



## Global Autos Outlook: Automotive trade – A Whole New World?

### US auto tariff hike risks up, at least in the short term; Suzuki new global pick

US protectionism is posing multiple challenges to global OEMs: 1) Higher tariffs, 2) More capex in the US, and 3) Rising raw material costs.

The Auto industry is staring at global excess capacity, no matter what the outcome of the Section 232 drama.

#### Key themes and analysis in this Anchor Report include:

- Comprehensive look at trade-related issues facing global automakers, possible strategies they could adopt to cope, and potential winners and losers over the near to medium terms.
- In-depth analysis of current US auto trade issues, including NAFTA renegotiations, Section 232 review, trade with Japan, EU, and South Korea.
- Suzuki is our new global top pick; we also like Geely, Hyundai Motor, Maruti Suzuki, and Tesla (TSLA covered by Instinet, LLC. technology analyst Romit Shah).

4 June 2018

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### Global auto trade: A Whole New World?

US auto tariff hike risks have risen, at least in the short term; Suzuki is our new global pick

#### Global demand to grow by 1.8% y-y in 2018F

We expect auto demand in the US to remain at a high plateau, while we believe that the markets in India and Southeast Asia will continue to grow. However, we note three key changes, compared to our view six months ago: 1) Trump's policies (both perceived and actual) are engendering uncertainties which may impact global carmakers significantly; 2) economic slowdown and contagion risks in Latin America have risen; and 3) political risks in Italy and Spain threaten demand recovery in Europe.

#### US protectionism: is it leading to a whole new world for global OEMs?

Automakers have set up an intricate web of suppliers and assembly plants globally to leverage the benefits of trade agreements, while keeping FX risks at bay. The pursuit of beggar thy neighbour policies by a large, connected, and heretofore open economy such as the US threatens to upend this structure.

#### Risk of "No NAFTA" is up, but our base case remains NAFTA 2.0

Trump's openly protectionist policies have increased the risk of a "No NAFTA" outcome, although our base case remains that NAFTA will be renegotiated. If NAFTA is dissolved, it will impact all automakers operating in North America. In particular, we think GM and FCA could be hit the hardest (higher import tariffs cut 40% of GM's FY2018E EBIT, 23% of that for FCA). To us, it increasingly appears that the US President's decision-making is centered on autoworkers, even if that is to the detriment of US automakers.

#### Auto industry staring at global excess capacity

Under the worst case scenario, Section 232 investigations may result in broad-based import tariffs slapped on US automotive imports. For global automakers, we therefore see a binary outcome from a growing list of protectionist measures being deployed by the US. Neither outcome is good news, with automakers staring at excess global capacity in either case (see page 4).

#### Silver linings: China's import tariff cut, forthcoming JEEPA

Although US protectionism is a real threat, we see a couple of silver linings. China announced an import tariff cut for autos, from 25% currently to 15% beginning 1st July 2018. The Japan-EU Economic Partnership Agreement (JEEPA) was agreed upon last December and is likely to become effective in spring 2019, benefiting Japanese car exporters. One of the biggest beneficiaries from both China and the EU's tariff cuts would be Toyota Motor.

#### Our global top pick is Suzuki Motor (7269 JP, Buy)

Our recommendation is based on three key reasons. First: Suzuki's strong positioning in high-growth markets such as India and Pakistan. Second: Further gains in Japan driven by an improving product mix. Third: Lack of exposure to US/Trump or Latin American risks.

Our regional picks are Geely (175 HK, Buy), Hyundai Motor (005380 KS, Buy), Maruti Suzuki (MSIL IN, Buy) and Tesla (TSLA US, Buy; covered by Instinet, LLC, technology analyst Romit Shah).

### Global Markets Research

4 June 2018

#### Anchor themes

US protectionism is posing multiple challenges to global OEMs: 1) higher tariffs; 2) more capex in the US; 3) rising raw material costs.

#### Nomura vs consensus

Auto industry is staring at global excess capacity, no matter what the outcome of the Sec 232 drama.

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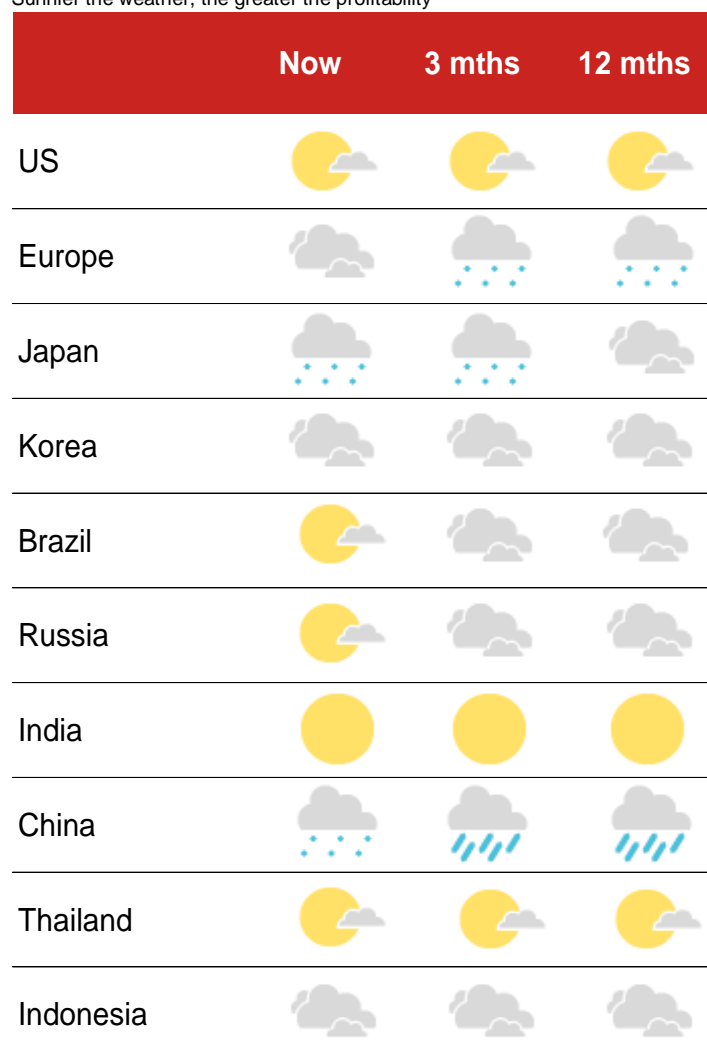
# Executive summary

## Global demand to grow by 1.8% y-y in 2018F

Our view remains unchanged that auto demand in the US will continue to stay at a high plateau, and that the markets in India and Southeast Asia would continue to grow. However, compared to half a year ago, we note three key changes: 1) Trump administration's policies (both perceived and actual) are engendering uncertainties which could potentially impact global carmakers significantly; 2) economic slowdown and contagion risks in emerging markets, particularly in Latin American economies such as Argentina, Brazil, and Mexico, have risen; and 3) political risks in Italy and Spain threaten the auto demand recovery in Europe.

**Fig. 1: Market profitability weather forecast**

Sunnier the weather, the greater the profitability



Source: Nomura research

## US pursuit of beggar thy neighbor policies: is it leading to a whole new world for global automakers?

Automakers have set up an intricate web of suppliers and assembly plants globally to leverage the benefits of trade agreements, while keeping FX risks at acceptable levels. The pursuit of beggar thy neighbour policies by a large, connected, and heretofore open



economy such as the US threatens to upend this structure. In this edition of the Global Autos Outlook, we therefore look at trade-related challenges (and opportunities) facing global automakers, possible strategies they could adopt to cope, and potential winners and losers over the near-to-medium term.

## **Risk of “No NAFTA” has risen, although our base case remains NAFTA 2.0**

Trump’s openly protectionist policies have increased the risk of a “No NAFTA” outcome, although our base case still remains that NAFTA will be renegotiated. Nearly 25 years of NAFTA have integrated the North American auto industry very tightly. If NAFTA is dissolved, it will impact all automakers operating in North America. In particular, we think GM and FCA could be hit the hardest (higher import tariffs cut 40% of GM’s FY2018 EBIT, 23% of that for FCA). In our opinion, it increasingly appears that the US President’s decision-making is centered on autoworkers, even if that is to the detriment of the automakers. Thus, US automakers getting hurt might not hold back Trump from making such a move.

## **Auto industry staring at global excess capacity, no matter what the outcome of the Section 232 drama**

The US Department of Commerce has started a Section 232 investigation into US imports of autos and auto parts. Under the worst case scenario, this may result in broad-based import tariffs slapped on US automotive imports after the investigation concludes and reports back to the President in several months. US imports of new passenger vehicles and auto parts totaled \$333bn in 2017. Import duties on such a large volume of goods would be highly disruptive and impact all the major car exporting countries/regions such as Mexico, Canada, Japan, the EU, and South Korea.

While we think that the threat of tariffs is largely Trump’s negotiation tactic to get a better NAFTA deal, we caution investors to pay attention, as the tail risk (of import tariffs materializing) is not negligible. Furthermore, no matter whether new auto tariffs are imposed or not, global carmakers, irrespective of nationality, are feeling pressured to build plants and increase employment in the US. This is likely to lead to increased capacity in the US, where car demand is no longer growing. On the other hand, non-US carmakers are unlikely to cut capacity at home or elsewhere, leading to excess capacity globally. This will impact most markets except for relatively closed ones such as China, India, and Southeast Asia, due to their existing high import tariffs.

**For global automakers, we therefore see a binary outcome** from a growing list of protectionist measures being deployed by the US. Neither outcome is good news, with automakers staring at excess global capacity in either case:

- If Section 232 tariffs are imposed, it (largely) cuts off imports into the domestic US market. However, that would mean that there is excess capacity outside the US, as existing foreign plants supplying to the US (7.88mn/\$192bn new PVs, 8.2% of global volume, and \$141bn auto parts in 2017) have to find markets elsewhere.
- If new tariffs are not imposed, we still have additional capacity coming up in the US as automakers are goaded into doing so to avoid political pressure. This also leads to a global supply-demand imbalance in the auto industry.

## **Silver linings: China’s import tariff cut, forthcoming JEEPA**

Although US protectionism is a real threat, we see a couple of silver linings. China announced an import tariff cut for autos, from 25% currently to 15% beginning 1st July 2018. The Japan-EU Economic Partnership Agreement (JEEPA) was agreed upon last December and is likely to become effective in spring 2019, benefiting Japanese car exporters. One of the biggest beneficiaries from both China and the EU’s tariff cuts would be Toyota Motor.

## Our global top pick is Suzuki Motor

Our recommendation is based on three key reasons. First: Suzuki's strong positioning in high growth markets such as India and Pakistan. Second: Further gains in Japan driven by improving product mix. Third: Lack of exposure to US/Trump or Latin American risks.

Suzuki's valuation is attractive, considering its medium term growth: P/E multiple for next fiscal year (FY20/3) is only 11x.

**Fig. 2: Our preferred global pick for the auto sector is Suzuki Motor**

Company Name	Ticker	Rating	Current price	Target price	Upside
Suzuki Motor	7269 JP	Buy	JPY 6,169	JPY 7,200	17%

Source: Bloomberg, Nomura research. Pricing date is 30 May 2018.

## Our regional picks are Geely, Hyundai Motor, Maruti Suzuki and Tesla

**Geely** is our top pick in the China autos space. We like the company for its all-round fundamental improvements in FY17, its newly launched Lynk brand that has the potential to become an important driver of volumes and profits, and for the longer-term opportunity afforded by exports.

While there could be some near-term pain due to **Hyundai Motor's** aging model line-up in the US and low capacity utilization, we urge investors to look beyond that as we expect earnings to improve sequentially. Potentially higher dividend payouts from FY19F add to the stock's attractiveness. Our Korea top pick.

Strong demand for new models, benefits from market trend towards premiumisation, and healthy cash flow generation are key positives which make **Maruti Suzuki** our top pick in the Indian auto sector.

**Tesla** (covered by Instinet, LLC, technology analyst Romit Shah) remains a top US pick. Tesla has a large market opportunity ahead, and an increasingly well-defined product pipeline capable of capturing meaningful global share. Romit continues to see exponential revenue growth ahead for the company and believes investor focus is about to shift from production issues and solvency to market opportunity and profitability, as Tesla is making meaningful progress on Model 3 production ramp.

**Fig. 3: Our regional top picks**

Region	Company Name	Ticker	Rating	Current price	Target price	Upside
China	Geely	175 HK	Buy	HKD 22.15	HKD 34.40	55%
South Korea	Hyundai Motor	005380 KS	Buy	KRW 137,500	KRW 180,000	31%
India	Maruti Suzuki	MSIL IN	Buy	INR 8,588.20	INR 11,125.00	30%
US	Tesla	TSLA US	Buy	\$ 291.72	\$ 420.00	44%

Note: Tesla covered by Romit Shah and Kellan Grenier, Instinet, LLC.

Source: Bloomberg, Nomura research. Pricing date is 30 May 2018.

Please refer to the section titled "Stock picks" on page 77 for further details on our Buy ratings for Suzuki Motor, Geely, Hyundai Motor, Maruti Suzuki, and Tesla (TSLA US, covered by Instinet, LLC, technology analyst Romit Shah).

Fig. 4: Stock valuations

Company	Ticker	Mkt Cap (\$mn)	Rating	Current Price	Target Price	Potential Upside	P / E 18E	19E	P / BV 18A	19E	ROE 18E	19E
US												
FCA	FCA IM	34,362	Neutral	EUR 19.010	EUR 18.000	-5%	6.6x	6.3x	1.4x	1.2x	19.4%	17.1%
Ford	F US	45,208	Neutral	USD 11.55	USD 10.00	-13%	8.0x	7.9x	1.3x	1.2x	15.5%	14.5%
GM	GM US	53,311	Neutral	USD 37.83	USD 41.00	8%	6.8x	6.0x	1.5x	1.3x	21.3%	21.0%
Tesla	TSLA US	49,532	Buy	USD 291.72	USD 420.00	44%	N/A	47.1x	8.6x	6.6x	-1.0%	0.1%
Average						8%	7.1x	16.8x	3.2x	2.6x	13.8%	13.2%
Median						2%	6.8x	7.1x	1.5x	1.3x	17.4%	15.8%
India												
Ashok Leyland	AL IN	6,502	Buy	INR 149.40	INR 171.00	14%	20.5x	17.2x	6.1x	5.2x	27.5%	28.1%
Bajaj Auto	BJAUT IN	11,855	Buy	INR 2,762.90	INR 3,395.00	23%	16.9x	14.9x	4.2x	3.7x	23.4%	23.7%
Hero Motocorp	HMCL IN	10,665	Buy	INR 3,601.45	INR 4,483.00	24%	17.4x	14.7x	6.1x	5.4x	32.9%	34.1%
Mahindra & Mahindra	MM IN	14,427	Buy	INR 897.95	INR 1,049.00	17%	21.5x	18.9x	3.4x	3.0x	14.8%	15.0%
Maruti Suzuki	MSIL IN	38,469	Buy	INR 8,588.20	INR 11,125.00	30%	26.8x	21.4x	6.2x	5.3x	21.4%	23.0%
Tata Motors	TTMT IN	12,369	Buy	INR 288.90	INR 495.00	71%	13.2x	8.5x	1.0x	1.0x	7.5%	10.6%
Average						30%	19.4x	15.9x	4.5x	3.9x	21.2%	22.4%
Median						24%	19.0x	16.1x	5.1x	4.5x	22.4%	23.3%
China												
BAIC	1958 HK	7,703	Buy	HKD 7.54	HKD 13.10	74%	7.5x	5.7x	1.2x	0.9x	13.5%	14.5%
Brilliance	1114 HK	9,325	Buy	HKD 14.50	HKD 24.70	70%	7.7x	5.5x	2.3x	2.0x	25.2%	27.8%
BYD	1211 HK	5,779	Buy	HKD 49.55	HKD 89.50	81%	19.3x	16.6x	2.1x	2.0x	10.8%	11.2%
Dongfeng Motor	489 HK	9,785	Neutral	HKD 8.91	HKD 10.30	16%	5.2x	5.2x	0.6x	0.5x	10.8%	9.5%
Geely Auto	175 HK	25,342	Buy	HKD 22.15	HKD 34.40	55%	13.9x	10.7x	5.0x	3.9x	32.4%	32.7%
Great Wall	2333 HK	3,022	Reduce	HKD 7.65	HKD 6.20	-19%	8.0x	7.4x	1.2x	1.1x	14.5%	14.3%
GAC	2238 HK	3,690	Neutral	HKD 13.08	HKD 15.10	15%	6.8x	6.5x	1.0x	1.0x	16.2%	15.8%
SAIC	600104 CH	64,048	Neutral	CNY 35.25	CNY 31.60	-10%	12.2x	11.3x	2.0x	1.9x	15.9%	16.1%
Average						35%	10.1x	8.6x	1.9x	1.7x	17.4%	17.7%
Median						35%	7.9x	7.0x	1.6x	1.5x	15.2%	15.1%
Korea												
Hyundai Motor	005380 KS	28,105	Buy	KRW 137,500	KRW 180,000	31%	10.6x	8.5x	0.6x	0.6x	5.3%	6.2%
Kia Motors	000270 KS	11,924	Neutral	KRW 31,700	KRW 37,000	17%	6.9x	6.0x	0.5x	0.5x	6.7%	7.4%
Average						24%	8.7x	7.2x	0.5x	0.5x	6.0%	6.8%
Median						24%	8.7x	7.2x	0.5x	0.5x	6.0%	6.8%
Japan												
Nissan	7201 JT	42,075	Buy	JPY 1,085.0	JPY 1,350.0	24%	7.8x	6.8x	0.8x	0.7x	9.8%	10.6%
Toyota	7203 JT	205,092	Buy	JPY 6,841	JPY 9,300	36%	9.0x	8.0x	1.1x	1.0x	11.4%	11.8%
Mitsubishi Motors	7211 JT	11,132	Reduce	JPY 813	JPY 680	-16%	11.1x	11.9x	1.6x	1.4x	13.3%	11.3%
Mazda	7261 JT	7,959	Reduce	JPY 1,371.0	JPY 1,250.0	-9%	10.0x	8.8x	0.7x	0.7x	7.0%	7.6%
Honda	7267 JT	56,886	Neutral	JPY 3,418	JPY 3,800	11%	9.2x	8.1x	0.8x	0.7x	8.1%	8.7%
Suzuki	7269 JT	27,831	Buy	JPY 6,169	JPY 7,200	17%	12.0x	11.1x	2.1x	1.8x	16.4%	15.5%
Subaru	7270 JT	24,070	Buy	JPY 3,406	JPY 4,000	17%	10.0x	8.5x	1.7x	1.6x	16.2%	17.8%
Yamaha Motor	7272 JT	10,159	Neutral	JPY 3,160	JPY 3,750	19%	10.3x	10.0x	1.8x	1.6x	16.2%	15.0%
Average						12%	9.9x	9.2x	1.3x	1.2x	12.3%	12.3%
Median						17%	10.0x	8.6x	1.3x	1.2x	12.3%	11.6%
Indonesia												
Astra International	ASII IJ	20,263	Neutral	IDR 7,000	IDR 7,650	9%	14.0x	12.6x	2.3x	2.1x	15.8%	16.4%
Indomobil Sukses Int'l	IMAS IJ	573	Reduce	IDR 2,900	IDR 930	-68%	N/A	N/A	1.6x	1.7x	-7.7%	-7.2%
Average						-29%	14.0x	12.6x	1.9x	1.9x	4.0%	4.6%
Median						-29%	14.0x	12.6x	1.9x	1.9x	4.0%	4.6%

Note: FY18 refers to FY ending in December 2018 or March 2019, depending on the company. Tesla covered by Romit Shah and Kellan Grenier, Instinet, LLC.

Source: Bloomberg, Nomura research. Pricing date is 30 May 2018.

# Global auto trade: A whole new world?

*Automakers have set up an intricate web of suppliers and assembly plants globally to leverage the benefits of trade agreements, while keeping FX risks at acceptable levels. As such, any significant changes to the rules of the “trade game” are bound to have a far-reaching (and sometimes, unforeseen) impact, on automakers’ operations and profits, either for better or for worse. In this edition of the Global Autos Outlook, we look at trade-related challenges (and opportunities) facing global automakers, possible strategies they could adopt to cope, and potential winners and losers over the near-to-medium term. We focus our analysis on five major “hotspots” which represent around 80% of the global automotive market: the US / NAFTA, the EU, Japan, South Korea, and China.*

## Global auto players facing multiple trade-related challenges

Over the past two years (since the Brexit vote in mid-2016), we have seen a gradual uptick in protectionism globally, along with some offsetting attempts at lowering trade restrictions. While it is not our place to analyze the genesis of these changes, we can certainly talk about their far-reaching effects on the global auto industry. Trade is an important component in automakers’ global business strategies as it influences a wide spectrum of their business decisions (e.g. plant location, component sourcing, etc.) and outcomes (product pricing and profits, etc.). Automakers have set up an intricate web of suppliers and assembly plants globally to leverage the benefits of trade agreements, while keeping FX risks at acceptable levels, and ensuring appropriate levels of protection for their intellectual property and trade secrets. As such, any significant changes to the rules of the “trade game” are bound to have a significant (and sometimes, unforeseen) impact, on automakers’ operations and profits, either for better or for worse. In this edition of the Global Autos Outlook, we look at trade-related challenges (and opportunities) facing global automakers, possible strategies they could adopt to cope, and potential winners and losers over the near-to-medium term. Given the wide-ranging nature of the subject, we limit our analysis to five major “hotspots” which represent around 80% of the global automotive market: the US / NAFTA, the EU, Japan, South Korea, and China. Other major markets such as India, Russia, and Brazil are relatively closed from a trade perspective, with high import tariffs to encourage local production. While China currently has similar trade restrictions, the government is seriously considering lowering trade barriers, and recently announced import duty cuts for autos starting from July 1 this year. This, coupled with its status as the world’s biggest automotive market and the large presence of global OEMs, leads us to take a closer look at the changes afoot in China.



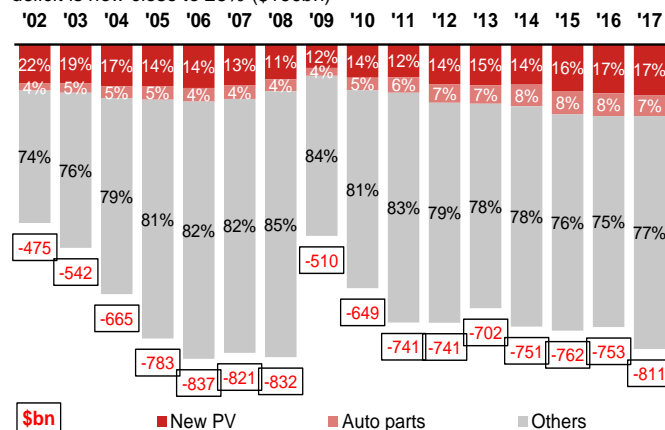
# United States of America

## Auto sector responsible for a large chunk of US trade deficit

One of President Trump's major policy objectives, as part of his "Make America Great Again!" campaign, is to reduce the US trade deficit. Trade statistics published by the US Census Bureau show that, in 2017, the country ran a total trade deficit of \$568bn, mainly due to an \$811bn trade deficit in the trade of goods. Out of this, the trade deficit from trade in new passenger vehicles (PVs) and auto parts accounted for \$190bn (23% of the total, Fig. 5). This was up from the pre-financial crisis level of \$145bn (18% of the total) in 2007.

**Fig. 5: Share of new PV and auto parts in the US goods trade deficit**

After bottoming out at 15% in 2008, share of new PV + auto parts trade deficit is now close to 25% (\$190bn)

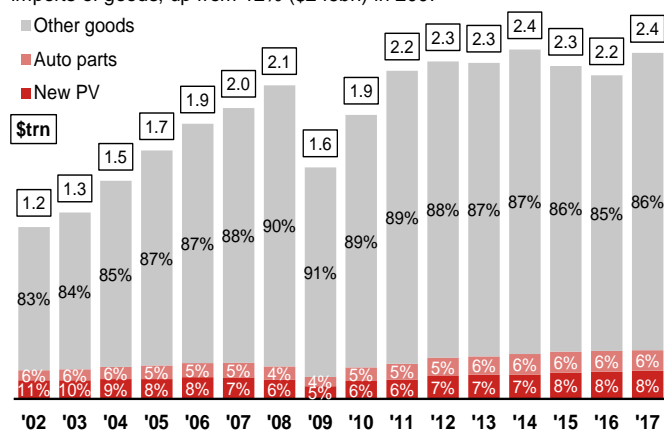


Note: Autos trade deficit excludes 1) trade in used vehicles and medium & heavy duty trucks, and 2) trade in raw materials that could be used for auto manufacturing (e.g. steel, aluminum, etc.).

Source: US Dept. of Commerce, US Census Bureau, Nomura research

**Fig. 6: Share of new PV and auto parts in the total imports of goods in the US**

New PV + auto parts imports now represent 14% (\$333bn) of all US imports of goods, up from 12% (\$246bn) in 2007



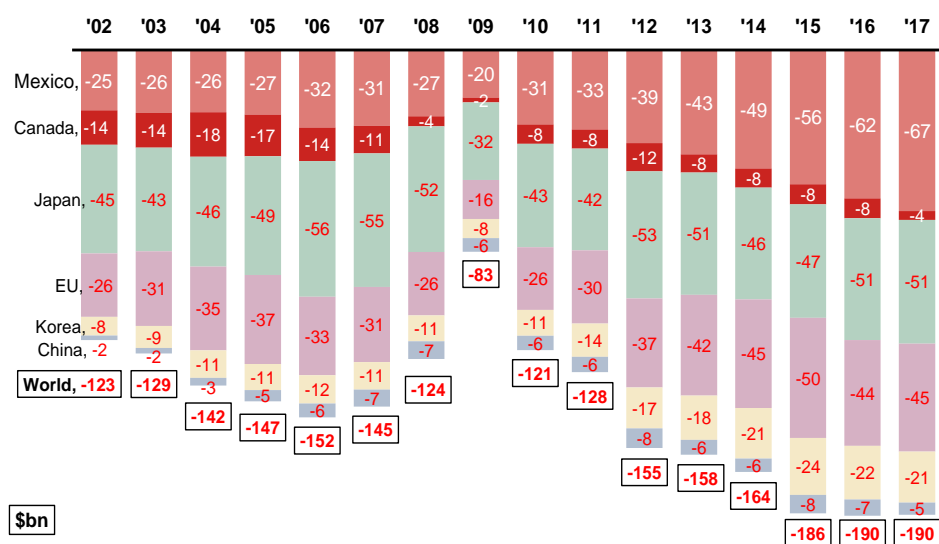
Note: Autos imports exclude 1) imports of used vehicles and medium & heavy duty trucks, and 2) imports of raw materials that could be used for auto manufacturing (e.g. steel, aluminum, etc.).

Source: US Dept. of Commerce, US Census Bureau, Nomura research

The growth in the autos-related trade deficit during this period is a result of the growth in the volume of automotive imports. In terms of the share of total imports, new PV and auto parts imports represented 14% of all US imports of goods (\$2.4tn) in 2017, compared to 12% in 2007 (Fig. 6). However, in terms of volume, imports of new PV and auto parts in 2017 stood at \$333bn (split into \$192bn of new PVs and \$141bn of auto parts), up 35% from the \$246bn recorded in 2007 (split into \$147bn of new PVs and \$99bn of auto parts). In contrast, the volume of total goods imported by the US rose 19% to \$2.4tn over the same period, while light vehicle sales in the US grew by just 7% (to 17.23mn units) during the same time. Apart from considerations of a large trade volume, cars and auto parts can be manufactured in the US, substituting imports. This would likely lead to a marginal increase in prices for the consumer, but on the other hand, once US production rises, it would lead to a stronger economy and greater job creation (in line with Trump's election promises). It is therefore not surprising that, among other options, the US administration is exploring ways to limit or reduce the imports of autos and auto parts. This would rein in the overall trade deficit on one hand, and increase US auto and auto parts production, supporting US autoworkers, on the other.

## Mexico driving US auto trade deficit higher

If we look at the country-wise split for the trade deficit arising from trade in new PVs and auto parts (hereafter referred to as the "auto trade deficit"), some interesting trends emerge. As seen in Fig. 7, the top-three trading partners responsible for the bulk of the US' \$190bn auto trade deficit in CY2017 were Mexico, Japan, and the EU, ranked by decreasing order of volume.

**Fig. 7: New PV + auto parts trade deficit by major automotive trading partner**

Note: US new PV + auto parts trade deficit (or surplus) with rest of the world is negligible. For simplicity, this breakdown is not shown in the chart above, although it is included in the total.

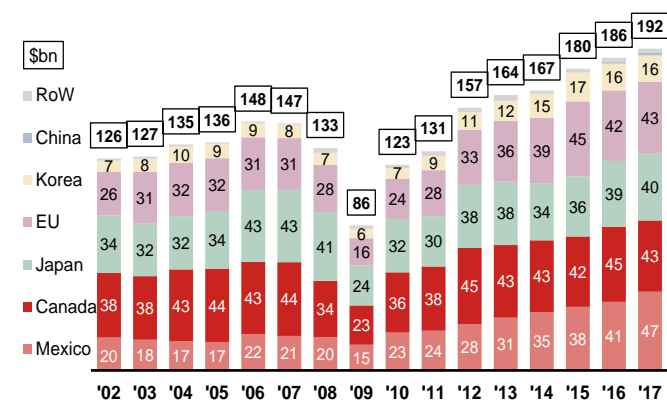
Source: US Dept. of Commerce, Nomura research

However, if we look at the data over the past 15 years, we note that the auto trade deficit with Mexico, after initially remaining stable in the \$25bn to \$30bn range, started to grow rapidly after the 2008 financial crisis, to reach its present level. In contrast, the auto trade deficit with Japan has been largely stable, while that with the EU has grown at a comparatively modest pace. In numbers, between 2007 (pre-financial-crisis) and 2017, the US-Mexico auto trade deficit was up 116%, from \$31bn to \$67bn, while that for US-Japan was down 7%, from \$55bn to \$51bn, and that for US-EU was up 45%, from \$31bn to \$45bn. We also note that, while the US-Mexico auto trade deficit grew during this time, that for US-Canada shrank from \$11bn in 2007 to just \$4bn in 2017, down 68%. We think this is a result of the restructuring that swept through the North American auto industry in the aftermath of the 2008 financial crisis: the Detroit Three cut excess capacity by retrenching higher-cost manufacturing operations in the US and Canada initially, and then, as the US auto market underwent a V-shaped recovery, all automakers (American, Japanese, Korean, and European) increased their presence in Mexico to leverage 1) its lower sourcing and assembly costs, and 2) the duty-free trade opportunities provided by the North American Free Trade Agreement (NAFTA). The result is that Mexico became the single largest driver behind the growth in the US' auto trade deficit between 2009 and 2017.

