

MacDermid
PERFORMANCE SOLUTIONS

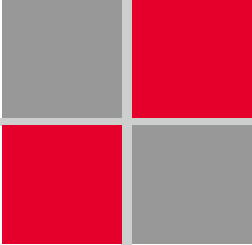
GLOBAL OEM UPDATE

2017 CASF Conference
Toronto, Ontario, Canada
November 15, 2017

Dave Gasparovich – Business Development Manager



Global OEM Coverage



20+ Automotive Professionals Supporting the Supply Chain

Automotive Solutions

Industrial Solutions

Braking Systems

Decorative Trim

Fasteners

Powertrain & Chassis

Suspension Systems

Wheels

Electronics Solutions

Electronics

Flexible Circuits

Printed Circuit Boards



Film Insert Molding

FIM – Cockpit Systems

FIM – Displays

FIM – Driver Interior

FIM – High Wear Interfaces

FIM – Anti-glare/Gloss/textures

Electronics Assembly Solutions

Assembly Materials

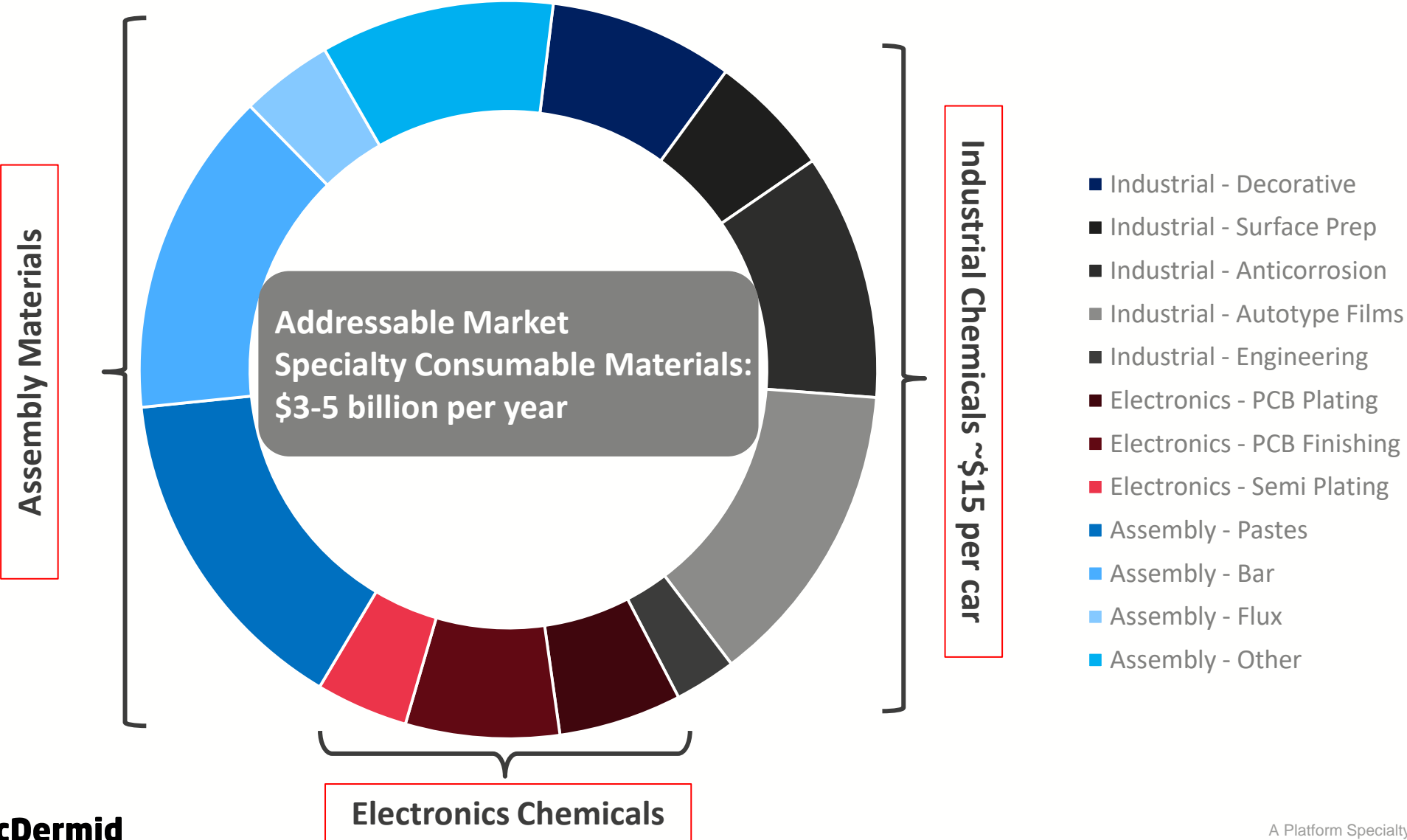
Engine Management

Interior Controls

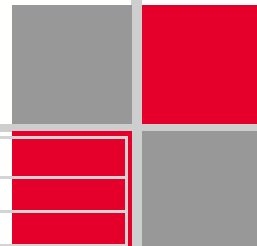
Infotainment Systems

LED Lighting

Target Rich: High-end Automotive



MEIS Pursues 81.5M of Global Volume



	AutoForecast Solutions LLC	
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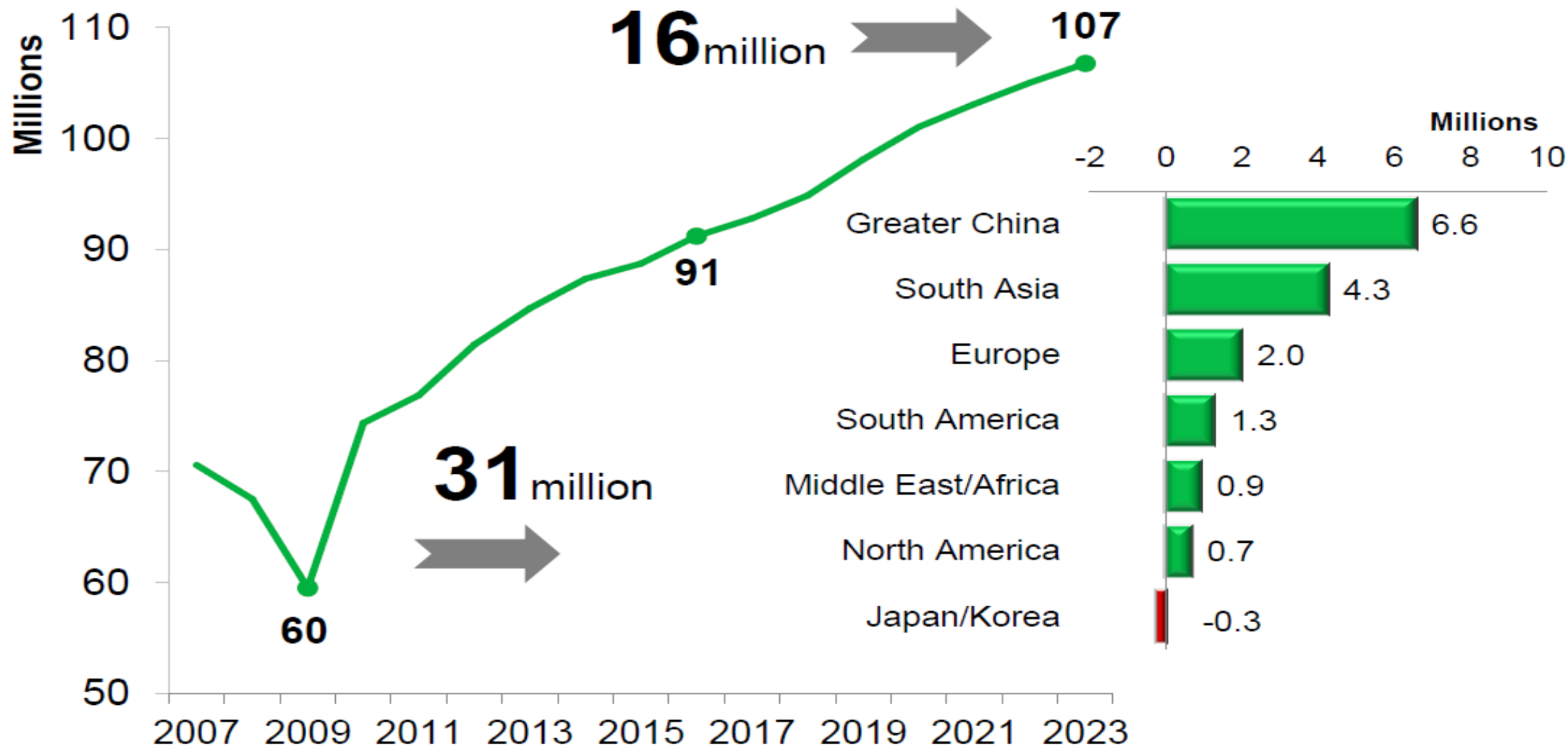
* Note ASIA-PACIFIC is: Australia, China, India, Indonesia, Japan, Malaysia, Myanmar, Pakistan, Philippines, Sri Lanka, S Korea, Taiwan, Thailand and Vietnam; MIDDLE EAST/AFRICA is: Algeria, Angola, Ethiopia, Iran, Kenya

