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## 2015 AAPA Port Real Estate Issues Seminar

December 10, 2015

**pwc**

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## ***Agenda***

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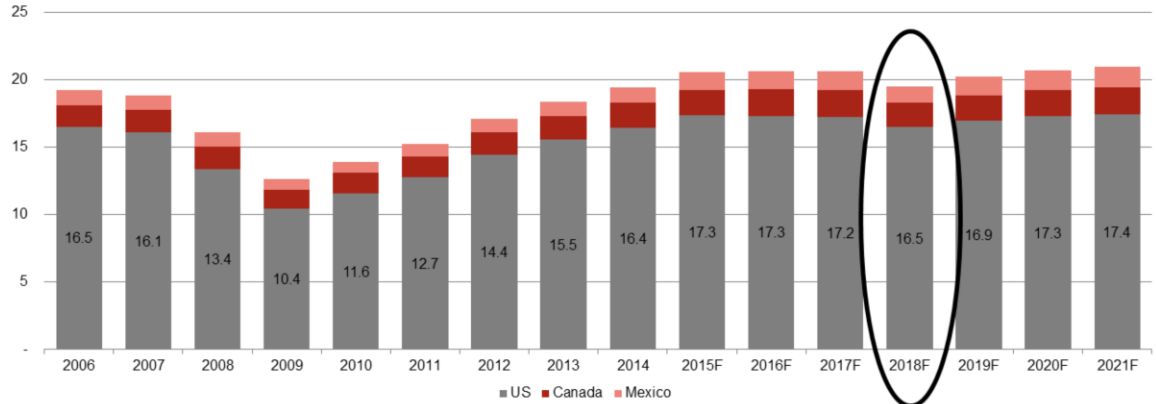
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# ***U.S. Sales Outlook***

**U.S. Sales Outlook – Downturn on the horizon**

While a record sixth consecutive year of sales growth is now certain for the U.S. in 2015 and a potential all-time record, a slowdown and eventual downturn is expected within the next 3-5 years.

**Preliminary Light Vehicle Sales by Country**  
2006 – 2021 (millions)



Source: Autofacts 2016 Q1 Preliminary Forecast Release

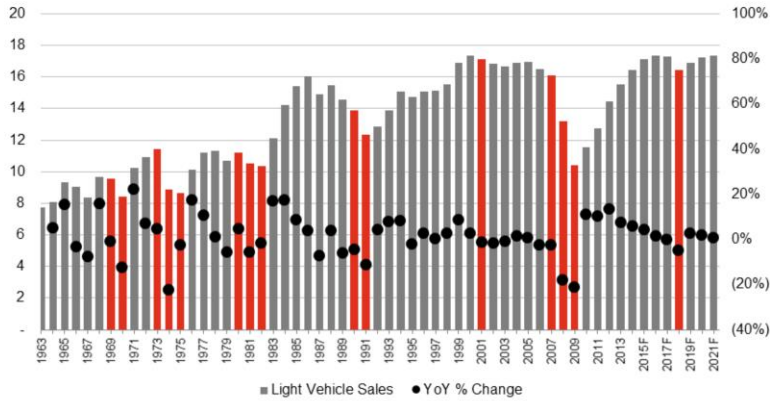
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U.S. sales up 5.5% YTD thru November

### U.S. Sales Outlook

While the U.S. auto industry is enjoying one of its most successful periods in recent memory, history also reminds us that the good times can't last forever.

#### U.S. Light Vehicle Sales 1963 – 2021 (millions)



#### U.S. Economic Recessions 1960 – 2021

Recessionary Period	Sales Period	Sales Decline (Peak to Trough)
12/1969 – 11/1970	1968 – 1970	(13.0%)
11/1973 – 3/1975	1973 – 1975	(24.5%)
1/1980 – 7/1980, 7/1981 – 11/1982	1980 – 1982	(7.4%)
7/1990 – 3/1991	1988 – 1991	(20.2%)
3/2001 – 11/2001	2000 – 2003	(4.1%)
12/2007 – 6/2009	2005 – 2009	(38.6%)
2018F	2017 - 2018	(5.0%)

Source: Autofacts 2015 Q4 Forecast Release

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While the exact date and length of the next recession remains unclear, economists are in general agreement that it will occur in the next 2-5 years.

