

# IndustriALL Automotive Working Group Meeting December 11, 2013, Global Auto

# Global Auto

- ⦿ Geography
- ⦿ Platforms
- ⦿ C02, Luxury and Other Topics
- ⦿ The View of Wall Street

# Mass Market OEMs

## *Shares of the Global Market*



*BMW & Mercedes  
have less than 3%  
market shares but  
profits similar to  
the leaders*

*The 70 Chinese domestic automakers together have 11% of the global market*

# Part 1

## Geography

# Geographic Presence

Is a key factor in evaluating competitive position

1. Diversity of market helps smooth cash flow
2. Scale of platforms is enhanced
3. Growth opportunities

# 2012 Sales

Market/Country	Unit Sales (millions)
<b>Asia-Pacific</b>	<b>35.0</b>
China	19.3
India	3.6
Indonesia	1.1
Japan	5.4
Korea	1.5
Thailand	1.4
<b>Europe</b>	<b>18.1</b>
Germany	3.4
Russia	3.1
<b>North America</b>	<b>17.5</b>
US	14.8
<b>South America</b>	<b>5.5</b>
Brazil	3.8

# Largest Markets

- ⦿ Europe – Signs of improvement very depressed outside of Germany
- ⦿ U.S. – Slow growth from here.
- ⦿ China – Growing
- ⦿ Emerging markets – Most other emerging markets, including Brazil, Indonesia, India and Russia have had a tough 2013 but so far no crisis and 2014 should bring recovery

# Profit – N. America

## Operating Margins

Company	2011	2012	2013 (thru 9/30)
Ford	8.3%	10.4%	10.7%
GM	8.0%	7.4%	8.0%
Chrysler	3.6%	4.4%	4.1%
Toyota	0.7%	1.3%	4.3%
Honda	3.7%	3.0%	2.9%
Nissan	4.8%	3.4%	2.5%

