Planning and Regional Development Department

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Staying Afloat: Container Shipping Trends

The long awaited raising of the Bayonne Bridge and dredging of the port's channel ways have heralded a new era in the East Coast ocean freight industry. Although many in the region may see this as just another project that has some benefits, the shipping industry may see it more as a life line that can pull them out of a nose dive. In fact, these developments come as the shipping industry is reeling from several years of upheaval.

According to Clarksons Research, in the beginning of 2017 there were 5,154 container ships operated by 326 carriers, an average of 16 ships per operator. Despite looking like a group of disbursed competitors, the container shipping industry is being whittled down to a few major players. Shipping companies have been going bankrupt or merging as opportunities arose. For example, out of the 20 largest carriers back in 2014, 4 have since stopped business. More recently, in September 2016, Hanjin Shipping, the world's seventh largest container carrier, filed for bankruptcy, and the three major Japanese operators declared their intention to merge containership operations in a joint venture due to be established this year and start operations in 2018.

Although recently shipping competitors have fallen to the wayside and others have merged to keep from going bankrupt, consolidation seems to be part of a long-term trend. Back in 1996 the top 10 carriers deployed 45% of capacity and at the start of 2017 that figure stood at 70%, double the amount of capacity. But despite capacity increases, shipping is still a difficult industry to make a profit. A recent Drewry Maritime Research report points out that ocean freight rates are no longer tied to market fundamentals, and that carriers' profits are now almost solely the result of cost-cutting. The study cited the fact that the world's top 15 container lines lost an estimated \$1.1 billion between 2007 and 2012. As shown in Figure 1 the price of shipping has gone down after the recession causing more bankruptcies and M&A activity.

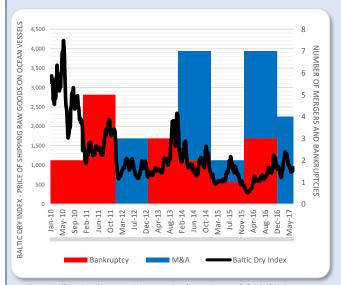


Figure 1 Shipping Operator Mergers, Bankruptcies, and the Baltic Dry Index-Price of Shipping

THE WATCHLIST

| Economic Variables | | Current | - One Year Trend |
|---------------------------------|---------|---------|---------------------|
| UNITED STATES | | | Aug 2016 - Aug 2017 |
| Real GDP [Annual Rate] | Q2 2017 | 3.0% | _ = = |
| Unemployment Rate | Aug-17 | 4.4% | ~~~ |
| Consumer Price Index [Annual] | Aug-17 | 1.9% | |
| Gasoline Price [Regular] | Sep-17 | \$2.63 | |
| PORT AUTHORITY REGION | | | |
| Regional Employment [NY MSA] | Aug-17 | 9,671 | |
| Consumer Price Index [Annual] | Aug-17 | 1.7% | |
| Port District Exports [\$Bill] | Jul-17 | \$10.29 | //// |
| Port District Imports [\$Bill] | Jul-17 | \$22.75 | ~~~ |
| Case-Shiller Home Price Index | Jun-17 | 3.9% | |
| Commercial Real Estate Asking R | ent | | |
| Midtown | Q2 2017 | \$83.95 | |
| Downtown | Q2 2017 | \$61.72 | |

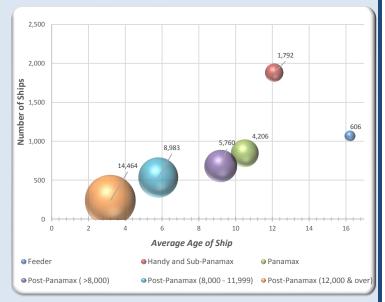


Figure 2 World Container Fleet Number of Ships, Average TEU Capacity, and Age

The report also sees the trend in economies of scale being a major factor driving the industry in the near future. The logic is that larger ships and fewer voyages should equate to greater capacity utilization, which cut operating costs and produce sustainable profits. The current fleet of container ships reflect the relationship that older ships are smaller and younger ships are larger. The industry has banked on their fleets being younger, larger, and fewer to further cut costs and boost profits as the older smaller ships are sent to the scrap yards to pay for the newly minted 18,000 TEU giants.