## Auto parts imports from China now ranks third, behind Mexico and the EU

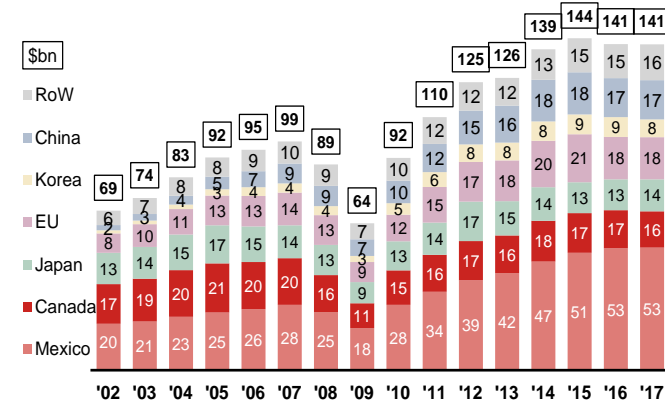
If we do a similar analysis with the data for imports of new passenger vehicles and auto parts, unsurprisingly, Mexico tops both lists. Imports of new passenger vehicles from Mexico went up from \$21bn in 2007 (14% of the total) to \$47bn in 2017 (24% of the total). The EU, Canada, and Japan were the next three largest sources for new car imports into the US in 2017, although their import volume has been largely stable during the period under discussion (Fig. 8). Turning to imports of auto parts, Mexico's share went up from \$28bn/29% in 2007, to \$53bn/38% in 2017. While this is expected, we note that China now ranks third in terms of auto parts import volume at \$17bn (up from \$9bn in 2007), after Mexico and the EU (Fig. 9). This points to slowly increasing China-sourced content in US-assembled autos, and could become another bone of contention in the rising trade friction between the US and China. In contrast, the volume of auto parts imports from Canada, Japan, and the EU has remained largely stable during this time.

Fig. 8: US imports of new passenger vehicles by country



Source: US Dept. of Commerce, Nomura research

Fig. 9: US imports of auto parts by country



Source: US Dept. of Commerce, Nomura research

## Expect US to drive a hard bargain in NAFTA renegotiations

Since March this year, the Trump administration has adopted an increasingly protectionist stance and a willingness to follow through with the President's election promises. Moreover, this being an election year, we think that trade friction is likely to intensify, rather than subside, in the lead-up to the mid-term elections in November 2018. Thus, over the coming days and months, we expect trade issues to continue to remain a major topic of discussion in the North American auto industry, and we think investors should be prepared to assess the impact from potential changes in trade regulations and how they might impact the global automakers under multiple scenarios. Chief among these is the final outcome of the NAFTA renegotiation that is currently underway. Given Mexico's outsized influence on the US auto trade deficit, we think the prospects for global auto companies with a large presence in Mexico need to be reviewed carefully – which means almost all the automakers operating in North America. We analyze multiple scenarios in the sections that follow.

## Japan unlikely to remain unscathed

Apart from the NAFTA bloc, we think Japan is unlikely to remain unaffected, given that the US-Japan auto trade deficit, although stable, is still significant at around \$50bn (Fig. 7). In our view, the most likely outcome would be that Japanese automakers would end up increasing their US production footprint given that a) US automakers have largely pulled out of the Japanese domestic market, and b) the scope for increasing reverse imports of Japanese brands from the US is limited due to market preferences for smaller vehicles. We discuss this and other implications in more detail in the section on Japan on page 29.

## EU auto trade deficit could shrink

Similar to Japan, the US-EU auto trade deficit, which stood at \$45bn in 2017, is also likely to remain on the radar for US trade talks, given that Trump has a preference for bilateral deals, and there is no US-EU free trade agreement (FTA) currently in force. However, given that the EU is in the midst of its own internal reorganization due to Brexit, we think NAFTA, China, and Japan are likely to remain center stage for now. Moreover, the majority of new PVs imported from Europe are those of the big three luxury brands: Audi, BMW, and Mercedes-Benz (these three sold 658k EU-sourced units out of a total of 1.12mn EU-sourced vehicles sold in the US in 2017). All three brand-owners have recently set up or are in the midst of setting up new production capacities in Mexico and/or the US. These are Audi's 150k unit plant San Jose Chiapa (Mexico), BMW's 150k unit plant in San Luis Potosi (Mexico) along with a 100k unit expansion of their existing assembly plant in Spartanburg (US), and Daimler's 230k unit COMPAS JV with Nissan in Aguascalientes (Mexico). Thus, it is likely that the auto trade deficit with EU could start to

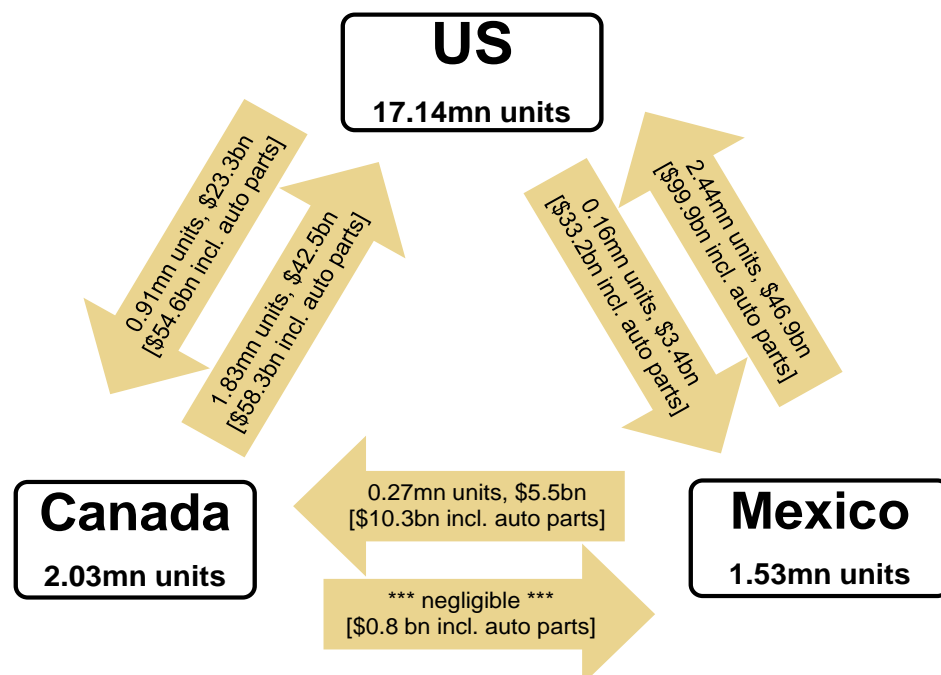
shrink as these European automakers increase their North American production footprint, lowering imports from the EU (and increasing US exports to the EU, in the case of BMW).

## NAFTA bloc: Mexico is a major net exporter of autos to both the US and Canada

Fig. 10 shows auto-related trade flows within the NAFTA bloc in 2017. Mexico exported 2.44mn new passenger vehicles to the US, valued at \$47bn (\$100bn value including auto parts), while the US exported just 160k new PVs to Mexico, valued at \$3.4bn (\$33bn value including auto parts). From the US perspective, this implies that new vehicle imports are more than 15x higher than exports (14x in value terms). Even after including auto parts, imports are still more than 3x higher than exports in value terms. These automotive exports are one of the main reasons why Mexico recorded a \$71bn goods trade surplus with the US in 2017, the second-largest after China's \$375bn.

**Fig. 10: Trade in new PVs and auto parts within the NAFTA bloc**

CY2017 actual. Figures in parentheses include auto parts



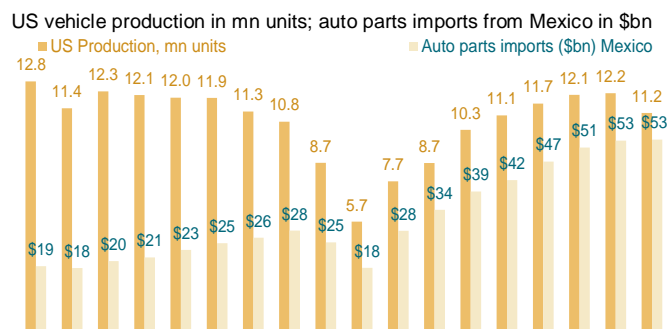
Source: US Dept. of Commerce, AMIA, Statistics Canada, Marklines, Nomura estimates

## NAFTA has integrated the North American auto industry

At the risk of saying the obvious, the NAFTA (treaty) has catalyzed the tight integration of the North American auto industry as we see it now, compared to what it used to be pre-NAFTA. To illustrate, we analyzed long-term data for trade in auto parts between the US and Mexico. According to figures published by the US Department of Commerce, exports of auto parts from Mexico to the US have grown from \$19bn in 2000 to \$53bn in 2017 (Fig. 11). Over these 18 years, domestic auto production in the US has hovered around the 12mn-vehicle mark annually (if we ignore the dip around the time of the 2008 financial crisis). As we are analyzing trade data aggregates, one limitation of the figures we quoted for the auto parts trade volume is that there is no distinction between original equipment (OE) and aftermarket parts. Based on an estimate by the US International Trade Administration (ITA), we assume OE production to account for roughly two-thirds to three-fourths of the total automotive parts production. Using this split and the auto parts trade and auto production data mentioned above, we estimate that Mexican-origin parts content per US assembled vehicle has steadily increased from around \$1,000 in

the year 2000 to around \$3,400 in 2017 – a more than three-fold increase over 18 years (Fig. 12). Even after allowing for ASP increases for vehicles sold in the US over this period, we think that this steady growth in Mexican content in US-assembled vehicles just goes to show the cost competitiveness of the Mexican auto parts manufacturing supply chain, and is a portent of the challenges automakers might face (if the reworked NAFTA introduces restrictions on Mexico), even if they have assembly operations in the US.

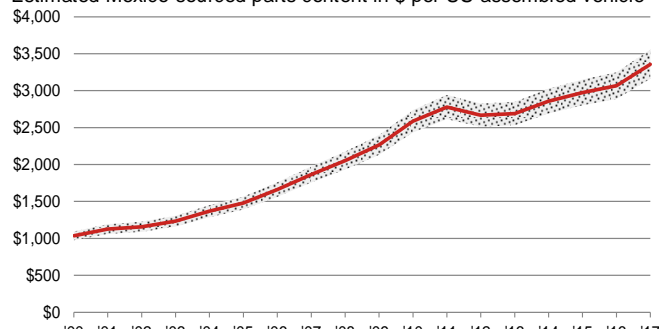
**Fig. 11: US vehicle production and parts imports from Mexico**



Source: US Dept. of Commerce, Nomura research

**Fig. 12: Mexico-origin content in US-made vehicles**

Estimated Mexico-sourced parts content in \$ per US-assembled vehicle



Shaded area represents the range of our estimates, based on the split between OE and aftermarket auto parts imports

Source: US Dept. of Commerce, DesRosiers Auto, Nomura estimates

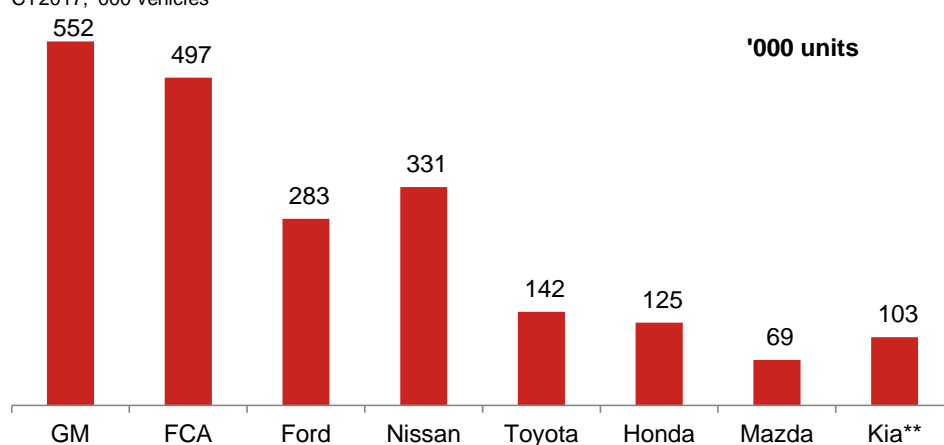
## Detroit Three account for 57% of Mexico-to-US export volume

Based on Mexico-to-US export data from AMIA/Marklines for 2017, we note that the Detroit Three accounted for 57% of new vehicle exports of 2.34mn, with GM exporting 552k units, followed by FCA with 497k units and Ford with 283k units (Fig. 13). Japanese automakers accounted for another 29% of Mexico's new vehicle exports to the US.

Nissan was the largest exporter with 331k units, followed by Toyota with 142k, Honda with 125k, and Mazda with 69k. Among the Korean automakers, only Kia has a plant in Mexico. The company shipped 103k units (4% of Mexico's new vehicle exports) to the US, including vehicles assembled for group company Hyundai Motor on an OEM-basis.

**Fig. 13: Export volume from Mexico to the US**

CY2017, '000 vehicles



\*\*Note 1: includes Hyundai vehicles manufactured by Kia on an OEM basis

Note 2: Toyota numbers include Yaris iA assembled by Mazda on an OEM-basis

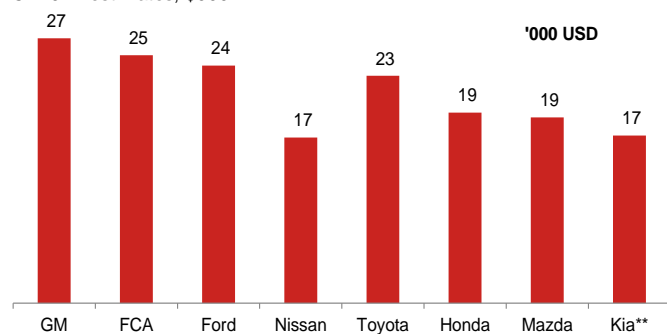
Source: Marklines/AMIA, Nomura research



## US OEMs and Toyota export relatively high-value models from Mexico to the US

To determine an automaker's relative exposure to risks from changes in import tariffs, it is not enough to look at just the raw export volume. Tariffs are levied as a percentage of the value of the goods being exported. Higher the cumulative value, greater is the impact on profits. We have estimated the total export value for each automaker (Fig. 15) based on model-wise export volumes from Mexico to the US and the corresponding manufacturers' suggested retail prices (MSRP) in the US. From this, we have put together OEM-wise estimates of average per-vehicle prices (Fig. 14) for exports from Mexico to the US.

**Fig. 14: Average unit prices for exports from Mexico to US**  
CY2017 estimates, \$000

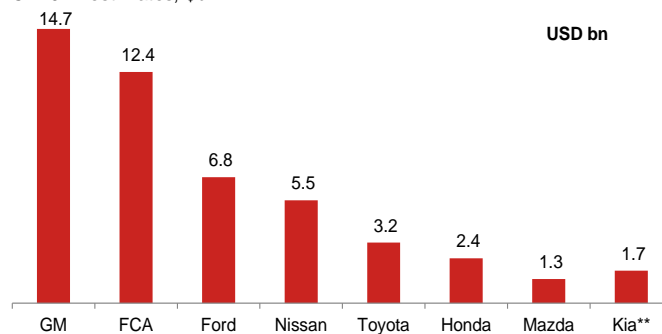


\*\*Note 1: includes Hyundai vehicles manufactured by Kia on an OEM basis

Note 2: Toyota numbers include Yaris iA assembled by Mazda on an OEM-basis

Source: Marklines/AMIA, company websites, Nomura estimates

**Fig. 15: Value of exports from Mexico to the US**  
CY2017 estimates, \$bn



\*\*Note 1: includes Hyundai vehicles manufactured by Kia on an OEM basis

Note 2: Toyota numbers include Yaris iA assembled by Mazda on an OEM-basis

Source: Marklines/AMIA, company websites, Nomura estimates

GM and FCA have the highest average per-vehicle prices because, unlike the rest of the automakers, they mainly export full-size pickup trucks such as the Silverado, Sierra, and Ram. On the other hand, Nissan and Kia/Hyundai have low average per-vehicle prices as a majority of their export volume comprises of relatively inexpensive compact cars, specifically the Sentra for Nissan and Forte for Kia (Fig. 16). As a result, while Nissan's export volume is roughly two-thirds of that for GM or FCA (Fig. 13), the estimated export value for Nissan is less than half of that for GM or FCA (Fig. 15). Specifically, we estimate GM's export value at \$14.7bn and FCA's at \$12.4bn, while that for Nissan is at only \$5.5bn due to its low per-vehicle prices. Toyota's average per-vehicle price is also relatively high, as it exports the Tacoma mid-size pickup truck. However, total volumes are relatively low, resulting in Toyota's estimated export value being capped at just \$3.2bn.

Apart from the export value, an automaker's relative exposure to risks from changes in FTAs also depends on the *kind* of vehicle being exported to the US. This is due to the import duty structure for non-NAFTA pickup trucks (25% of value) vs. all other vehicles (2.5% of value) when importing into the US. Thus, GM (343k units, valued at an estimated \$9.9bn) and FCA (243k units/\$6.7bn) are the most exposed as a majority of their exports are pickup trucks, with relatively high volumes. Toyota exports the Tacoma pickup, but we think the company faces lower risks as the export volume is relatively low (107k units/\$2.7bn). The options for GM or FCA would be very limited, as they build full-size pickups (larger, compared to the midsize Tacoma), which are only sold in North America (exports to South America, Middle East, etc. are negligible) with no commonality with any other high volume, non-North American product. Pickup truck assembly lines are also not adaptable for building non-truck-based vehicles, further limiting their choices.

**Fig. 16: Top three vehicle models at each automaker by export value**

Exports from Mexico to the US

CY2017		#1	#2	#3
GM	Model	Silverado	Sierra	Equinox
	Units (000)	236	107	84
	ASP (USD 000)	29	29	24
	Estimated export value (USD, mn)	6,781	3,134	2,009
FCA	Model	Ram Pickup	Compass	Journey
	Units (000)	243	115	88
	ASP (USD 000)	27	22	22
	Estimated export value (USD, mn)	6,672	2,539	1,947
Ford	Model	Fusion	MKZ	Fiesta
	Units (000)	199	34	50
	ASP (USD 000)	24	36	15
	Estimated export value (USD, mn)	4,786	1,219	752
Nissan	Model	Sentra	Versa	NV200
	Units (000)	201	87	21
	ASP (USD 000)	18	13	22
	Estimated export value (USD, mn)	3,588	1,110	449
Honda	Model	HR-V	Fit (Jazz)	
	Units (000)	85	40	
	ASP (USD 000)	20	17	
	Estimated export value (USD, mn)	1,728	676	
Toyota	Model	Tacoma	Yaris iA	
	Units (000)	107	35	
	ASP (USD 000)	25	16	
	Estimated export value (USD, mn)	2,682	563	
Mazda	Model	Mazda3		
	Units (000)	69		
	ASP (USD 000)	19		
	Estimated export value (USD, mn)	1,289		
Kia (+Hyundai)	Model	Kia Forte	Kia Rio	Hyundai Accent
	Units (000)	82	16	5
	ASP (USD 000)	17	15	15
	Estimated export value (USD, mn)	1,414	247	83

Source: Marklines/AMIA, company websites, Nomura estimates

# Modernizing NAFTA: what is on the table?

NAFTA renegotiations began on 16 August 2017 with trade representatives from Canada, Mexico and the US, and have cycled through multiple rounds of talks since then. The discussions are a result of the actions taken by the Trump administration, and followed the 2016 presidential campaign where then-candidate Trump had described the NAFTA as “the worst trade deal maybe ever signed anywhere”. Given that the NAFTA took effect on 1 January 1994, almost 25 years ago, there is some agreement among member countries that the treaty could use some modernization and updating. While there has been no official announcement regarding a timeline for the conclusion of the negotiations or about the exact contours of the proposals being considered, based on the news flow surrounding the talks, we note the following. According to a *Reuters* report on 14 April 2018, negotiators are considering a (revised) US proposal to raise the NAFTA regional content value requirement for a vehicle to 75% from the existing 62.5%. To be eligible for duty-free imports under NAFTA, US / Canada / Mexico built vehicles currently have to source at least 62.5% of the value of the vehicle from domestic (i.e. NAFTA bloc) sources. Under the new rules, there could be a separate 75% regional content threshold for major components such as engines, drivetrains, suspensions, etc., according to *Reuters*. Aluminum and steel would go into a second bucket of other parts and materials requiring a 70% regional content, while a third bucket of “lesser” parts would require a 65% regional content. *Automotive News*, on 12 April 2018, had reported a similar proposal being offered by US negotiators, and added that the US position was that auto companies would receive credits towards the 75% threshold if they satisfied certain criteria such as paying higher wages (more than \$15 an hour) to assembly workers or doing R&D (indirectly encouraging more work to be done in higher-wage economies such as the US or Canada). As noted earlier, the discussions are still in a state of flux, and while we do not know the final outcome of the NAFTA renegotiation, we think the following three scenarios are likely, in increasing order of their potential to disrupt the North American auto industry:

**Scenario 1:** NAFTA content requirement raised to 75% (possibly with a secondary 75% threshold for core parts such as engines and transmissions). Localize, or pay tariff.

**Scenario 2:** Only scenario which discriminates between regions within the NAFTA bloc. Minimum US/Canada content required (i.e., a secondary threshold within the overall 75% requirement). This could take the shape of a stipulation requiring 40% of NAFTA content to be sourced from an area with minimum wages of \$15 an hour (effectively shutting out Mexico).

**Scenario 3:** NAFTA dissolved, with regulations regressing to CUSFTA (the Canada-United States Free Trade Agreement, which was superseded by the NAFTA in 1994).

We review each of these three scenarios, and find out which automakers could be the winners and which ones could be the losers. Our analysis hinges on our ability to estimate the current levels of regional content for NAFTA-made vehicles (imports from non-NAFTA countries are not affected), at the OEM-level, with a reasonable level of accuracy. As NAFTA regional content information is not available publicly, we turned to the National Highway Traffic Safety Administration’s (NHTSA) annual AALA (American Automotive Labeling Act) reports to arrive at estimates by automaker. The results of our analysis follow. For details of the methodology, assumptions, data caveats and limitations of our analysis please refer to Appendix 1.

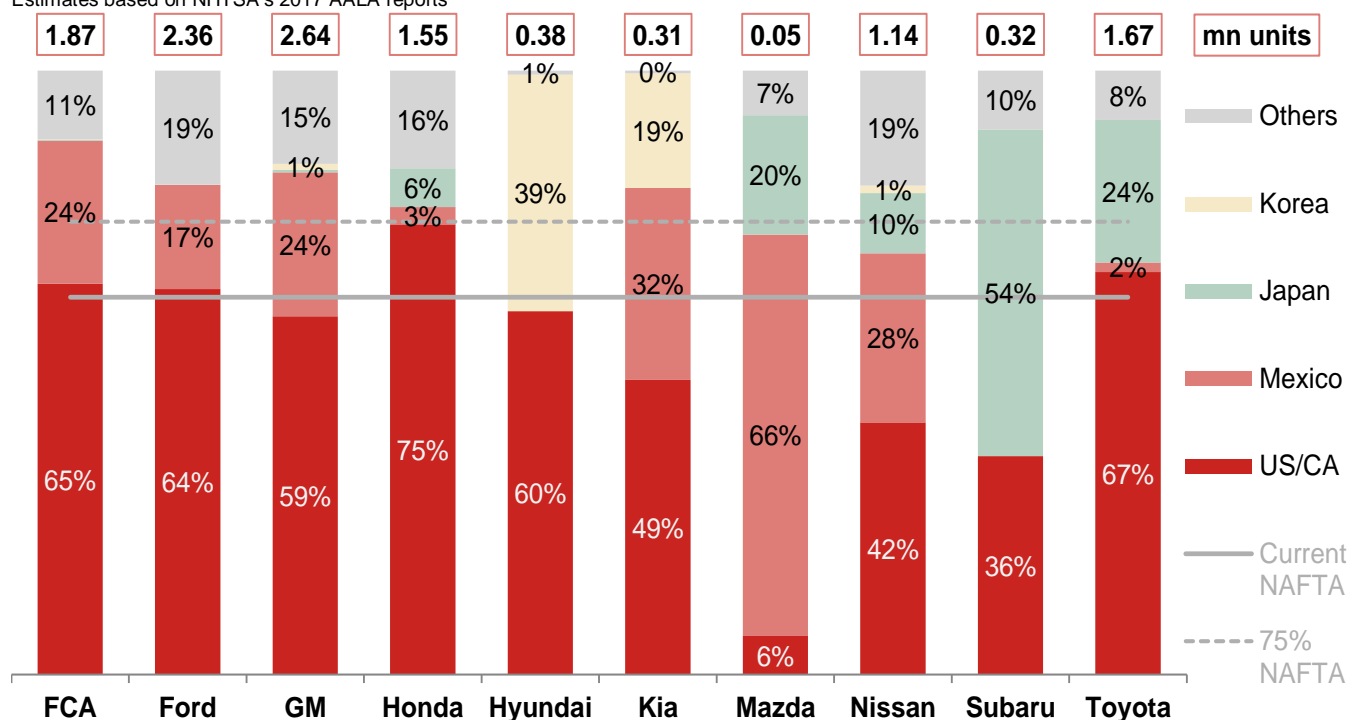
Keeping in mind the schedule for the presidential elections in Mexico (July 1), usual congressional timelines to present a trade deal to legislators in the US, and the May 31 deadline for the expiry of the temporary US tariff exemption granted to Mexico and Canada for their steel and aluminum exports, the market (and we) had assumed that the NAFTA talks would conclude in May for the revised treaty to come into force this year. However, as we have blown past that timeline, it is likely that the NAFTA talks would drag on till after the US mid-term elections in November, when Trump might tone down his bellicose stance and be more amenable to a compromise. By that time, we will also

have a better understanding of the new Mexican president's attitude towards NAFTA. However, this delay also increases the likelihood of "no-NAFTA".

## The results: OEM-wise source of content for NAFTA-assembled vehicles sold in the US in 2017

**Fig. 17: Nomura estimates for content origin of NAFTA-made vehicles sold in the US in CY2017 (by automaker)**

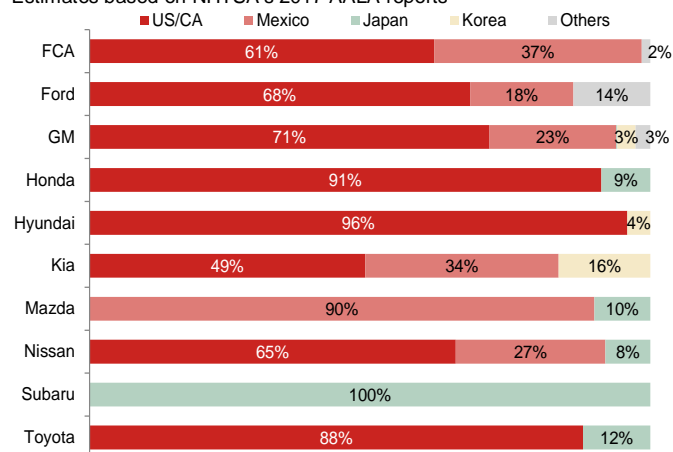
Estimates based on NHTSA's 2017 AALA reports



Source: Nomura estimates based on data from NHTSA, Ward's Auto and Marklines

**Fig. 18: Nomura estimates for origin of engines installed in NAFTA-made vehicles sold in the US in CY2017**

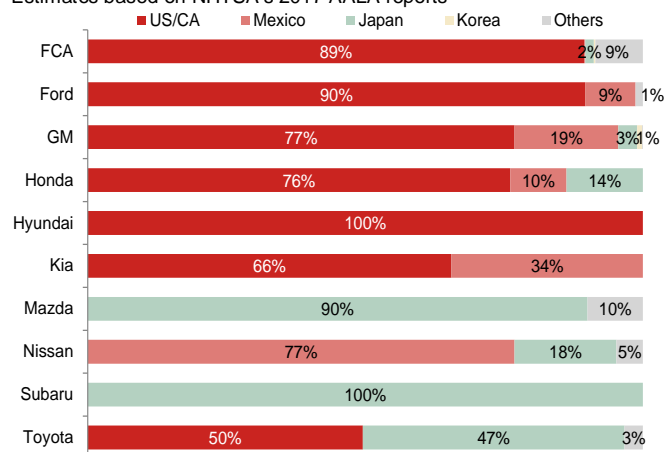
Estimates based on NHTSA's 2017 AALA reports



Source: Nomura estimates based on data from NHTSA, Ward's Auto and Marklines

**Fig. 19: Nomura estimates for origin of transmissions installed in NAFTA-made vehicles sold in the US in CY2017**

Estimates based on NHTSA's 2017 AALA reports



Source: Nomura estimates based on data from NHTSA, Ward's Auto and Marklines

The three charts above show the geographical source of content for vehicles assembled in the NAFTA bloc and sold in the US by ten global automakers in 2017. This is based on NHTSA's 2017 AALA reports. Fig. 17 shows the splits for the origin of content of the automaker's entire NAFTA-assembled-and-US-sold fleet. Fig. 18 shows the breakdown by origin of the engines installed in the respective automaker's NAFTA-assembled vehicles which were sold in the US, while Fig. 19 gives the same breakdown for transmissions.

**Note 1:** The solid and dotted gray lines denoting the 62.5% and 75% levels, respectively, in Fig. 17 are provided only as a visual aid. We make some adjustments and assumptions, as detailed in Appendix 1, given that the reporting under the AALA regulation is somewhat different from that under the NAFTA regulations (Fig. 143). A more detailed breakdown is currently not available publicly. Nevertheless, we believe that the results provide us with enough information to assess the relative NAFTA-related risks that each automaker is exposed to, at least directionally.

According to our calculations, NAFTA content in NAFTA-assembled vehicles is the greatest for FCA (88%, Fig. 17), followed by GM (83%), Ford (81%), Kia (81%), and Honda (77%). At the other end of the spectrum, Subaru has the lowest NAFTA-content at 36%.

If we exclude Mexico-sourced content, then the company with the highest US/Canada content is Honda (75%), followed by Toyota (67%), FCA (65%), and Ford (64%). On the other hand, Mazda (6%) was by far the lowest on this parameter.

Fig. 18 shows that only Mazda and Subaru did not source any engines from either the US or Canada for their NAFTA manufactured autos, while Fig. 19 indicates that Mazda, Nissan, and Subaru were the three automakers who did not source any transmissions from US/Canada to install in their NAFTA-made vehicles – among the ten global OEMs that we analyzed.

