Truckers Buy Trucks: A look under the hood of commercial vehicle demand

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Overview

• Positive side of slow, gradual expansion:
  • Still upside for manufacturing & retail at mid-cycle
• Freight situation solid; West Coast agreement helps
• Profitability is very good – corporate and transportation
• Commercial vehicle production & sales –
  • Class 8 on 2nd best ever trajectory
  • Class 5-7 steady slow improvement - but no records
• 2015 critical in determining stability or overheating

2015 & 2016 = good years ahead
Mostly happy – main problems are offshore

<table>
<thead>
<tr>
<th>Happy</th>
<th>Not-so-happy</th>
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<tbody>
<tr>
<td>Business/consumer</td>
<td>Rest-of-world economic growth</td>
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<td>confidence</td>
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<td>Job creation</td>
<td>US$ impact on exports</td>
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<td>Oil prices (consumers)</td>
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<td>Stock markets</td>
<td>Oil prices (producers)</td>
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<td>Corporate Cash Flow &amp;</td>
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<td>Profitability</td>
<td>Global gov’t finance</td>
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<td>Fed policy</td>
<td>– U.S. Federal</td>
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<td>Beltway scene is not</td>
<td>– Europe</td>
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<td>terrible</td>
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<td>China slowdown</td>
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<td>Geopolitics (nothing new)</td>
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~$200b Windfall

Diesel Fuel & Crude Oil Prices
2007-2015 (Week 20)

Price declines free up discretionary dollars:
1 cent (annual) = ~$2B
No Recession in Sight

• Yield curve spread wide = low recession risk
• Credit (relatively) easy to get

U.S. Federal Reserve Senior Loan Officers’ Survey: Bank Lending
Net % easing less tightening standards – C & I loans
Q1’90 - Q2’15

YIELD CURVE
1-Year and 10-Year Treasuries
January 1970 - April 2015

Rate Spread (pps)

Source: Federal Reserve Board, ACT Research: Copyright 2015
Deferred impact of stronger US$ on Class 8 orders relates to pricing practices: Prices adjusted on a quarterly basis.
Despite 28% GDP growth, there were fewer “Active” Class 8 tractors at the end of 2014 than there were in 2003.
Expensive Trucks = Old Fleet

U.S. Class 8 Population Model Outputs: Average Age, TRACTOR Population

1995 - 2015

Strong tractor sales from 2014-2016 finally start moving the needle on fleet age

Implied with strong sales, more fleets with monthly payments
Productivity: Defining the Cycle

• Rapid rise in transportation inflation ‘03-’08 triggered shipper focus on cost control
  • Equipment, driver, & diesel inflation
  • Overall costs of regulatory compliance

• Simultaneously, boost in tech & competition
  • Technology made for real-time communications linking shippers to under-utilized capacity
  • RRs spent $ billions on expanding IM offerings and improving service

• When do outsized productivity gains ebb?
  • Our work suggests peak occurred in 2013
Paradigm Shift

Class 8 Total Population & U.S. Real GDP
1976 - 2020f

US ACtive Pop (000s) vs. RGDP $Ts

- GDP
- US Total Pop

Deregulation

Broadly higher transportation costs and new technology trigger behavior changes by shippers and truckers through increased freight density and improvements in utilization.
Regulatory Calendar

• By late Q2, the EPA is expected to announce targets for Phase 2 of the GHG standard
  • Compliance phase-in anticipated in 2021, 2024, 2027

• Expectation that by late 2015, FMCSA will introduce a defensible ELD rule
  • Full ELD compliance 2 years after should be very good for capacity owners
  • Anywhere from a minimum of 2% to 5-6% capacity hit

• Rules surrounding driver health and fitness
  • Medical examiners certificate
  • Drug & alcohol clearinghouse
  • Higher fleet insurance premiums, follicle level testing, etc., still under consideration

• Will current 34-hour reset make it into next highway bill?
Impact of HOS 34-Hour Reset

BEFORE: Traffic prior to 2-overnight reset:
- Good traffic flows at 5am-6am
- Modest AM peak
- PM peak from 3pm – 5pm

AFTER: Traffic post to 2-overnight reset:
- Virtually no traffic at 5am-6am
- Sharp mid-morning peak
- Significantly longer PM peak extending to 7pm
Driver [Pay] Shortage

• The freight will get delivered
  • Freight determines driver demand, not the reverse
  • Problem of prosperity – what is worse:
    No freight (2008-09) or no drivers (2014)?

