North America Light Vehicle Outlook
Automotive in the cross-currents

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US light vehicle sales
Inventory correction in progress

Inventory update

- Inventory to Sale Index in negative for 6 of the last 8 months indicating inventory levels are being depleted
  - Implications from GM-UAW strike
- Lowest inventory since Sep. 2015
- Alignment of production to continue
- No longer a car and truck mix issue
- Increasing concern surrounding elevated truck and utility inventory
- No movement in inventory
  - Dec. 2019 = 3.45M units
  - Down 352,850 units from Dec. 2018
  - Down 166,550 units from Nov. 2019
- 50- to 100,000 units of excess inventory at current levels
North America
Flat and stable production environment

Short term
- GM-UAW skews metrics
- Weight of pricing and product mix
- Car to utility transition continues
- Maintain inventory alignment
- Strong product cadence

Long term
- Record production not in sight
- On- and off-shoring
- Capacity expansion and maximization
- Continued shift to trucks and utilities
- BEV implications
- Policy and regulatory uncertainty
- Exports grow 11% to 1.6 million units
North America
Transplants driving growth

Divergent trajectories – 2019 to 2026

- **Domestics**
  - -43K units or -0.5%
  - Offshoring to China
  - Build where you sell
  - Increasing shift to trucks
  - More closely tied to US sales

- **Transplants**
  - +732K units or +9.2%
  - Localization; build where you sell
  - Capacity expansion
  - Increasing exports
  - Global sourcing

- **Start-ups**
  - +108K units or +30%
  - Tesla largest component
North America
Intra-regional production shifts

Mexico: 2019 – 2026
- +4.0% growth
- 150K units at 3.94M
- 23% of regional output
- New plants:
  - Kia-Monterrey (2016)
  - Audi-San Jose Chiapa (2016)
  - COMPAS-Aguascalientes (2017)
  - BMW-San Luis Potosi (2019)
  - Toyota-Guanajuato (2019)
- USMCA implications
- Resourcing risks
  - Plants
  - Products
- Exchange rates
North America
Shifting portfolio mix

Vehicle Mix: 2019 – 2026
- Shift in mix:
  - Car: down 14% or -624K units
  - Truck: up 2.7% or 111K units
  - Utility: up 17% or 1.3M units
- Factors driving utility growth:
  - Demographics
  - Consumers
  - Regulations
- Further downside risk for cars
- Re-inventing the car strategies:
  - Strategy One: Acceptance
  - Strategy Two: Futility
- Electrification stems fuel price fears
- Trucks remain steady

North America light vehicle production

- Source: IHS Markit

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North America
Capacity

Doing more with less

- **Pre-recession**
  - Unions forced higher employment levels resulting in underutilization
  - 2-shifts operating pattern the norm

- **Post-recession**
  - Detroit 3 capacity ‘right-sized’ with 3-shift work patterns become the norm
  - Labor now acts as variable capacity
  - Detroit 3 can reduce labor footprint amid weakness without plant closures
  - German and Korea automakers also leverage 3-shifts
  - 3-shifts operating pattern accounts for around 50% of production since 2013
  - Japanese automakers predominantly operate on 2-shifts
US sales
Launches by vehicle type

US light vehicle launches

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<th>Year</th>
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<th>Trucks</th>
<th>Utilities</th>
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</tbody>
</table>

Source: IHS Markit

Strong launch activity: 2019 – 2026
- Luxury activity 52% (15.5% of total)
  - Cars = 62% (5.4% of total)
  - Trucks = 1% (0.2% of total)
  - Utilities = 56% (9.9% of total)
- Cars
  - Disproportionate number of luxury and exotic launches skew
  - Average 10 mainstream car launches
  - Legacy redesigns and EVs
- Trucks
  - Increasing activity in mid-size
- Utilities
  - Expansion across all segments
  - Redesigns of legacy nameplates
  - EV nameplates
US Three Manufacturers
Offshoring takes a toll

Positive
- Trucks and utilities; margins
- Retail focus
- Capacity footprint

Negative
- Launches
- Global luxury
- Offshoring
- Portfolio diversification

OEM Notables
- GM: CUVs, Trucks, New Mobility
- Ford: Product cadence, Volkswagen
- FCA: Ram, Jeep, post Sergio
Asian Four Manufacturers
On-shoring and capacity expansion drive growth

Positive
- Retail focus
- Flexibility
- Capacity maximization efforts

Negative
- Trucks
- Portfolio expansion
- Global luxury

OEM Notables
- Toyota: Portfolio mix, partners, EV
- Honda: Portfolio mix, partners, EV
- Nissan: Restructuring, holding pattern
- Hyundai: Reset and restructuring
German Three Manufacturers
Growth at the crossroads

Positive
- Global scale and luxury
- Localization
- Image

Negative
- Offshoring
- Aggressive targets
- Over proliferation
- Distractions

OEM Notables
- VW: CUVs and EVs
- BMW: Capacity expansion, sourcing
- Daimler: CUVs and EVs
Other Manufacturers
Risk versus reward

Positive
- Localization
- Niche

Negative
- Conquest dependent
- Size and scale
- Financial and technology risks

OEM Notables
- Subaru: Measured growth, constraints
- Tesla: Scaling business, China, EU
- Mazda: JV with Toyota, CUVs
- Volvo: Long-term focus, trade
- Rivian: Niche EV, partnerships
US light vehicle sales
Consumer shift to continue

Re-inventing the car

- **Strategy One: Acceptance**
  - Embrace being a car
  - Greater design freedom
  - Focus on driving dynamics

- **Strategy Two: Futility**
  - Give in, increase utility
  - Bodystyles; wagon, hatchback
  - Limited success, lack of authenticity

- Demographics at play
- Regulations favor trucks and utilities
- Freedom from ‘Volume Trap’
- Recapture consumer’s imagination
  - BEVs create new opportunities
  - Unique skateboard packaging
Thank you!