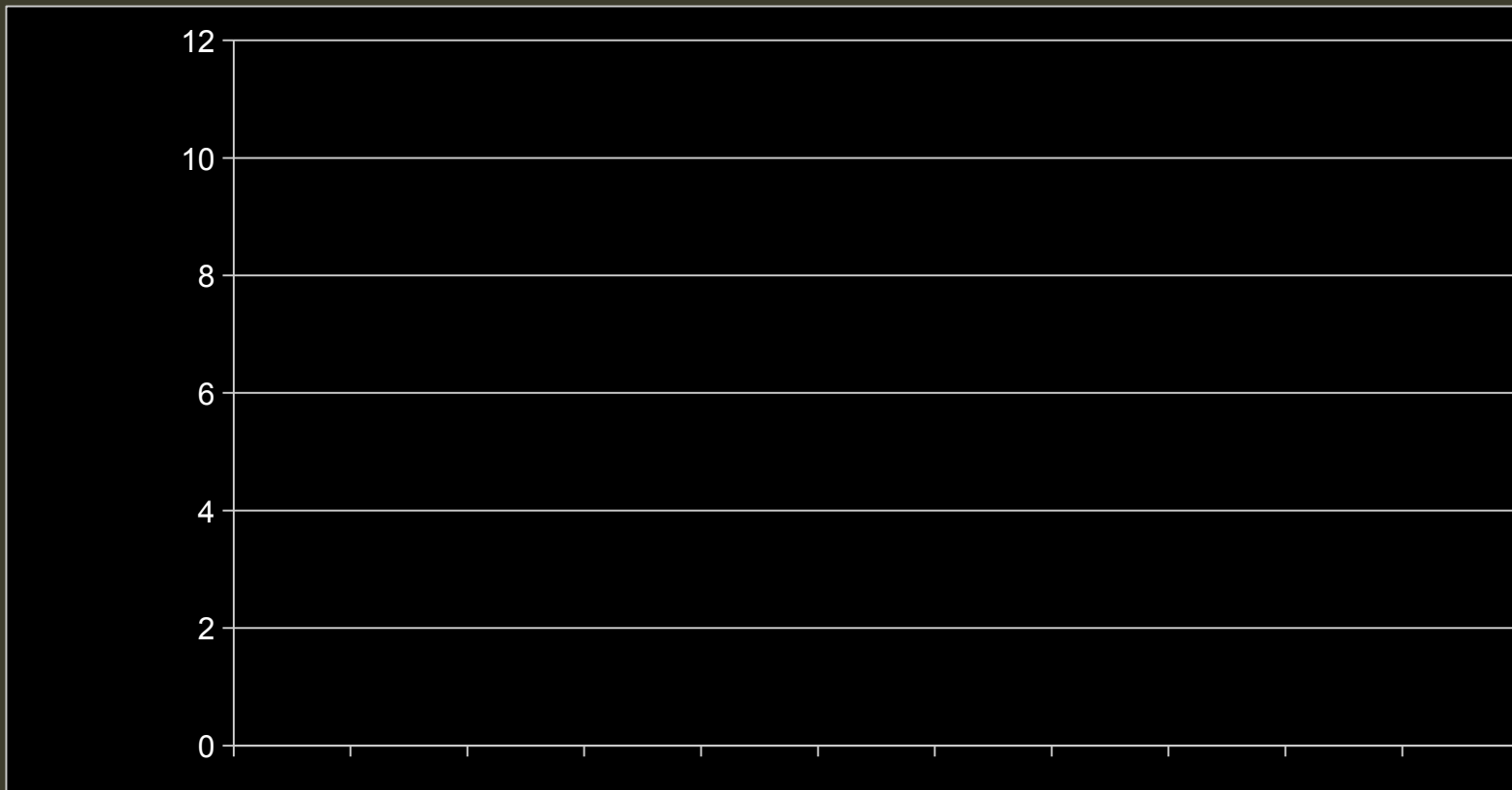
Notes: Big 3 have a 12/31 FYE. The J3 have a 3/31 FYE. Estimated NA portion of finco sales/profits are adjusted out for J3.



# Especially compared to the past

## N. America Operating Income

### 2000-2008



Source: Company public filings, UAW Strategic Research estimates. Japanese figures are from 4/1/00 – 3/31/10. U.S. figures are from 1/1/00 – 12/31/09. All figures exclude special one-time items reported by each company.

# Profit – China

- ◎ Very profitable for foreign joint ventures and Great Wall
- ◎ Estimates are that VW, Mercedes, BMW get between **30% and 40%** of their profits from China
- ◎ GM got about **20%** of its profit from China in 2012

# Profit – Europe

- ◎ Profits at opposite ends of the spectrum
  - Luxury
  - Low-end like Dacia
- ◎ Basic mass market very challenging

# Asia Rising – Theme of the Decade

Global “Middle Class” Roughly \$10,000 - \$100,000 PPP/Family

Country	2012	2020	2030
North America	17%	10%	7%
Europe	34%	22%	14%
South America	10%	9%	8%
<b>Asia</b>	<b>32%</b>	<b>53%</b>	<b>65%</b>
Other	7%	7%	7%

Source: OECD Working Papers/IMF Global Statistics

# Car Consumption

## Takes off at a certain income level

### *Global light Vehicle Sales*

Year	Asia Pacific	Europe	N. America	S. America
1995	13.2 million	14.2 million	16.5 million	1.9 million
2000	12.7 million	18.7 million	20.3 million	1.9 million
2005	18. 1 million	20.2 million	20.2 million	2.7 million
2012	34 million	18 million	17 million	5.4 million
2020 projected	45-70 million	20 million	20 million	7 million

# Growth Markets – Asia

## **China**

GM overall sales leader but lags behind VW in profit and passenger vehicle sales. VW is twice as big as GM.

