The Difference This Time:
Last cycle’s inflation drives this cycle’s productivity

Kenny Vieth
ACT RESEARCH Co., LLC

Federal Reserve Bank of Chicago
Automotive Outlook Symposium
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Macro Assumptions

Economy projected to move to a stronger footing

– GDP from 1.9% in 2013 to 2.5% in 2014, 3.2% in 2015

• Broader base of support
  – Healthier consumer balance sheets
  – Pent-up residential investment
  – Rising domestic energy production
  – Strong corporate profits
  – Continued low inflation
  – Accommodative Fed policy

• Caveat(s):
  • **Reemergence of unproductive domestic politics**
  • Rising potential for geopolitical disruptions
  • Still slow job and income growth
    – *How long will this act as a drag on business investment?*
  • Modest drag from slower emerging market growth

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Last October, ACT became one of the 50 forecasters in the *Blue Chip Economic Indicators!*
Productivity: Defining the Cycle

- Rapid rise in transportation inflation last decade drove sharp focus on cost control by shippers
  - Equipment, drivers, diesel (commodities)
- Simultaneously,
  - Technology advances made for real-time communications between shippers and under-utilized capacity
  - RRs spent $ billions on expanding IM offerings and improving service
The Problem in a Nutshell

RGDP & U.S. Heavy Truck Productivity

Year Over Year

2008 - 2014

If freight and productivity are growing at the same rate, you don’t need more trucks.

Source: ACT Research Co., LLC: Copyright 2014
Illustrating the Impact

Class 8 Total Population & U.S. Real GDP
1974 - 2020f

US Active Pop (000s)

RGDP $Bs

Deregulation

ACT Research Co., LLC: Copyright 2014
Despite economic growth and a stagnant Class 8 population, fleet utilization levels & profitability were basically unchanged from 2011 through mid 2013.
Slow to Materialize

TL Carrier Database: Net Profit Margin
Q1’09 - Q1’14

- **1H’13**: After ~3 years of stagnant results, profits break above trend
- **Q3’13**: Costs related to new HoS regs rose faster than revenues
- **Q1’14**: Weather pummels freight volumes, drives up operating costs
Shipper Productivity

ATA Truck Tonnage Index & ATA Truck Loads Index
January ’93 - March’14 (2000=100)

Density
Widening spread between tonnage & loads illustrates improved freight density

As well as:

Utilization:
Rise in private fleet backhauls
Technology driven improvement in incremental capacity utilization

Domestic intermodal

Source: American Trucking Associations, ACT Research Co., LLC: Copyright 2014
Productivity: Other Avenues

NPTC Benchmark Survey:
Private Fleet Empty Backhauls Percentage

Easy rule of thumb:
1mm IM loads = ~10k tractor pop.

Domestic Intermodal Loadings
2003-2014F

Private fleets get for-hire authority, farming capacity out to non-asset based 3PLs
Size of the Pie Reality

U.S. Freight Tonnage by Mode

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2024</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intermodal</td>
<td>Other</td>
</tr>
<tr>
<td>Intermodal</td>
<td>1.2%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Others</td>
<td>31.6%</td>
<td>27.4%</td>
</tr>
<tr>
<td>Trucking</td>
<td>67.0%</td>
<td>70.9%</td>
</tr>
</tbody>
</table>

U.S. Truck Tonnage 2012

- Private: 49.7%
- Truckload: 48.8%
- LTL: 1.5%

Applying this data to ACT’s “active” population:
1ppt of modal share ~20k truck population
# Productivity:
Undermining U.S. C8 Tractor Demand

<table>
<thead>
<tr>
<th>2007-2013 Capacity Diversion</th>
<th>Source data/methodology</th>
<th>Active stock Capacity Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shipment Density:</strong></td>
<td>ATA Tonnage &amp; Loads</td>
<td>140k units</td>
</tr>
<tr>
<td>. Product, Packaging</td>
<td>~10ppts</td>
<td></td>
</tr>
<tr>
<td>. Loading, etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fleet Utilization:</strong></td>
<td>NPTC (‘07-’13):</td>
<td>28k</td>
</tr>
<tr>
<td>. Private fleet backhauls</td>
<td>29% to 21% = ~2pppts</td>
<td></td>
</tr>
<tr>
<td>. Improved technological</td>
<td>Rise of 3PLs, optimization</td>
<td>74k</td>
</tr>
<tr>
<td>. ability to connect loads</td>
<td>software, smart phones,</td>
<td></td>
</tr>
<tr>
<td>. &amp; equipment</td>
<td>tablets, etc. Estimate:</td>
<td></td>
</tr>
<tr>
<td>. ~5pppts</td>
<td>~5ppts</td>
<td></td>
</tr>
<tr>
<td><strong>Domestic Intermodal:</strong></td>
<td>2007 = 5.7mm</td>
<td>18k</td>
</tr>
<tr>
<td>. 1mm = 10k pop.</td>
<td>2013 = 7.5mm = 1.3ppts</td>
<td></td>
</tr>
<tr>
<td><strong>Total Productivity Impact</strong></td>
<td>2007-2013</td>
<td>260k</td>
</tr>
</tbody>
</table>
From 2007 to 2013, 124,000 tractors were exported out of the U.S. (~100k out of NA)

Final tally is a net productivity hit of ~140k units, or about 10% of active tractor capacity
Why Are We Seeing this?

