North America Auto Outlook:
Market on Auto-Pilot...How Long Will it Last?

Jeff Schuster, Senior Vice President
September 10, 2015
Outline

• Global Automotive Backdrop

• US/NA Near- and Mid-term Trend

• SUV Growth in Regulation Environment

• What’s Next For Auto – Long-term Prospects?
Global LV Sales Market – Current Environment

2015 Forecast – World 88.6 mn, up 1.1 mn units (+1.2%)

North America
- 6% 5% 4%
- 14 15YTD 15F

Western Europe
- 5% 8% 7%
- 14 15YTD 15F

C&E Europe
- -8%
- -15%
- -15%
- 14 15YTD 15F

Asia Pacific
- 5%
- 0.2%
- 2%
- 14 15YTD 15F

South America
- -10%
- -18%
- -23%
- 14 15YTD 15F

World
- 4%
- 1%
- 1%
- 14 15YTD 15F

Source: LMC Automotive
Volume Scenarios – Balanced Volume Range

- Base - Global economic growth in 3-3.5% range for horizon supports autos
- Long positive run expected with volume crossing 100mn by 2018 - CAGR of 4% 14-20
- All eyes still on China, but other risks exist as well!

Source: LMC Automotive
Changing Tides of Production

- Global Production expected to be up 21%
- Expansion in China leads charge – share of global production increases to 30%.
- NA holds onto most gains with Mexico push but still drops 2 ppts.
- SA improves from very weak 2015, but growth prospects have been cut and investment not as strong as previously expected.
- Growth/Recovery also takes place in Middle East and Africa.
- Utilization improves everywhere except NA, but that is actually some relief as market remains very lean. Emerging markets as a whole are underperforming, but for different reasons. China’s setup to become global hub, SA may never get back to glory, EE making strides.

Source: LMC Automotive
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North America Economic Outlook

• **US** – Economy resilient despite global headwinds. Fed rate increase on watch. Slow pace of recovery is basis for lack of recession in forecast horizon.

• **Canada** – Economy contracted 0.5% in Q2 putting it in technical recession. Declining oil prices had negative impact on economy, but spending remained strong, Rebound in H2 still expected.

• **Mexico** - Outlook has been reduced as Q2 growth moderated to 2.2% YoY – structural issues constrain growth. Expansion to gain traction in 2016 with export growth and consumption-driven activity.

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Source: LMC Automotive
North America Light Vehicle Sales Outlook

Source: LMC Automotive

<table>
<thead>
<tr>
<th>Years</th>
<th>Sales (Millions)</th>
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<tbody>
<tr>
<td>2010</td>
<td>13.9</td>
</tr>
<tr>
<td>2011</td>
<td>15.2</td>
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<tr>
<td>2012</td>
<td>17.1</td>
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<td>2013</td>
<td>18.4</td>
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<tr>
<td>2014</td>
<td>19.5</td>
</tr>
<tr>
<td>2015</td>
<td>20.3 (+4%)</td>
</tr>
<tr>
<td>2020</td>
<td>20.9</td>
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Source: LMC Automotive

2015: +4% 17.18mn
2015: +1% 1.88mn
2015: +11% 1.26mn
US LV Sales Driven by Multitude of Factors

Macro Factors
1. Disposable Income
2. Unemp. Market
3. Housing Market
4. Stock Market
5. Fuel Prices
6. Credit/ Terms
7. Vehicle Equity
8. Vehicle Price
9. Incentive Actions
10. Product Activity

Consumer Internals & OEM Drivers

Total Sales
2013: 12.8mn
2014: 13.6mn
2015F: 14.0mn

Source: LMC Automotive, Oxford Economics, JDP PIN, Industry Sources

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www.lmc-auto.com
Large Pickup Wars – The Battle is On (Profits Up)!

Brent Crude Price (USD)

US Sales Large Pickup Price Mix

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<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015 YTD</th>
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<tr>
<td>&lt;$40K</td>
<td>80%</td>
<td>76%</td>
<td>70%</td>
<td>62%</td>
<td>55%</td>
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<tr>
<td>&gt;=$40K</td>
<td>20%</td>
<td>24%</td>
<td>30%</td>
<td>38%</td>
<td>45%</td>
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<tr>
<td>&gt;=$50K</td>
<td>5%</td>
<td>7%</td>
<td>8%</td>
<td>13%</td>
<td>15%</td>
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CAFE?...We Don’t Need (Want) No Stinking CAFE...At least for now!

Source: LMC Automotive
• Volume growth is steady – Capacity remains tight with utilization above 90% even with capacity at 20mn by 2016.

• Slow F150 launch gains traction by Q4 with new Mustang and full year Transit supporting.

• Honda gains on SUV output for CR-V and new HR-V.

• BMW and Daimler benefit from new adds.

• Mitsubishi winds down operation Nov-15.

• Subaru continues under radar but could use additional capacity.

Source: LMC Automotive
The US economy is the most robust in the world, but Fed likely delay rate hike to December in light of sluggish global growth, a strong dollar and heightened market stress.

- Project increase to be 0.5% to 1.0% per year through 2018 before leveling off.

- Interest rates risk to auto topline volume expected to be low - Can be managed with loan terms, incentives or consumer’s decision to buy less vehicle.

- Some mix implications - may push buyers into lower content or smaller vehicles.

Source: Oxford Economics, LMC Automotive
Longer terms and higher lease penetration used to manage monthly payment – could be buffer for rising interest rates.

