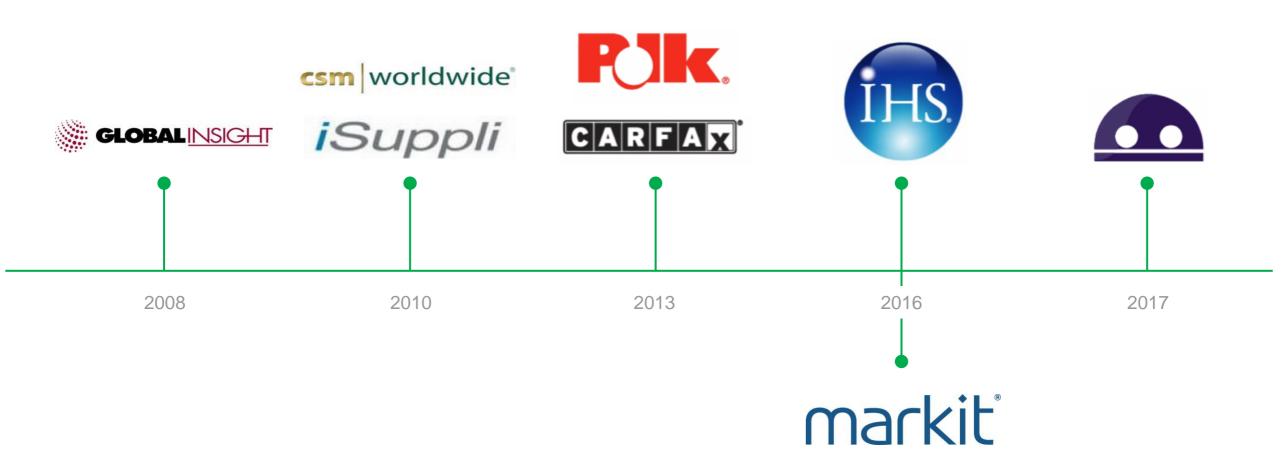


Perspectiva de la Industria Automotriz Foro Automotor 2019

Guido Vildozo, Senior Manager, Americas Light Vehicle Sales Forecasts

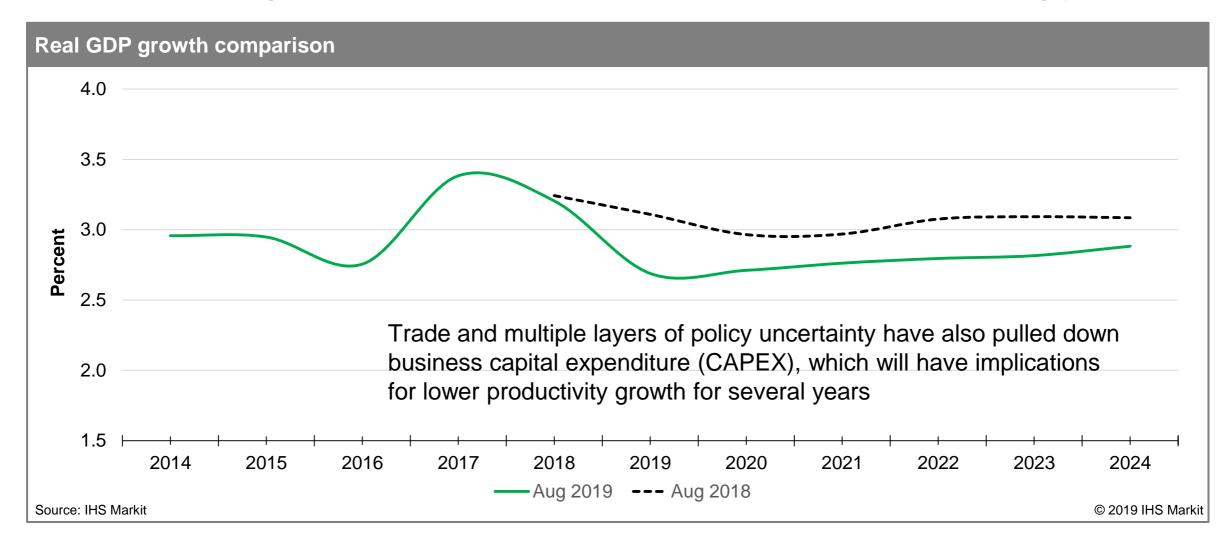
21 October 2019





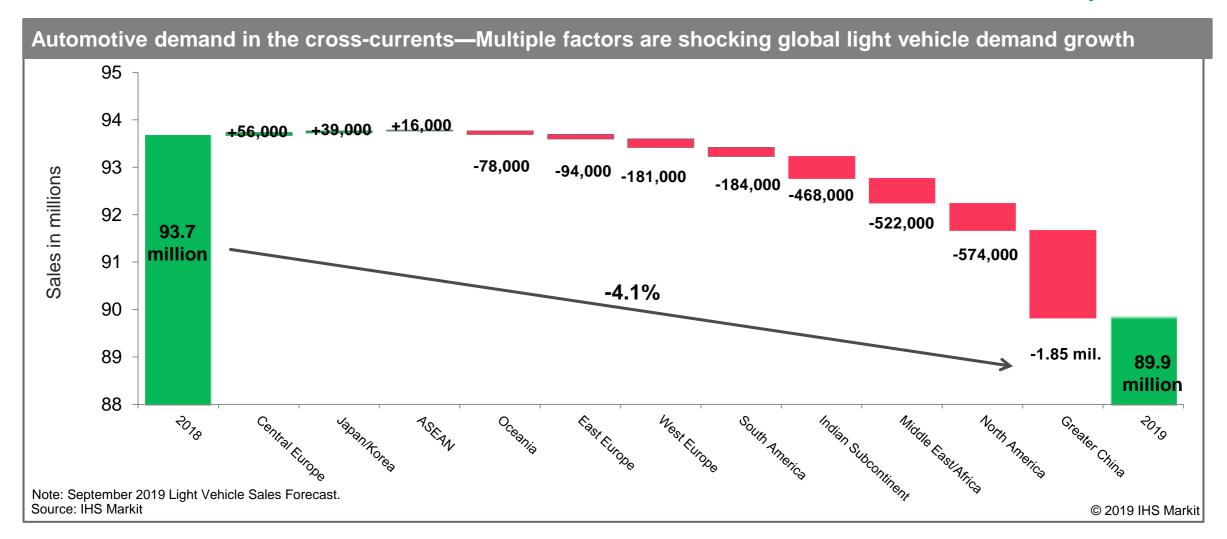
Global economics

GDP decelerating faster and earlier than forecast, below trend in coming years



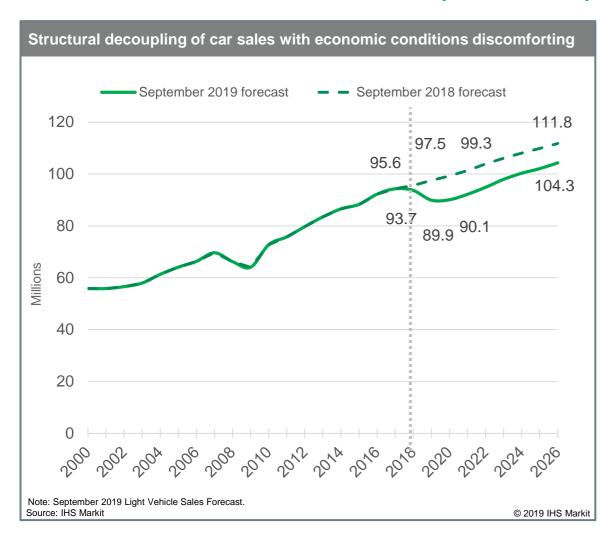
Global light vehicle demand

Sales have suffered an unusual, sudden disconnect with the macroeconomy



Global light vehicle demand

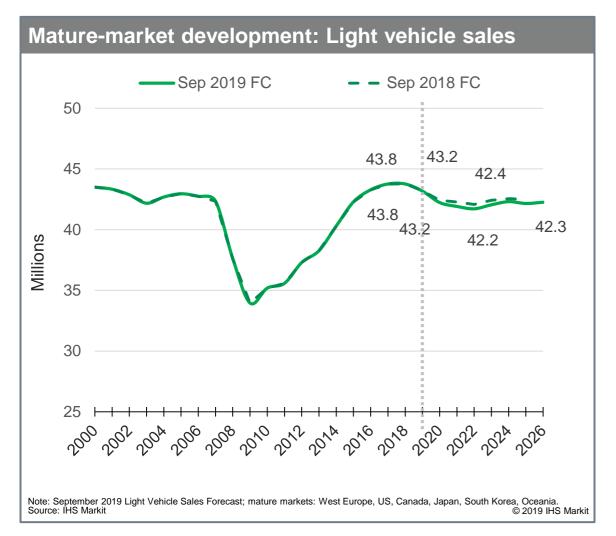
Slide in worldwide auto sales preceded projected slowdown of global economy

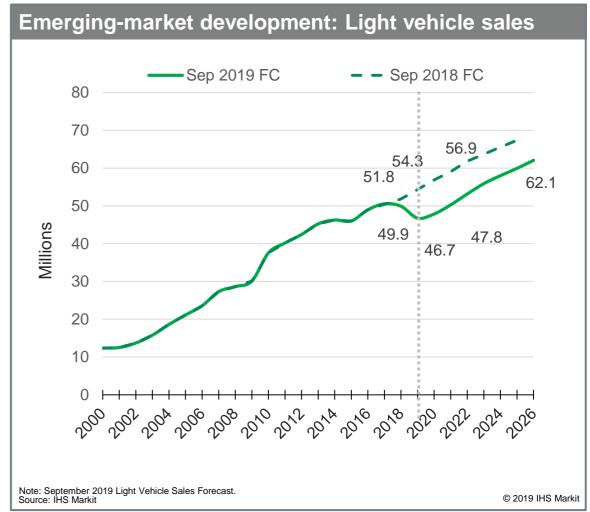


- Desynchronized auto sales may continue for a year or two after that, with sales picking up in 2020/21, provided the economic slowdown is not more aggressive than our current forecasts and China's car market does not permanently decouple from its underlying drivers.
- Deep correction in sales is far more than would be expected by overall global economic conditions. Key drivers include:
