Intermodal Year in Review

Pat Casey, Vice President, Fleet Management, TTX Company
Lee Clair, Managing Partner, Transportation and Logistics Advisors
Intermodal Year in Review:
Rail Markets Review

Pat Casey, Vice President, Fleet Management,
TTX Company
Summary of Leading Economic Indicators
2019 is on track to be a weaker year than 2018

<table>
<thead>
<tr>
<th>Economic Indicator</th>
<th>2017 Actual</th>
<th>2018 Actual</th>
<th>2019 Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP&lt;sup&gt;1&lt;/sup&gt;</td>
<td>2.2%</td>
<td>2.9%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Consumer Spending&lt;sup&gt;1&lt;/sup&gt;</td>
<td>2.5%</td>
<td>2.6%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Retail Sales</td>
<td>4.7%</td>
<td>4.9%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Investment&lt;sup&gt;1&lt;/sup&gt;</td>
<td>4.8%</td>
<td>5.9%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Housing Starts&lt;sup&gt;3&lt;/sup&gt;</td>
<td>1.21</td>
<td>1.25</td>
<td>1.31</td>
</tr>
<tr>
<td>US Vehicle Prod. (000)</td>
<td>10,960</td>
<td>10,994</td>
<td>10,948</td>
</tr>
<tr>
<td>US Vehicle Sales (000)</td>
<td>17,216</td>
<td>17,202</td>
<td>16,875</td>
</tr>
<tr>
<td>Industrial Prod. &lt;sup&gt;2&lt;/sup&gt;</td>
<td>1.6%</td>
<td>4.0%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Mexico GDP&lt;sup&gt;1&lt;/sup&gt;</td>
<td>2.3%</td>
<td>2.5%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Canada GDP&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3.0%</td>
<td>2.0%</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

Source: Bureau of Economic Analysis, Moody's Analytics, Autocast

1: SAAR, real % change  
2: Year-over-Year %Change  
3: Millions, annualized rate

Canada and Mexico 2017 GDP is an estimate as is 2017 U.S. vehicle production
The risk of recession is climbing

Source: Moody’s Analytics, U.S. Department of the Treasury
2018 was a good year for international, domestic container growth was softer

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trailers</td>
<td>1,306,282</td>
<td>1,444,571</td>
<td>10.6%</td>
</tr>
<tr>
<td>Domestic Containers</td>
<td>7,561,472</td>
<td>7,928,304</td>
<td>4.9%</td>
</tr>
<tr>
<td>All Domestic Equipment</td>
<td>8,867,754</td>
<td>9,372,875</td>
<td>5.7%</td>
</tr>
<tr>
<td>ISO Containers</td>
<td>9,067,555</td>
<td>9,558,448</td>
<td>5.4%</td>
</tr>
<tr>
<td>Total</td>
<td>17,935,309</td>
<td>18,931,323</td>
<td>5.6%</td>
</tr>
</tbody>
</table>

Source: IANA
Intermodal fell 1.5% in Q1, but this was on top of a 7.2% increase in Q1 2018

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trailers</td>
<td>355,525</td>
<td>336,227</td>
<td>-5.4%</td>
</tr>
<tr>
<td>Domestic Containers</td>
<td>1,899,448</td>
<td>1,821,916</td>
<td>-4.1%</td>
</tr>
<tr>
<td>All Domestic Equipment</td>
<td>2,254,973</td>
<td>2,158,143</td>
<td>-4.3%</td>
</tr>
<tr>
<td>ISO Containers</td>
<td>2,292,274</td>
<td>2,319,585</td>
<td>1.2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4,547,247</td>
<td>4,477,728</td>
<td>-1.5%</td>
</tr>
</tbody>
</table>

