Changing Dynamics

North America Outlook

PMA: Automotive Parts Suppliers Conference
Troy, MI │ April 25, 2017

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North America Vehicle Production Forecasting & Analysis
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US Auto Sales

- **Millions**
  - 0.0
  - 4.0
  - 8.0
  - 12.0
  - 16.0
  - 20.0

- **%Δ Y/Y**
  - 0.0
  - 4.0
  - 8.0
  - 12.0
  - 16.0
  - 20.0

- **US Sales**

- **Pessimistic**

- **Optimistic**

- **Forecast**

- **Years**
  - 2000
  - 2004
  - 2008
  - 2012
  - 2016
  - 2020
  - 2024

- **Values**
  - 2000: 15.3
  - 2004: 17.6
  - 2008: 19.1
  - 2012: 17.6
  - 2016: 19.1
  - 2020: 15.3
  - 2024: 15.0%
US Auto Sales

1.75M units
Pent-Up Demand

US Sales
US Sales (modeled)
US Inventory

Source: Autodata, IHS Markit analysis

Inventory/Sales Index  US Inventory

12.5 Year High

US Incentives

Source: Autodata, IHS Markit analysis
North American Production

millions

2016 2018 2020 2022 2024
17.8 17.6 17.8 18.7 18.5

+3.6%
Divergent Trajectories

<table>
<thead>
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<th>Year</th>
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US3: 8.6, 8.7, 8.6, 8.5, 8.4, 8.4

Transplants: 8.9, 9.2, 10.0, 10.1, 10.1, 10.1

+17% for US3
-9% for Transplants
Mexico in the Spotlight

Mexico: 2016 – 2024

- 34% growth
- 1.2M units to 4.7M
- 20% to 25% of region
- New plants:
  - Audi-San Jose Chiapa (2016)
  - BMW-San Luis Potosi (2019)
  - COMPAS (2018)
  - Kia-Monterrey (2016)
  - Toyota-Celaya (2019)
- Tariff or taxation risk
- Resourcing risks
- Exchange rates
## Mexico Production as % of NA Production

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## Mexico Production as % of US Sales

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Mexico Production as % of Sales Outside NAFTA

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Border Adjustment Tax

San Luis Potosi, MEX
- USA/CAN content = 55%
- Other = 15%
- Powertrain = KOR, MEX

Pupyong, KOR
- USA/CAN content = 5%
- CHN = 19%
- Other = 65%
- Powertrain = KOR, MEX

Chevrolet Trax
US Exports

- Top 6 export destinations = 80%
- 2.1M units US sourced sales in 2016
- 2016-2024 growth = 11% or 237,000 units
- US production declines 2.5% or 304,000 units
- Proposed Border Tax to exclude US-based export revenue from taxation
- Strong dollar undermines US exports
- Tracing more complex
- Potential supply disruptions; minimize with phase-in
Mexico Content

% MEX  % USA/CAN
Japan Content

![Bar chart showing Japan content for various car models. The chart compares the percentage of parts sourced from Japan (% JPN) and USA/CAN (% USA/CAN).]

- Fit
- RAV4
- Rogue
- RX
- Legacy
- Outback
- Corolla
- Sienna
- Frontier
- Camry
- Accord
- Tacoma
- Tundra
- Pathfinder
- Maxima
- Titan

Legend:
- % JPN
- % USA/CAN
South Korea and Germany Content

- Elantra
- Bolt
- Sonata
- Santa Fe
- Sorento
- Leaf

- X3
- X4
- X5
- X6
- C-Class
- GLE
- GLS
- Passat

% KOR vs % USA/CAN

% DEU vs % USA/CAN
Opportunities

Launches: 2016-2022
- All-new = 32
- Onshoring = 13
- Redesigns = 114

Bodytype
- Cars = 62
- Trucks = 19
- Utilities = 78

Country
- USA = 111
- MEX = 37
- CAN = 11
North America Production

Opportunities

• 60 ‘New’ vehicle programs
• New = 44
• Onshoring = 16
• -18% without ‘New’ vehicles
• Onshoring and localization