 - Crisis conditions in a few economies—unrelated reasons (Iran, Argentina, Turkey)—explain about 30% of the 2019 global forecast downgrade. Premium exposure for Turkey
 - China's first auto recession—totally not forecast and amplified by the 2018 trajectory being forecast from a high-water point before being hit by many negative forces from second half 2018. China downgrade explains ~50% of forecast downgrade over the near and medium terms
- Longer term, the total market fails to recover to previous trend projections. Reasons include:
 - Structural lowering of the trend in the Chinese market because of permanent loss of unconventional financing avenue plus initial long-term impacts of trade tensions on resourcing of manufacturing
- Persisting risk premium associated with the crisis-hit economies.
- **New, lower market trajectory for India,** where the downgrade builds progressively outbound. September 2019 brings further forecast downgrade

Global light vehicle demand

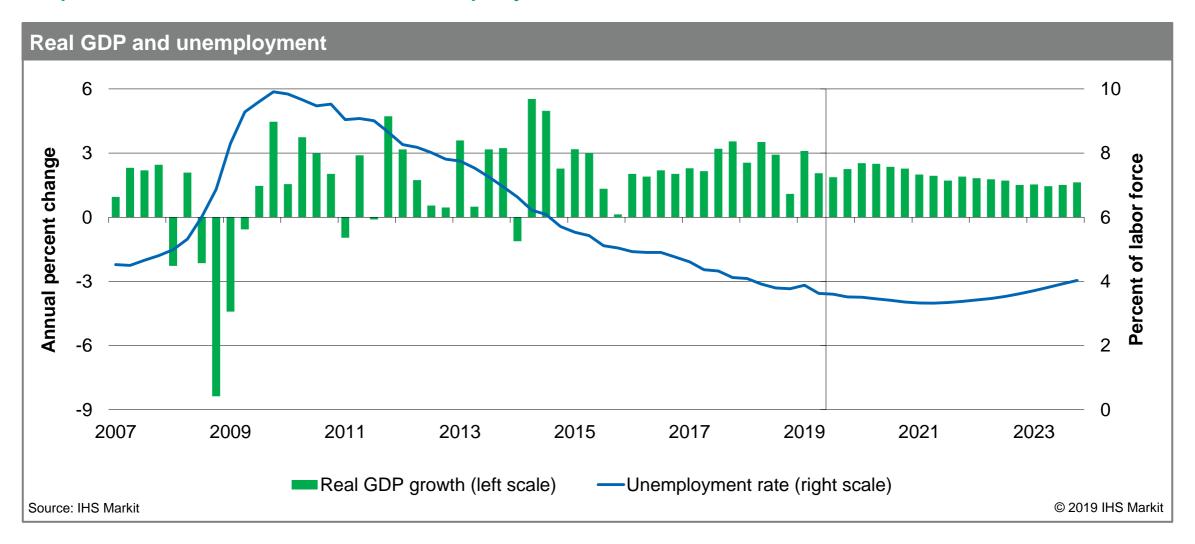
Mature-market slowdown vs. Emerging-market downturn