## **India**

Maruti/Suzuki, Hyundai, Tata dominate the market, Ford, GM, VW, Toyota, Fiat, Nissan have aspirations

## **Indonesia, Malaysia, Thailand**

Toyota dominates Indonesia, Malaysia, Philippines and Thailand with 40% - 50% market share. Nissan and Honda follow.

# China Sales (millions)

	<u>2010</u>	<u>2014</u>
Sedan	9.5	13.2
MPV/SUV	1.7	3.2
Mini car	2.5	2.7
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Total Car/SUV	13.7	19.0
Commercial Vehicles	4.3	4.6
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<b>Total</b>	<b>17 Million</b>	<b>24 million</b>

# India

- ◉ Small and low priced cars driving growth
  - Hyundai, Renault/Nissan, Ford using India as an export base, partly by default
- ◉ Units sales
  - Cars: 2 million
  - Utilities: 0.6 million
- ◉ Market share: other than Hyundai, global sales leaders lag in India

Suzuki: 40%

Toyota: 6%

Hyundai: 15%

GM: 4%

Tata: 14%

Ford: 4%

VW: 3%



# Indonesia, Thailand

- ◎ Indonesia with growing middle class has sights on growing auto production to compete with Thailand
- ◎ Thailand primary products are pickups and smaller cars. Exports finished vehicles and \$5 billion worth of parts. 80% of parts from local companies.

# Japanese OEMs Capacity Plans Worldwide

*Favor ASEAN Over China*

	<u>2008</u>	<u>2015</u>	<u>Change</u>
Japan	9.4	7.7	-2
Europe	2.1	2.0	
North America	4.9	5.9	+1
<b>Asia ex. China</b>	<b>2.8</b>	<b>6.2</b>	<b>+3.4</b>

# Capacity Growth in ASEAN

- ◎ 1 million units of new capacity being added in ASEAN countries
  - Most of it from Nissan, Honda, Toyota
- ◎ Over next few years supply will likely exceed demand

# Other Growth Markets

- ◎ Russia
- ◎ Brazil

# Russia Car Market, 2012

Relatively tight competition among mass market OEMS

OEM	Market Share 2012 (estimate)
Renault/Nissan/AvtoVaz	30%
GM	13%
Hyundai-Kia	12%
VW	10%
Toyota	6%

# Brazil Share (Cars)

OEM	Market Share
Fiat	24%
VW	22%
GM	19%
Ford	8%
Renault	7%
Hyundai	2%
Toyota	2%

Capacity growing:

- Cherry
- Fiat
- GM
- Renault
- Nissan
- Hyundai

Putting profitability at risk

# Export Hubs

## ◎ New and Growing

- Thailand: Toyota, Honda, Nissan, Ford
- Mexico: B3, Nissan, VW
- India: Hyundai, Nissan, Ford, GM

## ◎ Existing – Shrinking or flat

- Japan: Toyota, Nissan
- Korea: Hyundai-Kia, GM

# Part 2

## Platforms



# To get more bang for the buck

## Investment (roughly)

- ◎ New Plant: \$1 - \$1.5 billion
  - Paint shop: \$400 million
  - Body shop: \$400 million
- ◎ New architecture with 1 top hat: \$1 billion+
- ◎ New top hat on existing architecture: \$300 million

# Why Look at Platform Strategy?

## Cost of Making a Car

*Rough sketch as a % of sales*

Direct labor 6% - 8%

Purchased parts/materials 70%

R&D, capital expenditure 10%

Marketing, administrative 10%

Profit 0 – 10%



Platform strategy  
has an impact on  
these costs

# Capital Expenditures

*Advantage Hyundai?*

Company	2012 (Billion dollars)
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Fiat/Chrysler	5
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Ford	6
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GM	7
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<b>Hyundai/Kia</b>	<b>3</b>
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Nissan/Renault	6
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Toyota	10.5
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Volkswagen	9.6
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# Crude Measures of Efficiency