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| September 2017 | | | | | | | | | |
|---|----------|-----------|----------------|----------------|--|---------|-----------|----------------|---------------|
| AVIATION | Jul '17 | YTD | Jul '17/'16 | YTD '17/'16 | PORT COMMERCE | Jul '17 | YTD | Jul '17/'16 | YTI '17/'1 |
| Revenue Passengers (000's) | 12,769.3 | 76,351.2 | 5.4% | 2.9% | Port Trade | | | | |
| John F. Kennedy International Airport (JFK) | 5,851.0 | 34,379.1 | 2.5% | 1.6% | Container Imports (TEUs) | 291,760 | 1,922,703 | 6.0% | 5.7% |
| LaGuardia Airport (LGA) | 2,624.2 | 16,652.1 | -1.5% | -2.1% | Container Exports (TEUs) | 112,694 | 805,215 | 3.2% | 2.5% |
| Newark Liberty International Airport (EWR) | 4,238.4 | 25,117.2 | 13.9% | 8.3% | Containers lifted on/off Express Rail | 49,087 | 323,078 | 2.0% | 2.6% |
| Stewart International Airport (SWF) | 55.7 | 202.8 | 111.4% | 29.8% | TUNNELS, BRIDGES & TERMINALS | Jul '17 | YTD | Jul '17/'16 | YTI '17/'1 |
| Revenue Freight (Short Tons) | 182,949 | 1,247,654 | 7.0% | 7.0% | Eastbound Vehicle Volumes (000's) | 10,652 | 68,294 | 0.7% | 0.3% |
| Domestic | 58,303 | 433,387 | 0.1% | 4.4% | George Washington Bridge | 4,689 | 29,637 | 0.5% | 0.4% |
| International | 124,646 | 814,267 | 10.6% | 8.4% | Lincoln Tunnel | 1,620 | 10,926 | -1.5% | -1.4% |
| Flights | 114,609 | 746,078 | 1.2% | -0.6% | Holland Tunnel | 1,288 | 8,519 | -2.7% | -3.9% |
| Domestic Air Carrier | 78,735 | 532,206 | 0.7% | -0.7% | Bayonne Bridge | 198 | 1,284 | 63.2% | 37.2% |
| International Air Carrier | 29,516 | 174,168 | 4.3% | 0.3% | Goethals Bridge | 1,426 | 8,996 | -0.2% | -0.1% |
| General Aviation | 6,358 | 39,704 | -6.2% | 0.8% | Outerbridge Crossing | 1,431 | 8,932 | 2.7% | 2.7% |
| Paid Parked Cars | 708,914 | 4,133,993 | -6.7% | -12.6% | Eastbound Volumes by Vehicle Type (000's) | | | | |
| Revenue AirTrain Passengers | 900,956 | 5,833,964 | 0.8% | 3.3% | Autos | 9,792 | 62,401 | 0.7% | 0.3% |
| | | | | | Trucks | 598 | 4,186 | 1.0% | -0.1% |
| FERRY OPERATIONS | Jul '17 | YTD | Jul '17/'16 | YTD '17/'16 | Buses | 262 | 1,705 | 1.2% | -0.9% |
| Passengers (000's) | | | | | PORT AUTHORITY PULSE (Seasonally Adjusted, 2010=100) | Apr '17 | Mar '17 | Change | |
| New Jersey Ferries | 895.6 | 5,097.0 | 10.6% | 1.5% | PA Pulse (Transportation Activity Index) | 100.7 | 98.2 | 2.5% | |
| | | | | | PA Freight Pulse | 97.1 | 95.3 | 1.9% | |
| PATH | Jul '17 | YTD | Jul '17/'16 | YTD '17/'16 | PA Passenger Pulse | 104.2 | 101.1 | 3.1% | |
| Passengers (000's) | 7,129.0 | 47,505.0 | 8.7% | 4.4% | U.S. TRANSPORT. SERVICES INDEX (Prelim., Seasonally Adj., 2000=100) | Jul '17 | Jun '17 | Change | |
| Average Weekday | 297.8 | 1,959.3 | 9.3% | 4.9% | TSI - Combined Index | 128.1 | 126.8 | 1.0% | |
| Average Saturday | 118.4 | 789.8 | 6.0% | 1.6% | TSI - Freight | 128.2 | 126.4 | 1.4% | |
| Average Sunday | 94.8 | 616.8 | 3.8% | 4.5% | TSI - Passenger | 127.5 | 127.5 | 0.0% | |

TRANSPORTATION FOCUS



Indeed, the orders for new ships have a majority (64%) of the largest ships available. These ships would add 12% TEU capacity to the existing fleet while only adding 3% to the actual number of ships owned. This approach by shippers is already translating into a tangible outcome for the New Jersey and New York Ports as ship calls have dropped within the first six months of this year by 17.8% compared to 2016 while container volumes have maintained growth.

The American Association of Port Authorities anticipates that by 2030 the expansion of the Panama Canal and the deployment of the larger Panamax-size ships will comprise more than half the world's shipping capacity. These expansions will facilitate what is expected to be a 45 percent increase in freight by 2030. The Port Authority's recent investment in raising the Bayonne Bridge was made to unlock private investment for container terminals who want to service the new larger ships.

With a future of larger ships, fewer container carriers, and ports and terminal operators all fighting to gain market share through more efficient investments in their facilities, the container shipping industry and the ports that service them are aware of the challenges. But with an outlook of solid growth, more profitability, and better opportunities to capitalize on investments, it is an industry on the cusp of a new era.

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