**Note 2:** If an automaker's domestic content appears to fall short of the height of the solid line, it does not necessarily imply that the automaker is currently unable to satisfy NAFTA requirements for duty-free trade. Given the limitations of our source data (Fig. 143), there could be some discrepancies with the (non-public) results of actual calculations based on NAFTA rules. For instance, we might be underestimating Hyundai's NAFTA content, as according to the company, US localization is close to 80%. Also, while it appears that Subaru is not meeting the NAFTA domestic content rules for duty-free trade, in reality, the company exports to Canada from the US, duty free.



## Scenario 1: NAFTA local content requirement rises to 75%

*Least disruption to supply chains. No major impact on any automaker. **Subaru** saved by plant location. **Mazda, Nissan, and Toyota** likely to increase localization further. Best of three outcomes for **FCA/Ford/GM** (no impact).*

Under this scenario, the revised NAFTA would increase the domestic content requirement to 75% from the current 62.5% (possibly with a secondary 75% threshold for core parts such as engines and transmissions). The disruption to automotive supply chains would be the least (among our three scenarios), as would the potential for higher costs and/or higher prices for car buyers. In short, the least impact to the North American auto industry as a whole.

However, the impact on individual automakers could vary. If carmakers fail to meet the 75% domestic content requirement, exports to NAFTA countries would be subject to a 2.5% customs duty in the US (25% if the product is a pickup truck), 6.1% in Canada, and up to 50% in Mexico – assuming there is no fall back (for example, a most favored nation or MFN status).

As the incidence of an import tariff arises only if an automaker exports within NAFTA, it is unclear whether carmakers would choose to a) increase localization (which could lead to higher costs) to comply with the new NAFTA rules, or b) ignore the new rules and simply pay the tariff and/or change the sourcing location to a country covered by an FTA with the importing NAFTA country. In our opinion, automakers such as Mazda, Nissan, or Toyota would increase localization further by substituting home-country imports with NAFTA-sourced content (option a). On the other hand, we think Subaru would choose option b and pay tariffs.

- **Subaru** currently satisfies NAFTA content requirements, although it is not evident from our chart (Fig. 17). We think any increase in the content threshold from current levels could result in Subaru not being able to meet requirements for duty free trade as it imports all engines and transmissions from Japan (Fig. 18 and Fig. 19). However, Subaru's plant is located within the US and a majority of its products are sold in the US (in 2017, 89% of US production sold within the US). Therefore, NAFTA content requirements are moot for US sales.
- Thus, to assess the impact on Subaru, we only need to consider their exports from the US to Canada and Mexico. Subaru does not have a major presence in Mexico (fewer than 300 units exported from the US to Mexico in 2017). On the Canadian side, Subaru imported 25k units valued at \$546mn in 2017, by our estimate. A 6.1% Canadian import duty would amount to \$33mn, which is just 0.9% of Subaru's FY19/3E operating profits.
- Impact under Scenario 2, discussed next, remains the same for Subaru.

## Scenario 2: 40% minimum threshold set for US/Canada content

*Only scenario which discriminates between regions within the NAFTA bloc. Disruptions to supply chains could be significant. Passenger car segment shakeout: GM likely to exit; Nissan and Kia less competitive; Toyota, Honda and Hyundai potential winners.*

This could take the shape of a stipulation requiring 40% of NAFTA production to be in an area with minimum wages of \$15 an hour, indirectly shutting out Mexico, where wages are cheaper. We are assuming that the 40% ratio (in our example) is source-of-content based, rather than just the location of the final assembly.

Fig. 17 does not give us the complete picture for this scenario. The reason is that Mexico-assembled vehicles of a carline with “dual assembly” in US/CA as well as in Mexico would have lower US/CA content by virtue of being assembled in Mexico, vis-a-vis those assembled in US/CA. This distinction is critical for Scenario 2, but immaterial for the other scenarios. Also, it is more likely that the Mexico-assembled version would use Mexico-made engines and transmissions, if there is an option of sourcing a particular engine or transmission line from either US/CA or Mexico. Note that as per Fig. 143, carlines are not averaged across NAFTA countries for NAFTA content determination. Thus, there could be individual, non-compliant, high-volume carlines sold by an automaker, although at the corporate level, it might appear to satisfy our scenario at first glance.

So, we consider three buckets: 1) vehicles assembled in US/CA having less than 40% of US/CA content (Fig. 21), 2) vehicles assembled in Mexico having less than 40% of US/CA content (Fig. 22), and 3) all vehicles with “dual assembly”. We whittled down this list further (Fig. 23) to focus only on models which were imported into the US from Mexico in sufficiently large volumes (more than 20k units annually).

Based on our analysis, in Fig. 20 we calculate the hypothetical impact from US import tariffs for models which currently do not meet the 40% US/CA content requirement (“non-compliant vehicles” under our scenario). Mathematically, before accounting for any countermeasures or for any phased implementation of the new rules, we note that GM could face the biggest impact, given their large volume of non-compliant imports (pickup trucks, subject to higher tariff). Ford and Mazda would follow, in terms of relative impact to profits:

**Fig. 20: Potential impact from US tariffs levied on imports from Mexico with less than 40% US/CA content**

OEM	Vehicle type	Value of exports from Mexico to US with less than 40% US/CA content (CY17E, \$mn) (a)	Of which, passenger cars (\$mn)	US Import Duty (%) (b)	Impact from import duty (\$mn) (a x b)	FY2018E OP forecast (\$mn)	Potential OP impact (%)
FCA	Non-PU	2,139	191	2.5%	53	7,946	0.7%
Ford	Non-PU	6,757	6,757	2.5%	169	3,508	4.8%
GM	Non-PU	1,647	419	2.5%	41	6,516	0.6%
GM	PU	9,915	-	25.0%	2,479	6,516	38.0%
Honda	Non-PU	2,404	676	2.5%	60	7,571	0.8%
Kia	Non-PU	1,414	1,414	2.5%	35	1,516	2.3%
Mazda	Non-PU	1,289	1,289	2.5%	32	1,029	3.1%
Nissan	Non-PU	5,147	4,698	2.5%	129	5,324	2.4%
Toyota	Non-PU	563	563	2.5%	14	22,533	0.1%

Note: PU = pickup truck. FX rates used: 105 JPY/USD; 1080 KRW/USD; 1.20 USD/EUR

Source: Marklines, company websites, Nomura estimates

**Bucket 1: Nothing to report**

For vehicles assembled in US/CA having less than 40% of US/CA content (Bucket 1, Fig. 21), we note that for Subaru, the conclusion is the same as scenario 1. For Nissan's Rogue, the US/CA content is borderline, and we think it would not be too difficult to increase localization over 40%. Toyota's Camry Hybrid is not impacted under NAFTA, as it would be clubbed with the gasoline Camry (83% US/CA content) for determining NAFTA content. GM's Chevrolet Bolt is a niche product, and can be ignored as 87% of its production was sold within the US in 2017.

**Buckets 2 & 3: Passenger car segment shakeout**

Buckets 2 & 3 (Fig. 22 and Fig. 23) are a subset of vehicles which are assembled in Mexico, for sale in the US. In Fig. 20 we calculate the hypothetical impact from US import tariffs under our scenario for models which currently do not meet the 40% US/CA content requirement ("non-compliant vehicles" under our scenario). This is where things get interesting. By our estimate, passenger cars were 75% of the total value of non-complaint vehicles (excluding pickups) exported from Mexico to the US. The passenger car segment in the US has become extremely tough, and any additional import duty on such low-margin car imports would make passenger car production in Mexico unviable. Faced with such a scenario, we think carmakers would either a) swallow the additional duties (or spend on higher localization) if they have large, global passenger car businesses apart from North America (Mazda, Nissan, Kia); or b) exit the passenger car business in North America, to optimize costs and focus on more profitable lines such as SUVs (GM). We think that the resulting passenger car market dynamic where some players exit, while others are hobbled by higher costs, would benefit Toyota, Honda, and Hyundai as their NAFTA-built passenger cars have a high US/CA content (and are mostly built in US/CA). [Note: In April this year, Ford announced that they are largely withdrawing from the North American (NA) passenger car market, to focus on SUVs and pickups].

**Bucket 3: Special note regarding GM pickup trucks**

We estimate US/CA content for GM's Mexico-assembled Silverado/Sierra pickup trucks to be 37% (Fig. 23). While this is borderline, we would point out that this refers to the content in the outgoing generation of these models. GM is going to start selling the next generation versions of these pickups starting in 4Q of this year. At this stage we do not know what the regional content breakdown is going to look like. However, we note the following. US/CA content in the new generation Equinox/Terrain at 47% is significantly down from the prior generation's 68% (our estimates for the Mexico built versions). At the same time, Mexico content is now 43%, up from 8% previously. Similarly, US/CA content in the new generation Traverse/Enclave at 45% is down from the older generation's 81%, while Mexican content has grown to 41% from 0% (our estimates, US-built only). If this trend of higher Mexican content is any indication, then the US/CA content in the Mexico-made new-gen Silverado/Sierra might fall further below the 40%-mark, rather than cross it. Thus, if GM is faced with Scenario 2, we believe the most likely course of action would be to shift engine production for the model to the US (with additional capex), away from Mexico, leading to higher US/CA content in GM's Mexican trucks, and avoiding US import duties.

**Fig. 21: Bucket 1: Major models (>20k sales) assembled in US/CA but with less than 40% of US/CA content**

CY2017 sales

Make	Model	NAFTA source US Sales (units)	By line US/CA content	By line MX content	By line JP content	By line KR content	By line OTH content
Chevrolet	Bolt	23,297	25%	0%	0%	62%	12%
Nissan	Rogue	130,989	39%	9%	29%	10%	13%
Subaru	Impreza	86,043	34%	0%	56%	0%	10%
Subaru	Legacy	49,837	37%	0%	53%	0%	10%
Subaru	Outback	188,886	37%	0%	53%	0%	10%
Toyota	Camry Hybrid	20,985	34%	0%	60%	0%	6%

Note: Although Chevrolet Cruze satisfies the conditions for inclusion in Bucket 1, Bucket 2 and Bucket 3, it is only shown in Bucket 3 below for simplicity

Source: Nomura estimates based on data from NHTSA, Ward's Auto and Marklines

**Fig. 22: Bucket 2: Major models (>20k sales) assembled in Mexico having less than 40% of US/CA content**

CY2017 sales

Make	Model	NAFTA source US Sales (units)	By line US/CA content	By line MX content	By line JP content	By line KR content	By line OTH content
Dodge	Journey	89,470	31%	57%	0%	0%	12%
Ford	Fiesta	46,249	5%	61%	0%	0%	34%
Ford	Fusion	209,623	27%	58%	0%	0%	15%
Lincoln	MKZ	27,387	29%	61%	0%	0%	10%
Chevrolet	Trax (Mexico)	53,046	36%	17%	0%	18%	29%
Honda	Fit	22,788	13%	8%	69%	0%	10%
Honda	HR-V	94,034	13%	31%	40%	0%	16%
Kia	FORTE	105,836	1%	92%	0%	7%	0%
Toyota	Yaris iA	35,727	3%	50%	28%	0%	19%
Mazda	Mazda3	50,251	6%	66%	20%	0%	7%
Nissan	Sentra	218,451	10%	70%	2%	0%	18%
Nissan	Versa / Versa Note	106,772	10%	73%	0%	0%	17%

Note: Although Chevrolet Cruze satisfies the conditions for inclusion in Bucket 1, Bucket 2 and Bucket 3, it is only shown in Bucket 3 below for simplicity

Source: Nomura estimates based on data from NHTSA, Ward's Auto and Marklines

**Fig. 23: Bucket 3: Vehicles assembled in Mexico AND US/CA, with a significant volume (>20k) being imported into the US**

Text in blue: next-gen models of the respective carline. NHTSA's AALA reports for these models are not yet out. So, we used the parts content information (under AALA) available on the Monroney stickers for these vehicles which are already on sale at dealerships. We kept the sales volume same as the older gen version, except for GMC Terrain, as the new Terrain is being manufactured only in Mexico (CA + MX previously). CY2017 sales.

Make	Model	↓Mexico source US Sales (units)	By line US/CA content	By line MX content	By line JP content	By line KR content	By line OTH content
Ram	Ram 1500 PU (old)	242,706	45%	45%	0%	0%	10%
Chevrolet	Cruze (hatchback only)	23,470	29%	52%	0%	0%	19%
Chevrolet	Equinox	83,709	68%	8%	0%	0%	25%
Chevrolet	Silverado	236,450	37%	59%	0%	0%	4%
GMC	Sierra	106,953	37%	59%	0%	0%	4%
GMC	Terrain	45,274	68%	8%	0%	0%	25%
Toyota	Tacoma	107,021	57%	8%	22%	0%	13%
Ram	Ram 1500 PU - New	242,706	46%	44%	0%	0%	10%
Chevrolet	Equinox - New	83,709	47%	43%	0%	0%	10%
GMC	Terrain - New	110,000	47%	43%	0%	0%	10%

Note: "US Sales" column refers to US sales of Mexico-assembled vehicles only. Buckets 1 &amp; 2 above refer to US sales of NAFTA-assembled vehicles.

Source: Nomura estimates based on data from NHTSA, Ward's Auto and Marklines

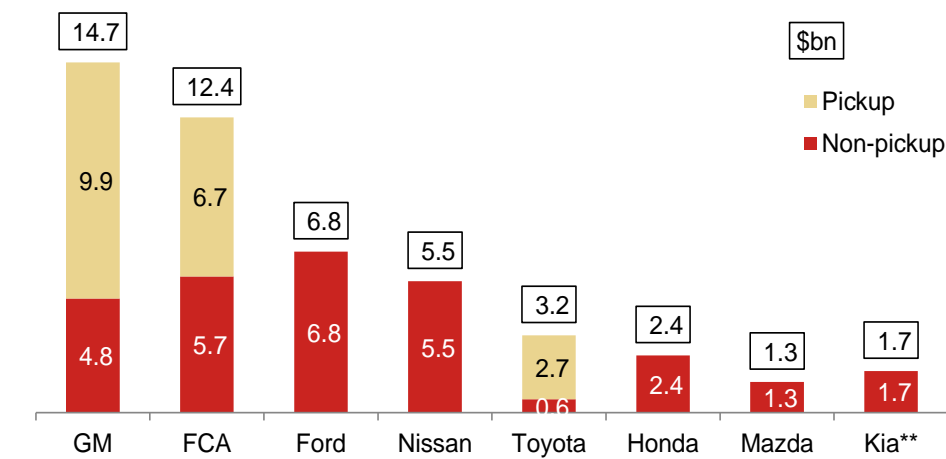
## Scenario 3: NAFTA dissolved; regulations regress to CUSFTA

If this scenario is realized, it would lead to a severe disruption of the global automotive supply chain. For **FCA**, **GM**, and **Toyota**, this scenario would make US imports of Mexico-built pickups unviable. Impact on passenger cars to be similar to Scenario 2.

If NAFTA is dissolved, US imports of Mexico-built pickups become unviable due to the steep 25% import duty on such products (Fig. 25). For details of model-wise data, please refer to Fig. 16.

**Fig. 24: Value of exports from Mexico to the US**

CY2017 estimates, \$bn



\*\*Note 1: includes Hyundai vehicles manufactured by Kia on an OEM basis

Note 2: Toyota numbers include Yaris iA assembled by Mazda on an OEM-basis

Source: Marklines, company websites, Nomura estimates

**Fig. 25: Potential impact from US tariffs levied on imports from Mexico if NAFTA is dissolved**

OEM	Vehicle type	Value of MX exports to US (\$mn) (a)	US Import Duty (%) (b)	Impact from FY2018E OP import duty (\$mn) (a x b)	forecast (\$mn)	Potential OP impact (%)
FCA	PU	6,672	25.0%	1,668	7,946	21.0%
FCA	Non-PU	5,721	2.5%	143	7,946	1.8%
Ford	Non-PU	6,757	2.5%	169	3,508	4.8%
GM	PU	9,915	25.0%	2,479	6,516	38.0%
GM	Non-PU	4,787	2.5%	120	6,516	1.8%
Honda	Non-PU	2,404	2.5%	60	7,571	0.8%
Kia	Non-PU	1,744	2.5%	44	1,516	2.9%
Mazda	Non-PU	1,290	2.5%	32	1,029	3.1%
Nissan	Non-PU	5,515	2.5%	138	5,324	2.6%
Toyota	PU	2,682	25.0%	670	22,533	3.0%
Toyota	Non-PU	563	2.5%	14	22,533	0.1%

Source: Marklines, company websites, Nomura estimates. Value of exports from Mexico to US is estimated based on CY2017 export volume.

Note: PU = pickup truck. FX rates used: 105 JPY/USD; 1080 KRW/USD; 1.20 USD/EUR.



- **FCA** and **GM** could face some significant operational impairment. Tariff impact would be 40% of FY2018E operating profits for GM and 23% for FCA. Their Mexican ops would face big challenges as they export full-size pickups trucks to the US in high volumes (Fig. 16), as well as high total value (Fig. 24 and Fig. 25). These imports would be faced with a steep 25% US import duty, absent NAFTA (also see page 13).
- **Toyota** would face a situation similar to GM or FCA, with regard to Toyota's midsize pickup Tacoma (25% US import duty). Additional import duties on Mexican imports would total \$685mn or 3% of Toyota's FY2018E operating profits.
- **Ford** currently imports a large volume of passenger cars from Mexico. The impact on the company under this scenario would be \$169mn or 5% of its FY2018E operating profits.

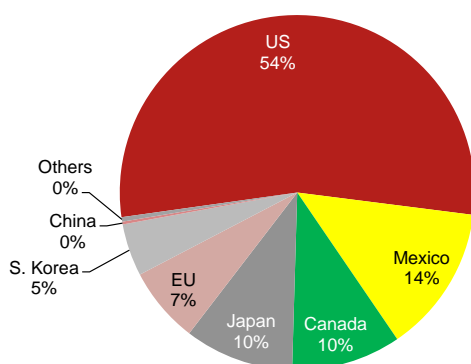
# Section 232 investigation into auto imports

## US Dept. of Commerce looking into whether auto imports could impair US national security

On May 23, the US Department of Commerce initiated a Section 232 investigation into US imports of autos and auto parts on national security grounds, acting on instructions from President Trump. The investigation would consider whether the long-term decline in domestic auto and auto parts production has structurally impaired the vitality of the US economy by reducing automotive research and development, and jobs for skilled workers. The Department's press release specifically cites technologies related to connected vehicle systems, autonomous vehicles, fuel cells, electric motors, batteries, and advanced manufacturing processes in this context.

**Fig. 26: US light vehicle sales by origin in 2017**

17.23mn light vehicles sold in the US in 2017



Source: Nomura, based on data from Ward's Auto and Marklines

At 2.32mn units or 14% of the total, Mexico was the largest source of light vehicles sold within the US in 2017 (Fig. 26). Canada, Japan (both countries shipping 1.72mn units each or 10% of total sales), the EU (1.19mn or 7%), and South Korea (821k or 5%) accounted for the bulk of the remaining imports. Imports from China were negligible, at 44k units in 2017. In value terms, the US imported \$192bn of new passenger vehicles (PV) and \$141bn of auto parts in 2017. Mexico topped the list of countries in both categories, shipping \$47bn worth of new PVs to the US and \$53bn worth of auto parts. Please refer to Fig. 8 and Fig. 9 for a more detailed breakdown and historical trends since 2002.

## Tail risk is not negligible: investors should be forewarned

Considering the timeline for a similar Section 232 investigation recently that looked at imports of steel and aluminum (see Trump tariffs and US auto manufacturing, page 36), we think that the Department's current investigation could take several months to complete, and would likely conclude with the Department making recommendations to President Trump on whether and how to restrict auto and auto parts imports. The President would then choose whether to accept those recommendations or not. Given the timing of the announcement, we think it is related to the ongoing renegotiation of the NAFTA treaty. Looking at the country exposures in the charts above, Mexico and Canada have the most to lose if this leads to higher US import duties on autos, without the protection offered by NAFTA. Thus, we think the actual intent of the threat of these new tariffs is to prod along the NAFTA renegotiations and to bring them to a conclusion.

We therefore believe that the likelihood of an eventual imposition of broad-based tariffs on US auto imports is relatively low. Having said that, the likelihood of a scenario where tariffs are actually imposed has risen, given the way the steel and aluminum tariffs hikes have played out (see page 36).

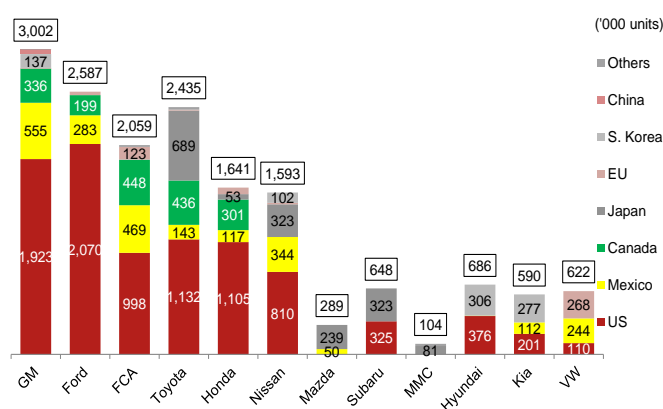
## What happens if the unthinkable materializes?

In our opinion, it increasingly appears that the President's decision-making is centered on autoworkers, even if that is to the detriment of the automakers. Thus, if we consider a scenario where tariffs are slapped on all US automotive imports, the repercussions are likely to be as follows.

### Customers likely to pay higher prices, leading to lower affordability

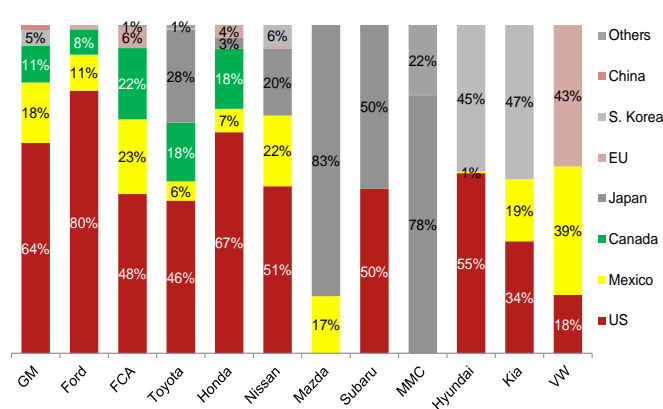
For the US car buyer, import tariffs would lead to higher new car prices, as automakers would try to pass on some of the higher costs to consumers. A 25% import duty (for example) would be something that an automaker cannot fully absorb. Higher prices would lower affordability and lead to a fall in auto sales in the US.

Fig. 27: US sales by manufacturer and by origin in 2017



Source: Nomura, based on data from Ward's Auto and Marklines

Fig. 28: US sales by manufacturer with origin splits in 2017



Source: Nomura, based on data from Ward's Auto and Marklines

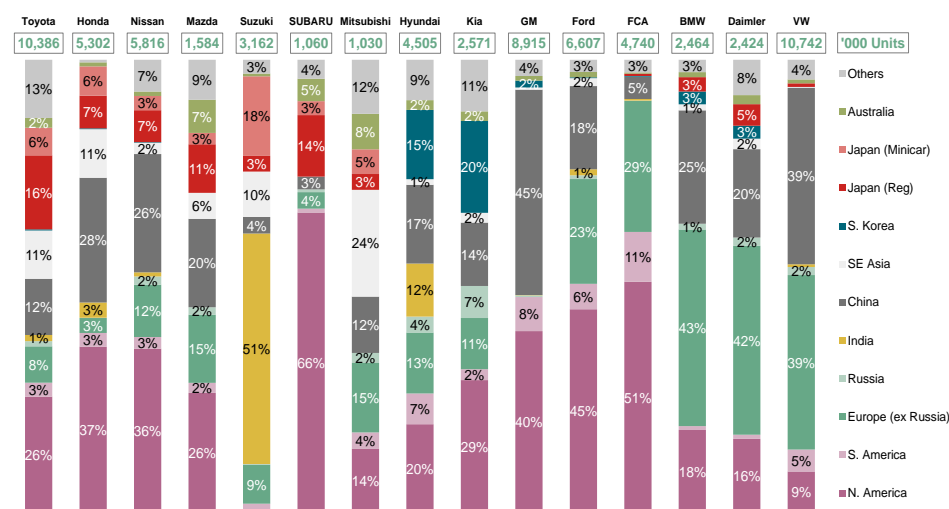
### Risk of stiffer competition in the US and other markets as automakers rush to increase US capacity

For automakers, we think that both US and non-US automakers realize that President Trump is prioritizing employment generation in the US Rust Belt, and they are taking steps to increase production in the US. However, the scale and timing of output growth are unclear at this stage. As an example, Toyota and Mazda are jointly investing \$1.6bn to set up a new 300k unit assembly plant in Alabama that is scheduled to start production in 2021. Another example is FCA's announcement that it will shift production of the next-generation Ram Heavy Duty truck from Mexico to its Warren Truck Assembly in Michigan by 2020, by spending more than \$1bn. It appears that other automakers are also implementing similar measures. It takes around three to four years from planning a new assembly plant to the start of production. An automaker would normally aim to grow sales in the US if it is constructing a new plant there (for example, Mazda). Therefore, if automakers rush to expand their US production footprint due to political pressure, we see a risk of stiffer competition in the US auto market ahead. For non-US automakers, US production capacity increases might not necessarily lead to corresponding capacity cuts in their home country or in other major production centers (such as Mexico). Thus, it could potentially lead to a global supply-demand imbalance in the auto industry.

For individual automakers, we think three factors would determine the intensity of the impact from broad-based US import tariffs on autos: 1) margins (e.g. a company like Subaru would be better placed to absorb higher costs compared to other mass-market automakers, given Subaru's double digit operating margins); 2) US import mix (e.g. Ford and Honda have the highest proportion of US-origin sales, Fig. 27 and Fig. 28, and are

therefore comparatively less at risk); and 3) overall geographic exposure to the US (e.g. 100% of Mitsubishi's sales in the US is of non-US origin, Fig. 28. However, North America, which includes the US, comprises just 14% of its global sales, Fig. 29, limiting the actual impact on the company).

**Fig. 29: Geographical exposure of major automakers, based on 2017 sales volume**



Source: Nomura estimates based on company data, JAMA, CAAM, SIAM, ACEA, NNA, Fourin, Marklines

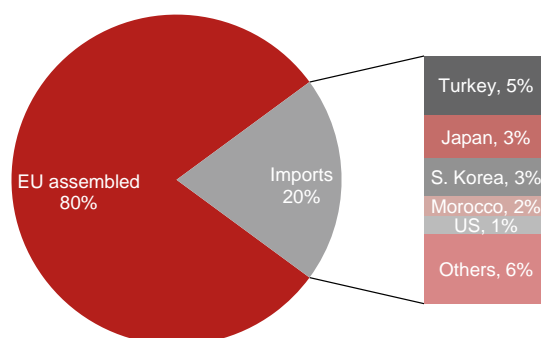
# Europe

## A fifth of the vehicles sold in the EU were imported

In 2017, out of sales of 15.14mn PVs, just 3.05mn (or 20% of the total) were imported (Fig. 30). The three largest auto exporters to the EU in 2017 were, in order, Turkey (730k units, representing 5% of total sales in the EU, or 24% of total auto import volume for the EU, Fig. 31), Japan (536k units, 3% of total EU sales, and 17% of total EU auto imports), and South Korea (461k units, or 3% of total EU sales, and 15% of total EU auto imports) respectively. Of note, the US exported 234k units to the EU in 2017, representing 1% of total EU sales (Fig. 30), or 8% of total EU imports (Fig. 31).

**Fig. 30: Passenger vehicle sales in Europe in 2017 by origin**

15.14mn passenger vehicles were sold in Europe in 2017

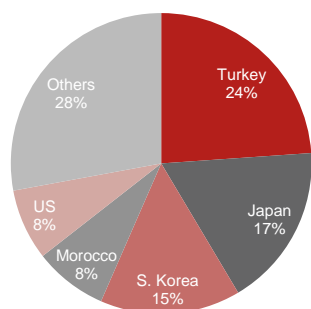


Note: This assumes all imports are sold within the EU, during the same year they are imported, or re-exported. This also does not account for inventories.

Source: ACEA, Nomura research

**Fig. 31: Origin of Imports**

Total imports in 2017: 3.05mn units

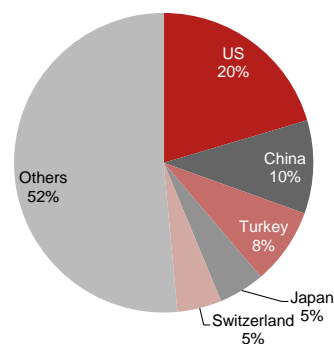


Note: Refers to trade in passenger cars. As it is a trade aggregate, there might be a small portion of used car imports included in the figures above

Source: ACEA, Nomura research

**Fig. 32: Destination of Exports**

Total exports from the EU in 2017: 5.63mn units



Note: Refers to trade in passenger cars. As it is a trade aggregate, there might be a small portion of used car exports included in the figures above

Source: ACEA, Nomura research

## JEEPA likely to lead to higher imports from Japan

On the other side of the ledger, the EU exported 5.63mn passenger vehicles in 2017 (Fig. 32), with the major destinations being the US (1.15mn units, or 20% of all PV exports), China (567k, or 10%), and Turkey (466k, or 8%). Japan was the destination for 280k units, or 5% of the total. Thus, Japan exported nearly 2x as many units to the EU as that imported from the EU in 2017. The US, on the other hand, imported almost 5x the volume it exported to the EU. However, as we noted on page 10, this trade imbalance with the US is likely to improve in the future, as major European automakers increase



production in North America, as well as source more vehicles from the US for sale within the EU. In the case of Japan, however, we think imports will rise due to lower tariffs after the forthcoming implementation of the Japan-EU Economic Partnership Agreement (JEEPA), as well as Japanese automakers' prowess in hybrids which are starting to gain favor with car buyers in Europe as EU emissions regulations become stricter. On the other hand, we see limited scope for growth of auto exports from the EU to Japan, given that 1) Japan does not have any import tariffs for autos, and 2) most imports are luxury vehicles which address a minor segment of the overall market.

## **JEEPA likely to be signed at a mid-July summit, and enter into force by spring 2019**

The European Commission, on 24 May, published a letter from European Trade Commissioner Cecilia Malmström about the swift signature and ratification of the JEEPA. The letter referred to the JEEPA as the most important trade agreement ever negotiated by the EU, and said that steady progress has been made towards its ratification. We think that the JEEPA would be signed at an EU-Japan summit in mid-July, and will come into force in spring 2019. This should benefit the heavily export-dependent Japanese auto industry, as it would lead to a reduction in tariffs on exports from Japan to the EU. Japan does not have any import tariffs for vehicle imports into Japan from other markets.