- ⦿ Volume per model
- ⦿ Volume per platform
- ⦿ Percent of sales in top 2 or 3 platforms
- ⦿ Models per platform

# Volume per Platform 2015

(roughly)

OEM	Average Units
VW	1,200,000 and going up
Hyundai/Kia	900,000
Honda	800,000
Toyota	600,000
Ford	600,000
GM	500,000

# % of Sales Accounted For By Top 3 Platforms

OEM	% of Sales
Honda	85%
Hyundai/Kia	70%
Volkswagen	60%
Ford	45%
Toyota	55%
GM	35%

# Reducing Platforms

- Ford and GM are reducing the number of platforms which will help increase the number of units and models per platform

	2011	2018
<b>Ford</b>	19	9
<b>GM</b>	26	17
<b>Honda</b>	5	5

# Models per Platform

	Now	2020
VW	4	8
Hyundai/Kia	5	8
Toyota	4	5
Ford	2	4



# Does Size Matter?

*Up to a point*

- ◎ In high fixed cost, R&D intensive industry more volume means more units to amortize cost over so VW, Toyota, GM have some brute advantage
- ◎ But the key is to leverage heavy investment over more units per model and platform since much investment is model/platform specific
  - Honda is a good example. In terms of size, Honda is a 3rd tier OEM but it gets many benefits of size by following a disciplined

# New Trend Led by VW

## *Benefits of flexibility/modularity*

- In theory, allows vehicles of different lengths and widths on a single platform
  - Small and medium cars as well as SUVs all on the same architecture
  - Allows accommodation for global tastes – Chinese like longer cars, Americans like wider cars
- Suppliers provide a tool kit that can be modified to fit different models reducing parts costs (Lego style)
- Reduces development time
- Increases powertrain options (engine position) for assembly plant
  - Example: electric Golfs produced on same line as gasoline and diesel Golfs!
- Supposedly improves line speed???

# VW is the Benchmark

But Hyundai, Daimler, Japanese, GM

- moving up  
● In 3 years, VW's MQB architecture will have 4.5 million units and 30 models
- Mercedes pursuing flexible architectures
  - Future S-Class, E-Class and C-Class on same architecture!
- Toyota has TNGA
- Renault/Nissan launching Common Module Family on Rogue, Qashqai, X-Trail and Espace

# Doubt's About Modularity

- ⦿ There may not be cost savings on parts beyond 200,000 – 300,000 units if it requires additional cap ex and tooling for parts makers
- ⦿ High and low end products on the same platform could mean a low-end car that's over engineered and too expensive, or a high-end car with cheapened content
- ⦿ Volume producers like VW aren't likely to realize an additional savings of 20% on parts cost once they've hit 1 million

# Success Without Modular Design

- ◎ Some successful companies are treading warily on this modular approach
- ◎ Honda has 5 platforms with lots of volume per platform and no apparent rush to merge them

# Part 3

## Pollution, Luxury and other topics

# Reducing Pollution

- ◎ By 2020 it will cost about \$2000/vehicle to meet environmental requirements
  - Larger volumes will help reduce R&D cost per unit
  - Higher costs will lower vehicle demand
- ◎ This will be a positive for suppliers as OEMs rely on them for solutions
  - Alternative powertrains
  - 10-speed transmissions
  - Start-stop systems

# Luxury *The 1% Issue*

In the past couple years the luxury market has taken off

- ⦿ VW has the advantage among mass market players
- ⦿ BMW, Mercedes, Audi all with super strong global sales and super profits, especially in China
- ⦿ Margins 10 – 15% vs. 4 – 6% in general
- ⦿ Cadillac, Lexus, Infiniti, Lincoln all trying to get there



# Low End Profitable

Renault – Dacia	Old design, low cost country production
Nissan – Datsun	Old design, low cost country production
Hyundai/Kia	Simple construction, low cost production overseas (India, US, E. Europe)