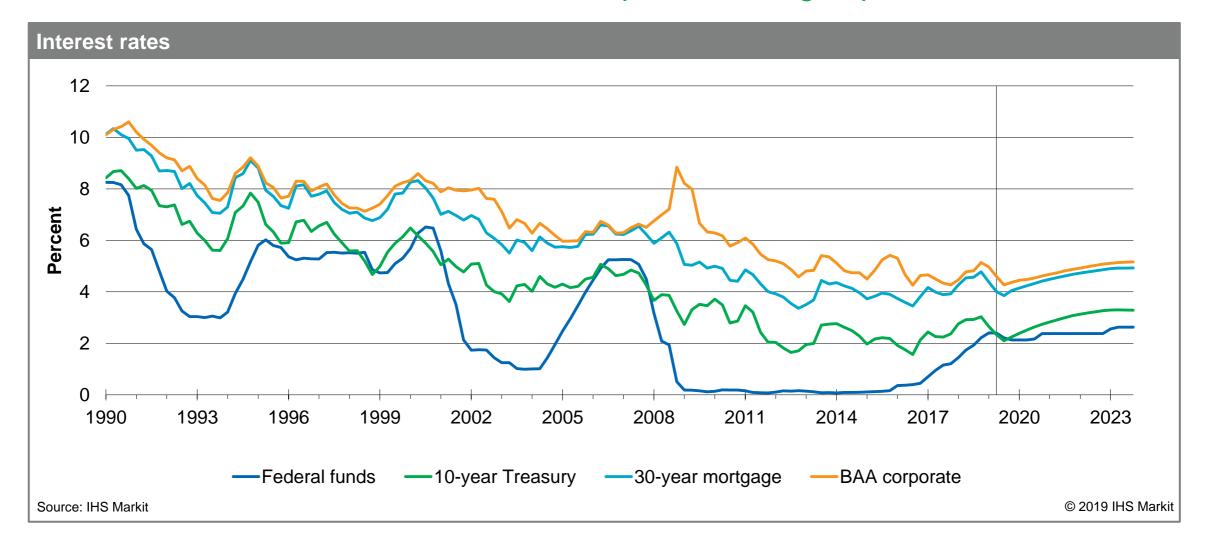
US economy

Expansion continues, the unemployment rate falls to 3.5% in 2019

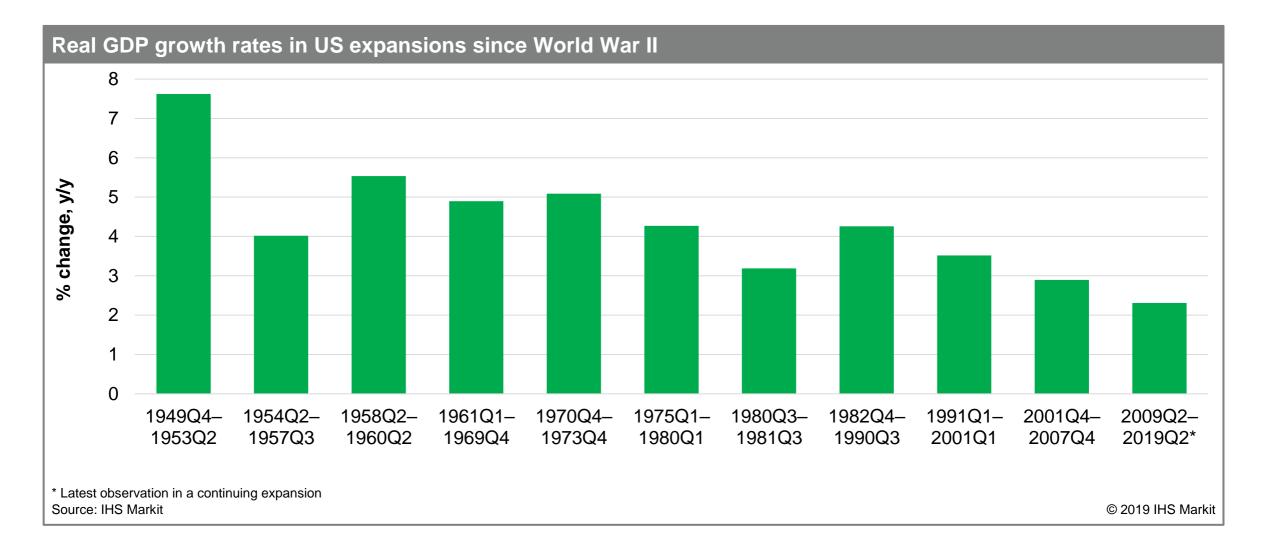


US economy

After recent declines, interest rates are expected to edge upward

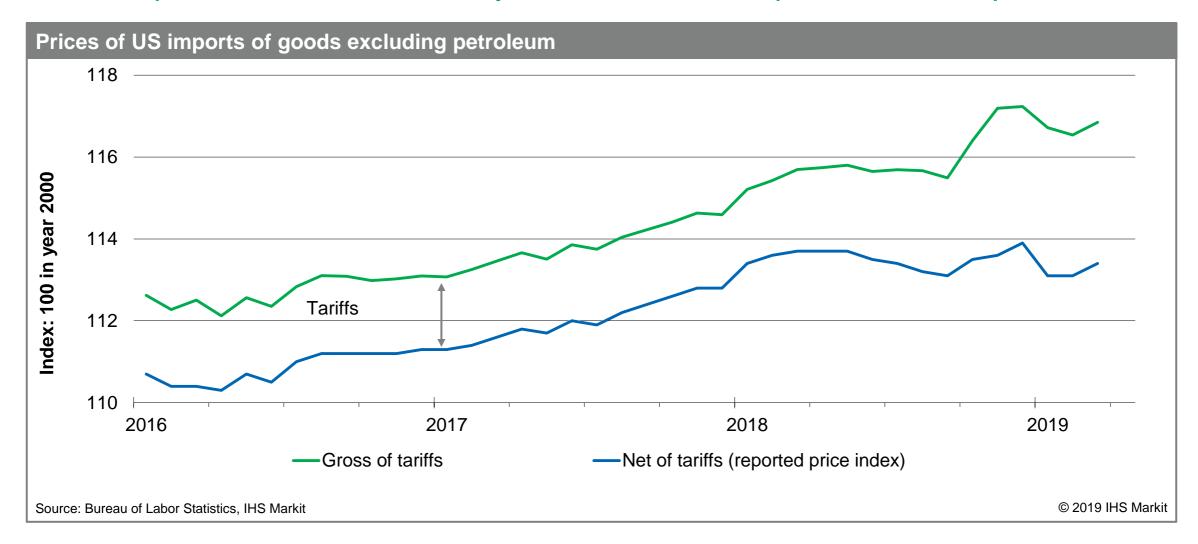


Real GDP growth rates in US expansions since World War II



US economy

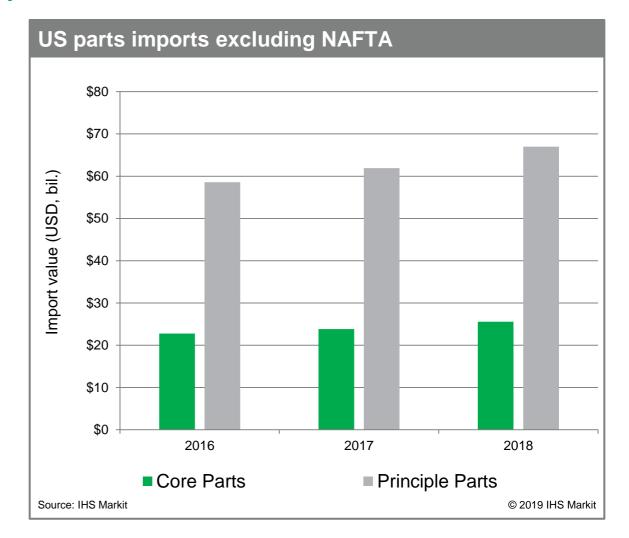
Tariffs implemented since January 2018 have raised prices of US imports



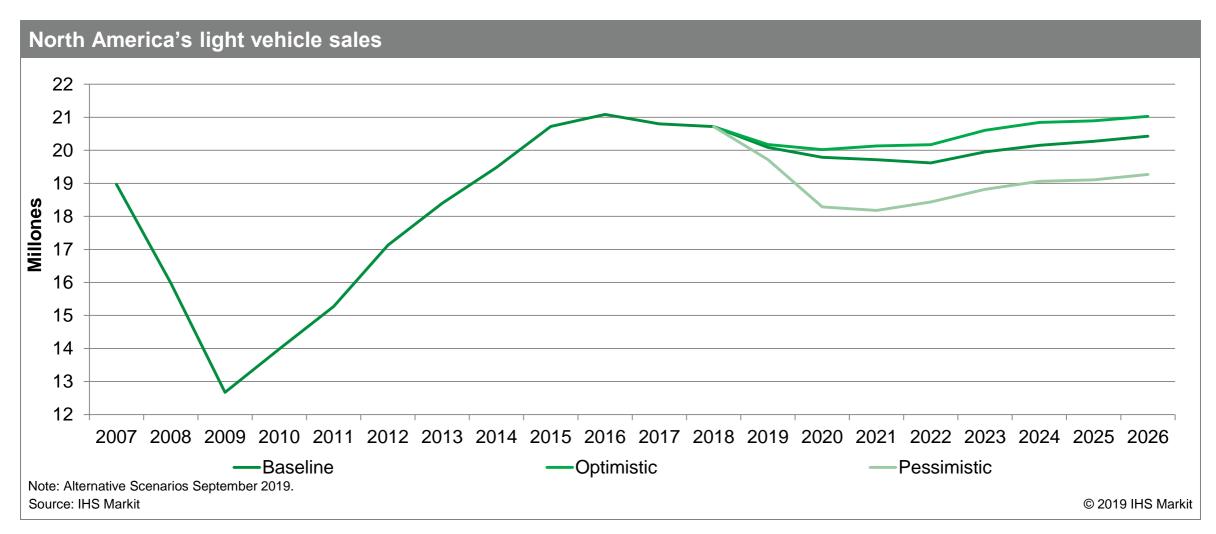
US light vehicle sales

Section 232 tariffs to impact industry, not just individual OEMs or countries