January aside, permanent or opportunistic?

A) Shippers trading slower speed for lower freight rates

B) A reflection of cheap money and China no longer exporting deflation

Source: Census Bureau, ACT Research: Copyright 2014
Productivity: Key question

- At what point do the outsized productivity improvements of the past 7-8 years begin to taper?
  - Our work suggests that 2012 was the high-water mark for the rate of productivity growth
    - Productivity still growing above trend, but at a slower rate
  - If the economy grows as expected* and productivity growth slows, the next several years will be very good for truckers and by extension new truck and trailer demand
Defining Population

U.S. Class 8 Population: Tractors/Artics & Trucks/Rigids
1990 - 2020

Despite 22% GDP growth from 2003 to 2013:
Total pop. up just 8%
Active pop. is unchanged
Late-model pop. down 12% (and 23% from ‘06 peak)
The high cost of trucks and the inability of the industry to gain traction on freight rates has kept fleet age at high levels:

Implicit in an older fleet is a less safe fleet.
Truck Quality or Necessity?

**Used Class 8: Average Miles**

January '04 - March '14 (Not SA)

Average Miles (000s)

- 552k mi.avg
- 507k mi.avg

ACT Research Co., LLC: Copyright 2014
Driver Shortage

• The freight will get delivered
  • Freight determines driver demand, not the reverse
  • Who, When (How long) and How Much

• There is no substitute transportation mode for heavy tractor-trailer combinations

• Transportation is a commodity and the Law of Supply & Demand has not been repealed

• Driver shortage does not preclude profitability

• All that said, there is no “Easy Button”
The Traffic World (now part of Journal of Commerce)  
Dec. 12, 1914

The Truck Driver Problem

- “Practically every truck manufacturer and nearly all employers complain of the great difficulty of securing drivers who are competent and who will work handling freight aside from those who drive horses. They are agreed that the profit or loss from truck transportation is largely dependent upon the drivers, and yet a majority of truck owners will hire the men who will work cheapest, entrusting valuable property in their keeping...
Freight Market Conditions

• Spot freight rates move higher following the capacity constraining changes to HoS

• Stronger economic growth in 2H’13 exacerbates already snug capacity
  • Driver situation started biting around this time

• Polar Vortices impact output in Q1, but impact truck availability even more
  • Reading between the lines on economic reports
Rising Rate Environment

DAT Trendlines:
Dry Van Revenue per Mile (exFSC)
Year over Year % Change
January ’10 - April ’14 (2000=100)

Spot rates were moving higher before the weather got bad.

Cass Truckload Linehaul Pricing Index
January ’09 - March ’14 (01’2005=100)

Source: Cass Information Systems, ACT Research Co., LLC: Copyright 2014
Wall Street Has Noticed

Exhibit 1: KNX 3-Year Historical Forward P/E

Source: Company data, Credit Suisse estimates
Used Prices Strong

More expensive EPA’10 trucks become part of the 4-5 year population
New Equipment Demand

- Rapid change in sentiment
  - Stronger and more consistent freight
  - Traction on freight rates & profitability
  - Improved confidence

- Short-term industry outlook
  - Class 8 orders booked at 320k SAAR October-March
  - Backlogs expand rapidly
    - From 4 weeks to 5 months
  - Low inventories provide some cushion for build
Never “If”, But “When”

TOTAL CLASS 8: N.A. NET ORDERS
January ‘10 - April ’14

TOTAL TRAILERS: NET ORDERS
Year over Year Percent Change
January ‘10 - April ’14
Improving Visibility
Build plan guidance from OEMs in May suggest a more aggressive 2nd half: Extrapolating May guidance produces 290k-295k for NA BU in 2014