# Part 4

## Outlook

# Japanese OEMs

Toyota, Honda and Nissan are recovering but they will not dominate as before because the landscape has changed dramatically since before the financial crisis:

1. China has grown in importance, political headwinds for Japanese
2. Luxury brands have grown especially within China, Japanese not leaders in luxury
3. VW now leads in platform strategy
4. Hyundai, Ford and GM are now serious competitors

# Global Outlook

- ⦿ Europe is stabilizing, look for surprising upside due to pent up demand (not as strong as U.S. but 6% - 7% annual recovery). Recovery should be led by Italy and Spain.
- ⦿ S.E. Asia will be slow in the near term with long term growth
- ⦿ India looks bumpy, good long term growth potential but investment needed on infrastructure

# Global Outlook

- ◎ Outlook for China is hard to call
  - Middle class is growing, demand for cars is growing
  - Pollution is a problem
  - 100 OEMs, most partially state owned and state controlled
  - Great Wall making competitive car, other domestics still lagging
  - Newer JVs require more local transfer of technology and brand by development partner

# Outlook N. America

- ◎ Capacity growing as plants go to 3 shifts and plants are added in Mexico
- ◎ Demand growing more slowly than capacity

# Part 5

## Wall Street View

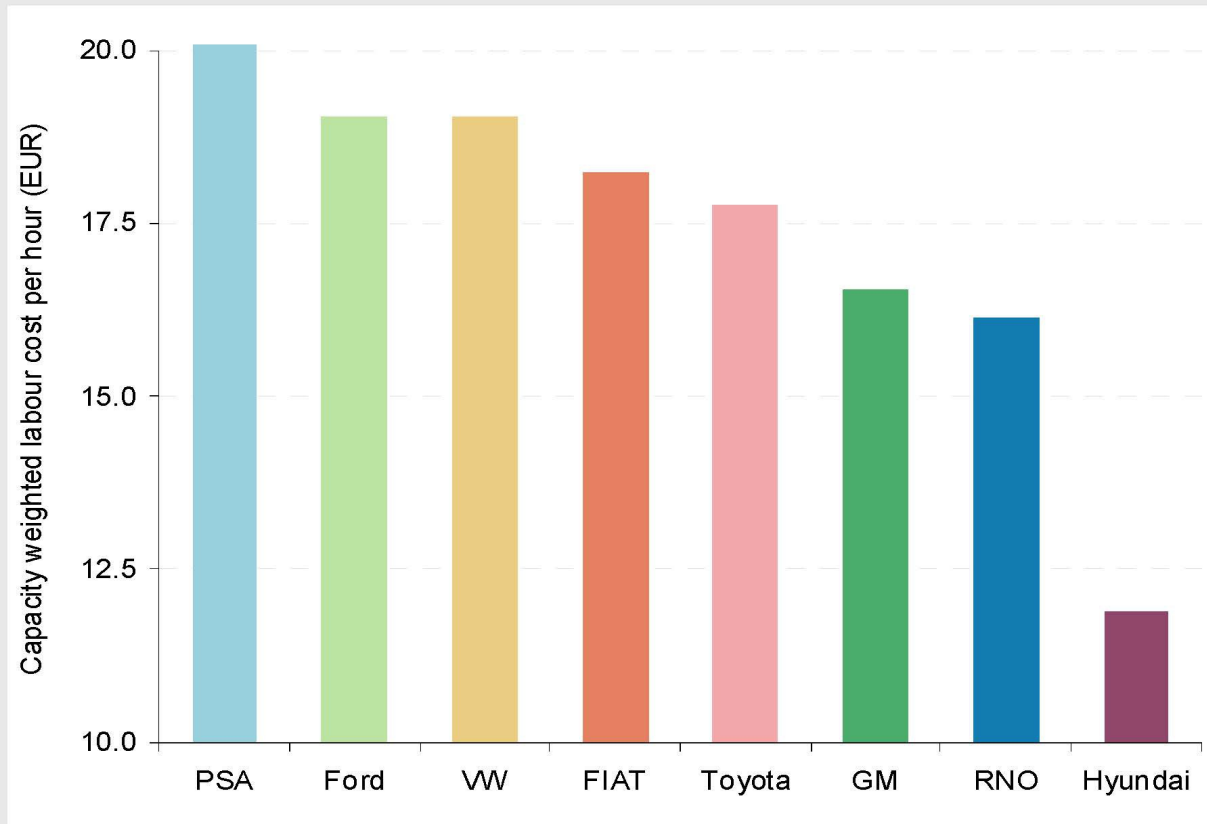
# Stock Market Value

	\$ billions
Toyota	\$223
VW	\$100
Honda	\$80
Renault/Nissan	\$80
Daimler	\$75
<b>Ford</b>	<b>\$70</b>
BMW	\$70
Hyundai-Kia	\$60
GM	\$60
Fiat	\$12
Peugeot	\$6