## **Complete abolition of tariffs would affect automobiles by ¥135bn, auto parts by ¥20bn**

According to data from Japan Customs and Tariff Bureau, the country exported 689k automobiles worth ¥1.35tn (\$12.4bn) to the EU in FY18/3. Under the JEEPA, auto import tariffs, currently at 10%, would be cut to 8.75% in spring 2019, followed by staggered cuts to zero by year eight. Our rough calculations, assuming no growth in volumes, suggest that every 1.25% reduction in tariffs would boost annual operating profits at seven Japanese automakers by ¥16.9bn (\$150mn), equivalent to 0.35% of their aggregate operating profits in FY18/3. A complete abolition of tariffs would boost operating profits by ¥135.3bn (\$1.2bn), equivalent to 2.8% of their aggregate OP. Exports of automobile parts from Japan to the EU totaled ¥526.6bn (\$4.8bn) in FY18/3, with tariffs varying between 2.7% and 4.5% depending on the product. Under the JEEPA, 92% of exports in value terms will become tariff free. Tariffs are also scheduled to fall on products not classified as automobile parts, including materials, tires, and semiconductors. Thus, it is likely that tariffs on a broad swathe of autoparts would fall by more than ¥20bn (\$180mn) in FY20/3 (equivalent to 0.4% of aggregate operating profits at seven Japanese automakers in FY18/3).

## **Comparatively more benefits for Mazda, Mitsubishi, and Toyota**

We see proportionally larger benefits for Mazda, Mitsubishi Motors, and Toyota. On a customs-cleared basis, we estimate Mazda's export volume from Japan to the EU at 180k units worth ¥360bn (\$3.3bn), and that for Mitsubishi at 100k units worth ¥200bn (\$1.8bn) in FY19/3. A cut in tariffs would boost their OP by ¥4.5bn (\$41mn) and ¥2.5bn (\$23mn) respectively in FY20/3. This is equivalent to 3.1% and 2.5% of their FY18/3 OP respectively. Toyota's market share in Europe has benefited from the recent popularity of its hybrid vehicles, as European car buyers shun diesel and opt for alternative powertrains. We estimate Toyota's exports from Japan to the EU to touch 220k units worth ¥600bn (\$5.5bn) in FY19/3, and its operating profits to be boosted by ¥17.5bn (\$160mn) in FY20/3 (equivalent to 0.7% of its FY18/3 operating profits), split into ¥7.5bn (\$69mn) from automobiles and ¥10.0bn (\$92mn) from auto parts.

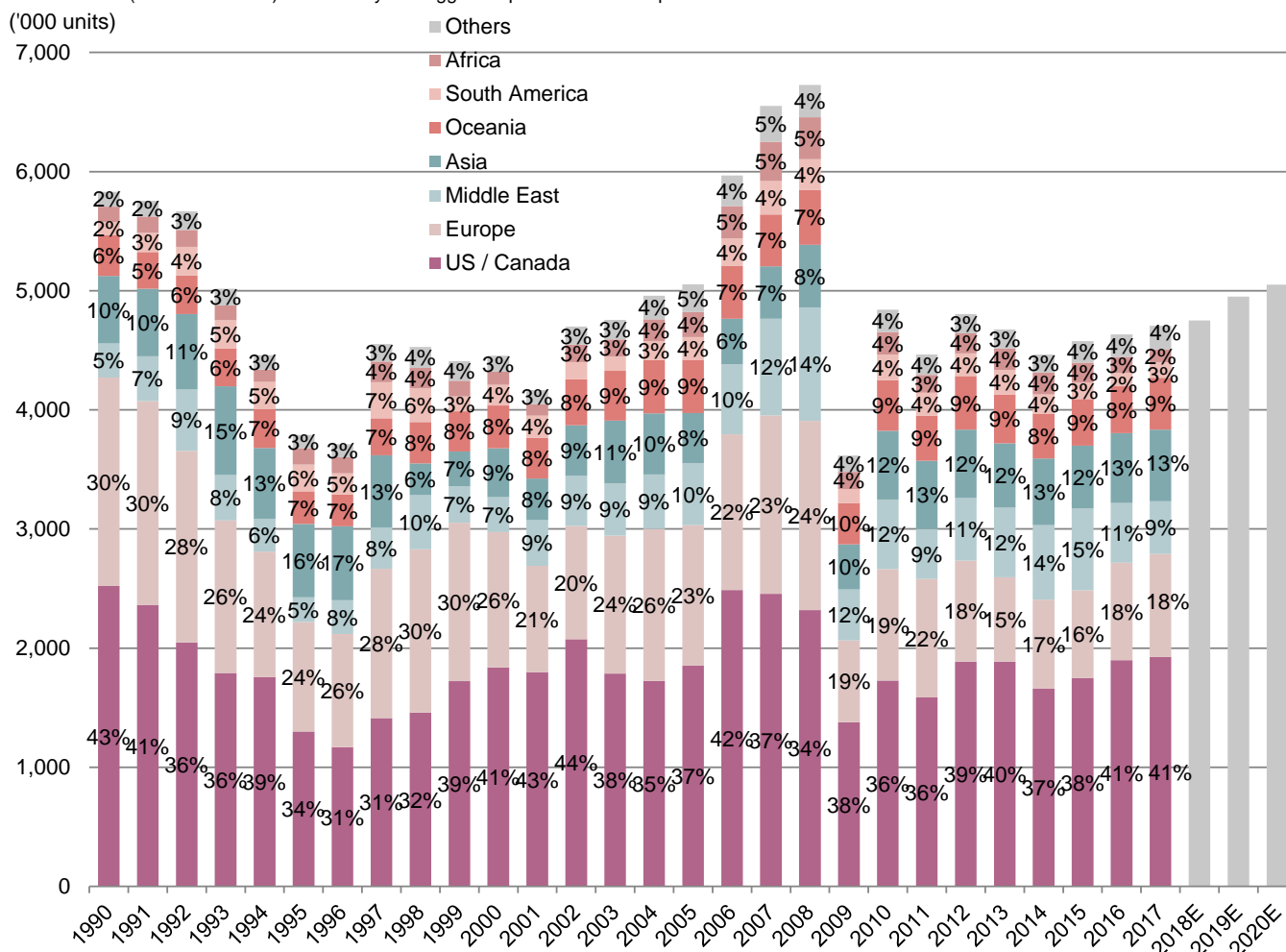
# Japan

## Auto sector accounts for 77% of Japan's trade surplus with the US

Japan's auto exports have been edging higher since 2015, especially to North America and Europe, and stood at 4.71mn vehicles in 2017 (Fig. 33). The US represented 37% of the total, or 1.74mn units. Statistics from Japan's Ministry of Finance show that the country exported ¥4.57trn (\$42bn) worth of autos and ¥0.96trn (\$9bn) worth of auto parts to the US, totalling ¥5.53trn (\$51bn) in 2017. In contrast, Japan imported ¥91.9bn (\$840mn) worth of automobiles and ¥57.9bn (\$530mn) worth of auto parts from the US, totaling just ¥149.9bn (\$1.37bn), giving Japan a trade surplus of ¥5.38trn (\$49bn) for trade in auto and auto parts with the US. Total exports from Japan to the US were at ¥15.1trn (\$140bn), while imports from the US to Japan were at ¥8.1trn (\$74bn). Thus, the total trade surplus was ¥7.0trn (\$64bn) in 2017. This implies that auto and auto parts exports to the US accounted for more than a third of Japan's total exports to the US, and that the auto sector accounted for 77% of Japan's entire trade surplus with the US.

**Fig. 33: Japanese automobile exports by destination**

North America (US and Canada) consistently the biggest export market for Japan



Source: Japan Automobile Manufacturers Association; estimates by Nomura

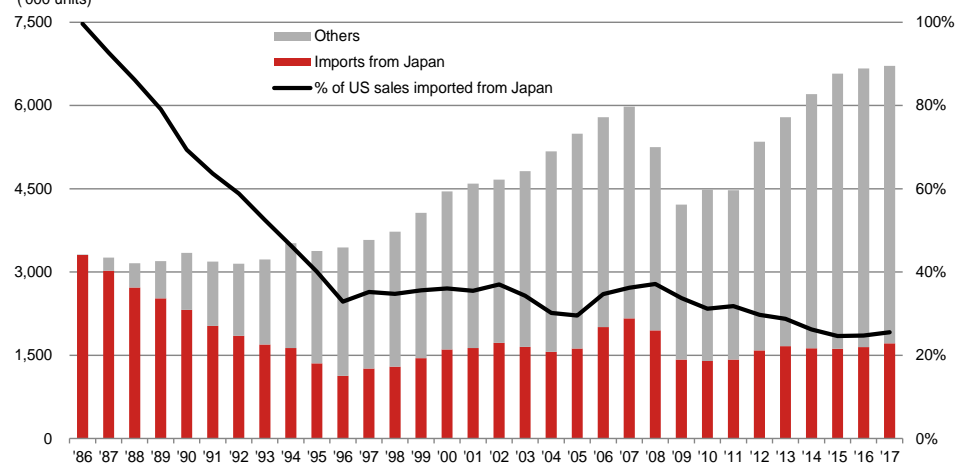
## Lessons from the past: Japan-US trade friction in early 1980s and first half of 1990s, and Japan's response

Japanese auto exports to the US resulted in a trade standoff between the two countries in the early 1980s and the first half of the 1990s. Trade friction in the auto sector intensified: 1) as US automakers became uncompetitive; 2) as unemployment grew as a result of an economic downturn in the US; and 3) as a "side-effect" of US presidential elections (fall 1980, fall 1992). At the time, the United Automobile Workers (UAW) had accused Japan of exporting its unemployment to the US, leading the US government to adopt a particularly hard line during negotiations.

Japan responded to the trade friction in the early 1980s by imposing voluntary export caps and prodding Japanese automakers to start production in North America. Honda was the first to do so, launching local auto production at its Ohio assembly in 1982 (Fig. 34). During the second round of trade friction with the US in the early 1990s, Japanese auto majors: 1) rolled out global production facilities; 2) increased localization in the US; 3) increased vehicle imports from the US to Japan; and 4) increased imports of auto parts.

**Fig. 34: Japanese automakers' total sales in the US and ratio of imports from Japan**

Japanese OEMs' US production grew since late 1980s, cutting imports from Japan to a fourth of US sales ('000 units)



Source: Ward's Auto, Nomura

## Strong US economy and lack of threats to the survival of the Detroit Three likely to act as buffer to greater trade friction

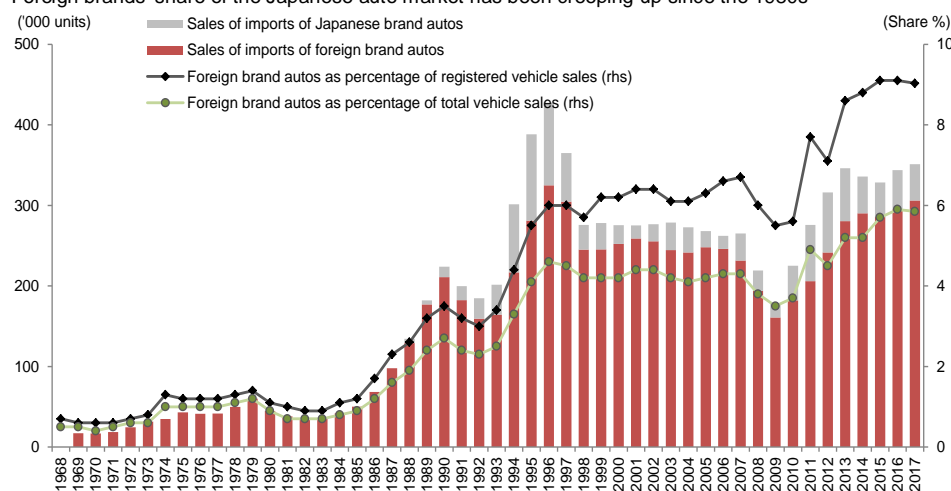
To understand the current state of automobile trade between Japan and the US, we have to view it in the context of: 1) the US automakers, who have been faring quite well; 2) the US unemployment rate, which remains low; and 3) increased US production by Japanese automakers, which has contributed to the growth of the US economy and created more jobs. We consider all of this to be good news for the Japanese side. The case, however, remains that trade friction tends to intensify ahead of elections, and we think the US will continue with particularly aggressive demands until the mid-term elections in November 2018. President Trump has been calling strongly for increased US output by global automakers, including US companies, since assuming office. We therefore expect the President's future demands to continue to focus on increased US production.

## Sales of imported vehicles in Japan

Sales of imported vehicles in the Japanese market comprise of foreign brands and reverse imports of Japanese brands. Japan imported 351k vehicles in 2017, out of which 306k were foreign brands and 45k Japanese brands. Looking back at imports over the past fifty years, auto sales of foreign brands, especially the German brands, have been on the upswing since the late 1980s, barring periods of severe economic downturn (such as during the 2008 financial crisis). As a result, foreign brand sales accounted for 9% of registered vehicle sales in 2017, and of 6% of total sales including minivehicles (Fig. 35).

**Fig. 35: Imported auto sales in Japan and market share of foreign brands**

Foreign brands' share of the Japanese auto market has been creeping up since the 1980s



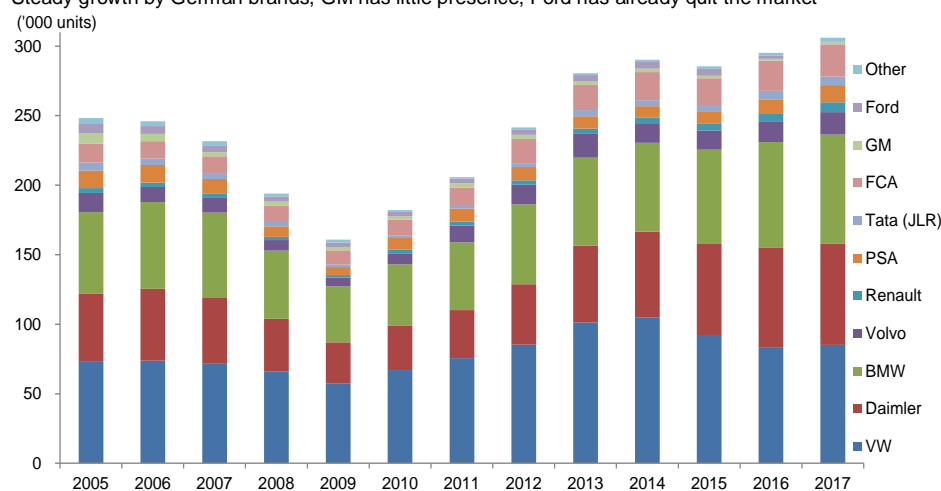
Source: Japanese Automobile Importers Association (JIMA), Japan Automobile Manufacturers Association, Nomura

### US automakers' generally large car sizes and lesser brand appeal are barriers to growth in Japan, even with deregulation

The VW group, including Audi and Porsche, accounted for 28% of foreign brand auto sales in Japan in 2017, making it the biggest foreign automaker in the market, followed by the BMW group with 26%, and Daimler with 24%, giving the German companies a 77% share of total foreign brand sales (Fig. 36). We also note that sales by FCA include Italian brands such as Alfa Romeo and Fiat, and include only some US-made vehicles such as those from Jeep. We attribute the success of the Germans in Japan to their strong brand equity among Japanese car buyers and the fact that they supply large numbers of smaller vehicles that cater to Japanese preferences. Among US automakers, Ford pulled out of Japan in 2016. GM only offers niche models under the Cadillac and Chevrolet brands such as the Corvette, and has very few dealers. We therefore see little scope for any increase in sales of US brands even if Japan were to somehow ease regulations. On that basis, we see little likelihood of the US government demanding Japan to open its markets, partly because there would be little benefit for US automakers and auto parts suppliers. For similar reasons, we see very little possibility that regulations concerning Japan's minivehicle market will be subject to discussion.

**Fig. 36: Foreign brand vehicle sales in Japan by automaker**

Steady growth by German brands, GM has little presence, Ford has already quit the market



Source: Japanese Automobile Importers Association (JIMA), Nomura

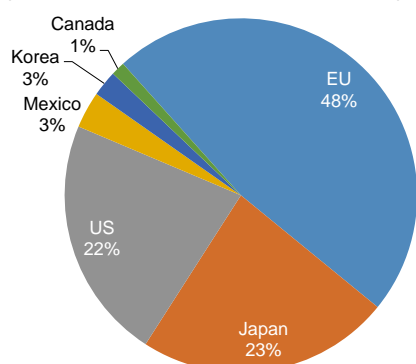
# China

## 48% of auto imports in 2017 were from the EU, followed by Japan, and the US

Chinese President Xi, in a speech on 10 April, said that imports tariffs on autos would be cut “substantially” this year. Subsequently, China’s Ministry of Finance announced that auto import duties would be cut from 25% currently to 15% starting 1st July 2018. Import tariffs on auto parts will also be cut to 6%, down from 8%-25%. In 2017, China imported 1.07mn vehicles (based on data from Marklines), which was 4% of total auto sales (of 28.92mn). Out these, almost three quarters were those of luxury brands (Fig. 38 and Fig. 39) such as Mercedes (Daimler), BMW, Audi (VW), and Lexus (Toyota). Given the dominance of the German automakers, nearly half of all imports (Fig. 37) came from the EU (48% or 507k units), followed by Japan (23% or 247k units), and the US (22% or 237k units).

**Fig. 37: 1.07mn new vehicle imports in 2017, by origin**

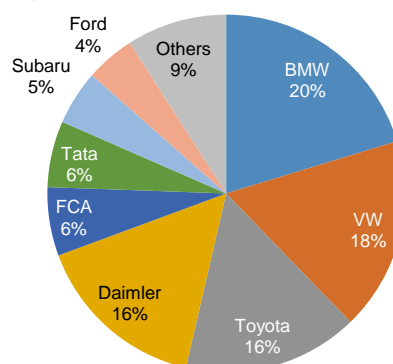
The EU, Japan, and the US accounted for almost all imports into China



Source: Marklines, Nomura estimates

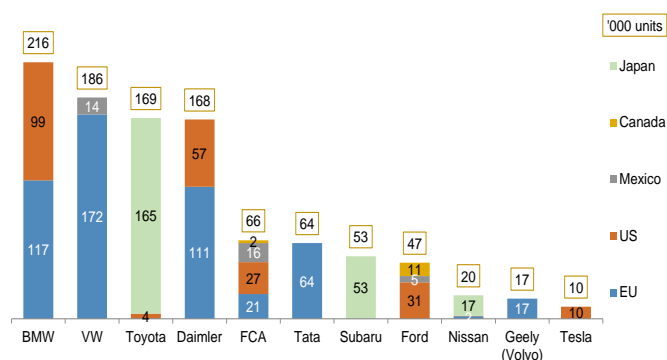
**Fig. 38: New vehicle imports in 2017, by automaker**

1.07mn units imported in CY2017



Source: Marklines, Nomura research

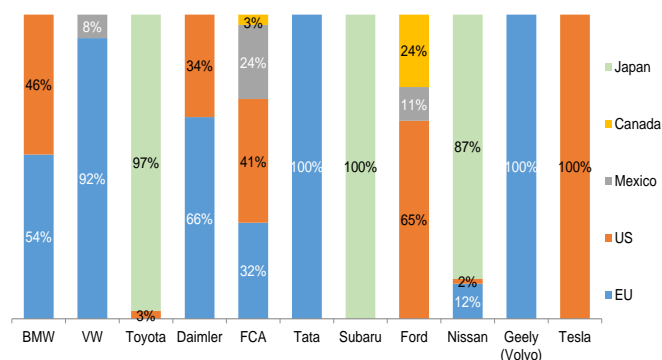
**Fig. 39: Automakers importing more than 10k units in 2017**



Note: Tesla covered by Romit Shah and Kellan Grenier, Instinet, LLC.

Source: Marklines, Nomura research

**Fig. 40: Automakers importing more than 10k units in 2017**



Note: Tesla covered by Romit Shah and Kellan Grenier, Instinet, LLC.

Source: Marklines, Nomura research

## Import tariff cuts likely to benefit luxury brands that currently do not have a local manufacturing base

We believe a lower import tariff would benefit luxury brands which currently do not have local production in China, such as Lexus, Porsche, etc. This is because luxury brands with existing assembly factories in China (such as Mercedes-Benz, BMW, and Audi) are unlikely to import models which they have already localized. Importing the same model would not be cost-competitive currently versus a locally-made version, given the additional 15% import duty (after the cut) and transportation costs.

Also importantly, most of the popular locally manufactured models have been engineered for China-only long wheelbase options, to cater to Chinese car buyer preferences for extra legroom in the rear seats. In contrast, imported versions of the same model offer only a standard wheelbase that is sold globally.

## Mild pricing pressure for luxury names likely, but chances of a price war look slim

So the question is: will a price cut for high-end imported luxury cars (Fig. 42) negatively impact the sales volume and pricing for a locally made, comparable or segment-adjacent competitor? For example, would a customer now choose an imported BMW 7 Series over a locally-made 5 Series? We think it is unlikely, given their large price differential (Fig. 41) and differing customer profiles. Alternatively, would a customer choose an imported Lexus RX or Porsche Macan over a locally-assembled Mercedes GLC or Audi Q5? We think Lexus could benefit incrementally, although its prices would be around 10% more expensive than that for comparable locally-made competitor models.

We think that it is safe to assume that there could be mild pricing pressure (we estimate c.2-3%) this year for locally-made luxury models as automakers proactively seek to maintain a comfortable pricing advantage over imported alternatives. Retail price cuts for selected imported models announced by some of the luxury brands so far have been within a range of just 5% to 7% (Fig. 42). As such, we believe the probability of a price war is slim given that the negative implications stemming from an erosion in the brand equity of the luxury names due to excessive discounting are probably too severe over the long term.

**Fig. 41: Retail prices of imported luxury models versus locally made models**

Brand	Imported	Retail price (CNY)	Brand	Locally made	Retail price (CNY)
<b>SUVs</b>					
Mercedes	GLE	712k-1,390k	Mercedes	GLC	395k-579k
				GLA	270k-398k
BMW	X5	752k-1,069k	BMW	X1	259k-436k
				X3	399k-585k
Audi	Q7	750k-1,042k	Audi	Q5	396k-519k
				Q3	247k-341k
Land Rover	Range Rover Sport	988k-1,818k	Land Rover	Discovery Sport	368k-518k
				Range Rover Evoque	448k-583k
Lexus	RX	458k-869k			
	NX	318k-569k			
Porsche	Macan	558k-988k			
	Cayenne	922k-2,839k			
<b>Sedans</b>					
BMW	7 Series	890k-2,650k	BMW	5 Series	436k-660k
				3 Series	287k-484k
Mercedes	S-Class	877k-1,981k	Mercedes	E-Class	420k-630k
				C-Class	326k-479k
Audi	A8	938k-1,310k	Audi	A6L	403k-695k
				A4L	290k-407k
Lexus	ES	359k-654k			

Source: LMC Automotive, Nomura research

**Fig. 42: Impact of tariff cut announcement on pricing of imported models**

Brand	Model	Old price (CNY '000)	New price (CNY '000)	% reduction
<b>SUVs</b>				
BMW	X5	752-1,069	700-995	7%
Audi	Q7	750-1,042	701-974	6.5%
Lincoln	MKX	446-654	419-619	5.4%-6.1%
<b>Sedans</b>				
BMW	7 series	890-2,650	828-2,488	6%-7%
Audi	A8	938-1,310	877-1,225	6.5%
Lincoln	Continental	395-609	369-567	6.6%-7%

Source: Autohome, Nomura research

Share performance of Chinese luxury auto dealers has been supported by the expected reduction of imported car tariffs, while that of luxury OEMs (Brilliance and BAIC) has lagged. Given our view above, we believe that the more attractive risk-reward lies with Brilliance and BAIC (both rated Buy).



# South Korea

## Revised KORUS FTA to have a limited impact on Korean autos

On 28 March, South Korea and the US reached an understanding on the key terms for revising the 2012-edition of the US-Korea Free Trade Agreement (KORUS FTA). The two countries have not yet formally signed off on the amended KORUS FTA. The revised terms of the agreement include the following (Fig. 43):

- The US will extend the phase out of a 25% tariff on pickup trucks imported from Korea by twenty years, from 2021 to 2041.
- Cap on US auto exports to Korea doubled to 50k vehicles (previously 25k) per manufacturer per year, that can meet US safety standards (in lieu of Korean standards) and enter the Korean market without further modification.

We think overall impact of the revised KORUS FTA will be limited on the Korean auto industry because:

- Korean automakers do not currently sell pickup trucks in the US. If necessary, Korean carmakers may choose to manufacture pickup trucks in the US.
- Doubling the quota for US-made vehicles which meet US standards is unlikely to dent Korean automakers' sales in Korea, as popularity of US brands in Korea is limited.

Fig. 43: Korea-US FTA negotiation results

		Korean market			US market		
		Before	After 2012 FTA	After renegotiation	Before	After 2012 FTA	After renegotiation
Tariff	Passenger cars	8%	4% (0% from 2016)	4% (0% from 2016)	2.5%	0% from 2016	0% from 2016
	Electric Vehicles	8%	4% (0% from 2016)	4% (0% from 2016)	2.5%	0% from 2016	0% from 2016
	Trucks	10%	0%	0%	25%	0% from 2021	0% from 2041
Quota		n.a.	Each automaker allowed to export 25k US-made vehicles per year that meet US safety standards in lieu of Korean standards	Each automaker allowed to export 50k US-made vehicles per year that meet US safety standards in lieu of Korean standards	n.a.		

Source: FTA.or.kr, Nomura research

## Review of the 2012 KORUS FTA

The original KORUS FTA came into effect in March 2012. Under the terms of the original treaty, South Korea cut its tariff on passenger vehicles from 8% to 4% and phased it out completely by 2016. The US completely phased out its 2.5% tariff on passenger car imports from South Korea by 2016 (Fig. 43). For trucks, Korea eliminated its 10% tariff on US imports, while US import tariff of 25% on pickup trucks was to be phased out entirely by 2021. Furthermore, each automaker with plants in the US could export 25k US-made vehicles to South Korea by complying with US safety standards in lieu of Korean standards.

## Revised KORUS FTA might provide protection to Korean auto exports from Section 232 duties in the US

In addition to our discussion on this subject earlier (see Section 232 investigation into auto imports, page 24), we note the following with respect to Korean automakers. Given that the KORUS FTA renegotiation was recently concluded, we think it is unlikely that the treaty would be opened for renegotiations once again. Thus, it might shield Korean automakers from the impact of Section 232 tariffs on auto exports to the US. If tariffs are imposed on vehicles exported to the US from major auto producing countries excluding Korea, it could potentially make Korean vehicle imports more price competitive in the US. Of note, Hyundai (HMC) and Kia imported 50% and 15% of their US sales volume from Korea respectively in 2017.

## Korea's permanent exemption from US steel tariffs

US President Trump has imposed a 25% tariff on all steel imports into the US (see following section). South Korea **is the only nation** to be permanently exempt from these tariffs, although it is subject to a product-specific annual volume quota equal to 70% of the average annual import volume of such products during 2015-17. As such, the risk of higher prices for steel imports on Korean automakers' US operations is likely to be limited. HMC and Kia import half of the steel that is used in their production facility in the US, from South Korea.

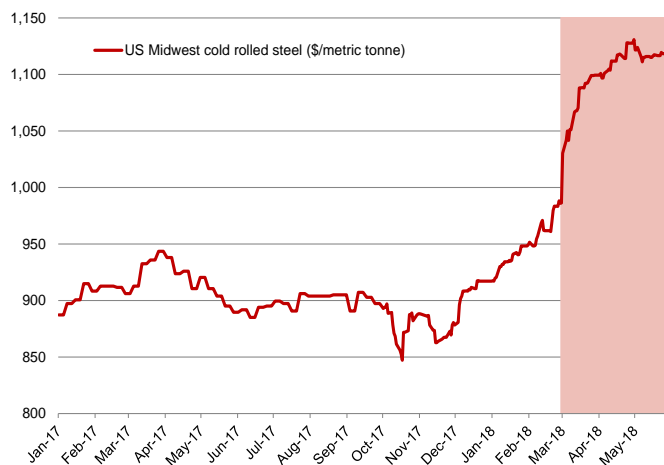
# Trump tariffs and US auto manufacturing

## Cost impact from US tariffs on steel and aluminum imports is here to stay

On March 8 this year, US President Trump signed executive orders imposing a **25% tariff on steel**, and a **10% tariff on aluminum** imports. These new levies entered into effect from March 23 onwards. Canada and Mexico (together accounting for the largest source of US steel and aluminum imports) were temporarily exempt, while the US continued to renegotiate the NAFTA treaty with them. These temporary exemptions for Canada and Mexico (along with a similar exemption for the EU) lapsed on **May 31**.

To avoid running afoul of WTO regulations, the new policy cited US national security concerns as the reason for the higher levies, saying that high quantities of steel and aluminum imports had put the long-term economic viability of domestic US producers at risk, which in turn impaired the ability of the US to procure these critical commodities in times of a national emergency. Thus, the main goal of these tariffs is to block a certain volume of imports, and make the prices of these metals rise domestically, so that it becomes profitable enough for US steel and aluminum producers to increase production and hire more people. As such, the presidential proclamation sets a capacity utilization target of 80% for the two industries and mentions that any waiver to a particular country could lead to corresponding hikes for the remaining countries still covered by the tariffs, in order to meet the volume/capacity utilization goals, i.e. a zero-sum game. This raises the possibility that these tariffs might rise in the future if, for example, Brazil's longer-term exemption from steel tariffs is made permanent. Additionally, there is neither any mention of a time limit for these trade restrictions to remain in force, nor any guidelines regarding their review or removal. Lastly, given the high employment base of the steel and aluminum industries, the topic of rescinding these tariffs could become a political hot potato for a future President. We therefore think that these tariffs would result in persistently higher input costs for automakers' manufacturing operations within the US. Looking at recent price movements, (Fig. 44 and Fig. 45), the next question is: how large is the impact going to be?