### Build Timing of Units in Backlog as of April 2014

<table>
<thead>
<tr>
<th>CLASS 8</th>
<th>2014 YTD</th>
<th>Q2'14 May-Jun</th>
<th>Q3'14 Jul-Sep</th>
<th>Q4'14 Oct-Dec</th>
<th>Q1'15 Jan-Mar</th>
<th>Beyond</th>
<th>2014 Fcst.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BACKLOG DISTRIBUTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>. Distribution by Quarter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BACKLOG DISTRIBUTION</td>
<td>44,709</td>
<td>48,625</td>
<td>21,506</td>
<td>3,576</td>
<td>1,312</td>
<td>119,728</td>
<td></td>
</tr>
<tr>
<td>. Distribution by Quarter</td>
<td>37.3%</td>
<td>40.6%</td>
<td>18.0%</td>
<td>3.0%</td>
<td>1.1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class 8 Actual/Forecast Build</td>
<td>90,278</td>
<td>49,403</td>
<td>77,900</td>
<td>75,000</td>
<td>--</td>
<td>292,581</td>
<td></td>
</tr>
<tr>
<td>. Open build slots: 2014</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>. % Open</td>
<td>4,694</td>
<td>29,275</td>
<td>53,494</td>
<td>--</td>
<td>87,463</td>
<td></td>
<td></td>
</tr>
<tr>
<td>. % Open</td>
<td>9.5%</td>
<td>37.6%</td>
<td>71.3%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DAYS BUILD UPD (A/F)</td>
<td>YTD 82</td>
<td>May-June 42</td>
<td>Q3'14 63</td>
<td>Q4'14 59</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DAYS BUILD UPD (A/F)</td>
<td>1,101 1,176</td>
<td>1,237</td>
<td>1,271</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TOTAL CLASSES 5-7: N.A. NET ORDERS
January '10 - April '14

TOTAL CL. 5-7: N.A. BACKLOG & BL/BU RATIO
January '10 - April '14

TOTAL CLASSES 5-7: N.A. NET ORDERS (Trailing 12 mo.) & BUILD (Actual)
January '10 - April '14
# N.A. Classes 5-7 Order Distribution

(Data through April 2013, annualized)

<table>
<thead>
<tr>
<th>Classes 5-7 Orders</th>
<th>Truck (000s)</th>
<th>Bus (000s)</th>
<th>RV (000s)</th>
<th>Total* (000s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Past 12 Mo.</td>
<td>152.1</td>
<td>35.6</td>
<td>17.6</td>
<td>212.2</td>
</tr>
<tr>
<td>Past 6 (AR)</td>
<td>156.3</td>
<td>32.4</td>
<td>19.0</td>
<td>217.5</td>
</tr>
<tr>
<td>Past 3 (AR)</td>
<td>163.8</td>
<td>38.4</td>
<td>23.0</td>
<td>237.7</td>
</tr>
<tr>
<td>Apr. (AR)</td>
<td>192.2</td>
<td>41.6</td>
<td>27.9</td>
<td>262.9</td>
</tr>
</tbody>
</table>

* Total includes Step Vans
Housing Starts vs. Cl 5-7 Truck Sales

Source: ACT Research Co., LLC, US DOC Census Bureau

HOUST
CL 5-7 TRUCK RS
Poly. (HOUST)
Poly. (CL 5-7 TRUCK RS)
Demand Impediments

• Equipment (especially C8) is meaningfully more expensive and very good

• Regulations, HoS (2005, 2013), CSA, etc., and changes in warehousing have reduced mileage/truck ~8%-10% per year since 2004
  • More trucks required, but fewer trucks per year

• The rate of economic growth relative to the rate of productivity has not been favorable cycle to date
  • To reiterate, this situation is critical to trucker profits
Significantly Better MPG

On highway Tractor Fuel Economy & Estimated Degradation

The difference between 6mpg & 8mpg over 100k miles?

4,200 gal./yr. =~$17k/yr.

Sources: ACT Research w/ inputs from PHH FirstFleet, NACFE, and fleet inputs.
ACT Research Co., LLC: Copyright 2014

ACT Research Co., LLC, Copyright 2014
Forecasts

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA Class 8 BU (000s)</td>
<td>278.7</td>
<td>245.5</td>
<td>293.0</td>
<td>295.6</td>
</tr>
<tr>
<td>Memo: U.S. C8 RS (000s)</td>
<td>198.7</td>
<td>187.6</td>
<td>220.0</td>
<td>223.0</td>
</tr>
<tr>
<td>US C8 NG RS</td>
<td>8k</td>
<td>10k-12k</td>
<td>14k-16k</td>
<td></td>
</tr>
<tr>
<td>NA C5-7 BU (000s)</td>
<td>176.6</td>
<td>188.2</td>
<td>213.8</td>
<td>222.0</td>
</tr>
<tr>
<td>U.S. Trailer FS (000s)</td>
<td>236.8</td>
<td>238.5</td>
<td>261.4</td>
<td>264.7</td>
</tr>
</tbody>
</table>

Domestic tank supply capacity constrained at ~10k