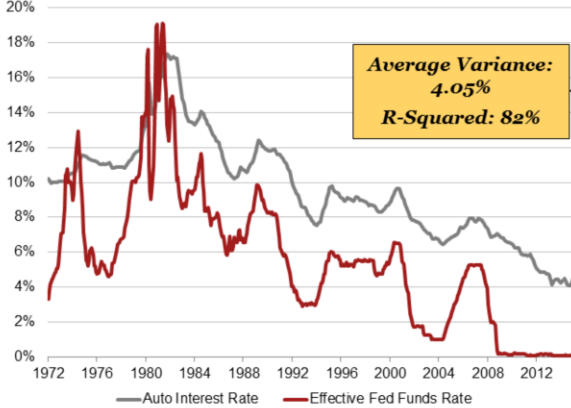
A recession occurs when there are consecutive quarters of GDP decline.

**Low rates continue to drive sales**

Auto interest rates remain near their historic low levels, thanks in part to aggressive measures taken by the Federal Reserve, however with the Fed likely to raise rates this year, the good times aren't likely to last for consumers.

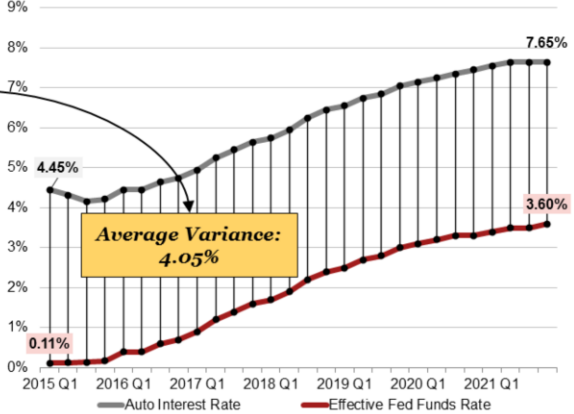
**US: Auto Interest vs. Effective Fed Funds**

Feb 1972 – Aug 2015



**US: Auto Interest & Fed Funds Rate Outlook**

2015 – 2021



Source: Federal Reserve G20 Report, Autofacts Analysis, Oxford Economics

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A very strong correlation exists between the Effective Fed Funds Rate and average auto prime interest rates for new vehicles...an 82% correlation.

During the period analysed (Feb 1972 – Aug 2015) there was an average variance of 4.05% between the two numbers. If the same variance is applied to the forecasted Fed Funds Rate, average auto prime interest rates will likely near 6% by 2018, causing a cooling off of new automotive loans and slowing vehicle demand.

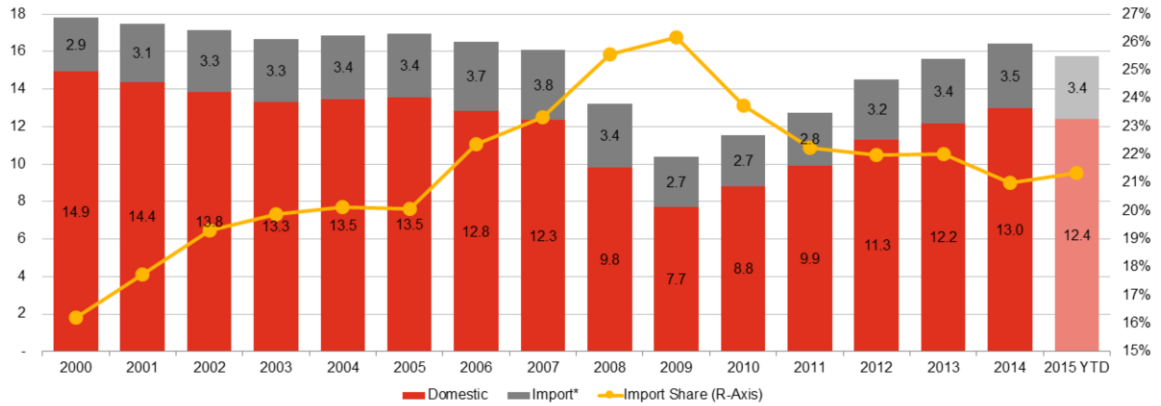
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## ***Topic in Focus: Import / Export Outlook***

**Import share continues to erode**

Driven by increased localization of assembly within the region, non-NAFTA U.S. light vehicle imports have seen a steady decline since peaking at 26% during the height of the 2009 recession.