Average term length continues to rise as does % > 72 months – Consumers buying more as well – ATP has remained at/above $30K for more than a year.

Our expectation is for this trend to continue for the next two years - +72 months may reach 35% before flatten out – leasing expected to remain near 30%.

In isolation, these factors should not pose a substantial risk but may cause slowing of replacement rate if leasing levels decline or long loans are reduced.

Source: JDP PIN, LMC Automotive
Regulations and Powertrain Mix

N.A. Average Displacement (cc)

N.A. Engines By Aspiration
- Natural
- Boosted

N.A. Electrification Market Share

N.A. Transmissions By Speeds
- 6
- 7
- 8
- 9
- 10
- Infinite
- Others

Source: LMC Automotive
• US LV topline is expected to grow at a CAGR of 1.1% from 2014-2020 - slowing but stable growth rates are consistent with economic growth of 2.5-3% and a fleet that remains old.
• Technology is a wildcard and could play a role in the average age of fleet decreasing.
• Recession scenario is mild with short duration – volume falls to 15.7 million unit in 2018, a 10% drop from baseline. Recovery may be hampered by lower density growth.
Competition = Fragmentation, Saturation & Complexity

**Vehicle**

- **2017**
  - 34 New Vehicles
  - 13 New Entries – 10<100K
  - 21 Redesigns – 12<100K

**Body Styles**

- **2017**
  - 47 New Body Styles

**Trim Level**

- **2017**
  - 150+ New Trim Levels

Source: LMC Automotive
Localization Drives Growth – Alters Mix

Change in Share 2014-2020
NA: 54% to 50%
AP: 39% to 40%
EU: 7% to 10%

Source: LMC Automotive
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- What’s Next For Auto – Long-term Prospects?
2005
- Multiple models across brands – “Badge Engineering”
- Most were Midsize and above
- Most were BOF with some BFI
- “Truck” Fuel Economy

GM
- 19 models across 7 brands
- 14 entries Midsize and above
- Volume per entry 56,000 units

2015
- Multiple models and sizes across brands – “Platform Engineering”
- Mix of Compact to Large, Small gaining
- Most are BFI, BOF for Large
- Moving towards more “Car-like” Fuel Economy

GM
- 11 models across 3 brands
- 4 entries Compact and below
- Volume per entry 88,000 units

2020
- Fragmentation expands: Multiple models and sizes across brands – “Modular Engineering”
- Mix of Small to Large
- Most are BFI, BOF for Large
- “Car-like” Fuel Economy – add HEV/PHEV/Downsizing

GM
- 13 models across 3 brands
- 5 entries Compact and below
- Volume per entry 82,000 units
Midsize Car
• Average wheelbase similar to Compact SUV (109 in vs 108 in)
• ATP on-par with Compact SUV
• Comparable Fuel Economy

Compact SUV
• Higher ride height
• Over double the average cargo volume (34 vs 15 cu. ft)
• Widespread AWD/4WD availability

Source: LMC Automotive
More SUVs are Coming to the Party!

Source: LMC Automotive
Which Leads to Growth Well Ahead of Industry

5 Year CAGR (2014-19)

- SUV: 2.2% CAGR and...
- Sporty
- MPV
- Industry
- Pickup
- Car
- Van

SUVs will account for 75% of the ~900K volume growth over that period.

Source: LMC Automotive

Non-Premium (+430K)

- 37% Compact
- 46% Midsize
- 20% Large
- 20% Small
- 3% Other

Premium (+210K)

- 24% Compact
- 25% Midsize
- 40% Large
- 11% Small

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What will the US Auto Market Look Like?

- Will cars be readily available...everywhere? on-demand?
- Topline Volume will be impacted over time – phase in period
- Families will own fewer vehicles or won’t own a vehicle at all
- Sharing will be Lifestyle or Use-driven – Cost based on use
- Increased vehicle maintenance – Need additional vehicles to buffer downtime
- Replacement part demand could get boost
- Will Individualism Disappear?

Still requires a lot of cars... hint:

NYC – Cars for hire stats

<table>
<thead>
<tr>
<th></th>
<th>Taxi</th>
<th>Other Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cars on Road</td>
<td>13,437</td>
<td>50,000+</td>
</tr>
<tr>
<td>Ave age of Taxi</td>
<td>3.3 years</td>
<td>6+ years</td>
</tr>
<tr>
<td>Passengers per Day</td>
<td>600,000</td>
<td>500,000+</td>
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2014 NYC Taxi Cab Factbook

...again still need a lot of cars!
How do brands differentiate themselves?
Consolidation likely to follow shift to sharing
Centralized Manufacturing – Some OEMs could specialize or shift focus to this
How many brands/vehicle types are necessary?
- Economy
- Sporty
- Premium
- Utility
- People mover
- Commercial

300+ Unique Model Lines
10% of today?
30?
Unique Model Lines
Summary

- Globally, the auto market is stable at topline with marginal growth, with near-term risk centered in the emerging markets.

- US demand continues to show signs that growth hasn’t yet peaked - demand remains positive, but with a slowing growth rate. Competition intensifies as well.

- North American production outpaces demand, investment pouring in – volume approaches 20mn with substantial increase in launch activity.

- A renewed and pronounced shift to Mexico and the Southern US drives most of growth in region. This is playing out now during the UAW talks.

- Long-term industry transformation underway, shift to autonomous car sharing – risk band is wide, but topline volume loss may not be dire...fallout below topline with OEMs and model consolidation likely.
Thank You!

Accurate real-time automotive intelligence, forecasting and analysis

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