• There is no substitute mode for **most** heavy truck freight

• Unlike freight and fuel, it is an internal issue
  – Retention/recruitment are actionable
  – Driver shortage does not preclude profitability
    • *Shortage strongly correlated with profits and Class 8 orders*

• There is no “easy button”
Who’s Delivering Your Freight?

Not surprisingly, private fleet drivers make $20k-$25k more per year on average than for-hire drivers and they also get home more regularly!

From NTI (Klemp):
For-hire median @ ~$46k, Private fleet median @ ~$68k
Most Common Job by State

Source: NPR's Planet Money
Unfriendly Demographics

DRIVER SUPPLY: U.S. MALES
Potential Hirees & Impending Retirees
2000-2030

Source: U.S. Census Bureau, ACT Research Co., LLC: Copyright 2015

Warm Bodies (000s)
1000 1200 1400 1600 1800 2000 2200 2400 2600
21 Year-olds
65 Year-olds
SUPPLY OF INCOMING CDL-AGE U.S. MALES NARROWS
HARD TO FIND DRIVERS
NOT SO HARD TO FIND DRIVERS
U.S. MALES AT RETIREMENT AGE RISES SHARPLY

Source: U.S. Census Bureau, ACT Research Co., LLC: Copyright 2015

ACT Research Co., LLC, Copyright 2015
HD Market Conditions

• Rising expectations for economic activity

• Strong, positive alignment of HD Class 8 and Trailer demand drivers
  • Economic velocity, trucker profits, pent-up demand, fleet age, new truck MPG, driver shortage, used valuations, etc.

• Maxim:
  Fleets use trucks to haul freight,
  Fleets buy trucks to make money
Carriers Buy Trucks to Make Money

TL Carrier Database:
Net Profit Margin
Q1'96 - Q1'15

Paired orange bars are the two quarters immediately preceding the last 4 significant upwards swings in orders.
With new capacity additions accelerating, and freight slowing in Q1, rate growth decelerates rapidly.

Some reacceleration expected as WC Ports freight and pent-up manufacturing demand unlimber

From mid’13 to early ’15, for-hire spot and contract rates (ex FSC) up 19% and 12%, respectively
Planning Ahead:

Strong new Class 8 retail sales from 2014 to 2016 suggest a glut of late model Class 8 equipment and falling prices are likely by 2018.
Bonus Demand Driver: Fuel Economy

U.S. Class 8 Fleet Fuel Economy

2014-Ending U-15 Population

U-15 Fleet:
Pre EPA’10: 1.62mm
EPA’10-’12: 0.31mm
CAFE’14 (‘13): 0.41mm

<6mpg 69.2%
6-7mpg 13.1%
>7mpg 17.7%
All C8 units up to EPA’10
EPA’10-2012
2013-2014
>7mpg 17.7%
6-7mpg 13.1%
Orders: US$ Strength Impacting Demand
(Data through April, annualized)

<table>
<thead>
<tr>
<th></th>
<th>US 8 (SAAR)</th>
<th>CAN 8 (SAAR)</th>
<th>MEX 8 (SAAR)</th>
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<tbody>
<tr>
<td>Past 12</td>
<td>311</td>
<td>37</td>
<td>20</td>
</tr>
<tr>
<td>Past 6</td>
<td>310</td>
<td>34</td>
<td>17</td>
</tr>
<tr>
<td>Past 3</td>
<td>266</td>
<td>20</td>
<td>14</td>
</tr>
</tbody>
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Knowing a price hike was immanent, Canadian truckers & dealers got a lot of orders booked from November to January.