# Wall Street View

## Capacity-weighted labour cost by OEM (2012)

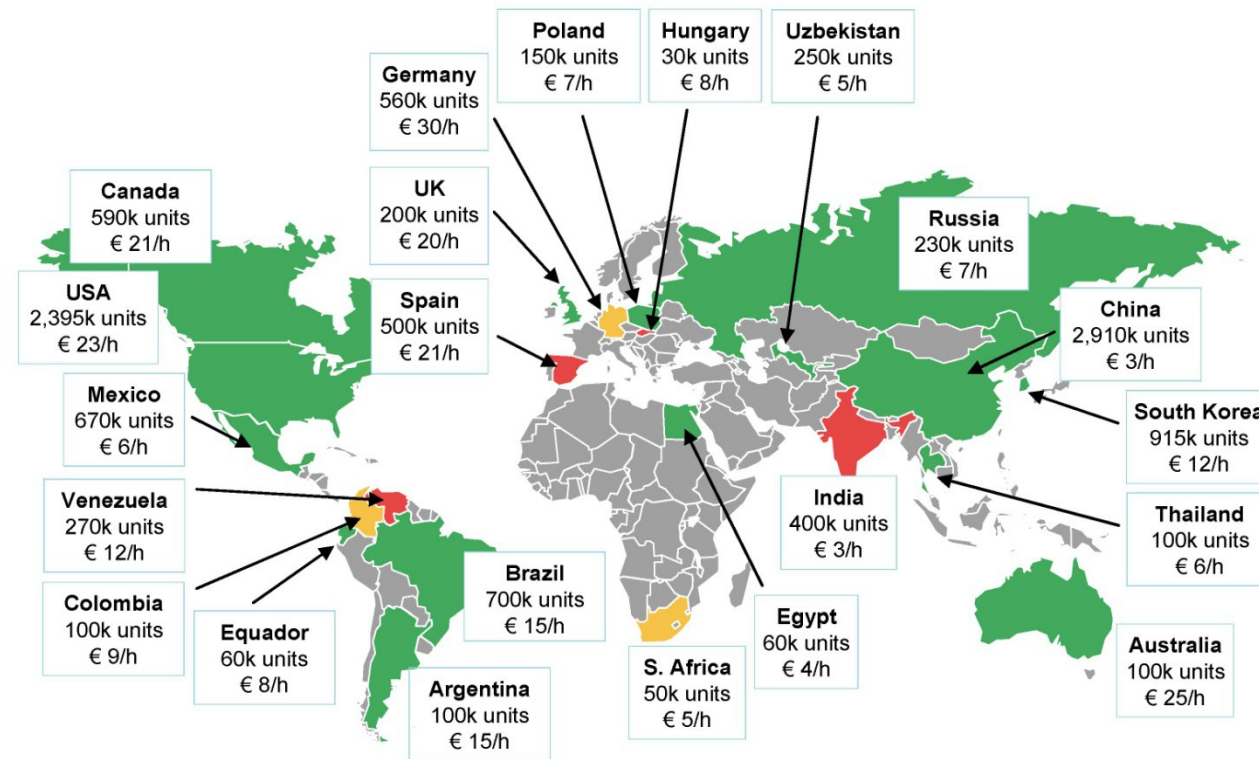


Source: Company data, Morgan Stanley Research estimates

# Wall Street View – GM

Exhibit 21

## GM – If it weren't for Opel



### GM

- # plants globally: 53
- global capacity: 11.1m units
- Ø plant capacity: 210k units
- global capacity utilisation: 85%