Global LV Production - BrandOwner allocation, History and Forecast R1608										
BrandOwner	Region	CY2016	CY2017	CY2018	CY2019	CY2020	CY2021	CY2022	CY2023	
Total		92,530,000	95,140,000	97,765,003	100,000,663	102,141,046	103,481,084	104,470,472	105,392,736	
Volkswagen	Total for group 10.2M	10,232,247	10,083,482	10,496,637	10,705,674	10,848,568	10,973,732	11,099,171	11,209,464	
Toyota Motor	Total for group 10.0M	10,028,346	10,226,441	10,410,562	10,520,360	10,923,161	10,946,827	11,002,734	11,002,509	
Renault/Nissan	Total for group 9.0M	9,004,450	9,136,375	9,132,677	9,326,100	9,575,077	9,850,258	10,030,756	10,047,314	
General Motors	Total for group 10.07M	8,001,616	8,187,419	8,193,123	8,359,080	8,446,427	8,314,120	8,427,181	8,401,965	
Hyundai Motor	Total for group 8.0M	7,944,456	8,216,362	8,879,899	9,182,397	9,421,163	9,603,230	9,661,106	9,815,586	
Ford Motor	Total for group 6.7M	6,601,239	6,572,330	6,626,356	6,616,399	6,850,922	7,022,527	6,997,831	7,040,380	
FCA	Total for group 4.9M	4,846,925	4,856,663	4,960,848	4,878,122	4,770,430	4,887,796	4,934,996	4,984,495	
Honda Motor	Total for group 4.8	4,810,077	5,160,344	5,099,601	5,175,564	5,257,785	5,443,570	5,541,321	5,653,801	
PSA/Peugeot-Citroen		3,407,873	3,339,170	3,180,611	3,320,869	3,430,220	3,368,946	3,458,610	3,513,472	
Daimler		2,570,754	2,486,060	2,546,060	2,730,768	2,884,413	2,775,903	2,877,289	2,961,207	
BMW		2,305,217	2,394,181	2,472,167	2,552,098	2,510,429	2,554,520	2,639,807	2,617,945	
SAIC-GM-Wuling		2,065,958	2,402,628	2,409,802	2,317,400	2,331,671	2,328,605	2,335,750	2,316,838	
Changan Auto		1,700,093	1,555,150	1,662,706	1,670,513	1,699,512	1,731,577	1,730,446	1,784,508	
Suzuki Motor		1,519,916	1,545,124	1,497,048	1,474,405	1,473,660	1,489,002	1,507,643	1,500,742	
Mazda Motor		1,492,423	1,504,392	1,508,091	1,531,509	1,558,357	1,631,965	1,637,179	1,646,070	
Maruti Suzuki		1,384,864	1,525,073	1,830,685	1,948,979	1,940,320	1,920,210	1,909,310	1,908,020	
Geely Group		1,155,265	1,303,136	1,470,732	1,922,514	2,055,976	2,174,529	2,242,089	2,253,520	
Beijing Automotive Group		1,154,855	1,132,992	1,149,518	1,190,978	1,217,947	1,244,926	1,269,243	1,293,844	
Mitsubishi Motors		974,836	988,822	1,031,220	1,061,833	1,067,120	1,068,952	1,086,906	1,146,195	
Great Wall Automobile		965,040	917,291	929,584	935,643	954,675	980,636	985,000	1,007,383	
Subaru		963,212	1,041,836	1,092,658	1,084,925	1,085,255	1,083,524	1,084,244	1,088,484	
Tata		952,785	1,022,438	1,116,245	1,226,262	1,267,748	1,290,995	1,287,990	1,345,540	
Dongfeng Motors		914,394	1,257,820	1,263,032	1,268,354	1,280,657	1,299,049	1,300,174	1,344,258	