**U.S. Light Vehicle Sales – Domestic vs. Import\***  
2000 – 2015 YTD (November) (millions)



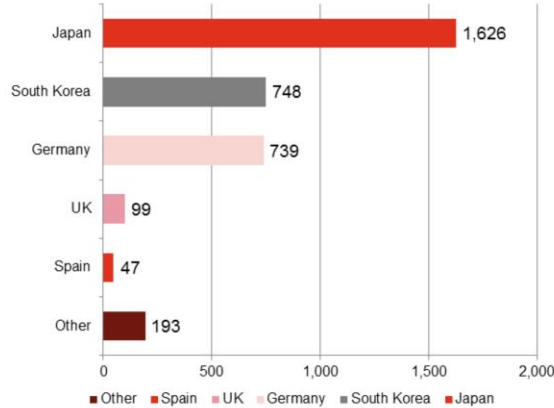
Source: Ward's Automotive Reports, Autofacts Analysis \*Non-NAFTA



**Big 3 import markets still dominating**

While Japan, South Korea and Germany still represented the countries of origin for over 90% of vehicle imports in 2014, the drop in import volume for those OEMs who localized assembly is telling of the direction the industry is heading.

**U.S. Import Sales by Country of Origin**  
2014 (thousands)



Company	2014 Import Sales	Country of Origin	YoY Δ
Toyota	671,449	Japan	+3.4%
Hyundai**	656,519	South Korea	+10.8%
Subaru	321,901	Japan	+22.5%
Mazda	285,823	Japan	+2.9%
Nissan	279,418	Japan	(20.3%)
VW*	260,763	Germany	(3.2%)
BMW	252,278	Germany	+8.1%
Daimler	225,688	Germany	(8.4%)
General Motors	88,552	South Korea	+34%
JLR	67,238	UK	+4%
Honda	37,777	Japan	(56.9%)

Source: Ward's Automotive Reports, Autodata Analysis \*Includes Audi & Porsche \*\*Includes Kia

**Impact of assembly localization on imports:**

- \*Nissan's Aguascalientes #2 plant opened in November 2013 with an annual capacity of 175,000
- \*Mazda's Salamanca plant opened in January 2014 with an annual capacity of 230,000
- \*Honda's Celaya plant opened in February 2014 with an annual capacity of 200,000
- \*Daimler expanded their Vance, AL plant in June 2014 to accommodate additional C-Class and MLC-Class assembly

**US imports poised for a sharp decline**

Taking into account both announced and forecasted capacity expansion through 2021, Autofacts estimates that US imports could see a decline of nearly 50% from current levels.

**North America Capacity Expansion by Company**  
2015 – 2021

	Toyota	Hyundai <sup>1</sup>	COMPAS <sup>2</sup>	VW <sup>3</sup>	BMW	GM	Subaru	Daimler	Geely	Tesla	Aston Martin	TOTAL
<b>New Facility</b>	200k	600k	300k	150k	150k	-	-	80k	100k	-	3.5k	1.58m
<b>Expansion</b>	281k	-	-	100k	100k	212k	200k	76k	-	100k	-	1.07m
<b>TOTAL</b>	<b>481k</b>	<b>600k</b>	<b>300k</b>	<b>250k</b>	<b>250k</b>	<b>212k</b>	<b>200k</b>	<b>156k</b>	<b>100k</b>	<b>100k</b>	<b>3.5k</b>	<b>2.65m</b>
<b>% Regional Consumption</b>	100%	100%	90%	50%	80%	75%	100%	20%	100%	70%	50%	<b>~84%</b>