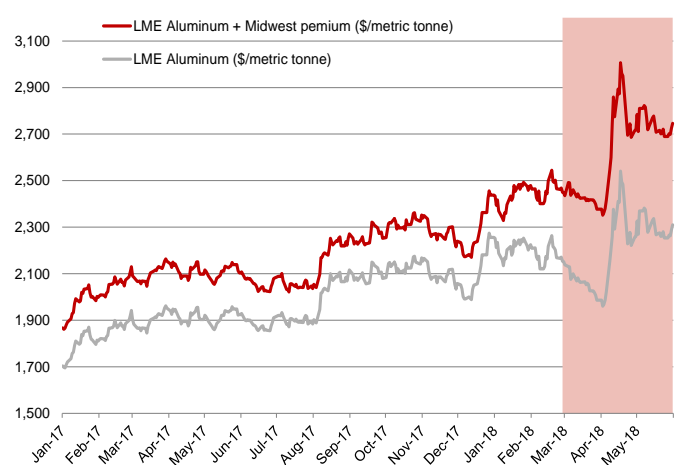
**Fig. 44: Steel price trends**



Note: Shaded area represents period following Trump announcing his intention to impose tariffs on aluminum and steel (March 1, 2018)

Source: Bloomberg, Nomura research

**Fig. 45: Aluminum price trends**



Note: Shaded area represents period following Trump announcing his intention to impose tariffs on aluminum and steel (March 1, 2018)

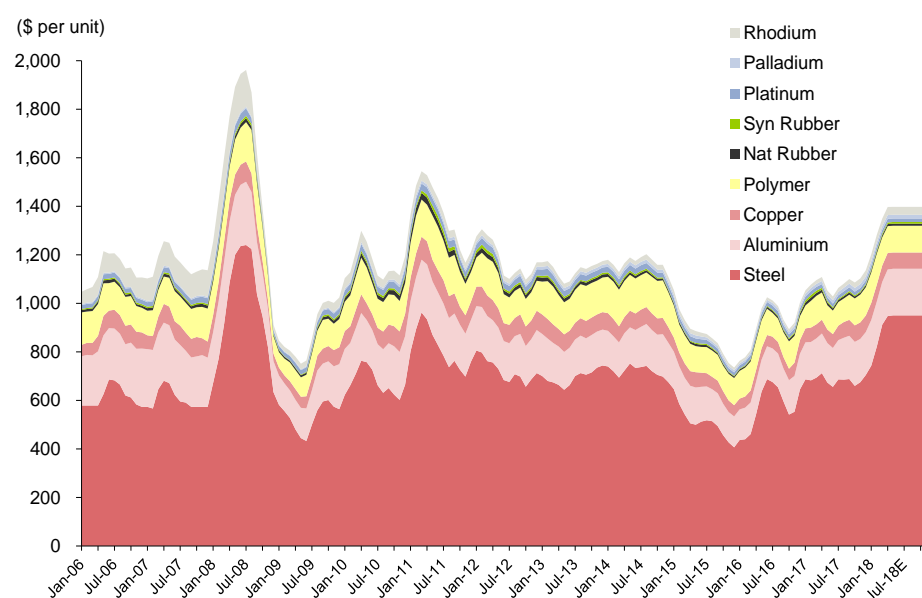
Source: Bloomberg, Nomura research

## Modeling the impact from steel and aluminum price hikes

The average steel content per vehicle for an automaker depends on the production mix: unibody vehicles (such as passenger cars or car-based SUVs) are lighter and use less steel compared to frame-based vehicles (such as pickup trucks and truck-based SUVs) which are comparatively heavier. Even with frame-based vehicles, automakers such as Ford use more aluminum to reduce vehicle weight as a means to improve fuel economy. We start with the CY2017 auto production and mix in the US as the base for our estimates (Fig. 48). We estimate the average steel content for frame-based steel vehicles at 2,100lbs (950kg), for frame-based aluminum-steel vehicles at 600lbs (270kg), and for unibody vehicles at 1,500lbs (680kg). In terms of aluminum content, we estimate all vehicles other than frame-based aluminum-steel types to average 400lbs (180kg). For full-frame aluminum-steel vehicles, we peg the average content at 950lbs (430kg) of aluminum.

Next, we use the CY2017 average spot prices for steel and aluminum as our base and apply a 24% increase for steel and a 16% increase for aluminum. These hikes correspond to current trends in spot prices, which are up by around \$220 per metric tonne (~\$200 per short ton) for steel, and by roughly \$320 per metric tonne for aluminum, compared to their CY2017 averages.

**Fig. 46: Total raw material cost trends (per average vehicle)**



Note: From May '18 onwards, the graph freezes prices at the 2 May 2018 spot rate

Source: Nomura estimates based on DataStream, Bloomberg, company data

Based on our estimates above, we calculate the potential impact on GM to be around \$490mn for a full year, or 7.6% GM's of 2018E operating profits (OP). For Ford the corresponding figures are \$510mn and 14.5%. Ironically, the proportional impact on Ford is higher compared to GM given the former's larger US auto manufacturing footprint (Fig. 47), with a similar mix of full-frame vehicles (Fig. 48). Toyota's balanced production footprint results in an annual cost impact of around \$280mn, or 1.2% of its FY19/3E OP, the lowest ratio among all the major global carmakers discussed here. We calculate the impact on Nissan to be \$200mn (3.8%), Honda \$250mn (3.3%), and Subaru \$75mn (2.2%). There is no impact on Mazda and Mitsubishi Motors, as they do not have a manufacturing base within the US. Based on CY2017 domestic US vehicle sales for each automaker, we find that the potential per-unit impact for automakers with existing assembly plants in the US would range from \$76 (Kia) to \$198 (Ford), see Fig. 48.

**Fig. 47: Production and sales in US, Canada Mexico; exports from Mexico**

CY2017 (000 units)	US				Canada			Mexico			Mexico export		
	Sales	Production	Difference	%	Sales	Production	Difference	Sales	Production	Difference	Total	To US	To non-US
	a	b	c=b-a	d=b/a	e	f	g=f-e	h	i	j=i-h	k=l+m	l	m
Toyota	2,435	1,264	(1,171)	52%	228	572	344	105	151	46	148	142	6
Nissan	1,593	931	(663)	58%	147	0	(147)	397	829	433	469	331	138
Honda	1,641	1,198	(443)	73%	197	429	232	90	209	118	187	125	62
Subaru	648	363	(285)	56%	55	0	(55)	1	0	(1)	0	0	0
Mazda	289	0	(289)	0%	74	0	(74)	54	142	88	148	69	79
Mitsubishi	104	0	(104)	0%	23	0	(23)	15	0	(15)	0	0	0
<b>JP Total</b>	<b>6,711</b>	<b>3,756</b>	<b>(2,955)</b>	<b>56%</b>	<b>723</b>	<b>1,001</b>	<b>278</b>	<b>663</b>	<b>1,331</b>	<b>668</b>	<b>952</b>	<b>668</b>	<b>284</b>
GM	3,000	2,067	(933)	69%	303	397	94	259	806	547	694	552	142
Ford	2,575	2,475	(100)	96%	309	254	(55)	83	315	232	307	283	25
FCA	2,059	1,162	(898)	56%	267	528	261	86	639	553	599	497	102
<b>US Total</b>	<b>7,634</b>	<b>5,704</b>	<b>(1,931)</b>	<b>75%</b>	<b>879</b>	<b>1,179</b>	<b>300</b>	<b>427</b>	<b>1,760</b>	<b>1,333</b>	<b>1,601</b>	<b>1,332</b>	<b>269</b>
HMC	686	402	(283)	59%	130	0	(130)	47	15	(31)	6	5	1
Kia	590	218	(372)	37%	77	0	(77)	87	206	120	158	98	59
<b>KR Total</b>	<b>1,275</b>	<b>620</b>	<b>(655)</b>	<b>49%</b>	<b>206</b>	<b>0</b>	<b>(206)</b>	<b>133</b>	<b>222</b>	<b>88</b>	<b>164</b>	<b>103</b>	<b>60</b>
<b>JP/US/KR Total</b>	<b>15,620</b>	<b>10,080</b>	<b>(5,540)</b>	<b>65%</b>	<b>1,808</b>	<b>2,180</b>	<b>372</b>	<b>1,224</b>	<b>3,312</b>	<b>2,088</b>	<b>2,716</b>	<b>2,103</b>	<b>614</b>

Source: Marklines, Ward's Auto, Nomura research

## Modeling the impact from steel and aluminum price hikes (continued)

**Fig. 48: Estimating the sensitivity of major automakers' profits to a rise in US steel and aluminum input costs**

Table below calculates the impact from a 24% increase in steel and 16% increase in aluminum spot prices compared to the CY2017 average

	CY2017 US Production ('000 units)	Full Frame Steel (%)	Full Frame Al-Steel (%)	Unibody Steel (%)	Full Frame Steel (lbs)	Full Frame Aluminum (lbs)	Full Frame Al-Steel (lbs)	Unibody Steel (lbs)	Average Steel Aluminum (lbs)	Steel Price (\$/short ton)	Steel tariff Impact (\$/short ton)	Aluminum Price (\$/t)	Al tariff Impact (\$/t)	Steel Impact (\$mn)	Aluminum Impact (\$mn)	Total Impact (\$mn)	FY18E OP (bn)	Impact on OP (%)	Of which, impact from Steel (%)	Aluminum (%)	CY2017 US Sales ('000 units)	2017 US ASP (\$)	Per Unit Impact (\$)
GM	2,067	56%	0%	44%	2,100			1,500	400	820	197	1,995	319	374	120	493	\$6.52	7.6%	5.7%	1.8%	3,000	40,200	164
Ford	2,475	7%	45%	48%	2,100	950	600	1,500	400	820	197	1,995	319	277	232	509	\$3.51	14.5%	7.9%	6.6%	2,575	39,800	198
FCA	1,162	51%	0%	49%	2,100			1,500	400	820	197	1,995	319	206	67	274	€6.62	3.4%	2.6%	0.8%	2,059	37,000	133
Toyota	1,264	22%	0%	78%	2,100			1,500	400	820	197	1,995	319	203	73	276	¥2,366	1.2%	0.9%	0.3%	2,435	32,400	113
Nissan	931	19%	0%	81%	2,100			1,500	400	820	197	1,995	319	148	54	202	¥559	3.8%	2.8%	1.0%	1,593	29,300	127
Honda	1,198	0%	0%	100%	2,100			1,500	400	820	197	1,995	319	177	69	246	¥795	3.3%	2.3%	0.9%	1,641	28,200	150
Subaru	363	0%	0%	100%	2,100			1,500	400	820	197	1,995	319	54	21	75	¥349	2.2%	1.6%	0.6%	648	27,600	115
Mazda	-																¥108	0.0%	0.0%	0.0%	289	28,100	-
Mitsubishi M	-																¥116	0.0%	0.0%	0.0%	104	26,300	-
Hyundai	402	0%	0%	100%	2,100			1,500	400	820	197	1,995	319	59	23	83	₩4,193	2.1%	1.5%	0.6%	686	24,500	120
Kia	218	0%	0%	100%	2,100			1,500	400	820	197	1,995	319	32	13	45	₩1,637	3.0%	2.1%	0.8%	590	24,500	76

Source: Nomura estimates based on data from Bloomberg, Ward's, Automotive Engineering, Ducker Worldwide, Mega Associates, company press releases. FX rates used: 105 JPY/USD; 1080 KRW/USD; 1.20 USD/EUR.

**Fig. 49: Product mix-based cost impact analysis for major automakers having assembly plants in the US**

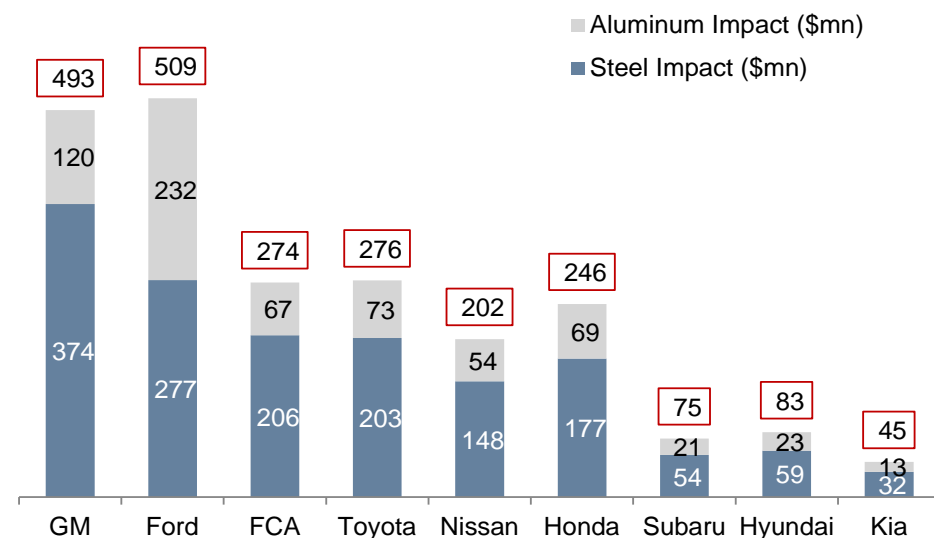


Chart on the left is a graphical representation of the cumulative impact from higher input costs resulting from the Trump Tariffs on major global automakers with manufacturing bases within the US. We tailor our estimates based on the CY2017 auto production mix for each automaker. The chart also shows the total impact apportioned to steel and aluminum, depending on usage.

Source: Nomura estimates based on data from Bloomberg, Ward's, Automotive Engineering, Ducker Worldwide, Mega Associates, company press releases

# Global automotive demand outlook

Our view remains unchanged that auto demand in the US will continue to stay at a high plateau, and that the markets in India and Southeast Asia would continue to grow. Comps continue to get tougher in China. Compared to half a year ago, we note two changes. 1) Economic slowdown and contagion risks in emerging markets, particularly in Latin American economies such as Argentina, Brazil, and Mexico, have risen. 2) Political risks in Italy and Spain threaten the auto demand recovery in Europe. We therefore expect global auto sales to grow by 1.8% y-y in 2018F, somewhat slower than what we saw in 2017.

**Fig. 50: Global automotive demand forecasts**

India and Southeast Asia to drive demand growth in 2018F. Latin American demand, although recovering, faces economic contagion risks

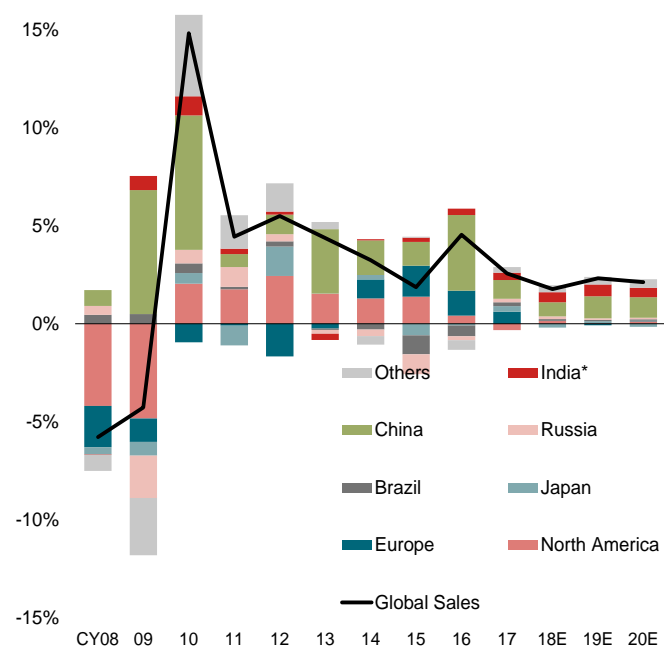
(million units)	CY2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018E	2019E	2020E
US	13.24	10.43	11.59	12.78	14.49	15.60	16.52	17.48	17.55	17.23	17.30	17.30	17.40
change yoy	-18.0%	-21.2%	11.1%	10.3%	13.4%	7.6%	5.9%	5.8%	0.4%	-1.8%	0.4%	0.0%	0.6%
Canada	1.63	1.46	1.55	1.58	1.67	1.74	1.85	1.89	1.95	2.03	2.05	2.07	2.08
change yoy	-1.0%	-10.7%	6.6%	1.8%	5.7%	4.1%	6.1%	2.5%	2.8%	4.4%	1.0%	0.8%	0.4%
Mexico	1.03	0.75	0.82	0.91	0.99	1.06	1.14	1.35	1.60	1.53	1.58	1.59	1.61
change yoy	-6.8%	-26.4%	8.7%	10.4%	9.0%	7.7%	6.8%	19.0%	18.6%	-4.6%	3.0%	1.0%	1.0%
<b>North America</b>	<b>15.90</b>	<b>12.64</b>	<b>13.96</b>	<b>15.27</b>	<b>17.15</b>	<b>18.40</b>	<b>19.50</b>	<b>20.73</b>	<b>21.10</b>	<b>20.80</b>	<b>20.93</b>	<b>20.96</b>	<b>21.09</b>
yoy change	-15.9%	-20.5%	10.4%	9.3%	12.4%	7.3%	6.0%	6.3%	1.8%	-1.5%	0.7%	0.2%	0.6%
<b>Total Europe</b>	<b>16.75</b>	<b>15.94</b>	<b>15.33</b>	<b>15.26</b>	<b>13.97</b>	<b>13.77</b>	<b>14.60</b>	<b>15.98</b>	<b>17.12</b>	<b>17.70</b>	<b>17.71</b>	<b>17.64</b>	<b>17.68</b>
yoy change	-8.2%	-4.8%	-3.8%	-0.5%	-8.4%	-1.4%	6.0%	9.5%	7.1%	3.4%	0.1%	-0.4%	0.2%
Japan	5.08	4.61	4.96	4.21	5.37	5.38	5.56	5.05	4.97	5.23	5.05	5.15	5.00
yoy change	-5.1%	-9.3%	7.5%	-15.1%	27.5%	0.1%	3.5%	-9.3%	-1.5%	5.3%	-3.5%	2.0%	-2.9%
South Korea	1.22	1.45	1.55	1.58	1.54	1.54	1.65	1.82	1.81	1.78	1.80	1.83	1.84
change yoy	-4.5%	19.6%	7.0%	1.5%	-2.4%	-0.1%	7.1%	10.5%	-0.6%	-1.8%	1.2%	1.4%	1.0%
Brazil	2.67	3.01	3.33	3.43	3.63	3.58	3.33	2.48	1.99	2.18	2.26	2.33	2.40
change yoy	14.1%	12.6%	10.6%	2.9%	6.1%	-1.5%	-6.9%	-25.6%	-19.8%	9.4%	4.0%	3.0%	3.0%
Russia	2.92	1.47	1.91	2.65	2.94	2.78	2.49	1.60	1.43	1.60	1.72	1.79	1.86
change yoy	12.4%	-49.7%	30.5%	38.7%	10.7%	-5.5%	-10.3%	-35.7%	-11.0%	11.9%	8.0%	4.0%	4.0%
India*	1.75	2.23	2.87	3.08	3.19	2.94	2.98	3.17	3.46	3.80	4.30	4.88	5.36
change yoy	-0.5%	27.6%	28.4%	7.3%	3.8%	-8.0%	1.6%	6.4%	9.0%	10.0%	13.0%	13.6%	9.8%
China	9.36	13.62	18.04	18.53	19.30	21.98	23.49	24.56	28.02	28.92	29.61	30.71	31.76
change yoy	6.6%	45.5%	32.5%	2.7%	4.2%	13.9%	6.9%	4.6%	14.1%	3.2%	2.4%	3.7%	3.4%
Thailand	0.62	0.55	0.80	0.79	1.44	1.33	0.88	0.80	0.77	0.87	0.95	1.00	1.05
change yoy	-2.5%	-10.8%	45.8%	-0.8%	80.9%	-7.3%	-33.7%	-9.3%	-3.9%	13.4%	9.0%	5.5%	5.0%
Indonesia	0.61	0.49	0.76	0.89	1.12	1.23	1.21	1.01	1.06	1.08	1.16	1.27	1.40
change yoy	39.9%	-20.0%	57.3%	16.9%	24.8%	10.3%	-1.7%	-16.2%	4.8%	1.7%	7.0%	10.0%	10.0%
Malaysia	0.55	0.54	0.61	0.60	0.63	0.66	0.67	0.67	0.58	0.58	0.59	0.60	0.60
change yoy	12.5%	-2.1%	12.8%	-0.8%	4.6%	4.5%	1.6%	0.0%	-13.0%	-0.3%	2.0%	1.0%	1.0%
Argentina	0.59	0.48	0.68	0.85	0.80	0.93	0.65	0.61	0.68	0.86	0.95	0.97	0.99
change yoy	8.5%	-19.1%	42.5%	26.2%	-6.2%	15.9%	-29.7%	-6.1%	11.3%	26.3%	10.0%	2.0%	2.0%
South Africa	0.45	0.33	0.40	0.47	0.51	0.62	0.61	0.59	0.52	0.54	0.52	0.53	0.54
change yoy	-21.6%	-26.3%	20.6%	16.8%	8.6%	21.0%	-1.1%	-4.2%	-11.4%	3.3%	-3.0%	1.5%	2.0%
Turkey	0.50	0.55	0.77	0.87	0.78	0.85	0.77	0.97	0.98	0.96	0.89	0.87	0.90
change yoy	-15.3%	10.4%	40.2%	12.5%	-10.3%	9.7%	-10.0%	26.1%	1.6%	-2.8%	-7.0%	-2.0%	3.0%
Iran	1.25	1.34	1.45	1.65	1.39	0.72	0.95	1.03	1.16	1.33	1.40	1.46	1.51
change yoy	16.8%	7.7%	8.0%	14.1%	-16.2%	-48.4%	33.4%	8.4%	12.1%	15.0%	5.0%	4.0%	4.0%
<b>Emerging markets</b>	<b>21.26</b>	<b>24.60</b>	<b>31.62</b>	<b>33.82</b>	<b>35.73</b>	<b>37.61</b>	<b>38.05</b>	<b>37.50</b>	<b>40.65</b>	<b>42.71</b>	<b>44.35</b>	<b>46.41</b>	<b>48.38</b>
yoy change	7.3%	15.7%	28.5%	7.0%	5.6%	5.3%	1.2%	-1.4%	8.4%	5.1%	3.8%	4.7%	4.2%
<b>RoW</b>	<b>7.21</b>	<b>5.29</b>	<b>6.67</b>	<b>7.24</b>	<b>7.87</b>	<b>8.50</b>	<b>8.61</b>	<b>8.54</b>	<b>8.03</b>	<b>7.87</b>	<b>7.95</b>	<b>8.07</b>	<b>8.19</b>
change yoy	-9.5%	-26.7%	26.1%	8.6%	8.7%	7.9%	1.3%	-0.8%	-5.9%	-2.0%	1.0%	1.5%	1.5%
<b>Key markets total</b>	<b>60.20</b>	<b>59.25</b>	<b>67.43</b>	<b>70.14</b>	<b>73.76</b>	<b>76.70</b>	<b>79.36</b>	<b>81.08</b>	<b>85.65</b>	<b>88.22</b>	<b>89.84</b>	<b>91.99</b>	<b>93.99</b>
Change	-5.3%	-1.6%	13.8%	4.0%	5.2%	4.0%	3.5%	2.2%	5.6%	3.0%	1.8%	2.4%	2.2%
<b>Global Sales ex-China</b>	<b>58.05</b>	<b>50.91</b>	<b>56.05</b>	<b>58.85</b>	<b>62.33</b>	<b>63.22</b>	<b>64.48</b>	<b>65.05</b>	<b>65.66</b>	<b>67.17</b>	<b>68.18</b>	<b>69.34</b>	<b>70.41</b>
Change	-7.5%	-12.3%	10.1%	5.0%	5.9%	1.4%	2.0%	0.9%	0.9%	2.3%	1.5%	1.7%	1.5%
<b>Global Sales</b>	<b>67.41</b>	<b>64.54</b>	<b>74.09</b>	<b>77.38</b>	<b>81.63</b>	<b>85.20</b>	<b>87.97</b>	<b>89.62</b>	<b>93.69</b>	<b>96.09</b>	<b>97.79</b>	<b>100.06</b>	<b>102.18</b>
Change	-5.8%	-4.3%	14.8%	4.4%	5.5%	4.4%	3.3%	1.9%	4.5%	2.6%	1.8%	2.3%	2.1%

\* Indian registrations refer to FY (e.g., 2018E refers to FY ending 31 March 2019)

Source: Autodata, CAAM, SIAM, ACEA, Fourin, JAMA, KAMA, KAIDA, AEB, ANFAVEA, Marklines, Nomura estimates



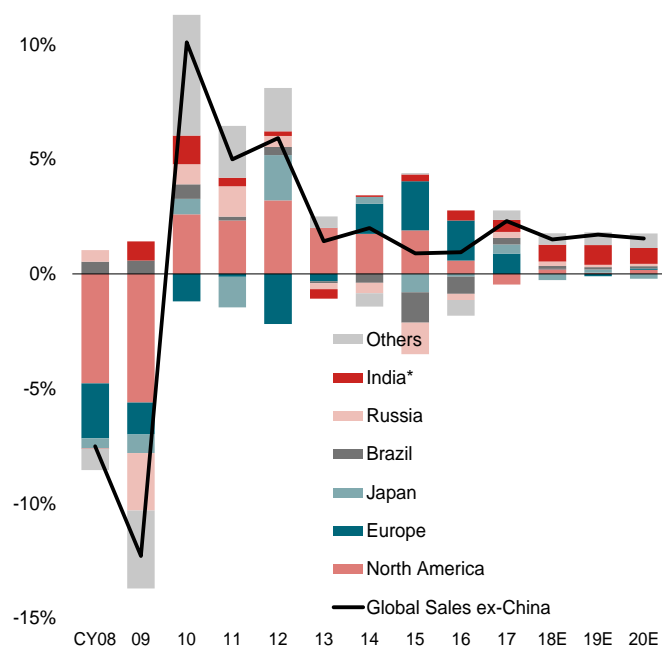
Fig. 51: Regional contributions to global demand growth



\* Indian registrations refer to FY (e.g., 2018E refers to FY ending 31 March 2019)

Source: Autodata, CAAM, SIAM, ACEA, Fourin, JAMA, KAMA, KAIDA, AEB, ANFAVEA, Marklines, Nomura estimates

Fig. 52: Ex-China contributions to global demand growth



\* Indian registrations refer to FY (e.g., 2018E refers to FY ending 31 March 2019)

Source: Autodata, SIAM, ACEA, Fourin, JAMA, KAMA, KAIDA, AEB, ANFAVEA, Marklines, Nomura estimates

Fig. 53: Economic forecast summary

	Real GDP (% y-o-y)			Consumer Prices (% y-o-y)			Policy Rate (% end of period)			Unemployment Rate (average %)		
	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019
US	2.3	2.9	2.6 ↗	2.1	2.7	2.3 ↗	1.38	2.38	2.88 ↗	4.3	3.8	3.3 ↘
Western Europe												
Germany	2.5	2.1	1.9 ↘	1.7	1.8	1.9 ↗	-0.40	-0.40	0.00 ↗	4.2*	4.2*	4.2* ↗
UK	1.8	1.3	1.7 ↘	2.7	2.4	2.0 ↘	0.50	0.75	1.25 ↗	4.4	4.3	4.4 ↘
Spain	3.1	2.7	2.2 ↘	2.0	1.4	1.5 ↘	-0.40	-0.40	0.00 ↗	17.7*	16.6*	15.8* ↘
France	2.0	1.8	1.9 ↘	1.2	1.9	1.4 ↗	-0.40	-0.40	0.00 ↗	9.6*	9.3*	9.0* ↘
Italy	1.6	1.2	1.2 ↘	1.3	0.9	0.9 ↘	-0.40	-0.40	0.00 ↗	11.4*	11.0*	10.6* ↘
Japan	1.7	0.8	1.0 ↘	0.5	1.3	0.7 ↗	-0.10	-0.10	-0.10 ↘	3.4	3.3	3.3 ↘
South Korea	3.1	3.0	2.7 ↘	1.9	1.7	2.0 ↗	1.50	1.75	2.25 ↗	3.7	3.7	3.7 ↘
Emerging Markets												
Brazil	1.0	2.5	2.3 ↗	2.9	3.8	4.2 ↗	7.00	6.50	8.00 ↗	12.1*	11.6*	10.9* ↘
Russia	1.5	1.7	1.4 ↘	3.7	2.7	4.0 ↗	7.75	6.75	6.00 ↘	5.5*	5.5*	5.5* ↗
India	6.4	7.5	7.3 ↗	3.3	4.7	4.5 ↗	6.00	6.50	6.50 ↗	NA	NA	NA
China	6.9	6.5	6.1 ↘	1.6	2.4	2.0 ↗	1.50	1.50	1.50 ↗	4.0*	4.0*	4.0* ↗
Thailand	3.9	4.3	3.7 ↗	0.7	0.7	0.7 ↗	1.50	1.50	1.50 ↗	1.2	1.4	1.4 ↗
Indonesia	5.1	5.4	5.8 ↗	3.8	3.5	4.0 ↗	4.25	5.25	5.25 ↗	5.4	5.0	4.8 ↘
Malaysia	5.9	5.5	5.0 ↘	3.7	2.5	2.5 ↘	3.00	3.25	3.25 ↗	3.4	3.3	3.3 ↘
Global	3.9	4.0	3.8 ↘	2.8	3.0	2.8 ↘	2.73	3.00	3.14 ↗			
All Developed	2.3	2.3	2.1 ↘	1.7	2.1	1.8 ↘	0.57	1.05	1.46 ↗			
All EM	5.1	5.2	5.0 ↘	3.5	3.7	3.5 ↘	4.39	4.47	4.39 ↘			

Note: The US policy rate for 2017, and forecasts for 2018, and 2019 are midpoints of the 1.25-1.50%, 2.25-2.50%, and 2.75-3.00% target federal funds rate range, respectively.

Source: Nomura Global Economics, \*IMF.

## US: At a plateau, but still very profitable

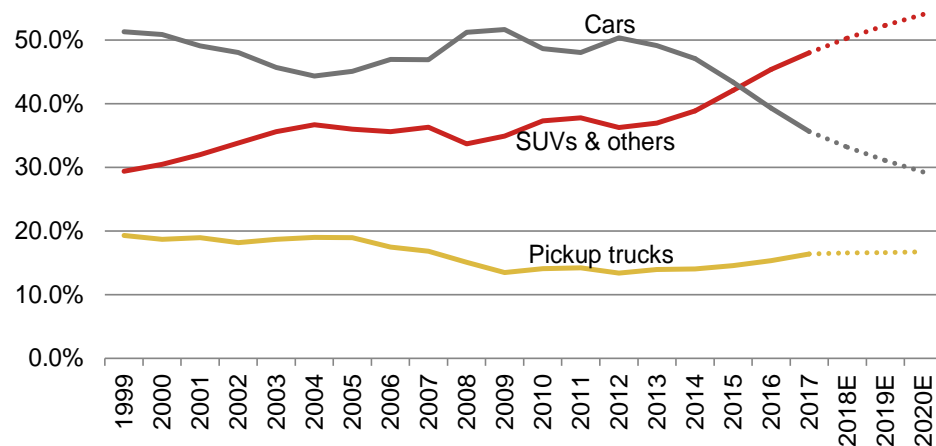
We stay positive on the US auto market, and maintain our 17.30mn unit sales forecast for light vehicles in 2018F, up slightly y-y. The story has not changed. The economy continues to improve. The job market remains healthy, with a steady pace of job creation, low layoff rate, and improved job openings. Interest rates are expected to rise, but a gradual pace would make them palatable as long as the economy performs. Lastly, while oil prices have been firming up, we do not expect an oil price shock on the horizon. Automakers' focus on profitability over volumes should keep a lid on runaway incentive spending, while the continuing shift to SUVs should keep the US auto market quite profitable for most automakers.