182 OEM's
in the
market!

Global Production Growth

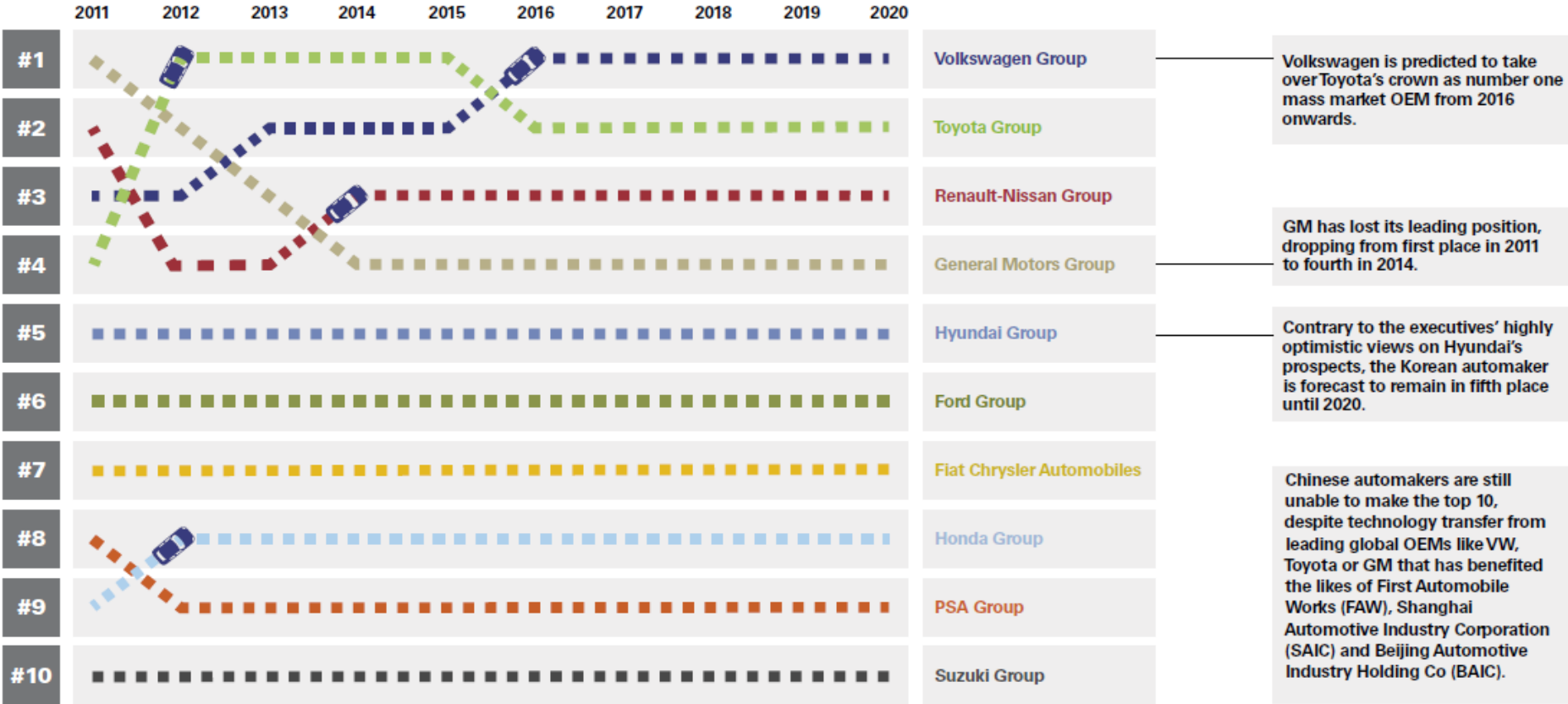
Transition from Mature Markets to Emerging Markets Intensifies