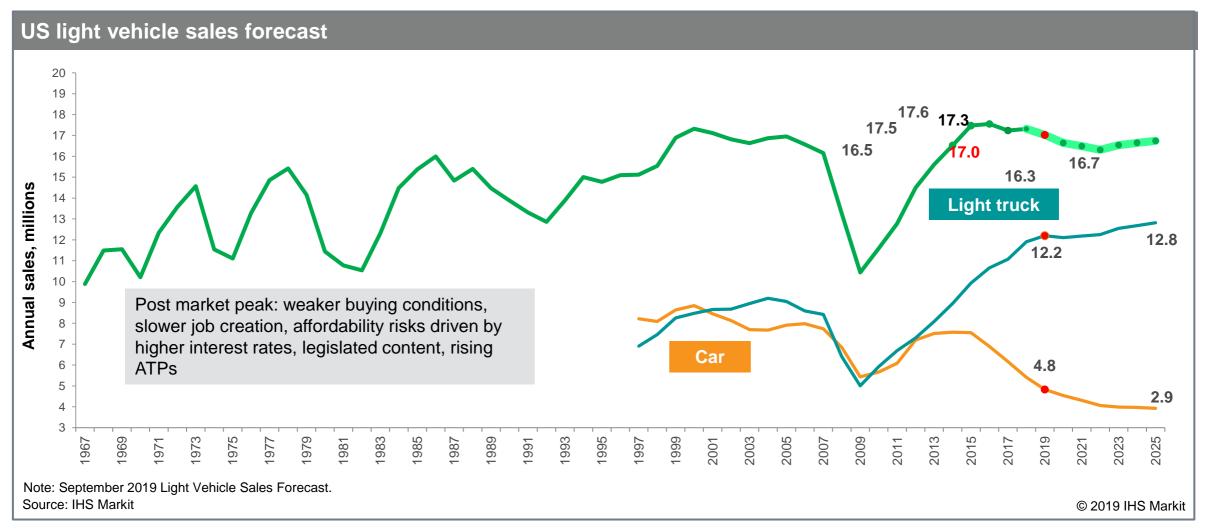
	Non-US	Non-N	Non-NAFTA	
Aston Martin		100.0%	100.0%	
BMW		67.0%	67.0%	
Daimler		62.9%	62.9%	
FCA		49.7%	7.0%	
Ferrari		100.0%	100.0%	
Ford		20.9%	3.6%	
Geely (Volvo)		99.7%	99.7%	
General Motors		36.9%	6.3%	
Honda		31.1%	6.9%	
Hyundai		61.8%	49.9%	
Karma Automotive		0.0%	0.0%	
Mazda		100.0%	85.4%	
McLaren		100.0%	100.0%	
Renault-Nissan-Mitsubishi		51.9%	30.3%	
Subaru		51.2%	51.2%	
Tata		100.0%	100.0%	
Tesla		0.0%	0.0%	
Toyota		55.3%	29.3%	
Volkswagen		84.2%	36.4%	
US total sales		46.6%	22.5%	