**2.65m \* .84 = 2.23m**

**2.23m \* .83 (US regional sales share) = 1.85m**

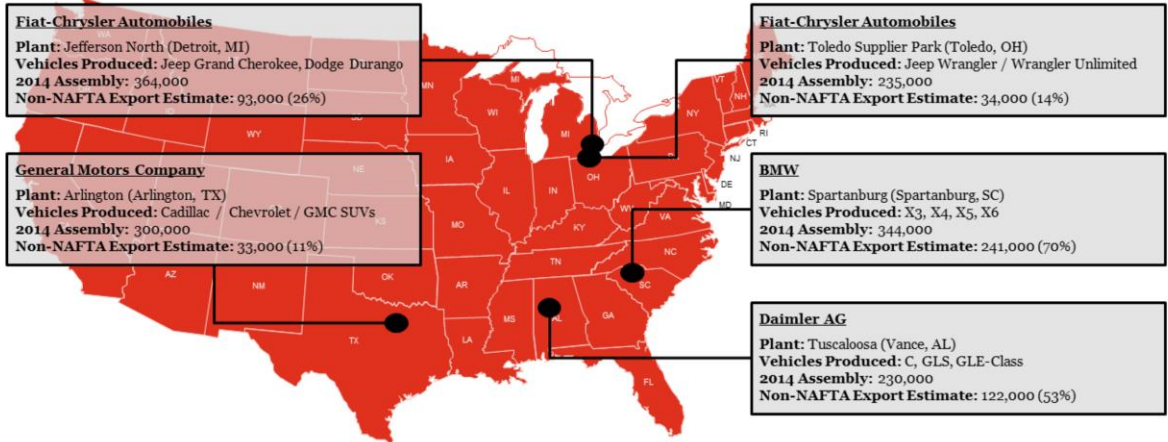
Source: Company Announcements, Autofacts 2015 Q4 Forecast Release, Autofacts Analysis <sup>1</sup> Includes Kia <sup>2</sup> COMPAS = Cooperation Manufacturing Plant Aguascalientes) <sup>3</sup> Includes Audi & Porsche  
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Two important caveats that could dramatically change this analysis:

- 1.) Trans-Pacific Partnership (TPP)
- 2.) Increased imports from China

### Steady growth anticipated for exports

Increased global demand for large CUVs and SUVs, many of which are sole sourced from North America, are expected to result in export growth for the foreseeable future.



Source: Autofacts 2015 Q4 Forecast Release, Autofacts Analysis

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Total non-NAFTA exports: ~1m/yr

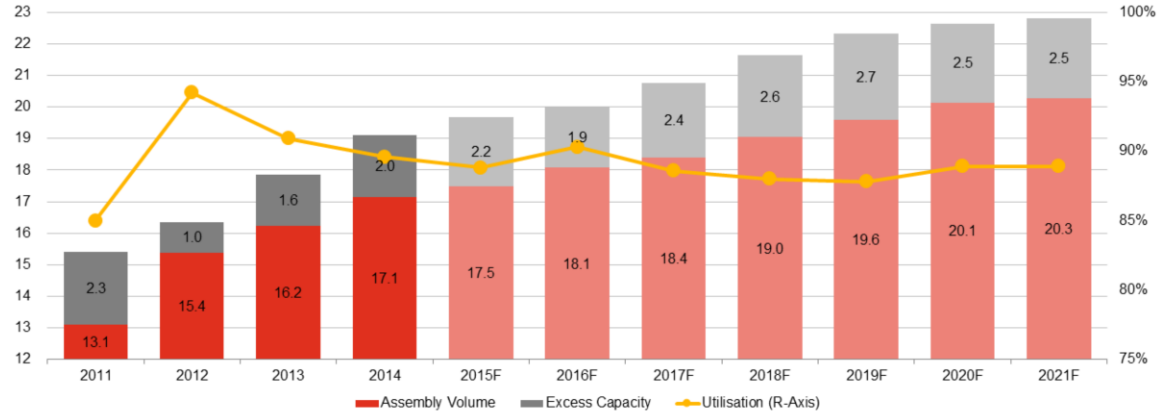
5 plants listed accounted for over 50% of all non-NAFTA exports (~522k) in 2014

**Assembly volume expected to buck any recessionary trends**

Significant expansion within the region from 2015 – 2021, driven by a combination of import substitution and an increase in exports is expected to result in steady assembly growth, even with a forecasted recession in 2018.