- % capacity outside W. EU: 89%
- capacity-weighted labour cost: €17

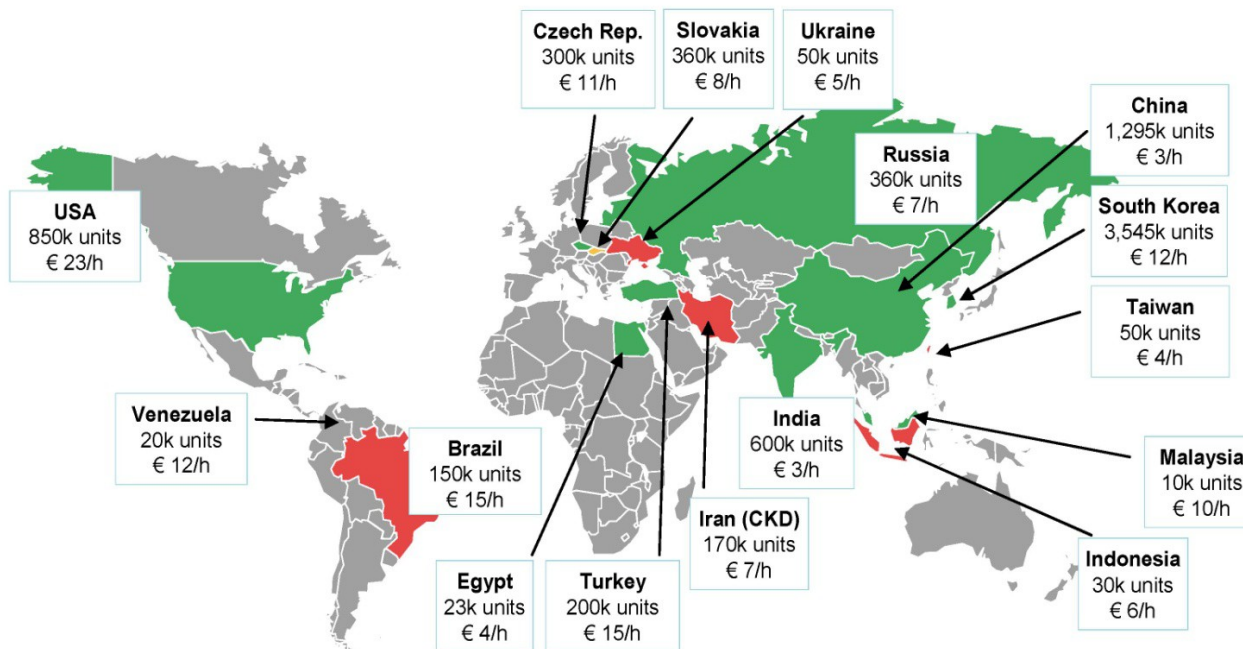
If it weren't for Opel, GM would have an almost flawless industrial footprint with high exposure and utilisation in all regions globally. However, we note that, compared to some peers and leaving aside China, GM has relatively little production in true low-cost countries.

