Automotive Industry Outlook: Navigating the Waters in a Post-Recovery Environment

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Global Economic Outlook

Global Economic Growth Remains Subdued

• Global growth will remain below 3% in 2017 as slowdowns in Europe and China offset accelerations in the United States and emerging markets.

• US economic growth will pick up from 1.4% in 2016 to 2.2% in 2017, led by growth in consumer spending and business fixed investment.

• Economic and political uncertainty will hurt UK investment, consumer spending, and capital inflows in the year ahead.

• Eurozone growth is projected to slow from 1.6% in 2016 to 1.4% in 2017, reflecting increased political instability and banking problems.

• China’s economic growth will slow further because of imbalances in credit, housing, and industrial markets.

• Deep recessions in Brazil and Russia are ending.
World Economic Growth

Global Growth Rises in 2017 as US Strengthens and Brazil/Russia Recover

World Average 2016 = 2.4%

Growth slows in China

Source: IHS Markit Data Insight
The Changing Automotive World
Emerging Markets Outlook is Key to Growth; Limited Potential in Mature Markets

Global sales of 90 million in 2016 with growth of 1.8% to 92 million for 2017; longer-term approaching ~100m by end of decade but the growth peak is approaching.

Note: Mature Markets = US, Canada, Japan, S Korea, Australia, New Zealand, Western Europe
Source: IHS Markit Light Vehicle Sales Forecast
Global Light Vehicle Production
China & NA/EU Help Drive Growth in 2016; Brexit Impact Intensifies in 2017

Source: IHS Markit Light Vehicle Production Forecast
Global Light Vehicle Production
Slower Growth as Emerging Asia is Offset by Brexit and Plateauing U.S. Market

Source: IHS Markit Light Vehicle Production Forecast
Global Production Growth
Transition from Mature Markets to Emerging Markets Intensifies

- 31 million production growth
- 16 million production growth

countries and years:
- Greater China: 6.6
- South Asia: 4.3
- Europe: 2.0
- South America: 1.3
- Middle East/Africa: 0.9
- North America: 0.7
- Japan/Korea: -0.3

years:
- 2007: 60
- 2009: 91
- 2011: 16
- 2013: 31
- 2015: 107
Crisis and Incentives

Fall Back and Payback

Cyclical Recovery with Fiscal Drag

Euro 6+ Compliance Costs

Debt and confidence crises

Replacement Demand & New Mobility Dynamics

Driving Age Pop. Grows at >1.3 million/year

Driving Age Pop. Grows at 0.5 million/year

Source: IHS Markit Light Vehicle Sales Forecast
European Light Vehicle Production

Broader Recovery Interrupted by Brexit Fallout, yet Still on a Growth Path

Source: IHS Markit Light Vehicle Production Forecast
Brazil nearing the bottom; sales and production impacted by a number of factors – dismal economic environment, poor consumer confidence, tight credit, etc.; Brazil exports starting to benefit from performance of surrounding markets

Near term outlook remains challenged – recovery pushed out to 2017/2018; longer term growth more muted given market conditions

Import gap reverses as OEMs localize more production; Inovar Automotive plan which incentivizes local production faces uncertain future with new president and deficit pressures
Near-term outlook remains challenged as market faces a difficult economic outlook, yet recession appears to be abating.

Decline in oil prices, as well as economic sanctions, have created headwinds and risk for the country.

Broader outlook dominated by oil and gas pricing – a more diversified economy is necessary to support vehicle sales and the quest for 3 million units per year.

Local production cannot serve demand and has only limited export potential at this stage.
Emerging Market Trends
India Sales and Production

Market recovery is ongoing; Modi government has helped revive industry sentiment

Lower oil prices and interest rates as well as improved economic outlook offer support for the market

Foreign direct investment and new infrastructure projects help set the stage for further growth; more needs to be done

Production serves large domestic market for small cars and trucks; strategic exports: Honda, Hyundai, Nissan and others
Emerging Market Trends
China Sales and Production

“New normal” sets in: sales and production growth slows; economic pressures and Tier 1 city registration restrictions vs. penetration into Tier 4-6 cities, increased auto financing, etc.; growth in rural areas is favoring domestic brands, pricing also a factor

Purchase tax reduction from 10% to 5% for vehicles 1.6L and lower through 2016 expected to stimulate sales in the near term; 2017 sales hangover is likely (possible program extension?)