### April YTD light vehicle SAAR at 17.22mn; volumes flat y-y

Sales of light vehicles in the first four months of 2018 were flat y-y, at 5.46mn units, corresponding to a SAAR of 17.22mn units (5.46mn units and 17.19mn unit SAAR, respectively, for the same period in 2017). Although overall volumes were flat, product mix continued to improve for automakers as sales of more profitable SUVs and pickup trucks grew at the expense of passenger cars (Fig. 54). Jan-Apr '18 SAAR for the light truck segment stood at 11.58mn units compared to 10.70mn units during the same period in 2017, as volumes grew by 9% y-y. On the other hand, sales of passenger cars fell by 13% y-y to 1.82mn units, corresponding to SAAR of 5.63mn units, compared to 6.49mn units in 2017 (Jan-Apr). Headline sales performance is consistent with a market that has plateaued, with underlying demand supported by a strong economy, topped off with benefits from Trump's tax reform starting to kick in. Generous incentives for fast growing light trucks (Jan-Apr YTD up \$278 y-y on average) vs. passenger cars (up \$52) have also helped, mitigating some of the impact from higher gasoline prices. We maintain our view that new vehicle demand will grow slightly to 17.30mn units for the full year.

**Fig. 54: Shift to SUVs to continue, catalysed by PV segment exits of some major OEMs**

SUVs and pickups are more profitable and have higher ASPs



Note: "SUVs & others" include MPVs and crossovers

Source: Autodata, Nomura estimates

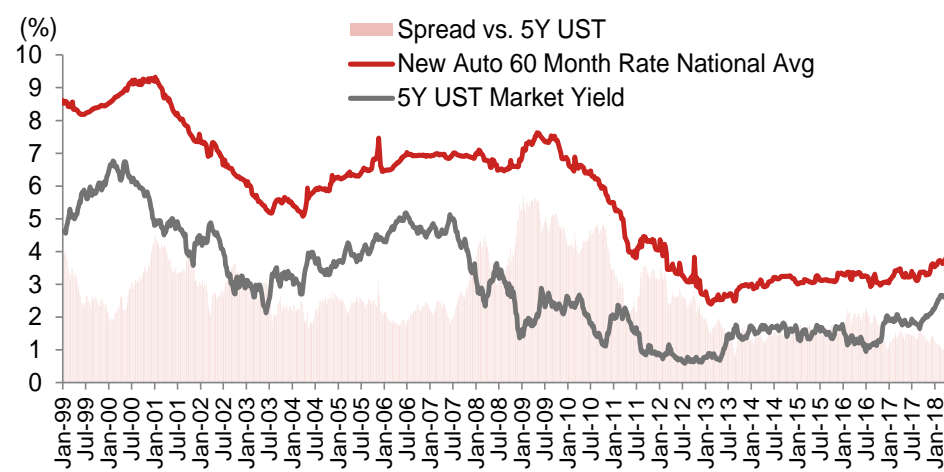
## Affordability: strong job market and generous incentives balanced by higher rates and oil prices

As expected, interest rates have been creeping up, while credit standards have tightened. Oil prices are also on the uptick. However offsetting these negatives, the labor market continues to improve, with consumers optimistic about their future job market prospects. Used car prices are also holding up. Lastly, incentives have also been supportive. We therefore think that affordability in the new vehicle market remains good.

### Interest rates on pace, as expected, unaffected by leadership change at the Fed

We expect the Fed to stay on its hiking cycle. Our economists expect four rate hikes in 2018, followed by two more in 2019, with the new Fed leadership unlikely to cause a material change in the near-term trajectory of monetary policy. Higher interest rates would lead to higher borrowing costs: every 25bp hike implies a \$2.50 or 0.6% increase in monthly payments for a mass market car like the Camry (assuming a \$22k loan for a 60-month term, with 0% down payment and borrower's FICO score of 700 or higher). As long as the rate hikes are gradual, as predicted, and the US economy continues to perform, we think automakers should be able to pass on these hikes to consumers supported by a healthy job market. In addition, high capacity utilization levels at North American assembly plants provide flexibility to automakers to manage production schedules appropriately, by cutting production in case there is a temporary slowdown in demand following a rate hike (instead of offering even higher discounts to move inventory).

Fig. 55: New car loan interest rates and 5-year UST yield



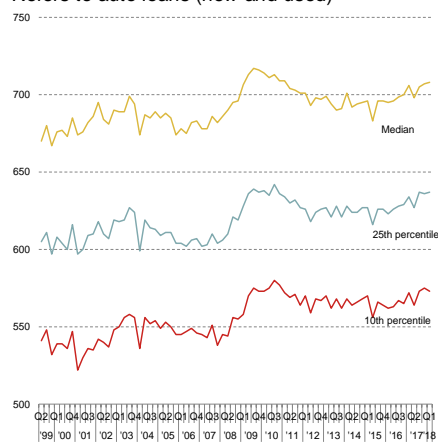
Source: Bankrate.com, US Federal Reserve, Nomura research

### Credit score requirements rising: tighter credit, but healthier industry

Lenders are becoming more cautious, and have tightened lending standards. Looking at the trends in the distribution of credit scores at origination (Fig. 56), we note that there was a sharp tightening of credit standards in the aftermath of the 2008 financial crisis (implied by the jump in the credit score of borrowers at each percentile shown in Fig. 56, over this period). This was followed by a period of gradual easing of lending standards until 1H16. Since then, lenders have again become more cautious, with credit standards approaching levels we had seen after the financial crisis. We think this may have been triggered by a slow uptick in new delinquency levels over the past few years. However, with the lenders proactively managing risk levels, further deterioration in auto loan delinquency levels has likely been capped (Fig. 57 and Fig. 58).

**Fig. 56: Distribution of credit scores at origination**

Refers to auto loans (new and used)



Source: Nomura research, based on FRBNY Consumer Credit Panel / Equifax data

**Fig. 57: Transition into delinquency (30+ days) by loan type**

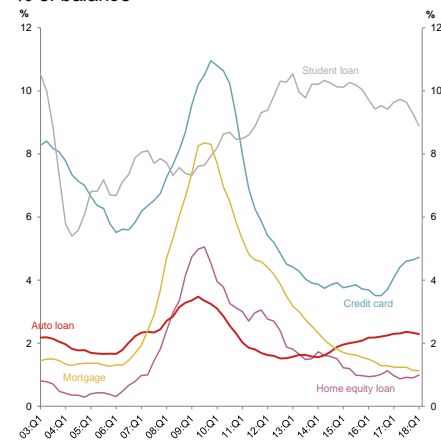
% of balance



Source: Nomura research, based on FRBNY Consumer Credit Panel / Equifax data

**Fig. 58: Transition into serious delinquency (90+ days) by loan type**

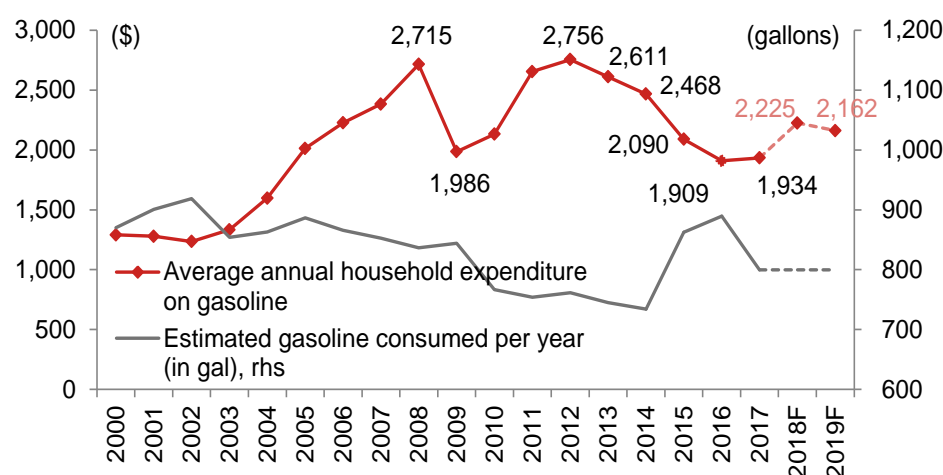
% of balance



Source: Nomura research, based on FRBNY Consumer Credit Panel / Equifax data

**Higher gasoline prices could be a headwind, but look manageable at this stage**

Gasoline prices have been creeping up. Higher gasoline prices increase running cost for vehicles and erode consumers' spending power. According to the EIA, the retail price of regular gasoline in the US was up 13% y-y in 2017 to \$2.42 per gallon, including taxes. However, annual consumption of gasoline in the US remained steady at 3.40 billion barrels in 2017, down just 0.3% y-y. If gasoline consumption in 2018 stays at 2017 levels, then based on data from the latest BLS Consumer Expenditure Survey (Fig. 59) and EIA's projections for average gasoline price in 2018 (\$2.78, up 15% y-y), we estimate US households' average annual expenditure on gasoline would be \$2,225, up \$291 vs. 2017. Thus, although the outgo on annual fuel expenditure would be higher compared to last year, we think the US economy (and by extension, consumers' spending power) would be resilient enough to absorb this increase, unless gasoline prices go up faster than what is indicated by EIA's near-term projections.

**Fig. 59: Average annual household expenditure on gasoline**

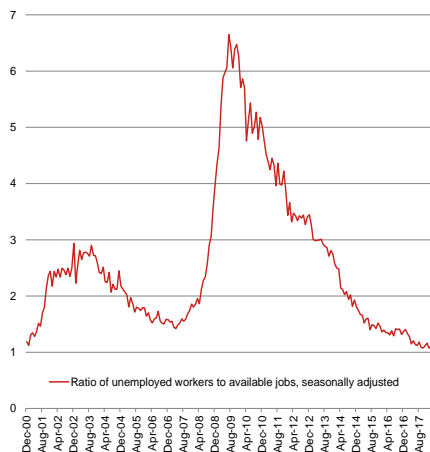
Source: EIA, Consumer Expenditure Survey, Nomura estimates

**Labor market continues to improve; future income expectations positive**

The US job market remains healthy, with a steady pace of job creation, low layoff rate, and improved job openings. The ratio of unemployed workers to available jobs has climbed down to historical lows since late 2017 (Fig. 60), pointing to the strength of the US economy as the labor market recovery continues into its ninth year. Our economists

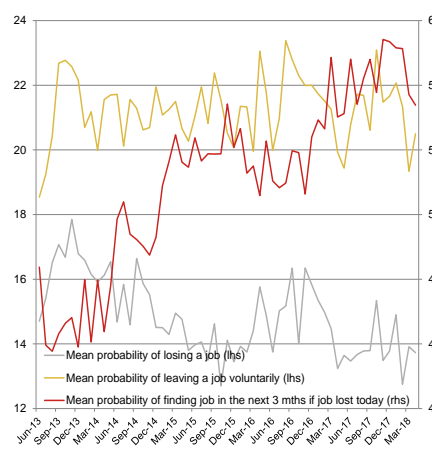
project the unemployment rate will continue to improve, going from 4.3% in 2017 to 3.8% in 2018F, and further down to 3.3% in 2019F (Fig. 62). As the labor market tightens, consumers' outlook towards their employment prospects has remained buoyant, which is reflected in their confidence of finding a job quickly, and in their assignment of a comparatively low probability of losing their existing job (Fig. 61). Their outlook for future income growth also remains positive. Median expectations of one-year-ahead personal income growth have averaged 2.7%, and those for household income growth have averaged 2.9% respectively during the first four months of 2018, based on FRBNY's monthly Survey of Consumer Expectations.

**Fig. 60: Ratio of unemployed workers to available jobs**



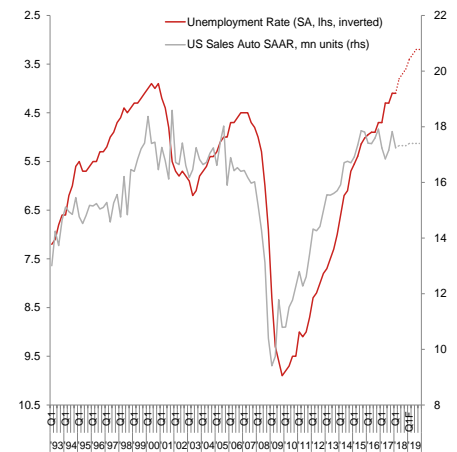
Source: Bureau of Labor Statistics (BLS), Nomura

**Fig. 61: Consumers' confidence in the job market**



Source: SCE Labor Market Survey, Nomura

**Fig. 62: Auto sales and the unemployment rate**

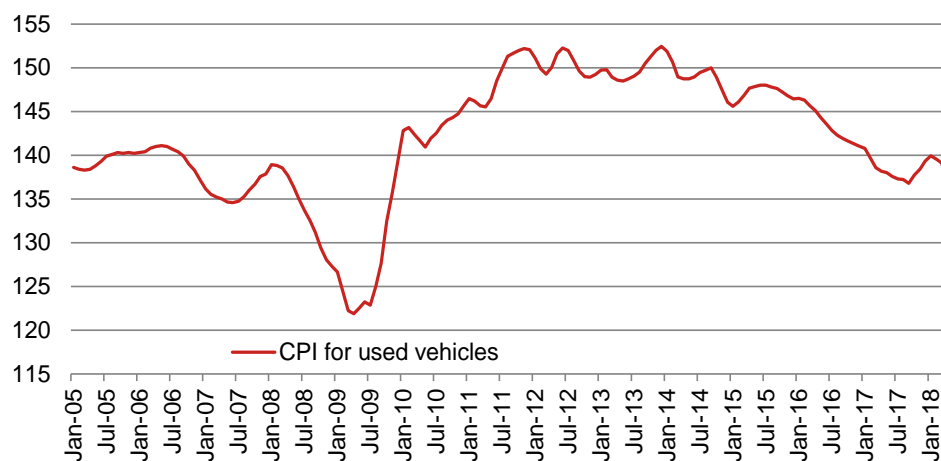


Source: Autodata, BLS, Nomura estimates

### Momentum of decline in residual values slowing

Used car prices had been trending lower since early 2014 (Fig. 63), with price declines accelerating in 2017. Lower resale values for used cars impacts the affordability of new cars by lowering the trade-in value of the old vehicle, or by increasing the leasing rate (as the leasing company assumes a lower residual value). In 2018, we expect the pace of decline in used car prices is likely to moderate to around 3% y-y, as the supply of vehicles coming off leases grows at a slower pace.

**Fig. 63: Used vehicle price trends**



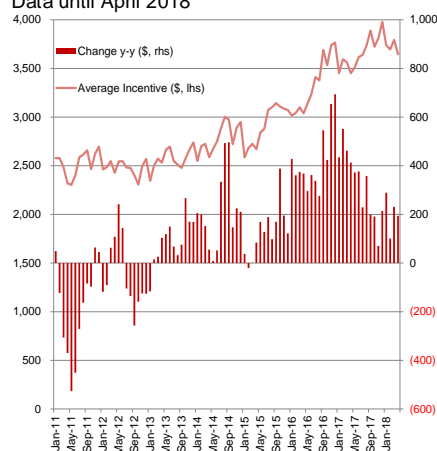
Source: BLS, Nomura research

### Incentive spending rising, but at a slower pace

With US auto market volumes at a plateau, there is a risk that automakers might increase their incentive spending, in an effort to grow sales and market share. However, high capacity utilization at North American assembly plants has provided automakers with the option to cut production to match demand, instead of lowering prices to increase sales. This strategy (of not discounting new vehicles excessively) also preserves used car prices, which in turn makes automakers' captive finance businesses more profitable. As automakers have focused on profitability over volumes, incentive spending has stayed relatively disciplined overall. We do however note that pricing pressures in the passenger car segment appear to be coming to an end, while those in the light truck segment are picking up (Fig. 65 and Fig. 66). Among other reasons, we think the continuing exit of US OEMs from the passenger car space (the latest being Ford), while they focus their attention on more profitable light trucks, is driving this change. In 2018, we believe overall incentives will be up by only \$200 to \$300 for the full year on average, based on current trends (Jan-Apr YTD incentives are up \$204 per unit, compared to the same period last year).

**Fig. 64: Average incentive per vehicle**

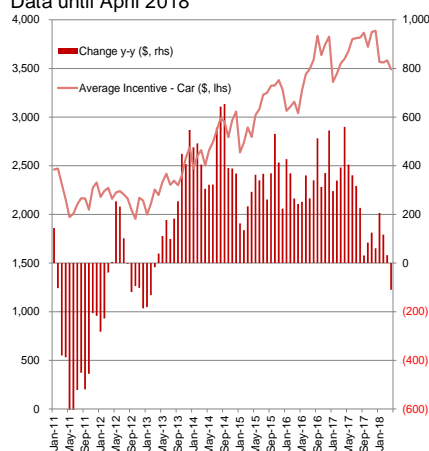
Data until April 2018



Source: Autodata, Nomura research

**Fig. 65: Average incentive per car**

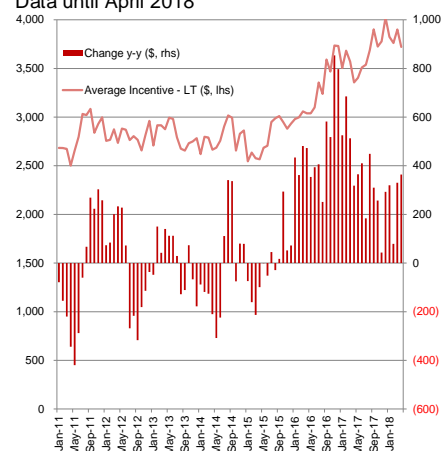
Data until April 2018



Source: Autodata, Nomura research

**Fig. 66: Average incentive per LT**

Data until April 2018



Source: Autodata, Nomura research

### We continue to maintain our 17.30mn unit SAAR view for the full year

Apart from the auto-industry-specific drivers discussed above, we think underlying demand would continue to be supported by the steady improvement in the US economy (Nomura US economists expect real GDP growth to accelerate from 2.3% in 2017 to 2.9% in 2018F as a late-cycle surge will continue through 2018, boosted by fiscal policy). Summing up, we therefore remain positive on the US auto market, and maintain our 17.30mn unit sales forecast for light vehicles in 2018F.

## Brazil: Risk of contagion

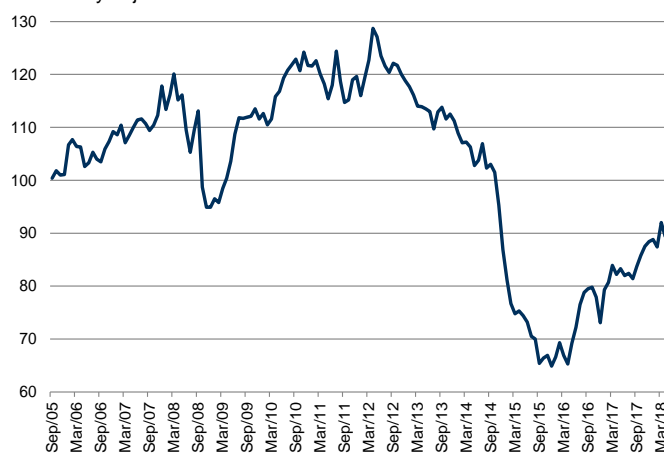
*We cut our volume forecasts and now expect demand to grow by 4% y-y to 2.26mn units in 2018 (previously 8%). While the year began on a strong note, we see contagion risk from neighboring Latin American economies, especially Argentina.*

### April '18 YTD light vehicle sales up 20% y-y

Sales of new light vehicles in 2017 grew by 9% y-y to 2.18mn units, as the Brazilian economy came out of a recession that lasted for more than two years. The country's new car market was in an extended slump since 2013 and volumes had touched a ten-year low in 2016 (Fig. 69). Thus, the 2017 result, although positive, was off a very low base. The sales pace over the first four months of 2018 has quickened from the previous year, with April YTD volumes up 20% y-y to 738k units. Improving macroeconomic conditions leading to an improvement in consumer sentiment (Fig. 67) likely led to higher new vehicle sales during this period. Inflation has also moderated and remained in check, with April at 2.76%, significantly below the central bank's 4.50% target, while the overnight lending rate (Selic) has been cut by a cumulative 50bps (to 6.50%) from that at the end of 2017, further supporting consumer demand for new cars. The biggest market share gainers so far this year are Volkswagen (+190bps) and Renault (+110bps), while FCA (-80bps) and Toyota (-70bps) lost share (Fig. 70). Volkswagen's strong share gain was driven the launch of the next-gen Polo hatch and the all new Virtus (a Polo-derived sedan), both of which were launched in 4Q17, addressing the largest segment in the Brazilian auto market. Renault's volumes benefited from the all-new Kwid, launched in 3Q17. Toyota is likely to win back some of its lost market share in 2H18, after the launch of an all-new, emerging markets variant of the Yaris, slotted between its two top-selling models in Brazil, the Etios and the Corolla.

**Fig. 67: IBRE/FGV Consumer Confidence Index**

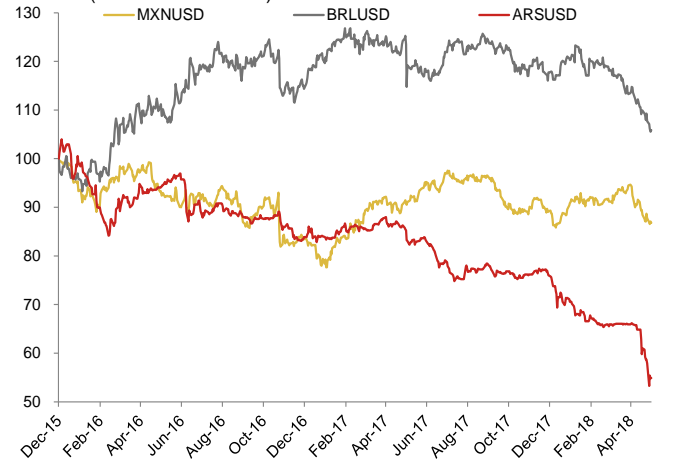
Seasonally adjusted



Source: Brazilian Institute of Economics. Data until April 2018.

**Fig. 68: Cross-rates for major Latin American currencies**

Indexed (17 Dec 2015 = 100)



Source: Bloomberg, Nomura research



## We now expect new vehicle sales of 2.26mn units in 2018, up 4% (up 8% previously)

While the Brazilian new car market has begun 2018 on a strong note, we see clouds gathering on the horizon.

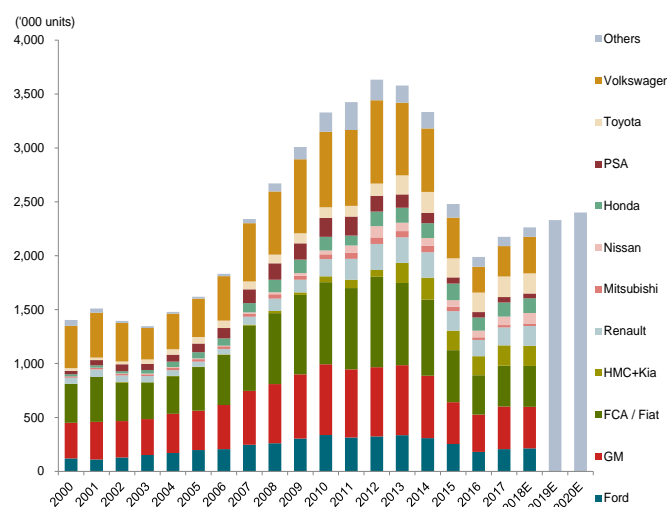
### Tougher comps; higher interest rates; slow economic recovery at risk

First, we note that y-y comps get tougher as demand in 2017 was back loaded (Jan-Apr '17 volume was down 2% y-y, while May-Dec '17 was up 14%). Next, interest rate expectations are on the uptick. On May 16, our economists raised their 2018-end Selic call to 6.50% from 6.25%, and now believe that the next rate movement is likely to be up (in 2019) instead of down. Higher oil prices also do not bode well for the inflation outlook, as price hikes are likely to be passed on to consumers.

### Political uncertainties ahead of elections; delays to Rota 2030 automotive policy

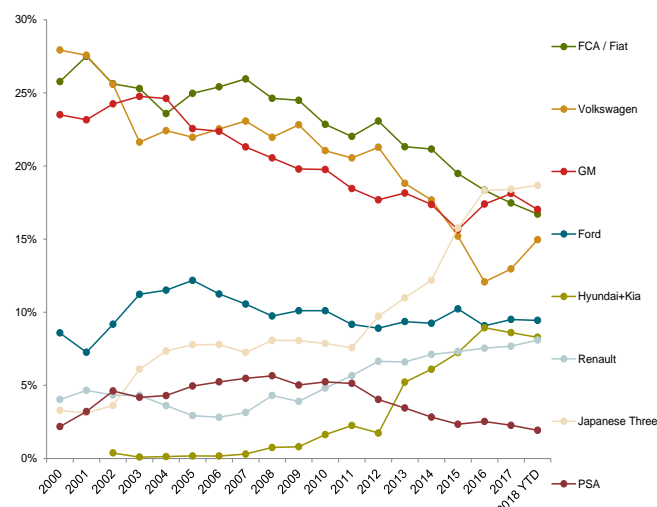
Third, political uncertainties have returned ahead of the key presidential election in October (first round of voting on October 7), with no centrist, or clearly reformist candidate doing well. Strong centrist candidates are more likely to implement key medium-term reforms – especially an overhaul of Brazil's generous pension system. This lack of clarity around the possibility of a market friendly outcome is a clear risk to Brazil's medium-term economic outlook, according to our economists. The impact from this fluid political situation is also being felt in the auto industry, as the Brazilian government has not yet announced the details of its crucial Rota 2030 automotive policy. This was supposed to have been announced in August 2017 and implemented from January 2018 onwards, after the old Innovar-Auto policy (implemented in 2012) expired at the end of 2017. The old policy included tax benefits which breached WTO norms. While details of the new policy are not yet known, Brazil's Valor Econômico reported that the new policy could give tax breaks according to energy efficiency standards and engine power performance, without the local content rules that ran afoul of WTO norms.

Fig. 69: New vehicle market in Brazil



Source: ANFAVEA, Nomura estimates

Fig. 70: Market share trends for major automakers



Source: ANFAVEA, Marklines, Nomura research

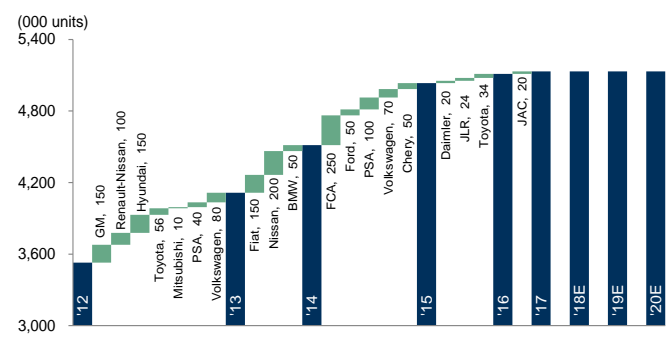
### Risk of contagion in the region: could weaken BRL

Lastly, we see the possibility of a return of currency volatility in the region. Although Brazil's external position is relatively strong, the BRL faces contagion risk from neighboring Latin American economies, especially Argentina, given their trade linkages. Argentinian president Macri removed the country's capital controls soon after coming to office in December 2015, but did so without fully addressing its macroeconomic imbalances. Since then, the Argentine peso has lost 50% of its value vs the US dollar, out of which 10% was lost since the beginning of May 2018 (Fig. 68), reflecting the vulnerabilities of the country's economy. In Mexico, a left-wing candidate is the current frontrunner ahead of the country's presidential elections on 1 July 2018. A left-leaning Mexican president increases the likelihood of a "no NAFTA" scenario, which would have negative consequences for the country's economy, at least over medium-term, likely dragging down the Mexican peso. Thus the BRL is unlikely to remain immune to such volatility, adding to inflationary pressures in the country.

### We therefore lower our new car demand forecasts for Brazil

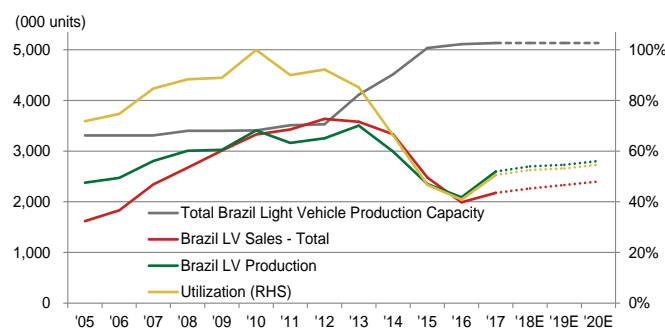
In the light of the potential headwinds discussed above, we cut our volume forecasts for Brazil's light vehicle market and now expect demand to grow by 4% y-y to 2.26mn units in 2018, compared to our earlier expectation of 8% annual growth. Also, given limited medium-term visibility, and the likelihood of continuing volatility in the region, we become more conservative regarding 2019 as well, and now expect the market to be up 3% y-y, compared to 8% previously.

Fig. 71: Changes in production capacity, by company



Source: ANFAVEA, Marklines, Company press releases, Nomura estimates

Fig. 72: Production, capacity, and utilization rates



Source: ANFAVEA, Marklines, Company press releases, Nomura estimates

### Industry capacity utilization to suffer as exports are hit, but impact would vary among OEMs

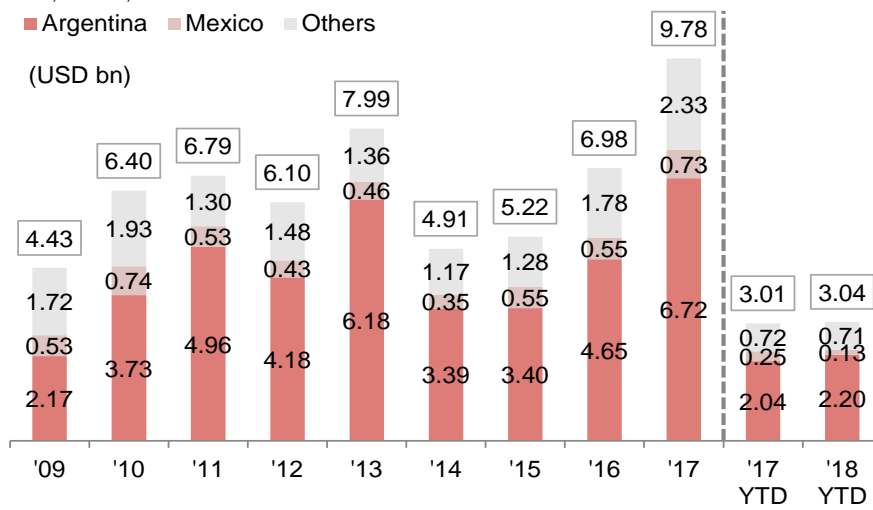
Automakers have been pursuing export markets in Latin America, to improve capacity utilization of their assembly plants in Brazil, as domestic demand had been moribund until recently. Exports got a fillip in 2017 (Fig. 73) following the extension of a bilateral automotive trade agreement with Argentina (destination for the majority of Brazil's auto exports) till 2020. This was at a time when President Macri's market friendly reforms led to a demand recovery in Argentina's domestic auto market (up 31% y-y in CY2017). Based on trade data from the government, Argentina was the destination for 70% of Brazil's auto exports by volume and 69% by value in 2017. Thus, any slowdown in exports to Argentina as it faces its own set of economic challenges, could dent capacity utilization and profitability for automakers in Brazil. Among the major automakers, the Detroit Three, Nissan, PSA, and VW exported over 25% of their production in 2017, while their plant capacity utilization was 55% or lower. Thus, their operations in Brazil would face greater challenges compared to the rest.