North American light vehicle sales Light vehicle sales alternative scenarios



US light vehicle sales Light vehicle sales outlook

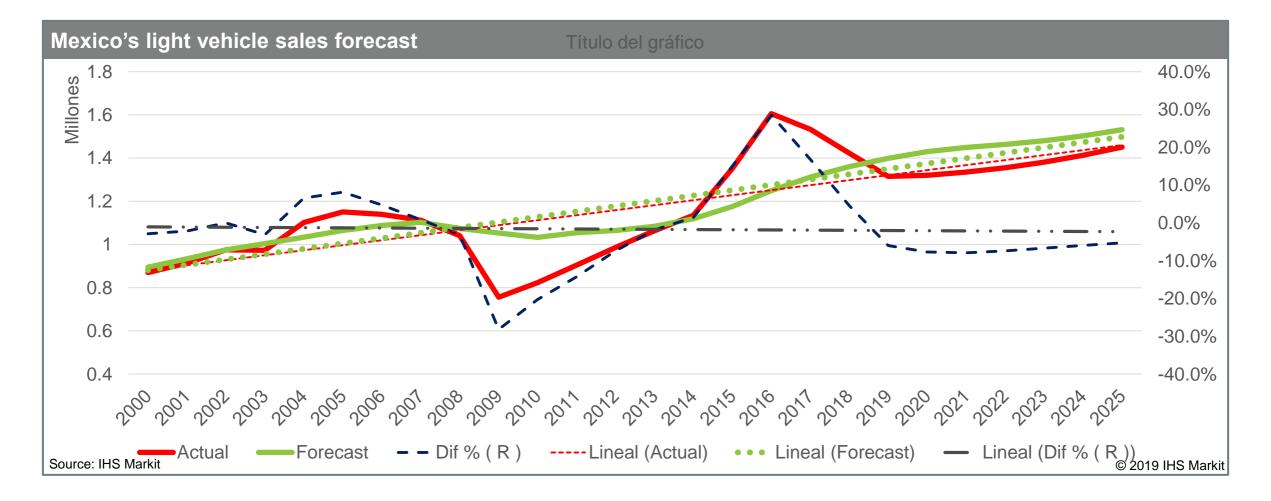


Mexican light vehicle sales Impact of "Chocolates" is felt

Concept	Units	Brazil M	Лехісо	Argentina	Chile (Colombia
Economic indicators (current US dollars)				_		
Consumption	Billions of USD	83.9%	17.1%	71.8%	96.0%	91.9%
Gross domestic product	Billions of USD	86.8%	17.1%	78.7%	95.9%	91.5%
Disposable income index	Billions of USD	87.4%	21.2%	64.7%	96.0%	91.9%
Profits	Billions of USD	80.8%	18.8%	77.9%	93.8%	91.6%
Employee compensation	Billions of USD	68.9%	21.6%	73.5%	93.9%	89.8%
Economic indicators (constant 2015 US dollars)						
Consumption	Billions of 2015 USD	65.0%	59.0%	89.4%	89.8%	77.2%
Gross domestic product	Billions of 2015 USD	71.2%	56.7%	92.7%	88.9%	79.8%
Disposable income index	Billions of 2015 USD	76.3%	64.4%	39.3%	90.1%	77.5%
Economic indicators (rate)						
Bank rate	Rate	68.3%	5.0%	0.8%	36.3%	67.2%
PPP conversion factor	PPP\$/USD	78.1%	51.6%	50.9%	68.4%	69.5%
Real PPP conversion factor	PPP\$/2015 USD	0.0%	0.0%	0.0%	, 0	0.0%
Exchange rate	LCU/USD	17.4%	60.8%	28.8%	5.5%	3.9%
Labor force						
Labor force	Millions	36.6%	39.3%	70.5%	89.9%	69.6%
Female labor force	Millions	38.6%	40.1%	74.1%	89.5%	71.9%
Male labor force	Millions	33.7%	38.7%	63.5%	90.0%	66.8%
Labor participating rate	Rate	10.1%	3.6%	26.9%	90.6%	12.9%

Mexican light vehicle sales

Light vehicle sales outlook – HHOLD Model vs Forecast



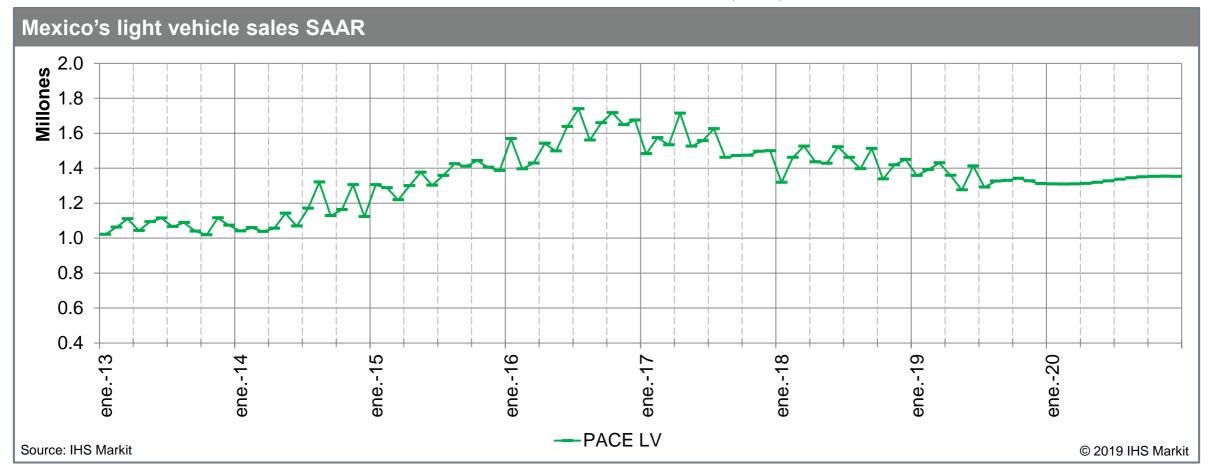
Mexican light vehicle sales Light vehicle sales outlook