Global Automotive Rankings

Leading mass market OEMs – Sales ranking 2011-2020

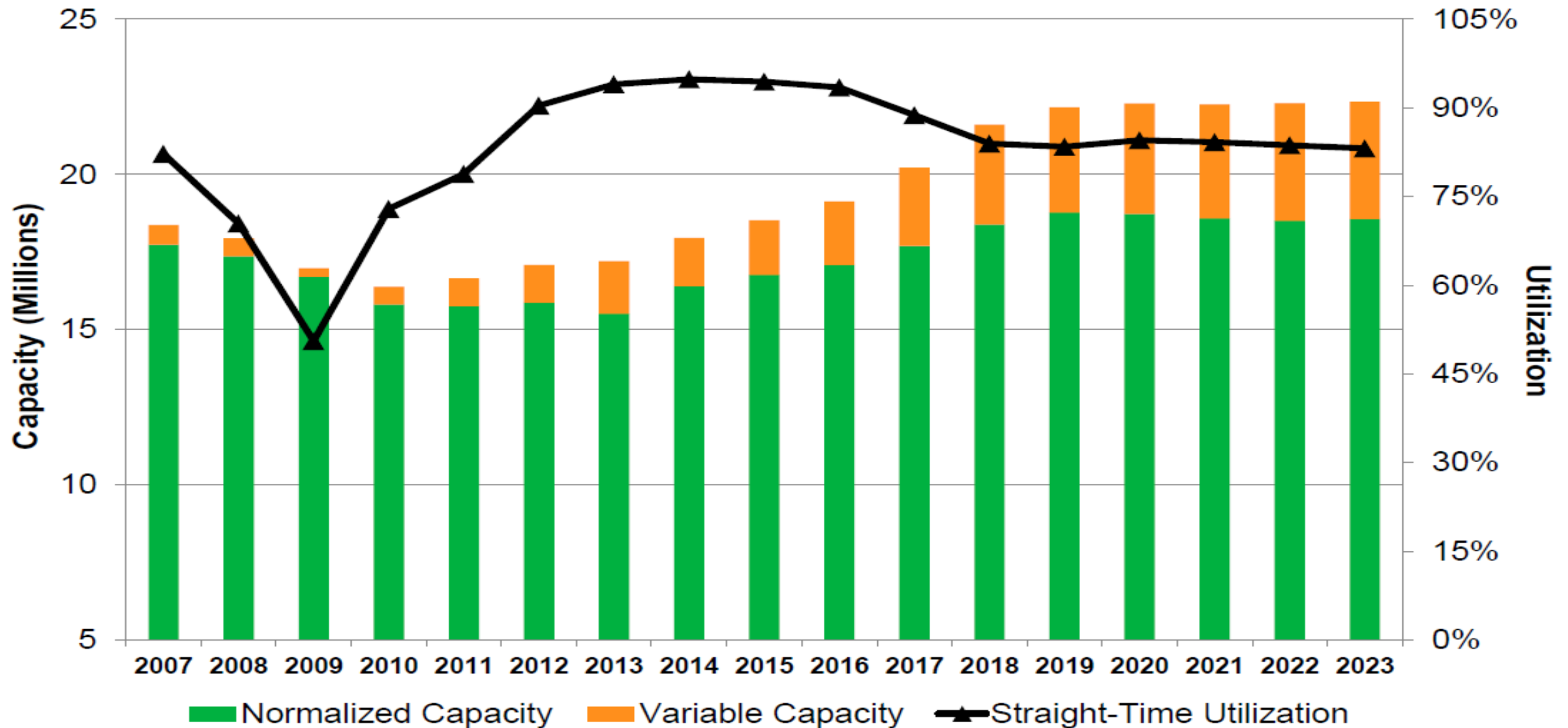
Not a single emerging market OEM is predicted to make the top 10 by the end of this decade in the mass market segment



Note: OEMs ranked descending by sales volume in respective year
 Source: KPMG Competence Centre Automotive, LMC Automotive