Mexican truckers are placing orders month to month.
Tractors Primary Market Drivers

U.S. CLASS 8: NET ORDERS
January '10 - April '15

Units (000s)

TOTAL 8
TRACTORS
TRUCKS

Recent pullback in orders primarily related to paucity of available build slots in 2015

ACT Research Co., LLC: Copyright 2015
Long Lead-Times Continue

TOTAL CLASS 8: N.A. BACKLOG & BL/BU RATIO
January '10 - April '15

Not All Backlogs Created Equal:
April ending BL/BUs:
- U.S. 6.4 mos.
- Canada 5.5 mos.
- Mexico 2.4 mos.
- Export 5.5 mos.
Don’t Wait! Supplies are Limited

Class 8 Backlog Fill
Estimated April 2015 Ending

Strong backlog filling through balance of 2015:
At the end of April, ACT estimates 64k open build slots in 2015 (at ACT’s ~338k NABU forecast)
Tractor Capacity Outlook

• It’s not units purchased, but units purchased relative to freight growth

  • 2015 to mid 2016: Spot capacity is expected to remain tight, upwards pressure on contract rates
  
  • 2H’16; Spot market likely to ease as strong tractor capacity additions continue
  
  • 3 years of capacity boosting sales set the stage for balanced tractor capacity and freight in 2017
  
  • The full implementation of the ELD mandate suggests by the end of 2017, capacity situation is likely to tighten rapidly
Record U.S. Tractor Sales in 2015

Sales above ~13,800 units/month represent U.S. tractor fleet growth above replacement + economic demand.
More Capacity = More Competition

U.S. Class 8
Implied Tractor Fleet Utilization Rate
1997 - 2016

Fleet Utilization (%)

Target Utilization Rate: 90%

Fcst.

More fleets driving more new trucks suggests a less-lucrative for-hire market in 2017.

Or will it be drivers who dictate capacity this cycle?
# N.A. Classes 5-7 Order Distribution

(Data through April 2015, 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>164.1</td>
<td>37.9</td>
<td>15.5</td>
<td>223.7</td>
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<tr>
<td>Past 6 (AR)</td>
<td>172.2</td>
<td>37.6</td>
<td>16.3</td>
<td>233.0</td>
</tr>
<tr>
<td>Past 3 (AR)</td>
<td>160.0</td>
<td>46.7</td>
<td>14.7</td>
<td>233.4</td>
</tr>
<tr>
<td>Apr. (AR)</td>
<td>147.0</td>
<td>47.8</td>
<td>14.7</td>
<td>212.9</td>
</tr>
</tbody>
</table>

* Total includes Step Vans
Backlog Rolls Over (on cue)

TOTAL CL. 5-7: N.A. BACKLOG & BL/BU RATIO
January '10 - April '15

BL/BU Ratio (Months)
Units (000s)
BACKLOG
BL/BU RATIO
(Right Axis)
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)
Summary

• 2015 another good year for freight & fleet profits
  – Better economic growth in key freight sectors
  – Still tight capacity, rising rate environment
  – Lower energy prices likely to persist
  – Favorable business conditions into 2016 (possibly beyond)

• For equipment demand, solid underlying support
  – An old fleet (maintenance & downtime issues)
  – Healthy used values
  – Value in new equipment

• If economy keeps a slow but sustained pace . . .
  – Potential for several more years of stability and profitability
  – Strong case to be made for stronger longer
Forecasts

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<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
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<tbody>
<tr>
<td>NA Class 8 BU (000s)</td>
<td>245.5</td>
<td>297.1</td>
<td>338.0</td>
<td>306.0</td>
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<tr>
<td>Memo: US C8 RS (000s)</td>
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<td>187.6</td>
<td>224.0</td>
<td>267.0</td>
<td>246.0</td>
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<tr>
<td>NA C5-7 RS (000s)</td>
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<tr>
<td></td>
<td>190.6</td>
<td>212.3</td>
<td>221.2</td>
<td>232.5</td>
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<tr>
<td>U.S. Trailer FS (000s)</td>
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</tr>
<tr>
<td></td>
<td>236.7</td>
<td>268.7</td>
<td>305.0</td>
<td>295.4</td>
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