), but rail service in Atlanta was actually better than the prior month as dwell times were down.

Conversely, in May 2020, trucking capacity only began to tighten moderately as rail service in Atlanta deteriorated significantly and rail dwell times spiked.

Figure 5: SONAR Rail Dwell Times (Atlanta) and Outbound Tender Rejections (Atlanta)

SONAR: RRTD.ATL (right axis - blue), OTRI.ATL (left axis - green)

If a paper company's mills are located in the Southeast U.S., using these two periods (March and May) as an example, this company could benefit by switching from one mode to another opportunistically. SONAR allows near-time pricing on a spot basis (for truck and intermodal) that is appropriate to the type of mini-bids associated with, say, a month-long shift from rail to trucking (or vice versa).

FreightWaves' data can also compare train velocities and dwell times by railroad, so a paper company could compare Norfolk Southern to CSX on a constant basis.

For another example of how SONAR could be helpful to a paper and packaging company, consider that Chicago is a major rail hub in the Midwest. If a paper company has significant volumes flowing through Chicago, it can use SONAR to monitor dwell times, trucking capacity and spot rates to tactically price point-to-point trucking moves out of Chicago to save time and keep its products moving. This could become especially important since Union Pacific (UNP) is moving from six terminals to three in Chicago, leaving the rail networks there susceptible to a squeeze if there is a volume surge. This example can be extended to any rail and trucking market in the U.S.

Figure 6: SONAR Rail Dwell Times (Chicago), Outbound Tender Rejections (Chicago) and DAT spot rates (Chicago to Atlanta)

SONAR: Rail Dwell Times (Chicago; RRTD.CHI), Outbound Tender Rejections (Chicago; OTRI.CHI), Spot Rates (Chicago to Atlanta; DATVF.CHIATL)

Figure 7: SONAR Rail Dwell Times at Major U.S. Terminals (Chicago, Atlanta, Birmingham and Memphis)

SONAR: Rail Dwell Times (Chicago; RRTD.CHI), Rail Dwell Times (Atlanta; RRTD.ATL), Rail Dwell Times (Birmingham; RRTD.BHM), Rail Dwell Tims (Memphis; RRTD.MEM)

Finally, FreightWaves data science team has the ability to create custom indices and metrics that can be used to optimize any company's transportation needs. For example, FreightWaves could potentially create a holistic rail service score by combining dwell times and train velocities to make it simpler to chart rail service and network fluidity against trucking markets and capacity availability.

The bottom line is that SONAR can potentially save paper and packaging companies a great deal of money on their transportation spend while at the same time improving the efficiency of their transportation operations and boosting the knowledge and skill set of their employees. And SONAR can help paper and packaging companies achieve a leg up on the competition, making it a compelling proposition to consider partnering with FreightWaves.