SARIMA Estimates:

2019 1,325,894

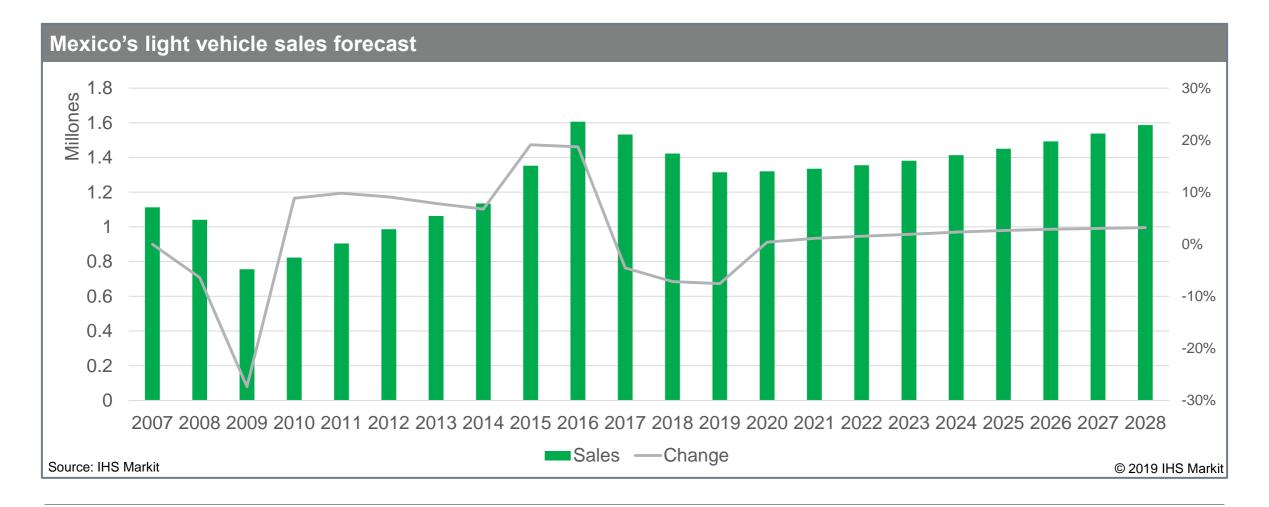
2020 1,273,128

2021 1,253,309



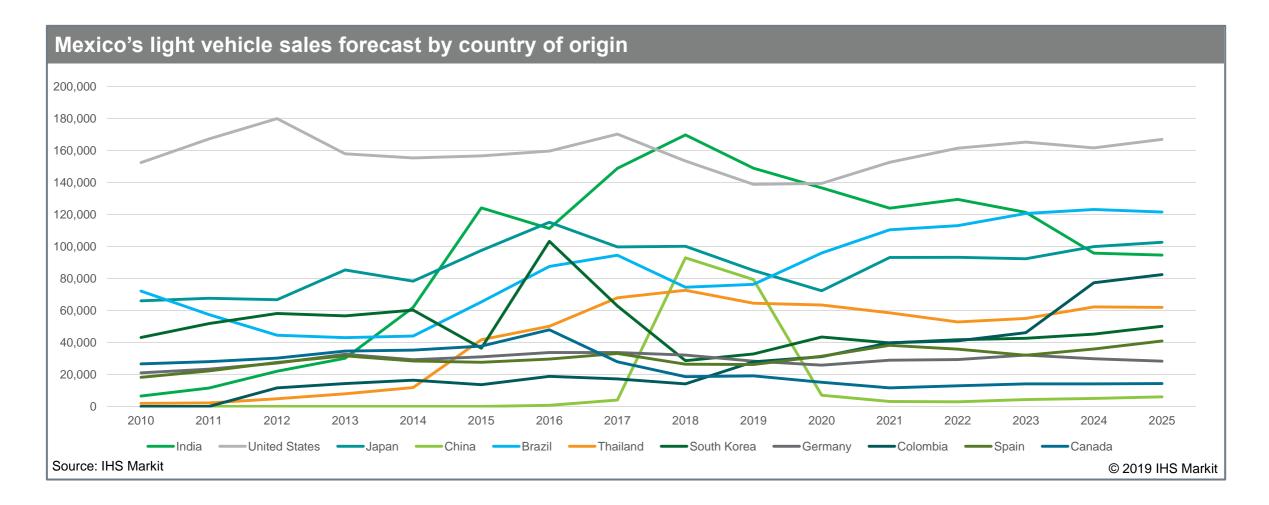
Mexican light vehicle sales

Light vehicle sales outlook

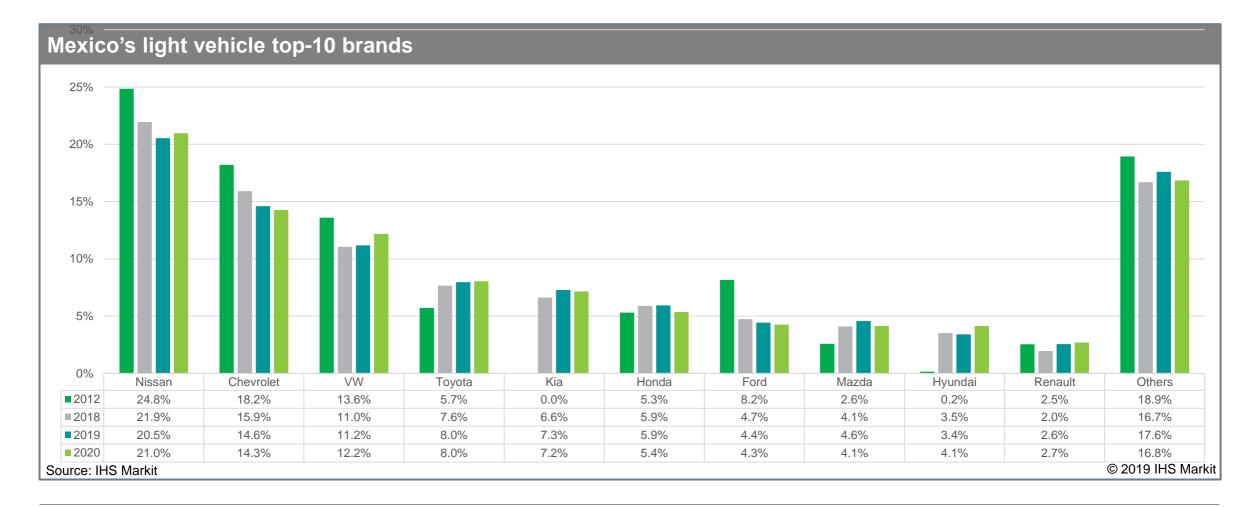