As headline growth slows and congestion increases, new internal markets will need to expand to support development; typically served by local OEMs but global players attracted
U.S.: Light Vehicle Sales Outlook

New Housing Starts and Full-Size Pickup Sales

- Strong correlation between housing starts and Full-Size Pickup sales
- Housing starts are recovering (slow but steady) – not expected to reach previous peak
- Full-Size Pickup sales recovering with improved commercial fleet sales and redesigned vehicle offerings (with more forthcoming) further bolstered by low gas prices
U.S.: Light Vehicle Sales Outlook
Reaching the Peak of the Cycle; Higher Rates Eventually Lead to Pull-Back

US Light Vehicle Sales Forecast

Affordability driven by higher interest rates, legislated content and urbanization slows sales momentum

Source: IHS Markit Light Vehicle Sales Forecast
U.S. market plateaus and competition will be fierce:

- GM share faces challenges from multiple automakers and segments
- Ford share remains stable in a competitive market, supported by strong products and new offerings
- Chrysler slows the downward slide with Fiat derived product, but remains pressured in longer term
- Hyundai share expands although capacity issues could challenge growth prospects
- Japanese manufacturers stabilize to an extent – although don’t return to historical levels
- VW gains somewhat as part of its focused North American efforts with new CUV products
U.S.: Light Vehicle Sales Outlook
Compact & Midsize Vehicles Maintain Dominance, but Subcompact is Growing

Source: IHS Markit Light Vehicle Sales Forecast
U.S.: Light Vehicle Sales Outlook
Shift in Favor of CUV Design Continues in the Near-to-Intermediate Term

Source: IHS Markit Light Vehicle Sales Forecast
North American Light Vehicle Production
Assessing the Market

Portfolio review
- Cycle check
- Goals
- Risk profile
- Timeframe
- Demand
- Capabilities
- Technology

Risk mitigation
- Customer base
- Diversification
- Hedging

Action plan
- Assess
- Diagnose
- Execute

We are here
Production Outlook
North American Light Vehicle Production by Country

Source: IHS Markit Light Vehicle Production Forecast

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North American Light Vehicle Production
Customer Mix is Changing; Opportunity Targeting is More Critical than Ever!

- Asian, German and ‘Other’ OEM production accelerates with continued localization and new white space products.
- Detroit 3 production declines due to plant rationalization, competitive intensity and vehicle production sourcing decisions.
North American Production Capacity
Capacity is Rebuilding, yet Utilization is Robust – For Now; Flexibility is Key

Source: IHS Markit Light Vehicle Production and Capacity Forecast

Straight-Time = Normalized + Variable Capacity
Powertrain Technology Trends
Don’t Count out the Internal Combustion Engine

US Light Vehicle Sales by Propulsion Design (%)

ICE = Internal Combustion Engine
Compliance Gap Emerges
Without New Technologies, OEMs Will Not Comply

Projected Compliance Gap - US

- Extreme focus on larger offerings with substantial gaps
- OEMs will require several costly technologies to comply into the next decade
- Powertrain, Efficiencies, Lightweighting then Electrification

Note: Global Sales Segment

Compliance Gap: Expected powertrain mix without incremental technologies – lightweighting, electrification etc.
Automated Driving EVOLUTION

Autonomous Driving: When, Not If – But a Longer Term Proposition

Autonomous Vehicle Sales Forecast – Worldwide

Source: IHS Markit Autonomous Driving Portal

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L5
L4
L3
L2
L1
L0

No Automation

Combined Function Automation

Limited Self-Driving Automation

Autonomous Mode with Driver Controls

No Driver Controls

Single Function Automation

NHTSA + IHS L4/5

2005 2015 2025 2035

Units (Millions)

% of New Vehicle Sales

% New LV Sales
Autonomous Vehicle Outlook
Building Blocks of Autonomy Offer Compelling Near-Term Growth Prospects

ADAS Applications Leading to Autonomy – Worldwide Production Units

Source: IHS Markit
Thank You!

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