Source: IANA
## Top growth lanes

<table>
<thead>
<tr>
<th>Corridor</th>
<th>2017 Units</th>
<th>2017 Share</th>
<th>2018 Units</th>
<th>2018 Share</th>
<th>17-18 Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midwest to Northeast</td>
<td>2,218,030</td>
<td>12.4%</td>
<td>2,429,210</td>
<td>12.8%</td>
<td>9.5%</td>
</tr>
<tr>
<td>South Central to Southwest</td>
<td>1,572,028</td>
<td>8.8%</td>
<td>1,701,290</td>
<td>9.0%</td>
<td>8.2%</td>
</tr>
<tr>
<td>Intral-Southeast</td>
<td>1,096,594</td>
<td>6.1%</td>
<td>1,192,691</td>
<td>6.3%</td>
<td>8.8%</td>
</tr>
<tr>
<td>Midwest to Western Canada</td>
<td>693,179</td>
<td>3.9%</td>
<td>784,371</td>
<td>4.1%</td>
<td>13.2%</td>
</tr>
<tr>
<td>Midwest to Southwest</td>
<td>3,128,250</td>
<td>17.4%</td>
<td>3,212,438</td>
<td>17.0%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Midwest to South Central</td>
<td>492,338</td>
<td>2.7%</td>
<td>552,283</td>
<td>2.9%</td>
<td>12.2%</td>
</tr>
<tr>
<td>Midwest to Northwest</td>
<td>928,263</td>
<td>5.2%</td>
<td>980,041</td>
<td>5.2%</td>
<td>5.6%</td>
</tr>
</tbody>
</table>

Source: IANA

Note: chart includes lanes that increased by more than 50,000 moves in 2018
After two very strong years, container import growth may soften in 2019

- Container import growth should slow in 2019, at least in part due to freight being pulled into late 2018 due to concerns about tariff policy
- TTX expects imports to gain 2-3% in 2019

The latest data shows 1Q19 U.S. imports grew 2.0% over 1Q19
There was likely a pull-forward of imports from China in late 2018

» Pre-tariff surge from China was not evident in Q3 – but definitely happened in Q4

» First time in 15 years that Q4 was that year's highest volume from China

» Most of that surge was in December – up 27% after averaging 6% the first 11 months of 2018

Source: PIERS, U.S. Census Bureau
Container Imports from China

» Growth by commodity reflects expected tariff increases

Share moving inland was an all-time low of 55% in December, but the share has increased since then

Source: PIERS, IANA

NOT FOR DISTRIBUTION OR REPRODUCTION
All-Water Share increased in 2018

Source: PIERS, TTX
Transload share is expected to remain flat in 2019

Source: PIERS, TTX
There is the potential for international to outpace imports in 2019.

- Intermodal is expected to gain 3-4% in 2019
IMO 2020 may increase the cost of a FEU by $200: Is this accurate and how might it affect routings?

A TEU consumes 400 kg. of fuel (average of all sailings)

An FEU consumes 800 kg.

At 2.2 lbs. / kg., an FEU consumes, 1,760 lbs. of fuel

\[
1,760 \div 2,204 = .80 \text{ metric tons}
\]

.80 metric tons x $250 (Assumed cost difference between bunker and low-sulfur diesel fuel) = $199.64

Will BAF’s be applied on a route specific basis and how will it affect AWS routing costs vs. west coast discharge?

Scrubbers and LNG may be cost effective but limited in scope?

Source: Hapag-Lloyd, Breakthrough, TTX
Domestic Intermodal
Domestic softened in late 2018

North American Domestic Intermodal Volume Growth

Source: IANA, TTX
Overall freight shipments are down from last year

Source: Cass
Current estimates are that the domestic container fleet will expand 6.9% in 2019

Source: TTX
After a rough winter, velocity seems to be on an upward track
Domestic container growth may return in the second half of 2019.

- Domestic containers are expected to expand 3-4% in 2019.
The trailer rebound is likely over

- Trailers volumes are expected to be mostly flat in 2019

Source: IANA, Licensed Materials, TTX
Pat Casey, Vice President, Fleet Management, TTX Company
Intermodal Year in Review: Trucking Review

Lee Clair, Managing Partner,
Transportation and Logistics Advisors
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Trucking in 2017 and 2018
Trucking tonnage grew slowly from mid-2014 to mid-2017, then grew strongly through the end of 2018

- Truck tonnage growth CAGR:
  - 7/2014 to 3/2017 1.6%
  - 3/2017 to 1/2019 6.3%
- Recent tonnage growth > 2x GDP growth
- Shippers also built inventory ahead of tariffs

Source: Federal Reserve Bank of St. Louis Truckload Tonnage index data
At the same time, the implementation of ELD’s decreased truck capacity