North American Production Capacity

Capacity is Rebuilding, yet Utilization is Robust – For Now; Flexibility is Key

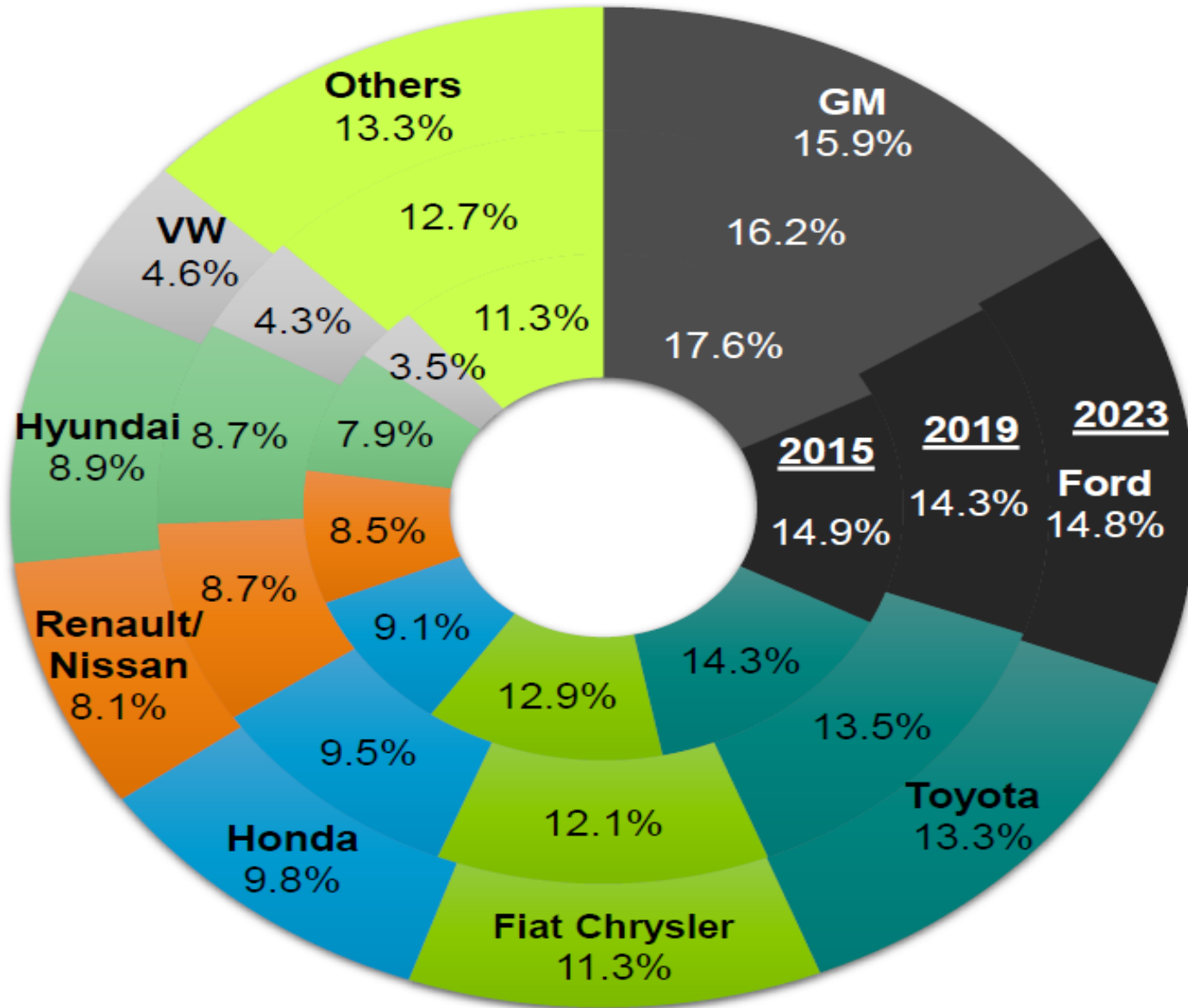


Straight-Time = Normalized + Variable Capacity

Source: IHS Markit Light Vehicle Production and Capacity Forecast

U.S.: Market Share Profile

Share Trend by Automaker (2015 – 2019 – 2023)



