Global supply chains may be the most underappreciated phenomena in the world economy. The sheer scale of it all is hard to fathom. The largest container ships are now longer than the Empire State Building and can carry 24,000 twenty-foot containers. Some trains are almost 3 miles long with more than 200 cars. Sure, there are often disruptions – oil spikes, hurricanes, wars, etc. But shippers are generally able to divert freight traffic through other modes so that goods are delivered on time and at reasonable cost. Unfortunately, COVID has strained these supply chains in ways few could have foreseen.

COVID created one of the world’s deepest recessions followed by one of its strongest recoveries – all in the matter of a few months. This dynamic created a perfect storm of supply-demand imbalances. On the demand side, U.S. stimulus (nearly $6 trillion in total) has driven consumer demand growth rivaled only by the post WWII recovery. The U.S. trade deficit is running at a 14-year high and the volume of North American freight shipments grew at a record 35% y/y pace in May. Such demand would typically cause a rapid growth in freight capacity. However, shippers are struggling to grow their fleets and merchants have been unable to replenish inventories. Labor availability, commodity shortages, and even weather events have all conspired to intensify this global bottleneck.

Thus far, the Transport stocks have benefitted from such a tight freight market. The Dow Jones Transportation Index is up over 120% from its bottom in March of 2020. However, this index peaked on May 10th and has since underperformed the S&P by more than 11%. The Market seems to believe these supply chain issues are nearly resolved and that pressures will subside in coming months. We, however, think there are structural issues that could prolong this disruption, which could present an opportunity to buy into recent Transport weakness.

Ocean Freight:

The freight capacity shortage has been global and across all modes of traffic. But perhaps the biggest beneficiaries of this environment have been the ocean freight shippers. Companies such as Maersk have generated huge profits as container shipping rates reach record levels. Just recently, the cost to ship a 40-foot container from Shanghai to L.A. neared $10,000. For context, this rate averaged less than $1,800 from 2011 to March 2020. And as these rates rise, the benefits flow directly to shipper bottom lines. Maersk reported its best ever quarter in 1Q21 with net profits of $2.7 billion, up from $197mm in 1Q20.
Thus far, supply has not followed demand. And it is not from lack of effort. Orders for new container ships in 2021 are nearly double those of 2019 and 2020 combined. But it generally takes three years of design, planning, and construction to produce a new container ship. Add in labor and commodity shortages and you can see why container-shipping capacity is expected to grow at half the rate of demand this year.

**Trucking:**

Trucking is another industry experiencing significant tightness. A cyclical business by nature, trucking companies suffered a difficult freight recession in 2019 and were shedding vehicle capacity in the lead up to COVID. The industry has also long struggled with driver shortages that constrain capacity growth. So, trucking was already trending towards lower capacity and higher rates when this stimulus-fueled demand flooded the market. COVID turned what should have been a normal trucking cycle into an historic supply/demand imbalance with record level freight rates.

![Trucking - Dry Van Rates Graph](image)

Trucking companies have been scrambling to grow their fleets in order to meet this surging freight demand. Orders for class-8 trucks accelerated in the back half of 2020 and are still running about 71% higher y/y. Demand for new trucks has been so strong that truck manufacturer order books for 2021 are now full and the wait time for delivery is nearly 10 months. Component shortages have also exacerbated the tightness. Semiconductor shortages are the most widely reported, but plastic shortages, especially polyethylene, have been just as disruptive. 85% of U.S. polyethylene supply comes from Texas, and the polar vortex freeze in February created massive disruption that the industry is still trying to resolve. As a result, used truck prices are setting all-time records.

These component shortages should resolve themselves in due time. However, the ongoing driver shortage is perhaps a more meaningful and longer-term constraint. Trucking is a dangerous and demanding profession with long periods spent away from home and very cyclical earnings potential. The industry has struggled to attract and retain younger replacements for its aging workforce. Driver turnover rates for large long-haul carriers are more than 90% and about 72% for small carriers. COVID stimulus certainly has not helped bring back drivers, and the shutdowns bankrupted as many as 25% of driving schools. The American Trucking Association (ATA) has stated that the industry is running short nearly 61,000 truck drivers and will need to hire roughly 1.1 million new drivers over the next decade to keep pace with retirements and demand growth. This is a structural issue that will take more than just a few months to resolve.

**Rail:**

The railroads have been slower to recover than other modes of transportation. Heavy demand and extreme weather events (TX Polar Vortex, Canadian Wildfires, etc.) have caused poor service levels among all the rail companies. Average train speeds are down 14% QTD and dwell times are up 14%. As a result, shippers have been directing their cargo elsewhere. The cost savings of shipping by rail simply do not offset the deterioration in service levels.
Fortunately, there are signs that the industry is beginning to right itself. Total Load Volumes are still running below their pre COVID levels but are up about 23% y/y so far this quarter. Intermodal volumes have been particularly strong due to low trucking capacity. Automobile loads have suffered from component shortages, but most expect this segment to normalize in the second half of the year. Rail pricing has also begun to improve. Analysts are now forecasting revenue per carloads up 2% y/y in 2Q after four straight quarters of declines. We remain cautiously optimistic that the railroads are in an early stage recovery and could benefit from prolonged trucking capacity shortages.

**Air Freight:**

Air freight is one segment taking full advantage of the supply chain tightness. Typically, air cargo is used for high-value and perishable goods that require expedited shipping. These air shipments are completed far quicker, but that speed comes at a cost. Prior to COVID, shipments by air were 12 times more expensive than by ocean. But with ocean supply chains stretched to their limits, shippers are increasingly shifting orders to air freight. This trend has driven 13 straight months of improving global demand for air cargo with a 9.4% increase y/y in May. And even with increasing air freight prices, the spread between air and ocean pricing has been halved in recent weeks. Air freights now costs only 6 times that of ocean.

This pricing environment has been a boon for the air freight industry. According to the International Air Transportation Association (IATA), overall air cargo revenues are up 70% from pre COVID levels. This strength could continue longer than many expect. Global passenger widebody aircraft are still flying 65% below 2019 levels even though domestic volumes have mostly recovered. And recently rising COVID cases are likely to put further pressure on international travel. This, combined with strong consumer demand and continued ocean freight tightness, should create an attractive environment for air cargo through the end of 2021.

**Investment Implications:**

As we noted, the transportation industry has underperformed the market by more than 11% since peaking on May 10th. This reopening environment has been a boon to freight businesses, but most analysts believe the supply chain tightness has peaked. Higher freight pricing should introduce new capacity and cool consumer demand, ultimately leading towards normalization. Our view, however, is that some of these supply chain bottlenecks have structural imbalances that could persist longer than expected. Persistent driver shortages, lengthy containership production, and aggressive government stimulus are factors contributing to this view. And though upside may be limited at current share prices, this pullback in transports stocks may be an opportunity rather than a leading indicator.
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