<table>
<thead>
<tr>
<th>ELD Rule</th>
<th>Impact</th>
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<tbody>
<tr>
<td>• Electronic Logging Devices (ELD's) record driver hours-of-service, required December, 2017 for interstate commerce</td>
<td>• Large carriers have had ELD's for years</td>
</tr>
<tr>
<td>• April 1, 2018 full enforcement</td>
<td>• Q4, 2017 many other carries installed</td>
</tr>
<tr>
<td>• Makes it difficult for drivers to cheat on hours</td>
<td>• Q1, 2018 &quot;rest&quot; of carriers to implement</td>
</tr>
<tr>
<td>• Could make it easier for drivers to claim coercion on carriers, shippers</td>
<td>– Likely the greatest creative paper log Co's</td>
</tr>
<tr>
<td></td>
<td>• Q2, 2018 enforce compliance</td>
</tr>
<tr>
<td></td>
<td>• Impacts:</td>
</tr>
<tr>
<td></td>
<td>– Routes requiring just over 1 or 2 full days</td>
</tr>
<tr>
<td></td>
<td>▪ Avg. days for 450-550 mile lane increased from 1.05 to 1.22</td>
</tr>
<tr>
<td></td>
<td>– Short hauls where multiple loads/day</td>
</tr>
<tr>
<td></td>
<td>– 1-day lanes, nowhere to park</td>
</tr>
<tr>
<td></td>
<td>– Various one-off situations</td>
</tr>
</tbody>
</table>

Source: Stifel presentation “The ELD Mandate is Finally Here” 12/19/2017; JOC article “ELD mandate delaying US truck shipments” 2/16/2018
As a result, truckload rates rebounded sharply

- Rates flat to down 2015 – mid-2017
- Rates up 17.2% June – December 2018
  - Increased freight volumes
  - ELDs constrained capacity

*Change in per-mile truckload linehaul rates
Source: CASS Information Systems Truckload Linehaul Index
Current Trucking Environment
Truck tonnage has remained high, but growth may be slowing

- Growth was consistently strong from mid-2017 through October 2018
- Since October 2018 volume has flattened
- Year-over-year volume growth still strong
  - January: Up 5.5%
  - February up 5.4%
- Estimates that truck volume will be +/- 2% vs. 2018

Source: St. Louis Federal Reserve ATA data; Logistics Management Magazine for 2019; Stifel Trucking Industry Update 4/9/2019
Demand for spot capacity increased from mid-2017 to mid-2018, but has decreased since

- Load-to-truck ratio increased from 2 to 5 in 2017 and stayed high through June 2018
- Since June 2018 load-to-truck ratio has been declining
- March 2019 weak vs. March 2018
  - Van Load-to-Truck Ratio down 63%
  - Spot market loads down 55%
  - Van Spot Rates down 14%

Source: DAT Trendlines
Driver costs continue to increase – supporting trucking rates

**Driver Shortage Issues**

- ATA est. shortage of 50,000 drivers
- Median for-hire driver age: 49, 52 for private fleets
- Issues include:
  - Recoveries in manufacturing, construction
  - More stringent safety requirements eliminate poor drivers
  - Drug test eliminate a percentage of the potential driver base
  - Women ~6% of truck drivers
  - Minimum age of 21

**Driver Cost**

- Driver cost 7.2% annual 2014-2017 growth, despite weak trucking market
- Likely greater increase since 2017
- Driver costs ~43% of ops cost

<table>
<thead>
<tr>
<th>Year</th>
<th>Average Driver Cost/Mile (Cents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>12.9 (46.2)</td>
</tr>
<tr>
<td>2015</td>
<td>13.1 (49.9)</td>
</tr>
<tr>
<td>2016</td>
<td>15.5 (52.3)</td>
</tr>
<tr>
<td>2017</td>
<td>17.2 (55.7)</td>
</tr>
</tbody>
</table>

Wages

Benefits

CASS data shows rates have softened in 2019, but not collapsed

- 2019 rates have softened
  - Up 5.5% from 2018 levels
  - Down 3% from year end 2018 levels
- Rates still well above 2017 levels

*Change in per-mile truckload linehaul rates
Source: CASS Information Systems Truckload Linehaul Index
DAT data shows contract rates down slightly in 2019, while spot rates are down significantly.

- Contract rates are holding up much better than spot rates
  - Contract up 2% YoY in March, down 5% from peak
  - Spot down 14% YoY in March, down 20% from peak
- Contract and spot rates are well above winter 2017 levels
- Spot rates typically 15% to 17% below contract rates
  - Narrow spread in late 2017 and first half of 2018
  - Currently a wider than typical spread

Source: DAT Trendlines: National Van Rates
Other key trends influencing the trucking market

- Tariff threats resulted in building inventory in late 2018, now unwinding
- Carriers are adding trucks – small carrier capacity up 4% YoY

Source: Stifel Trucking Industry Update 4/9/2019; TandLA experience