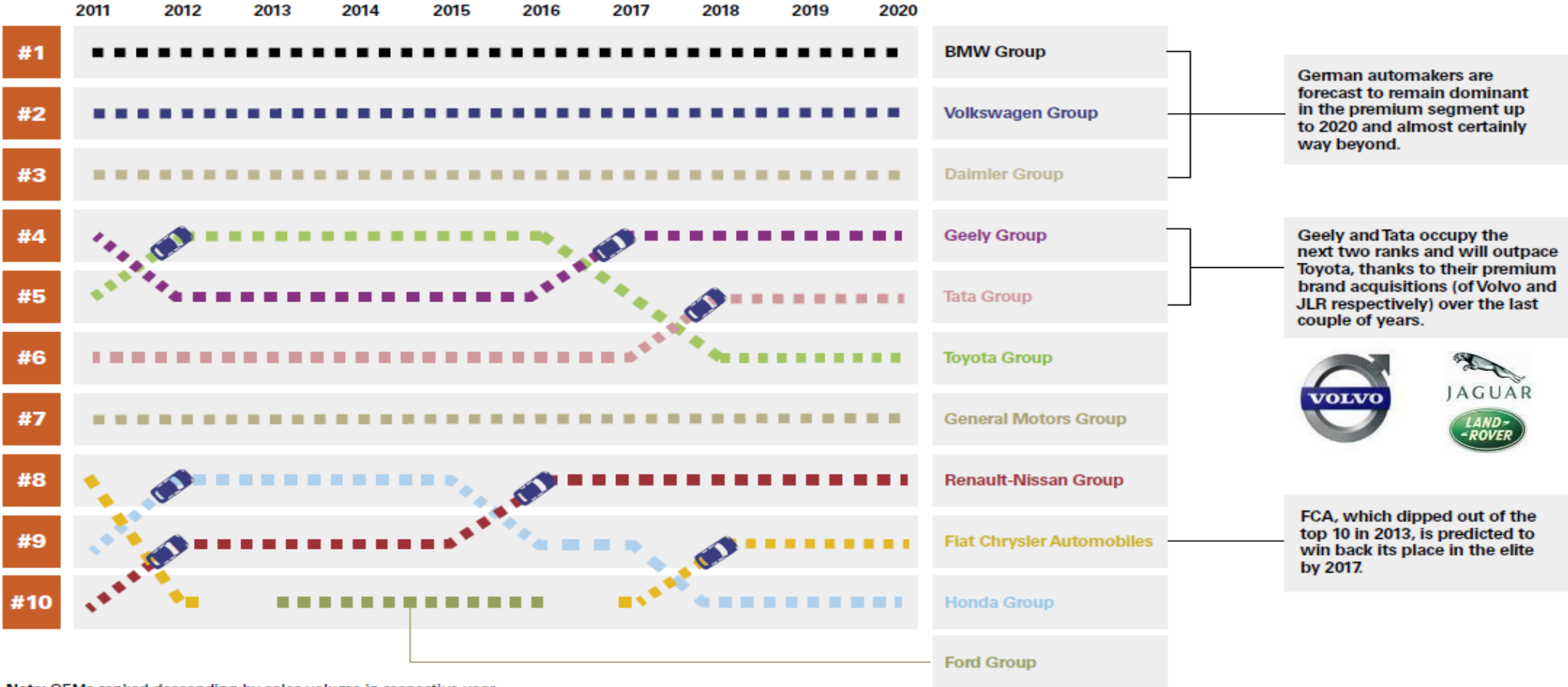
U.S. market plateaus and competition will be fierce:

- 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

Source: IHS Markit Light Vehicle Sales Forecast

Global Automotive: Premium Brands

Leading premium market OEMs – Sales ranking 2011-2020
 German automakers are set to continue their domination of the premium segment



German automakers are forecast to remain dominant in the premium segment up to 2020 and almost certainly way beyond.

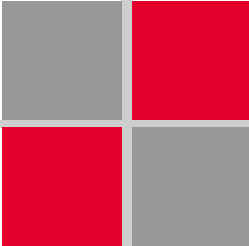
Geely and Tata occupy the next two ranks and will outpace Toyota, thanks to their premium brand acquisitions (of Volvo and JLR respectively) over the last couple of years.



FCA, which dipped out of the top 10 in 2013, is predicted to win back its place in the elite by 2017.

Note: OEMs ranked descending by sales volume in respective year
 Source: KPMG Competence Centre Automotive, LMC Automotive

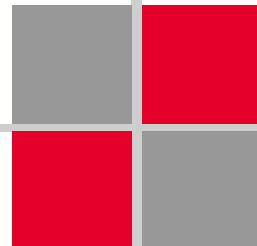
Opportunities



Dark Chrome



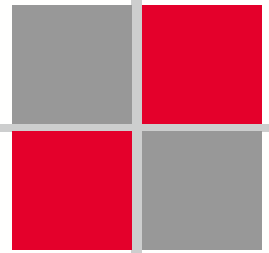
Dark Satin



Multi Satin



Industry Disruption



“54 million self-driving cars will be on the road by 2035”