Note: Ford is covered by our colleague Adam Jonas. Source: Morgan Stanley Research estimates

# Wall Street View – Hyundai

Exhibit 18

## Hyundai – Nobody does it better



### HYUNDAI

- # plants globally: 27
- global capacity: 7.6m units
- Ø plant capacity: 281k units
- global capacity utilisation: 95%
- % capacity outside W. EU: 100%
- capacity-weighted labour cost: €12

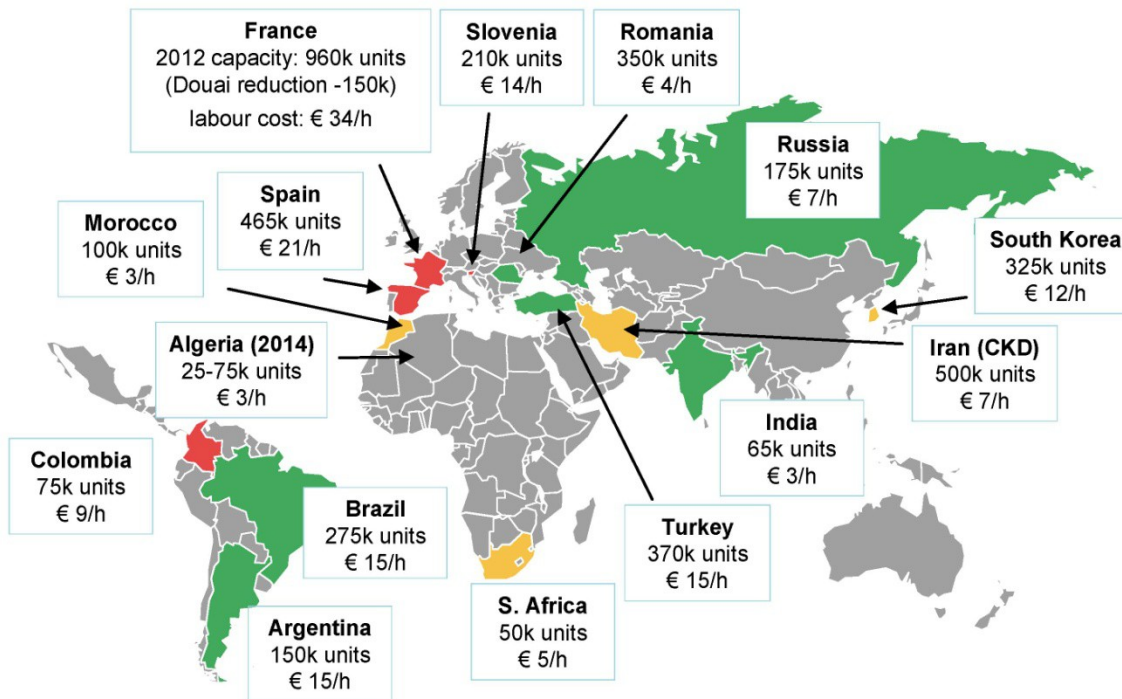
Can it be done better than at VW? Yes, Hyundai boasts the highest capacity utilisation and average plant capacity among OEMs globally, as well as the lowest labour costs by some margin, not least because it has no plants in W. Europe. Low utilisation in Brazil is no reason for concern, in our view, and merely reflects recent expansion work.

Note: Hyundai is covered by our colleague Sangkyoo Park. Source: Morgan Stanley Research estimates

# Wall Street View – Renault

Exhibit 14

## Renault – The low-cost champion



### RENAULT

- # plants globally: 23
- global capacity: 4.3m units
- Ø plant capacity: 186k units
- global capacity utilisation: 64%
- % capacity outside W. EU: 67%
- capacity-weighted labour cost: €16

High levels of capacity utilisation in high-margin markets like Russia and Brazil and the shift to low-cost countries allow Renault to offset poor capacity utilisation in W. Europe. Capacity-weighted labour costs are hence the 2<sup>nd</sup> lowest globally and Renault has also just renegotiated employment terms in both Spain and France.

Source: Morgan Stanley Research estimates

Thank You