**Fig. 73: Automotive exports (in USD) from Brazil**

Value, in USD, FOB

■ Argentina ■ Mexico ■ Others

(USD bn)



Source: Ministry of Industry, Foreign Trade and Services, Brazil; Nomura research. Data until April 2018.

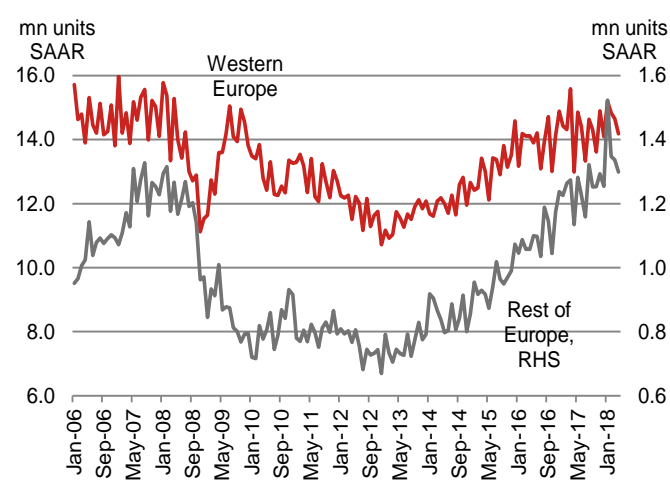
## Europe: Sales pace to reverse in 2H

We now expect total passenger car sales in Europe (ex-Russia) would stay largely flat y-y at 15.60mn units (previously 15.80mn, up 1%) in 2018F. We think that there would be some pull-forward of demand due to the diesel scrappage incentive schemes in 1H, leading to a pullback in 2H. Additionally, the political uncertainties in Italy pose significant downside risks. Thus, in 2019F, we now expect volumes to fall 1% y-y to 15.51mn (previously up 1% to 15.93mn).

### Diesel scrappage schemes drive Apr YTD volumes up 3% y-y

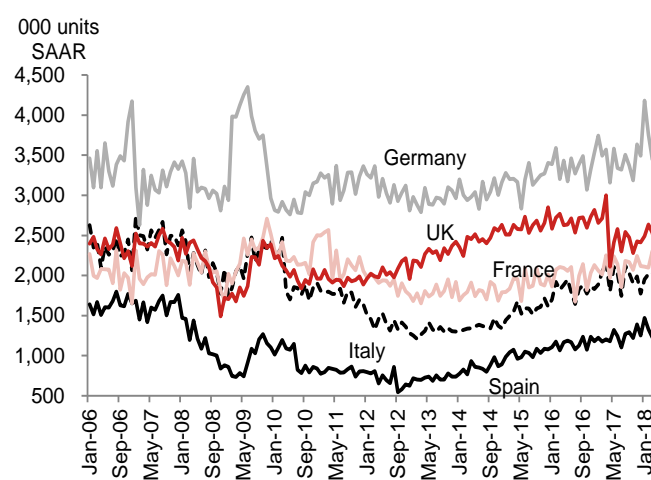
Sales of new passenger vehicles in Europe (ex-Russia) grew 3% y-y to 5.63mn units during the first four months of 2018, continuing the sales pace recorded in CY2017. YTD passenger vehicle SAAR in the mature markets of Western Europe (region as defined by ACEA) was up 3% y-y to 14.72mn units compared to 14.33mn during Jan-Apr 2017. Passenger vehicle SAAR in the rest of Europe grew by 12% to 1.38mn units vs. 1.22mn units over the same period last year (Fig. 74), mainly driven by economies such as Poland, Hungary, and Romania. New car sales in Europe this year have been boosted by generous rebates of as much as €10,000 (\$11,740) being offered by most of the major automakers to car buyers willing to trade in their older (Euro 1 to Euro 4) diesels from any brand. These diesel scrappage schemes began in 2H17 in Germany and then got extended to some other European countries, as German automakers tried to assuage political and public concerns over air quality in the lingering aftermath of the VW emissions scandal. Since then, the deadlines for these scrappage schemes have been extended a couple of times by several automakers, with the most of the rebates now scheduled to end on 30 June 2018. Apart from this sales push by automakers, new car buyers in Europe's largest market, Germany, were likely influenced by a February 2018 ruling by the Federal Administrative Court (one of the five federal supreme courts of Germany) that empowered city administrations to ban older diesel vehicles from streets to control air pollution. Bans on old diesel cars would hit their resale values and likely prompted owners to replace them earlier than intended. This prompted VW to offer a buyback-cum-exchange guarantee to new VW diesel car buyers in Germany (bought between 1 April through the end of 2018), in case their cars are affected by a diesel ban. With the precedent set by the court ruling in Germany, we think car buyers in other European nations also hastened their diesel replacements, drawn by the limited-time scrappage incentives by automakers.

Fig. 74: SAAR trends for Western Europe and the rest



Source: ACEA, Nomura research, Data until April 2018

Fig. 75: SAAR for five major countries in Western Europe



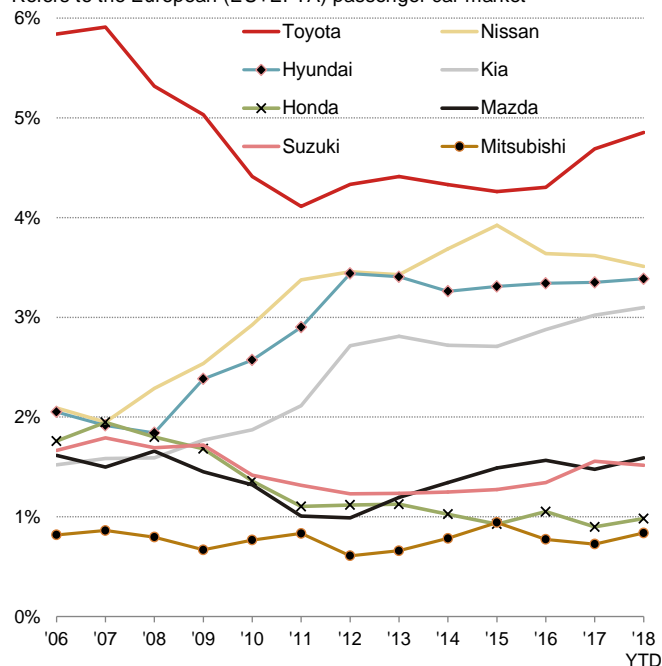
Source: ACEA, Nomura research, Data until April 2018

Among the five major Western European economies, Spain registered the strongest growth in new vehicle sales (4M SAAR up 12% y-y to 1.34mn units) on the back of its continuing economic recovery. Apart from Spain, the diesel scrappage incentives mentioned previously drove Germany's auto sales higher, with 4M SAAR up 6% y-y to 3.70mn units. We think this pull-forward of demand in Europe's largest market will depress sales in 2H18. At the other end of the spectrum, in the UK, impact from Brexit continued to dampen demand, with 4M SAAR down 5% y-y to 2.50mn units. Changes to the country's vehicle tax rates from 1 April 2017 onwards had led to a pull-forward of demand into 1Q17 (Fig. 75), followed by a sharp dip, and has not recovered since then as consumer sentiment has been weak due to Brexit.

Among automakers, in the EU+EFTA area as defined by ACEA, Volkswagen was the biggest market share gainer (+98bps) over the Jan-Apr period, helped by its large exposure to the German market. On the other hand, Nissan (-39bps) and FCA (-37bps) lost the most share among the major OEMs (Fig. 76 and Fig. 77).

**Fig. 76: Market-shares for the Asian carmakers**

Refers to the European (EU+EFTA) passenger car market

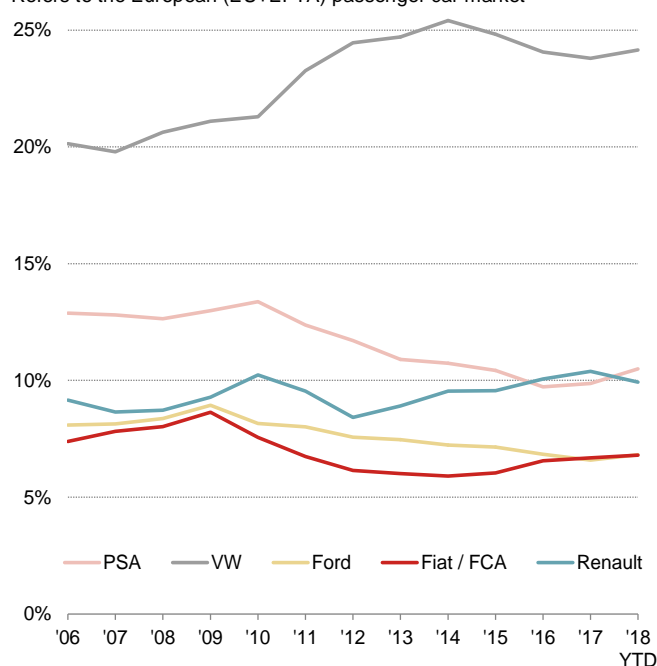


Note: March YTD market-shares for Mazda, Mitsubishi, and Suzuki.

Source: Company data, ACEA, Marklines, Nomura research. Data until April 2018.

**Fig. 77: Market-shares for the European and US carmakers**

Refers to the European (EU+EFTA) passenger car market



Source: Company data, ACEA, Nomura research. Data until April 2018.

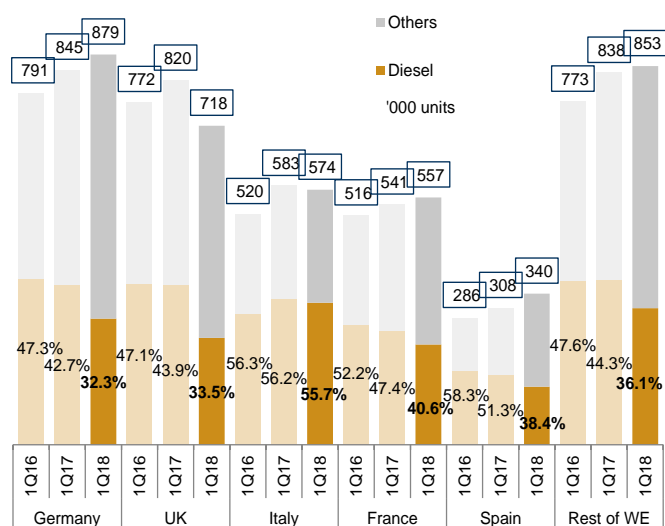
## We now expect demand to remain flat y-y in 2018F

We expect new vehicle sales momentum to slow down in 2H18 following the end of the diesel vehicle scrappage schemes. We also think there was some pull-forward of demand from 2H into 1H due to these schemes. Even if these scrappage schemes get extended, y-y comps are likely to be tougher as these schemes were initially launched in 2H17. Apart from the impact from diesel scrappage incentives, we expect sales in the UK to continue to deteriorate, driven down by Brexit as the vote remains incredibly divisive, constraining the government's ability to focus on any other legislation or reform. Moreover, as sales in the UK (after the financial crisis) recovered earlier than the rest of Europe (Fig. 75), pent-up demand is likely already satisfied. Following the general elections in Italy earlier this year, the surprising advent of a Euroskeptic government and the Italian president's subsequent actions bring in uncertainties that markets do not like: any resulting economic destabilization in the country would be a risk for auto sales. Lastly, US president Trump's decision to open a Section 232 investigation into auto imports could ratchet up US-EU trade friction, which we consider to be a downside risk.

On the macroeconomic front, our economists cut their euro area GDP growth forecast for 2018 from 2.4% to 2.1% and that for 2019 from 2.0% to 1.8% following a string of negative data surprises, and what they call an “Italian drama” (see *Italian drama – a 5 star review*, 29 May 2018). They add that contagion from the recent trend towards financial instability in Italy could threaten other European economies as well and therefore there are downside risks to our economic outlook for the euro area. Thus, we think auto sales momentum would slow down significantly later this year from the run rate (+3% y-y in April YTD) we have seen so far. We therefore expect total passenger car sales in Europe (ex-Russia) would remain flat y-y at 15.60mn units (previously 15.80mn, up 1%) in 2018F. In 2019F, we now expect sales to be down 1% at 15.51mn units (previously up 1% to 15.93mn).

**Fig. 78: Diesel falling out of favour in Europe**

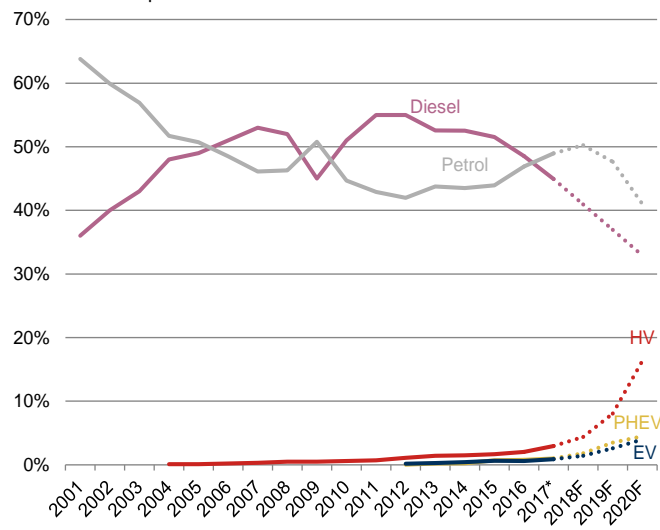
Share of diesel car sales by market in Western Europe (WE)



Source: AID, Nomura research

**Fig. 79: Trends in European PV market shares by powertrain**

Diesel share expected to decline from 45% in 2017 to 33% in 2020F



\* Provisional

Source: European Environment Agency, ICCT, Nomura estimates

## Diesel is rapidly falling out of favour in Europe, and we expect this trend to continue

Demand for diesel-engine-powered cars in Europe has been falling ever since the VW emissions scandal. The trend has accelerated this year (Fig. 78), as consumer apprehension grew about future bans on diesel and its negative impact on used diesel car prices. On the supply side, automakers have also started to gradually withdraw from offering diesel powertrain options as it gets more expensive to manufacture diesel cars that comply with stricter emissions regulations. Instead, they are channeling those resources to develop electrified powertrains. According to data from AID Research, sales of diesel vehicles in Western Europe in 1Q18 plunged 18% y-y to 1.51mn units despite the overall market remaining flat at 3.92mn units. As a consequence, the share of diesel in new vehicle sales in Europe fell to 38.5% from 46.6% in 1Q17.

It is technologically more challenging to reduce NOx and PM (particulate matter) emissions in diesel engines compared to gasoline engines. Given technological advances in alternative powertrains such as hybrid (HV), plug-in hybrid (PHEV), and battery-electric (EV), we estimate Europe's diesel ratio to decline from 45% in 2017 to 41% in 2018, and further down to 33% by 2020 (Fig. 79). In volume terms, we estimate sales of HVs growing from 460k units in 2017 to 2.63mn units by 2020. Correspondingly, we estimate sales of PHEVs to grow from 152k units in 2017 to 699k units by 2020, while sales of EVs are likely to touch 621k units in 2020, up from 135k units sold in 2017. The corresponding market penetration rates for these electrified powertrains are

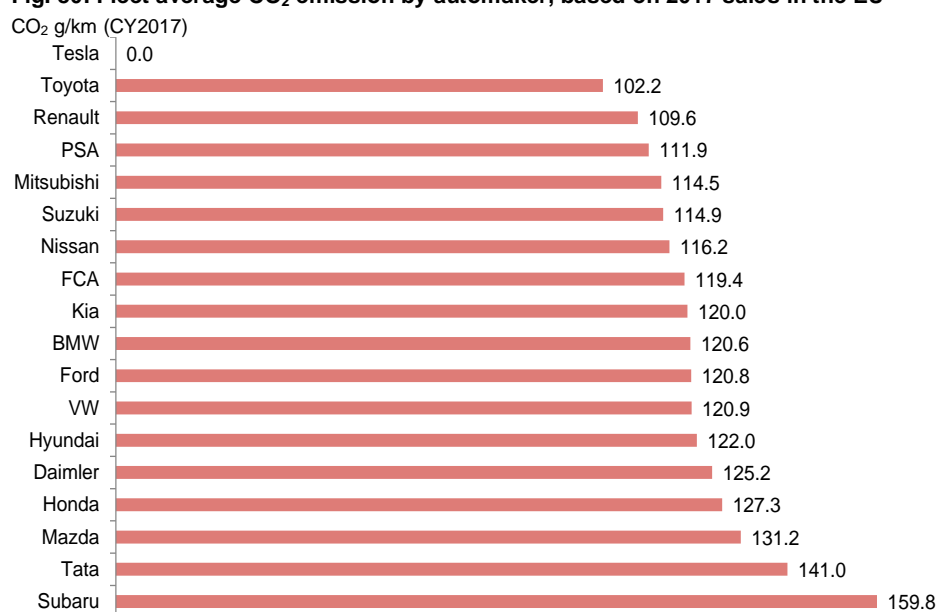
expected to go from 2.9% in 2017 to 16.9% of total sales by 2020 for HVs, from 1.0% to 4.5% for PHEVs, and from 0.9% to 4.0% for EVs over the same period.

## Shift away from diesels throwing a wrench in automaker strategies to meet EU CO<sub>2</sub> emission regulations

Diesel engines are more fuel efficient and emit 20% less CO<sub>2</sub> vs. comparable gasoline engines. Thus, a shift away from diesel is leading to higher average CO<sub>2</sub> emissions for the fleet, threatening automaker strategies (that partly relied on diesel) to meet strict EU limits on such emissions. The situation has been exacerbated by the diesel scrappage incentives. Not only are car buyers swapping their old diesels for less fuel-efficient gasoline vehicles, but they are also choosing heavier, less aerodynamic and more fuel-thirsty SUVs and crossovers (vs. hatches and sedans), to take advantage of the generous incentives. For instance, for the first four months of 2018, Germany's new passenger vehicle fleet average CO<sub>2</sub> emissions stood at 128.9g/km, up from 127.9g/km recorded during the same period in 2017. These trends point to the uphill task that carmakers face to meet the EU's tough 2021 fleet average CO<sub>2</sub> emissions target of 95g/km.

Based on JATO Dynamics' CO<sub>2</sub> emissions data for 2017, we find that apart from Tesla, Toyota was best placed in terms of the lowest fleet-wide average CO<sub>2</sub> emissions amongst all the major automakers (Fig. 80), followed by Renault and PSA (including Opel/Vauxhall). Toyota's early bet on hybrid powertrains and avoiding diesels is starting to pay off now. At the other end of the spectrum, Subaru, Tata (Jaguar/Land Rover), and Mazda have high CO<sub>2</sub> emissions. EU's looming 2021 CO<sub>2</sub> target makes it more imperative for automakers with fleet CO<sub>2</sub> emissions on the higher side to work towards cutting them, by introducing electrified powertrains (EV/PHEV/HV), and by reducing sales of higher performance models with powerful engines – in order to continue to operate in the EU. Both these paths would pressure their margins. Subaru's EU exposure is low (29k units sold in the EU in 2017, 3% of global sales), so a negative impact on margins should be manageable. Mazda estimates that its operating profits would suffer an additional ¥10bn hit in FY19/3 attributable to fines for exceeding CO<sub>2</sub> limits in the EU. Mazda's CO<sub>2</sub> footprint in Europe has suffered due to the unexpectedly quick shift away from diesel coupled with growing sales of less fuel efficient SUVs such as CX-5, away from hatchbacks.

**Fig. 80: Fleet average CO<sub>2</sub> emission by automaker, based on 2017 sales in the EU**



Note: Tesla covered by Romit Shah and Kellan Grenier, Instinet, LLC.

Source: Nomura estimates based on JATO Dynamics and Marklines data. PSA includes Opel/Vauxhall



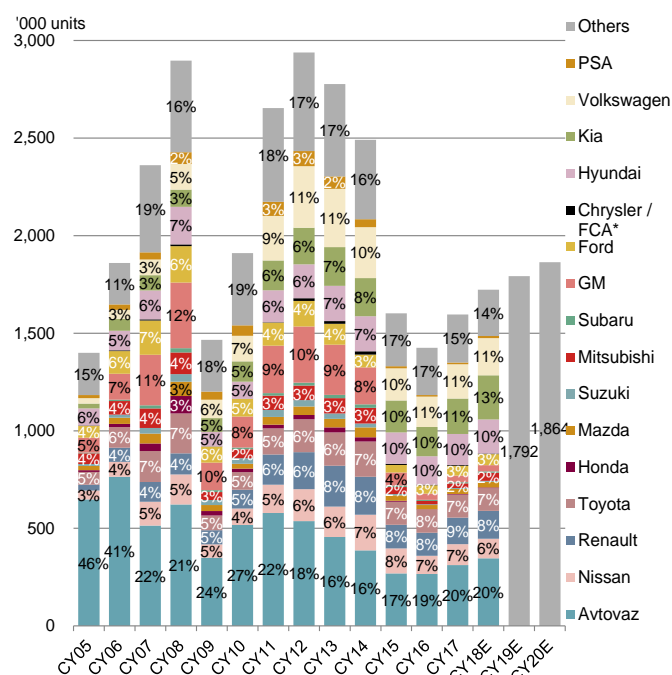
# Russia: Cautious optimism

Given the sales momentum in the first four months of 2018, we revise up our demand forecast for the full year and now expect volumes to grow by 8% y-y (previously 5%) to 1.72mn units. Additional US sanctions coupled with a weakening of the RUB could be headwinds, while higher oil prices could provide some relief.

## Jan-Apr '18 YTD sales up 21% y-y as economy recovers

New vehicle sales in Russia grew 12% y-y to 1.60mn units in 2017. The double-digit growth was off a low base, and came after four consecutive years of y-y volume declines (Fig. 81). Sales benefited from an improved macroeconomic environment, after the Russian economy came out of a two-year recession towards the end of 2016. The presidential elections in March 2018 passed off without any major market impact, with President Putin re-elected for another six-year term, indicating that the general direction of policy would remain unchanged. Oil prices have continued to firm up (Fig. 82), benefiting Russia's oil-dependent economy. On the monetary front, Russia's central bank cut its key rate by a cumulative 50bps since the beginning of 2018, bringing it down to 7.25%, as consumer price inflation has stayed well below the central bank's target of 4.0% with the April 2018 reading coming in at 2.4%. Thus, the recovery in auto demand that began in 2017 has continued into this year, with new vehicle sales up by 21% to 0.55mn units during Jan-Apr 2018. The biggest market share gainers over the period were Kia (+138bps), Mitsubishi Motors (+121bps), and AvtoVAZ (+74bps), while Nissan (-127bps), and Toyota (-73bps) lost share.

**Fig. 81: Competitive landscape in the Russian auto market**

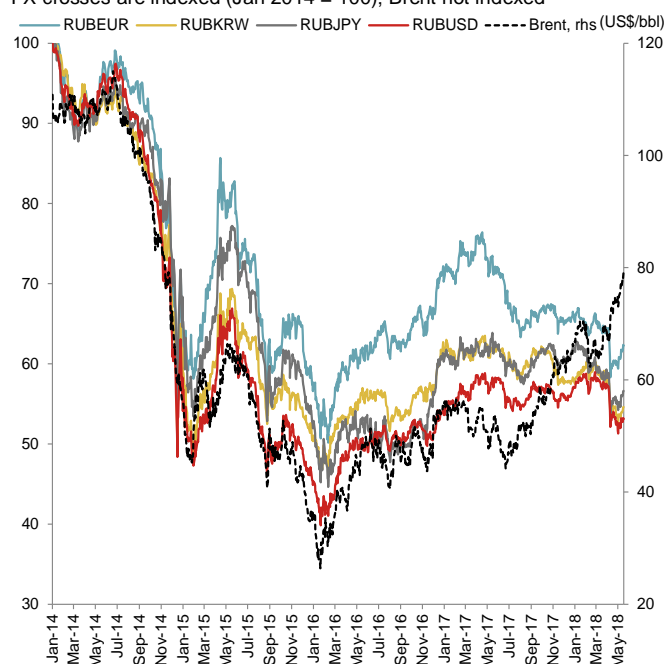


\* Chrysler/FCA includes Fiat from 2012 onwards

Source: Marklines, AEB, Ward's Auto, Nomura estimates

**Fig. 82: RUB cross-rates indexed vs. crude oil**

FX crosses are indexed (Jan 2014 = 100); Brent not indexed



Source: Bloomberg, Nomura research

## Firmer oil prices should support economy

Oil prices have been on the uptick (Fig. 82), benefiting Russia, which is a major oil producer and exporter. One of the factors supporting higher oil prices is the deal for production cuts agreed upon by the OPEC, along with several major non-OPEC players such as Russia. This agreement was extended in November 2017, and will remain in effect till the end of 2018. However, US President Trump's decision (announced on May 8) to withdraw from the Joint Comprehensive Plan of Action (JCPOA, or the Iran nuclear deal) has introduced uncertainties in OPEC's oil production cut deal. If US sanctions take Iranian oil off the market (or crimp its supply), it could upset the balance among the signatories to the OPEC production cut deal. Iran currently exports ~2.5mbpd of crude and condensates. At this stage, it is unclear how US actions would play out in the context of the OPEC deal. If it leads to further oil price gains, some signatories might decide to exit the pact and get rid of supply limits, as the original deal's objective was to boost oil prices. Thus, we would keep an eye on the outcome of the group's next meeting scheduled for June 21. We estimate a 10% increase in oil prices would add 0.7ppt to Russia's GDP growth and improve the current account balance by 1.2% of GDP.

## We now expect new car sales to grow by 8% y-y to 1.72mn units in 2018F

Although the first four months of the year recorded strong y-y growth in new vehicle sales, we note that the y-y comps get tougher as the year progresses. The RUB also appears to have delinked from oil prices since early 2017 (Fig. 82) following US President Trump's inauguration, and is now more reliant on the global risk appetite and the outlook for sanctions (the most recent dip in the RUB-USD rate was caused by the 6 April US sanctions, Fig. 82). As such, higher oil prices might not necessarily lead to RUB strength as it had in the past. On the other hand, RUB weakness led to a spurt in new car sales in April (+18% y-y, despite tougher comps) as car buyers brought forward their purchases to pre-empt potential price increases later in the year. This pre-buying might dampen sales in the following months.

In terms of government support, Russia's Ministry of Economic Development has said that state support of the auto industry would be kept at a level of RUB65bn (\$1.1bn) annually till 2025, which is similar to the level of government support seen in 2017. The Russian government has already allocated RUB12.2bn (\$0.2bn) out of this in 1Q18, to support the auto industry. This was spent on auto loan and lease subvention subsidies (RUB7bn or \$113mn), subsidies for cars running on natural gas (RUB2.5bn or \$40mn), and subsidies to the industry for procuring equipment on financial leases (RUB700mn or \$11mn), among others.

On macroeconomic and monetary outlook, our economists expect the Russian economy to continue to recover gradually, with real GDP growth improving to 1.7% in 2018F compared to 1.5% in 2017. There could be some upside from construction activity due to the 2018 FIFA World Cup in Russia, although low potential growth could limit that upside. They also expect the central bank to resume easing later in the year and have pencilled in two more 25bp cuts in September and in December, bringing the key rate down to 6.75% by the end of 2018. However, this is contingent upon the stability of the geopolitical environment, and any risk of renewed RUB weakness could derail further rate cuts in 2018.

Thus, on balance, we remain cautiously hopeful about the recovery underway in the auto market in Russia. Given the sales momentum in the first four months of 2018, we revise up our demand forecast for the full year and now expect volumes to grow by 8% y-y (previously 5%) to 1.72mn units.

## China: Growth likely to stagnate

We maintain our passenger vehicle demand growth forecast of 0.3% y-y in 2018F, as we believe that the growth slowdown in 2017 is likely to continue this year. This is a result of two factors: 1) some pull-forward of 2018 demand into 2017, ahead of the end of the purchase tax cuts in December 2017; and 2) the market's entry into a longer-term structural low growth phase. We note the emergence of a stark "growth disparity" in this environment, where automakers with weak new model lineups and unclear brand identities stagnate and lose share, as they get squeezed out by their stronger competitors.

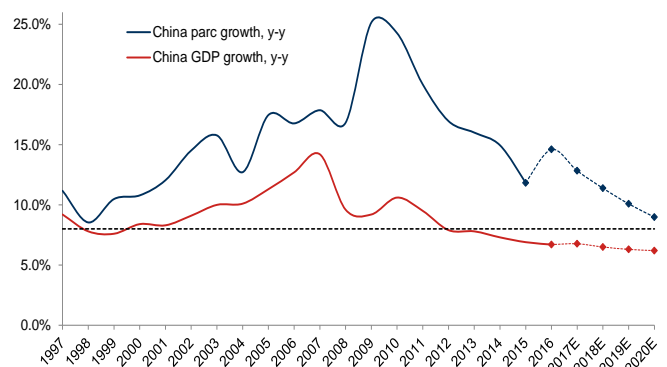
### Slow growth that began in 2017 set to continue into 2018F

We reiterate our view that China's auto market has entered a structurally slow growth phase. In an earlier report (see [China enters structural low growth phase](#), 28 November 2016), our in-depth analysis of long-term demand in China's new vehicle market concluded that there was a gross mismatch between market estimates for China's GDP growth over the next several years, and the corresponding sales growth expectations for the country's automotive market (Fig. 84 and Fig. 85). At the time, our top-down approach indicated that China's auto market was approaching an inflection point characterized by low or stagnant sales growth and a market environment featuring increased competition and margin pressure for automakers, as they expanded capacity significantly. Judging by the lacklustre growth in passenger vehicle (PV) sales volumes thus far (up 1.4% y-y in CY17; up 4.5% y-y in 4M18; Fig. 83), we believe our thesis is being borne out.