Mexican light vehicle sales

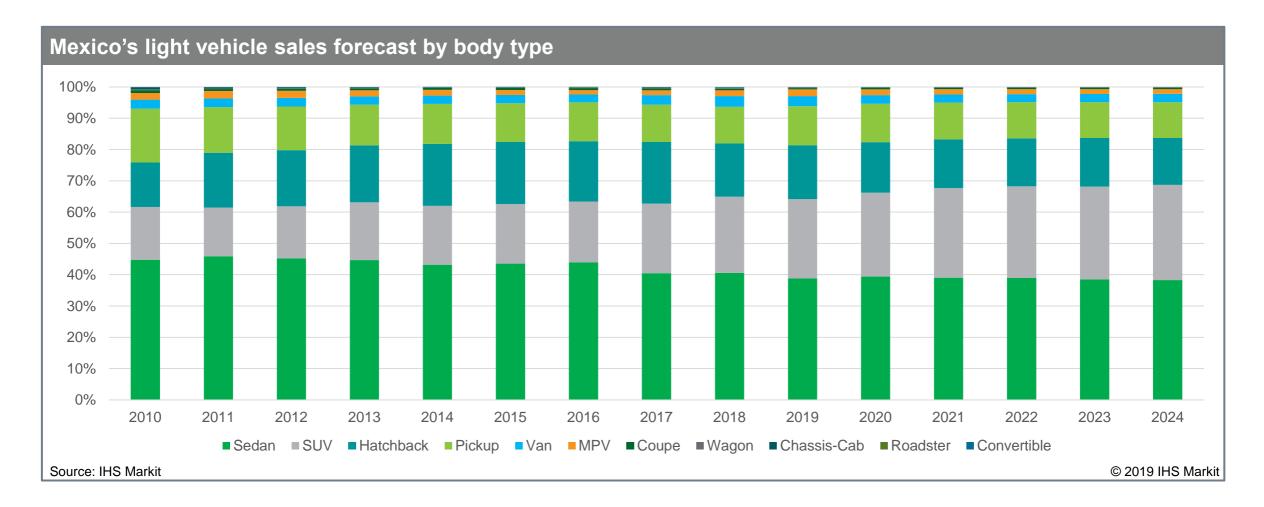
Light vehicle sales outlook by country of origin



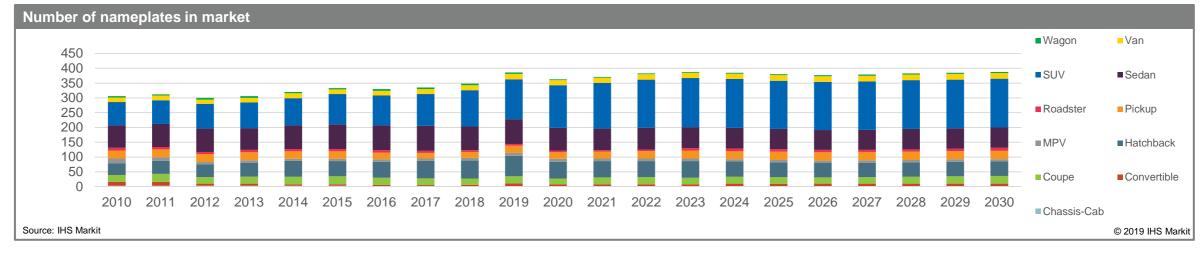
Mexican light vehicle sales Light vehicle sales outlook, top-10 brands