**Light Vehicle Assembly**

2011 – 2021 (millions)



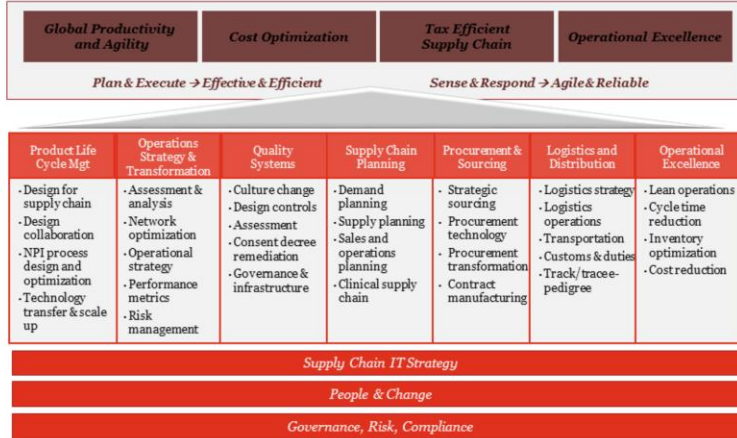
Source: Autofacts 2015 Q4 Forecast Release

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## ***PwC Capabilities & Experience***

### Automotive logistics capabilities & experience

PwC, together with strategy&, has over 6,000 operations consultants globally, many of whom are specialized in automotive and transportation logistics.

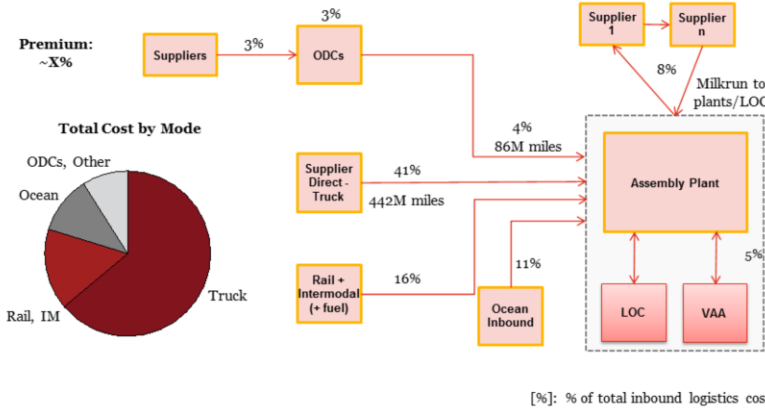


PwC / strategy& capabilities overview

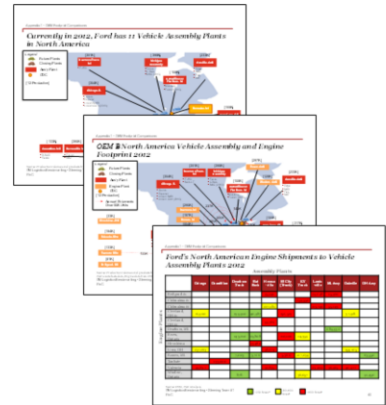
**Lets continue the conversation...**

PwC has extensive experience and works closely with every type of automotive supply chain & logistics participant. We can assist clients from strategy through execution.

**OEM Client Inbound Transportation Flow and Spend:**



**Mfg. Footprint & Material Flow Analysis:**



Who we work with:

- OEMs
- Suppliers
- Car Haulers
- Railroads
- Ports
- Terminal Processors
- VAS Providers

Logistics and Distribution Offerings:

- Logistics Strategy Development
- Strategic Network and Mode Optimization
- Logistics Stages of Excellence Assessment
- Logistics Cost Reduction Opportunity Assessment
- Transportation Mode, Lane & 3PL Sourcing
- Transportation and Logistics Process Improvement
- Cube Optimization and Truck Utilization
- Service-level Rationalization
- Fleet Strategy and Management
- WMS/TMS Selection and Implementation

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# Thank you!

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