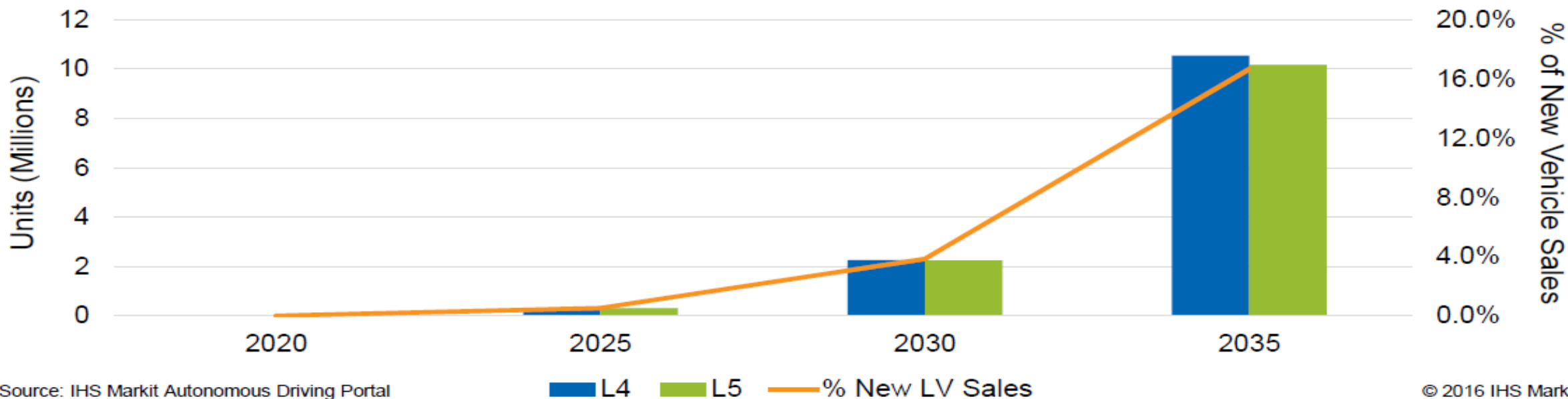
Source: IHS Automotive



Automated Driving EVOLUTION

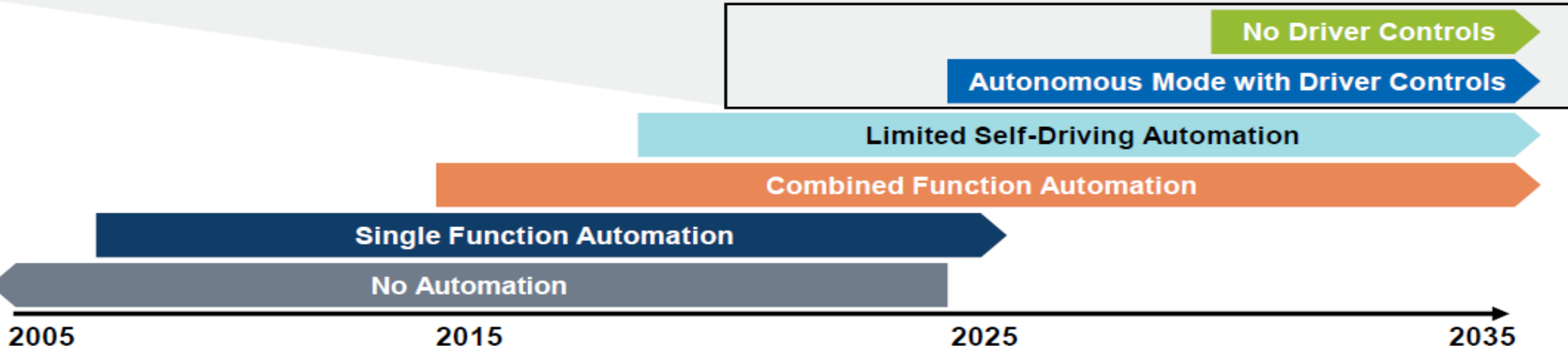
Autonomous Driving: When, Not If – But a Longer Term Proposition

Autonomous Vehicle Sales Forecast – Worldwide



NHTSA + IHS L4/5

L5
L4
L3
L2
L1
L0





Thank you for your time.