-13.0
-14.0
-15.0
-16.0
-17.0
-18.0
-19.0

2016 2018 2020 2022 2024

3.4M units

17.8
18.0
18.5
15.1
16.0
17.0
18.0
19.0

-NA
-NA less New/Onshoring

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North America Production – Car

Opportunities
- 25 ‘New’ car programs
- New = 15
- Onshoring = 10
- -21% without ‘New’ Car models
- Onshoring and localization

Car Production

Car less New/Onshoring
North America Production – SUV/CUV

Opportunities

- 31 ‘New’ SUV/CUV programs
- New = 26
- Onshoring = 5
- -24% without ‘New’ SUV/CUV models
- Onshoring and localization

Millions

2016 2018 2020 2022 2024

- SUV/CUV
- SUV/CUV less New/Onshoring

6.7 7.8 6.0

1.9M units
US Three Manufacturers

Positive
- Trucks, SUVs
- Retail focus
- Full-size profits

Negative
- Launches
- Global luxury
- Offshoring

Opportunities
- GM: VSS
- Ford: C2, CD6, T3, T6
- FCA: Giorgio, DU/DK
Housing and Full-Size Pickups

- 2011-2016: Oversold market by 600K units
- 2017-2019: Forecast oversell by 400K units
- 2020-2024: Forecast undersell by 1.4M units
- Net potential = 400K units

Replacement Period


12 Years
Asia Four Manufacturers

Positive
- Retail focus
- Flexibility
- Exports

Negative
- Trucks
- Portfolio expansion
- Global luxury

Opportunities
- Toyota: GA-C, GA-K
- Honda: CCA
- Nissan: CMF-C/D, D, X61X, Mitsubishi?
- Hyundai: N, KP2, KP3
German Three Manufacturers

Positive
- Localization
- Image
- Exports

Negative
- Aggressive targets
- Over proliferation
- Distractions

Opportunities
- VW: MQB, MEB
- BMW: LG, LK, San Luis Potost
- Daimler: MHA, EQ
Other Manufacturers

Positive
- Localization
- Niche

Negative
- Conquests
- Financial risk
- Size and scale
- Technology risk

Opportunities
- Subaru: SGP
- Tesla: GEN III, Pickup
- Mazda: Skyactiv C/D
- Volvo: SPA, CMA
Case for Utilities

- Demographics
- Consumers
- Regulations
Driving Population

- Interbellum
- Greatest
- Silent
- Baby Boomer
- Gen X
- Gen Y
- Gen Z
US Sales by Vehicle Type

- Car
- Truck
- Utility
Vehicle Footprint

Fuel economy target (MPG)

Vehicle footprint (ft²)

- Car
- Truck
- Vehicle

- Prius
- Colorado
- Fit
- RAV4
- RX
- Avalon
- Grand Cherokee
- Colorado

7–15 MPG gap
Portfolio Changes

Segment Issues
- Product rescope
- Consumer shift
- Regulatory factors
- Trade and tariff risks

Portfolio Risk
- Chevrolet Sonic
- Ford Fiesta
- Honda Fit
- Hyundai Accent
- Kia Rio
- Nissan Versa
- Toyota Yaris

Honda Fit
- 2017 = 43.6%
- 2025 = 61.1%
- 40%

Honda HR-V
- 2017 = 34.7%
- 2025 = 48.2%
- 39%

21%
Mid-Size Car Outlook

-- Graph with line charts showing number of competitors and % share over years from 2000 to 2024.

Segment Issues
- 300,000 units at risk
- Volume consolidation
- Share threshold = 3.0%
- Regulatory factors
- Tesla impact

Portfolio Risk
- Volkswagen Passat
- Subaru Legacy
- Toyota Avalon
- Nissan Maxima
- Mazda6
- Buick LaCrosse
- Buick Regal
Mid-Size Car Outlook

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Portfolio Changes

Segment Issues
- Decreasing differentiation
- Greater overlap
- Similar situation to midsize pickup

Portfolio Risk
- Ford Taurus
- Chevrolet Impala
- Toyota Avalon
- Nissan Maxima
- Kia Cadenza
Thank you

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