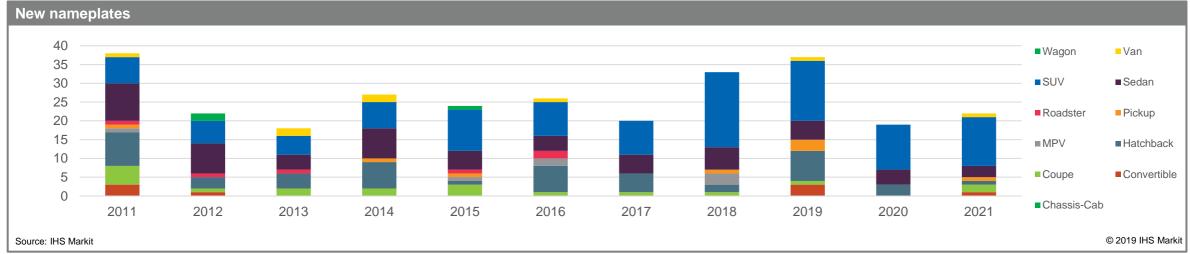


Mexican light vehicle sales Light vehicle sales outlook by body type

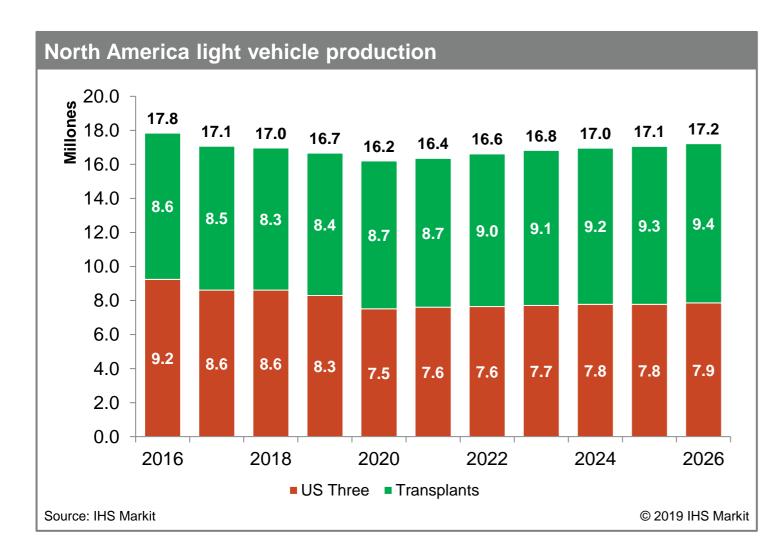


Mexico's new models in market





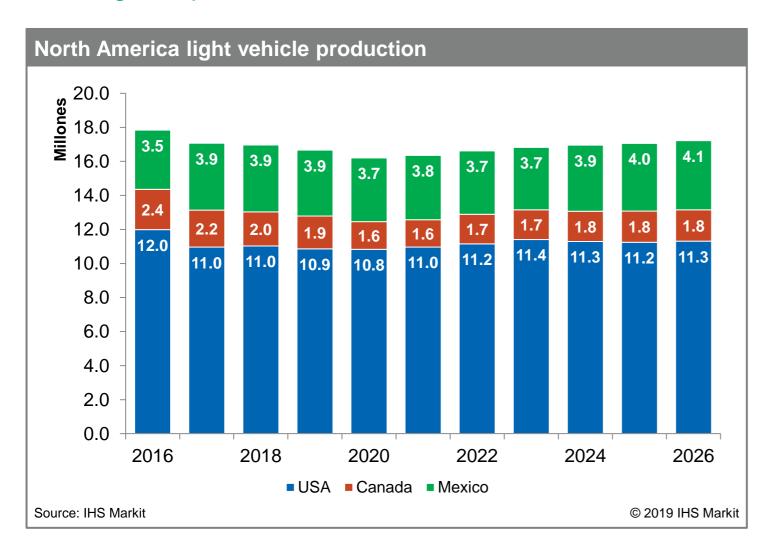
In the cross-currents



Divergent trajectories

- Growth paths 2018 to 2026
 - Total: 256,000 units or 1.5%
- Domestics
 - Down 758,000 units or -8.8%
 - Offshoring
- Transplants
 - Up 1.0 million units or 12.2%
 - Onshoring
 - New capacity and maximization
- Short term
 - Transition from car to truck
 - 2020 upside outside of recession
- Long term
 - New products and import substitution
 - Export growth: 19% to 1.7 million units

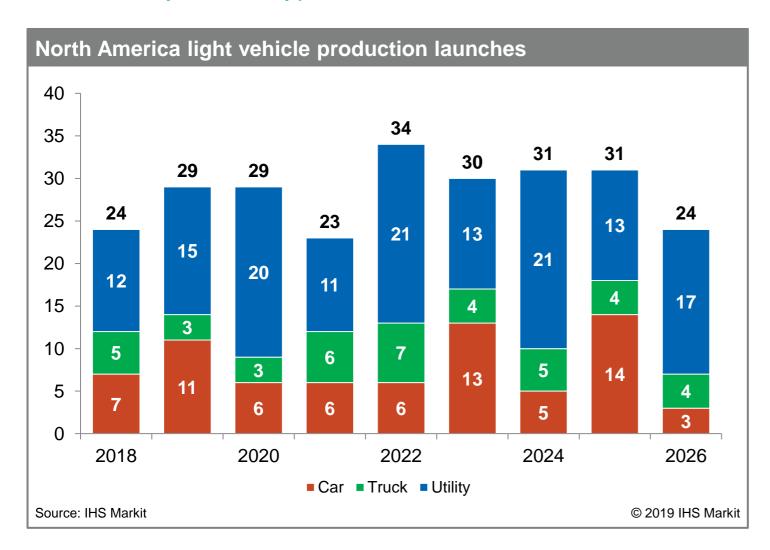
Intra-regional production shifts



Muted growth amid uncertainty

- United States-Mexico-Canada Agreement (USMCA) implications
- Trade-related resourcing risks
- Underutilized plants:
 - US: Fairfax, Grand River, Orion, Belvidere
 - Canada: Brampton, Windsor, Oakville, CAMI
 - Mexico: Cuautitlan, El Salto, Tijuana
- Mexico plant investments:
 - Kia—Monterrey (2016)
 - Audi—San Jose Chiapa (2016)
 - COMPAS—Aguascalientes (2017)
 - BMW—San Luis Potosi (2019)
 - Toyota—Guanajuato (2021)

Launches by vehicle type



Strong launch activity

- Launches amid industry slowdown
 - Will new product be king?
 - Quality volume versus quantity
- Utility vehicle expansion continues
 - Competitiveness weighs on leaders
 - Pricing and margin pressure
- BEV activity
 - 27 all-new nameplates
 - 5.5% or 954,000 units of North American production by 2026
 - Tesla from 82% to 51% of total
 - Product redundancy
 - Varied strategies
- Legacy programs as a hedge
- Extended lifecycles amid future costs

UAW strike implications

North America light vehicle production – manufacturer impact and footprint

General Motors	Ford	Fiat Chrysler Automobiles
Volume implications	Volume implications	Volume implications
■ US = 8,100 units per day	■ US = 8,900 units per day	■ US = 5,600 units per day
Canada = 1,550 units per days	Canada = 1,050 units per days	Canada = 2,400 units per days
■ Mexico = 3,600 units per day	Mexico = 1,100 units per day	■ Mexico = 2,100 units per day
■ Total = 13,250 units per day	■ Total = 11,050 units per day	■ Total = 10,100 units per day
 US = 61% of production 4 weeks: 226,000 units Limited recovery opportunities 	 US = 80% of production Trucks all produced in USA Impact to launches Limited recovery opportunities 	 US = 50% of production Most diversified footprint Limited recovery opportunities

Source: IHS Markit *Loss to date through full day Monday, September 30, 2019

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North American light vehicle sales outlook More of the same, but risks continue to increase

- Global deceleration is very much in place, impacting emerging markets more so than TRIAD.
- Risks to the economy are rising, and the Federal Reserve is intervening—this will allow for GDP growth
 of 2.0% in coming years.
- The economy has historically had an influence on US light vehicle demand, despite recent divergence.
- US light vehicle sales are likely to break 17.0 million units in 2019, but they will stabilize at about 16.5 million units in coming years.
- The market will remain SUV/light truck—centric, with more players in most segments.
- Mexico is different to peers with limited relationship to macroeconomic indicators.
- Mexico's light vehicle sales are likely to see a U-shaped recovery.
- Sourcing from Asia is significant for Mexico, with China's momentum growing.
- Mexico will mimic the US SUV/CUV boom.



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