Fig. 83: China PV sales volumes and forecasts, 2009-2019F

	2009	2010	2011	2012	2013	2014	2015	2016	2017	4M18	2018F	2019F
<b>Sedan</b>	7,460,638	9,494,194	10,124,599	10,745,776	12,009,704	12,376,702	11,696,681	12,094,368	11,848,001	3,790,500	11,255,601	11,255,601
YoY	48.0%	27.3%	6.6%	6.1%	11.8%	3.1%	-5.5%	3.4%	-2.0%	3.1%	-5.0%	0.0%
% of total	72.3%	69.1%	69.8%	69.4%	67.0%	62.8%	55.4%	49.9%	47.9%	47.3%	45.4%	43.7%
<b>SUV</b>	657,494	1,317,585	1,617,502	1,998,192	2,988,758	4,077,897	6,206,152	8,998,920	10,252,673	3,465,400	11,277,940	12,123,786
YoY	47.4%	100.4%	22.8%	23.5%	49.6%	36.4%	52.2%	45.0%	13.9%	12.9%	10.0%	7.5%
% of total	6.4%	9.6%	11.2%	12.9%	16.7%	20.7%	29.4%	37.1%	41.5%	43.3%	45.5%	47.1%
<b>MPV</b>	248,954	445,401	497,483	493,341	1,305,181	1,914,255	2,106,779	2,485,999	2,070,655	613,600	1,811,823	1,993,005
YoY	26.1%	78.9%	11.7%	-0.8%	164.6%	46.7%	10.1%	18.0%	-16.7%	-12.0%	-12.5%	10.0%
% of total	2.4%	3.2%	3.4%	3.2%	7.3%	9.7%	10.0%	10.2%	8.4%	7.7%	7.3%	7.7%
<b>Others</b>	1,948,277	2,491,704	2,258,436	2,256,260	1,625,215	1,331,715	1,099,140	681,467	546,992	141,800	437,594	393,834
YoY	83.2%	27.9%	-9.4%	-0.1%	-28.0%	-18.1%	-17.5%	-38.0%	-19.7%	-36.9%	-20.0%	-10.0%
% of total	18.9%	18.1%	15.6%	14.6%	9.1%	6.8%	5.2%	2.8%	2.2%	1.8%	1.8%	1.5%
<b>PV sales</b>	10,315,363	13,748,884	14,498,020	15,493,569	17,928,858	19,700,569	21,108,752	24,260,754	24,718,321	8,011,300	24,782,958	25,766,226
YoY	52.9%	33.3%	5.4%	6.9%	15.7%	9.9%	7.1%	14.9%	1.9%	4.5%	0.3%	4.0%

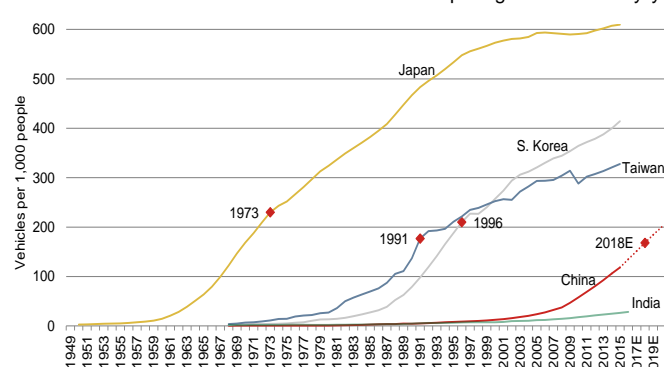
Source: China Auto Market, Nomura estimates

**Fig. 84: China GDP and car population growth**

Source: China Auto Market, Nomura research

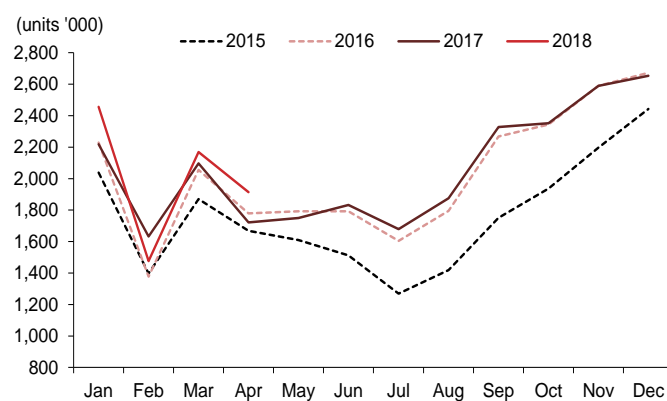
**Fig. 85: Vehicle penetration trends**

Red diamond marker shows the last time that car parc grew over 10% y-y

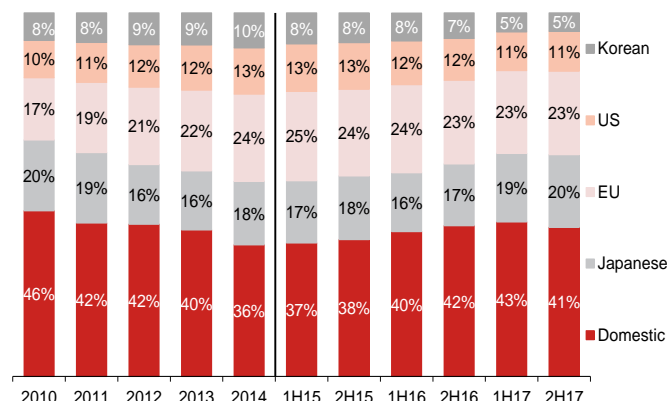


Source: JAMA, CAAM, US Census Bureau International Database, Nomura estimates

Looking ahead, the months of April and May benefit from a low base (April-18 PV volumes up 11% y-y), as shipments in these two months last year declined y-y (Fig. 86), as some demand was brought forward into 1Q17 when many automakers had opted to subsidize customers for the higher vehicle purchase tax (which went up from 5.0% in 2016 to 7.5% in 2017, following the partial withdrawal of a government tax cut). However after 2Q18, we expect y-y growth to moderate again going into 2H18F, as the sales pace normalizes. Also, 4Q17 saw some pull-forward of 2018 demand, ahead of the end of the purchase tax cuts in December 2017. As such, we believe consensus' 3-5% growth expectation for 2018F would be tough to attain.

**Fig. 86: Monthly PV sales volume seasonality trends**

Source: China Auto Market, Nomura research

**Fig. 87: Market share by automaker origin**

Source: China Auto Market, Nomura estimates

## “Growth disparity” is here to stay

While in our view China's auto market is likely to remain in a structural low growth phase longer-term, we have also previously noted the emergence of something that we call “growth disparity” from 2017 onwards. In the past, when overall auto demand benefited from a high-growth phase, most companies survived and reported growth. However, with the start of an industrywide sales slowdown, the auto market has turned into a “zero-sum game”, where one automaker's gain is another automaker's loss. This has led to significant shifts in market share (Fig. 88) and has resulted in the emergence of a stark “growth disparity” between winners and losers: automakers with weaker new model line-ups and unclear brand identity may experience a prolonged period of stagnant volumes and market share losses as they get squeezed out by their stronger competitors.

**Fig. 88: Big market share reshuffles since 2014**

	Market share				
By brand origin	2014	2015	2016	2017	
Domestic					
Geely	2.2%	2.5%	3.1%	4.8%	UP
Great Wall Motor	3.1%	3.5%	3.9%	3.7%	Up then flat
Changan	3.6%	4.4%	4.6%	4.3%	UP then down
Baojun	0.9%	2.4%	3.1%	3.9%	UP
Wuling	3.8%	3.2%	2.7%	2.1%	Down
Dongfeng	2.2%	2.5%	2.8%	2.6%	Flat
Trumpchi	0.6%	0.9%	1.5%	2.1%	UP
Roewe	0.7%	0.5%	1.0%	1.5%	UP
Chery	2.2%	1.9%	1.9%	1.6%	Down
BYD	2.2%	2.1%	2.0%	1.6%	Flat (higher EVs offset by lower non-EVs)
Japanese					
Toyota	5.2%	5.1%	4.6%	5.0%	Flat then Up
Nissan	4.4%	4.2%	4.1%	4.5%	Flat
Honda	4.0%	4.7%	4.9%	5.7%	UP
Korean					
Hyundai	5.8%	5.0%	4.6%	2.9%	Down (to regain some in 18F)
Kia	3.4%	3.0%	2.7%	1.4%	Down
American					
GM	9.0%	8.2%	7.6%	7.9%	Down then flat
Ford	4.2%	4.2%	3.9%	3.4%	Down
European mass					
VW	15.7%	14.1%	13.7%	14.2%	Down then flat
PSA	3.6%	3.3%	2.4%	1.5%	Down
Luxury					
Audi	3.0%	2.7%	2.4%	2.5%	Down then flat
BMW	2.2%	2.1%	1.9%	2.3%	Down then Up
Mercedes Benz	1.4%	1.8%	1.9%	2.4%	UP
Lexus	0.38%	0.40%	0.45%	0.50%	UP
Volvo	0.45%	0.39%	0.37%	0.45%	Down then Up
Land Rover	0.53%	0.43%	0.42%	0.46%	Down then Up
Jaguar	0.11%	0.07%	0.10%	0.17%	UP
Tesla	0.01%	0.02%	0.04%	0.06%	UP

Source: LMC Automotive, Nomura research

## Relaxation of foreign ownership cap: eventual outcome likely to be mutually beneficial for Chinese and foreign JV partners

According to the National Development and Reform Commission (NDRC), China plans to remove foreign-ownership caps for companies making electric and plug-in hybrid vehicles in 2018, for commercial vehicle makers in 2020, and for the wider passenger vehicle market by 2022.

In our view, any negotiation between the auto JV partners on this subject would include proposals that mutually benefit both partners. As such, in order to avoid overpaying for an extra stake in the JVs, foreign partners seeking a larger stake in the JVs post-2022 would likely offer some concessions to their Chinese partners to reassure them that the “pie” (i.e., the total profits of the JVs) will grow even bigger over the longer term. Possible incentives could include:

- A long-term, expanded product pipeline, committing the foreign partner to the existing JV over a longer timeframe
- Extension of the expiration date for the JV agreement: having long-term visibility on the JV relationship is a strong incentive for Chinese partners
- Export opportunities. China’s massive, scalable production facilities (and the associated supply chains) could be ideal for Chinese JVs to become export hubs, especially as the China market matures

Most China JVs are highly profitable and contribute meaningfully to the foreign partner's global profits. It is therefore against the foreign partner's economic interests to abandon its China JV or restrain the JV's growth potential, as this might lead to disruptions to local dealer networks, and to local production ecosystems. Domestic partners could also try to resist any pressure from the foreign partners, for example, by demanding a prohibitively high price for any stake transfer. Nevertheless, we think that these outcomes are unlikely simply because it is in the economic interest of both parties to not disrupt these JV structures. On the contrary, negotiations are more likely to revolve around ways to generate more profits under the new regulatory framework.

We also note that automakers are no longer allowed to establish a new project or JV to manufacture traditional ICE cars. This further reduces the likelihood of a foreign automaker abandoning its existing domestic JV partner and setting up a new, majority-owned subsidiary to replace its existing 50% JV.

**Fig. 89: Agreement expiry dates for major auto JVs in China**

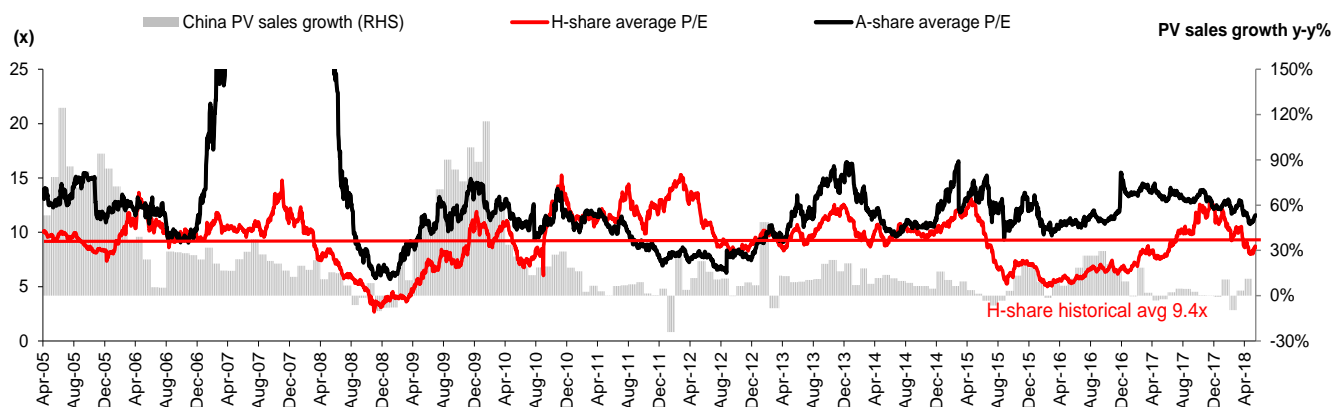
<u>Expiry date</u>		<u>Expiry date</u>		<u>Expiry date</u>	
<b>Dongfeng Motor (489 HK)</b>		<b>BAIC (1958 HK)</b>		<b>SAIC (600104 CH)</b>	
DF - Nissan	May - 2053	Beijing - Benz	Jul - 2033	SAIC - VW	2035
DF - Honda	Jan - 2043	Beijing - Hyundai	Oct - 2032	SAIC - GM	May - 2027
DF - PSA	May - 2027				
<b>GAC (2238 HK)</b>		<b>Brilliance (1114 HK)</b>		<b>Changan (000625 CH)</b>	
GAC - Toyota	Sep - 2034	BMW - Brilliance	Mar - 2028	Changan - Ford	Apr - 2051
GAC - Honda	May - 2028	Renault Brilliance Jinbei	Dec - 2027		
GAC - Fiat	Mar - 2040				

Source: Company data, Nomura research

## Valuations

China's auto sector has traded lower in the past month, following Chinese President Xi Jinping's speech at the Boao Forum for Asia in Hainan Province on 10 April, saying that China would substantially cut tariffs on auto imports and relax foreign ownership restrictions. Nevertheless, as stocks have already de-rated with P/E multiples below historical averages (Fig. 90), we think that there is limited room for further valuation downside. Market-share gainers, including successful domestic brands (such as Geely, our top pick in China autos) and luxury brands (such as BMW-Brilliance) should continue to outperform their peers, in our view, despite the challenges stemming from regulatory/tariff changes and China's structurally slower market growth. Amongst the OEMs under our coverage, our top Buys are Geely (175 HK) and Brilliance (1114 HK) while our top Reduce remains Great Wall (2333 HK).

Fig. 90: China autos OEMs' A- &amp; H-share forward P/E



Source: Bloomberg, Nomura research

Fig. 91: HK Connect: southbound ownership

Company	Ticker	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	As of 14-May 2018
<b>Autos</b>																
BAIC Motor	1958 HK	9.69%	10.23%	9.13%	8.25%	8.89%	9.77%	10.54%	9.84%	8.67%	8.62%	8.46%	6.73%	6.93%	7.03%	4.93%
Brilliance China	1114 HK	0.85%	0.93%	0.97%	0.92%	1.12%	2.04%	2.54%	2.58%	2.66%	2.87%	3.07%	3.42%	3.41%	2.93%	1.92%
Dongfeng Motor	489 HK	8.29%	7.63%	7.56%	6.65%	5.74%	5.62%	5.25%	4.30%	3.66%	3.46%	3.65%	4.21%	4.29%	4.03%	4.01%
Geely Automobile	175 HK	10.87%	11.02%	10.88%	10.40%	9.82%	9.72%	9.58%	9.16%	8.81%	8.52%	8.17%	7.66%	8.46%	8.93%	9.83%
Great Wall Motor	2333 HK	18.85%	21.20%	22.99%	25.21%	26.28%	25.72%	25.73%	25.76%	27.14%	29.54%	34.15%	37.37%	37.45%	36.85%	35.97%
Guangzhou Auto	2238 HK	21.13%	21.98%	23.73%	24.63%	26.35%	25.33%	24.23%	22.49%	22.13%	22.90%	23.36%	25.52%	25.75%	24.18%	23.30%
China ZhengTong Auto	1728 HK	3.85%	3.58%	3.80%	4.06%	4.42%	3.83%	4.33%	4.73%	4.77%	4.90%	4.47%	3.89%	3.36%	2.85%	2.57%
Grand Baoxin Auto Group	1293 HK	1.75%	1.79%	1.77%	2.27%	3.53%	4.18%	4.91%	5.66%	5.75%	5.64%	5.82%	6.87%	7.14%	7.50%	7.39%
Zhongsheng Group	881 HK	4.26%	3.94%	3.96%	3.73%	3.13%	3.03%	2.73%	2.89%	3.20%	3.32%	3.40%	3.33%	3.22%	2.57%	2.17%
Fuyao Glass	3606 HK	2.57%	2.76%	2.83%	2.98%	2.92%	3.03%	3.34%	3.31%	3.69%	3.79%	3.75%	4.17%	4.75%	4.68%	4.92%
Nexteer Automotive	1316 HK	0.99%	1.05%	1.23%	1.35%	1.27%	1.23%	1.01%	1.02%	1.13%	1.12%	1.16%	1.13%	1.15%	1.28%	1.20%
BYD	1211 HK	1.35%	1.40%	1.42%	1.65%	1.90%	1.64%	1.77%	2.07%	2.01%	1.96%	1.83%	1.66%	1.81%	1.75%	2.30%

Note: Average southbound shareholding as % of total number of issued shares. Data as of 14 May 2018. Source: HKEx, Datastream, Nomura research



# India: PVs have huge potential; CVs on an upcycle

We believe vehicle ownership in India, estimated by us at 31 per 1,000 at the end of FY18/3, is near an inflection point, similar to that seen in markets such as China, South Korea, and Japan in the past. Thus, we believe that India's passenger vehicle (PV) market is in the midst of a structural growth cycle and is likely to see a 12-14% CAGR over the next 5-10 years, underpinned by 6-7% annual growth in GDP. Two wheeler (2W) volumes are likely to grow at an 8% CAGR, led by scooters (12% CAGR), while those for motorcycles would be comparatively slower (6% CAGR). In the near-to-medium term, an upcycle in the MHCV segment is likely to sustain strong y-y demand growth of 15% and 10% in FY19/3 and FY20/3, respectively. On margins, we expect the impact from rising commodity costs to be largely offset by price hikes and benefits from operating leverage.

## PV market: Close to inflection point seen in several countries

Fig. 92: India auto industry demand forecasts (domestic volumes)

('000 units)	FY12/3	FY13/3	FY14/3	FY15/3	FY16/3	FY17/3	FY18/3	FY19/3F	FY20/3F	FY21/3F
<b>Total domestic 4-wheeler sales</b>	<b>3,424</b>	<b>3,461</b>	<b>3,137</b>	<b>3,216</b>	<b>3,475</b>	<b>3,761</b>	<b>4,144</b>	<b>4,690</b>	<b>5,313</b>	<b>5,813</b>
<b>Passenger vehicle</b>	<b>2,615</b>	<b>2,668</b>	<b>2,505</b>	<b>2,601</b>	<b>2,790</b>	<b>3,047</b>	<b>3,288</b>	<b>3,705</b>	<b>4,230</b>	<b>4,675</b>
Cars	2,015	1,874	1,785	1,876	2,025	2,103	2,174	2,391	2,678	2,946
Utility Vehicles	365	557	528	554	587	762	922	1,106	1,327	1,487
Vans	235	237	191	171	178	182	192	208	224	242
<b>Commercial vehicle</b>	<b>809</b>	<b>793</b>	<b>633</b>	<b>615</b>	<b>686</b>	<b>714</b>	<b>856</b>	<b>985</b>	<b>1,083</b>	<b>1,138</b>
Heavy	348	268	201	233	302	303	340	391	430	452
Light	461	525	432	382	383	412	516	594	653	686
<b>Two wheelers</b>	<b>13,434</b>	<b>13,797</b>	<b>14,805</b>	<b>16,005</b>	<b>16,456</b>	<b>17,589</b>	<b>20,193</b>	<b>22,190</b>	<b>25,123</b>	<b>25,726</b>
Motorcycles	10,094	10,085	10,480	10,743	10,700	11,095	12,613	13,761	15,550	15,394
Scooters	2,563	2,923	3,603	4,506	5,032	5,605	6,720	7,526	8,580	9,438
Mopeds	777	789	723	756	724	890	860	902	993	893
<b>Y-Y (%) Change</b>										
<b>Total domestic 4-wheeler sales</b>	<b>12.5</b>	<b>1.1</b>	<b>(9.3)</b>	<b>2.5</b>	<b>8.1</b>	<b>8.2</b>	<b>10.2</b>	<b>13.2</b>	<b>13.3</b>	<b>9.4</b>
<b>Passenger vehicle</b>	<b>4.1</b>	<b>2.0</b>	<b>(6.1)</b>	<b>3.9</b>	<b>7.2</b>	<b>9.2</b>	<b>7.9</b>	<b>12.7</b>	<b>14.2</b>	<b>10.5</b>
Cars	1.6	(7.0)	(4.7)	5.1	8.0	3.8	3.4	10.0	12.0	10.0
Utility Vehicles	15.5	52.6	(5.1)	4.8	6.0	29.9	21.0	20.0	20.0	12.0
Vans	10.0	1.1	(19.6)	(10.2)	3.6	2.4	5.8	8.0	8.0	8.0
<b>Commercial vehicle</b>	<b>19.7</b>	<b>(2.0)</b>	<b>(20.2)</b>	<b>(2.8)</b>	<b>11.5</b>	<b>4.2</b>	<b>19.9</b>	<b>15.0</b>	<b>10.0</b>	<b>5.0</b>
Heavy	8.0	(23.0)	(25.2)	16.0	29.9	0.1	12.5	15.0	10.0	5.0
Light	30.3	13.8	(17.6)	(11.6)	0.3	7.4	25.4	15.0	10.0	5.0
<b>Two wheelers</b>	<b>13.9</b>	<b>2.7</b>	<b>7.3</b>	<b>8.1</b>	<b>2.8</b>	<b>6.9</b>	<b>14.8</b>	<b>9.9</b>	<b>13.2</b>	<b>2.4</b>
Motorcycles	11.9	(0.1)	3.9	2.5	(0.4)	3.7	13.7	9.1	13.0	(1.0)
Scooters	23.6	14.1	23.2	25.1	11.7	11.4	19.9	12.0	14.0	10.0
Mopeds	11.4	1.5	(8.3)	4.5	(4.2)	23.0	(3.5)	5.0	10.0	(10.0)

Source: Company data, SIAM, Nomura estimates

We estimate vehicle ownership in India to be around 31 per 1,000 people at the end of FY18/3. Historically, similar vehicle penetration levels in some of the other major markets marked an inflection point for acceleration in vehicle sales growth (Fig. 94). In countries such as China, South Korea, and Japan, car sales grew at over 20% CAGR for the next five years once this level was achieved, supported by strong growth in GDP of over 8% annually. With respect to India, Nomura economists expect GDP growth to improve from 6.4% in 2017F to 7.5% in 2018F and 7.3% in 2019F, potentially becoming the world's fastest-growing economy in both these years. This should keep new vehicle sales growing at a CAGR of 12-14%. If the GDP growth rate picks up, the pace of new vehicle sales could accelerate further, as we have seen in some of the key global markets.

### Maruti's outperformance to continue

Company wise, Maruti Suzuki (MSIL IN) continued to outperform the industry (volumes up 14% y-y vs. PV industry up 8% in FY18/3). We expect this trend to continue given that the company's recent launches, such as Baleno, Brezza, and new Swift/Dzire, are all seeing long waiting periods for delivery to customers due to high demand. Maruti also faces weaker competition, as competitors such as Mahindra & Mahindra, Hyundai and Tata Motors have a shallow product pipeline over the next few years (Fig. 140). We also think that the impact from the entry of new players, such as Kia and MG Motors in the compact segment in FY20/3, is likely to be limited given Maruti's dominance of the segment.

**Fig. 93: Auto sales growth trends for select countries**

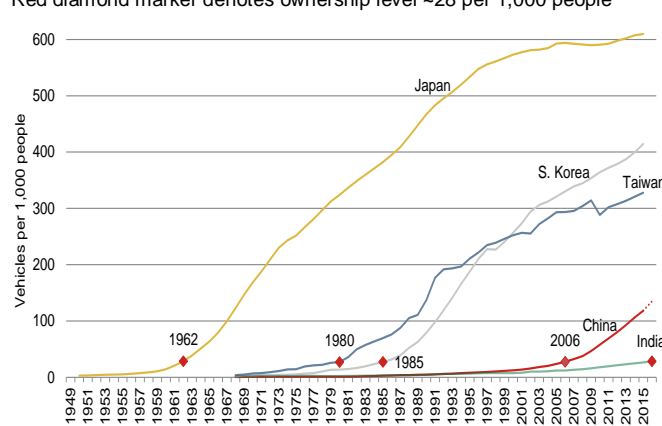
After ownership levels reach 28 per 1,000 people

Country	Year	CAGR			GDP per capita CAGR		
		2Y	5Y	10Y	2Y	5Y	10Y
Japan	1962	26.6%	23.8%	16.7%	8.9	8.5	7.3
Penetration	28	51	99	209			
S. Korea	1985	61.7%	28.6%	15.5%	11.1	9.4	8.1
Penetration	27	39	79	188			
China	2006	14.2%	20.9%	14.5%	11.4	10.1	8.5
Penetration	28	38	69	135			
India	2017						
Penetration	28						

Source: World Bank, Nomura estimates. India data refers to FY ending in March.

**Fig. 94: Vehicle ownership trends for key countries**

Red diamond marker denotes ownership level ~28 per 1,000 people



Source: JAMA, CAAM, US Census Bureau IDB, Nomura estimates

### MHCVs: Upcycle to continue

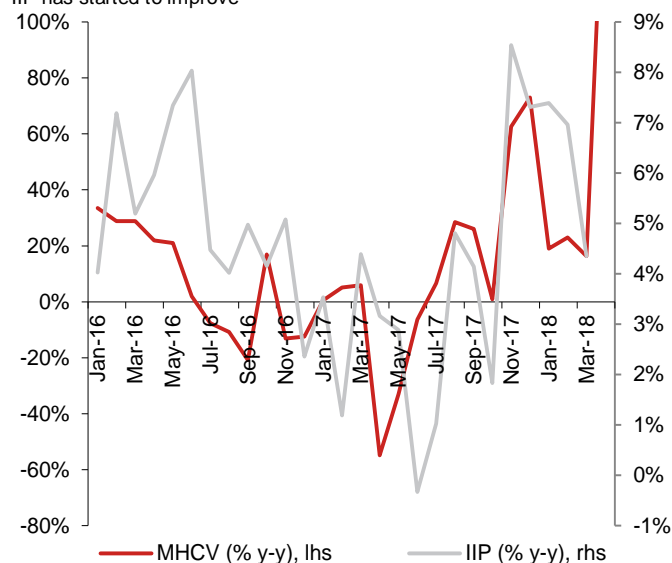
The MHCV segment ended FY18/3 with y-y volumes up by a healthy 13%. This could have been higher, if not constrained by capacity (see *Catalysts in place for a stronger CV cycle*, 20 March 2018). Our meetings with government officials indicate that the ban on the overloading of vehicles has been enforced very strictly, especially on national highways, leading to strong growth in toll traffic. With an electronic tracking system (which makes overloading even more difficult) and a strong push by the National Highways Authority of India, this trend is likely to continue. Moreover, with many key states implementing similar measures on overloading, most inter-state fleet operators are shifting to rated payloads. These trends have led to a sharp increase in the demand for higher-tonnage (>37T) trucks. Lastly, the implementation of an e-way bill from June 2018 has the potential to restrict overloading further.

Other macro indicators also point to a broad-based cyclical recovery. The Index of Industrial Production (IIP) grew by over 6% on average in the first three months of 2018. 4Q17 GDP growth recovered to 7.2% from 6.5% in 3Q17 on the back of a turnaround in the investment cycle. Also, the overloading restrictions implemented by the states has not only led to strong growth in MHCV sales, but has also resulted in higher sales in the LCV segment, where there are no overloading restrictions.

Thus, we believe that the recovery in demand for MHCVs is broad-based, and therefore we expect the upcycle to continue in FY19/3F with volumes up 15% y-y, followed by 10% y-y volume growth in FY20/3F. There could be some upside to our estimates as demand would benefit from pre-buying in FY20/3F, ahead of price hikes stemming from the implementation of stricter BS-VI emission norms from April 2020 onwards. Furthermore, the Indian government has recently increased its focus on building roads, with FY18/3-20/3F spending expected to almost double from the levels seen in FY15/3-17/3 (see *Bharatmala provides road capex visibility*, 27 October 2017).

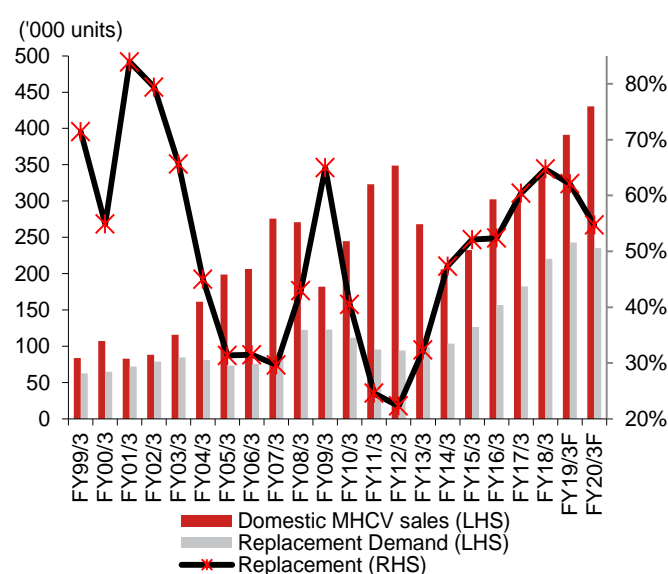
**Fig. 95: MHCV growth & change in IIP: closely correlated**

IIP has started to improve



Source: SIAM, Nomura research

**Fig. 96: High replacement demand to support MHCV growth**



Source: SIAM, Nomura estimates

## Two-wheelers: Scooters and premium bikes to drive growth

Over the next few years, the 2W industry is likely to be impacted by higher costs as emissions and safety regulations become stricter. Also reasonably high ownership levels in rich states imply that overall volume growth is likely to remain modest at around an 8% CAGR over FY18/3-21/3F. However, y-y growth is likely to be higher at 14% in FY20/3F due to pre-buying before the BS-VI emission regulations are implemented, which could lead to prices increasing by more than 10% in FY21/3F. This is over and above the 1%-5% cost impact in FY19/3-20/3F due to the new braking regulations (ABS/CBS, see section on 2W emissions and safety regulations below). Hence, growth is likely to slow to only 2% y-y in FY21/3F.

Demand from rural areas remains important, with ~50% of motorcycle sales volumes coming from such regions. Although the correlation of 2W volumes with agricultural GDP has been fairly low at ~14% historically, we think that factors such as increases in minimum support prices (MSPs), normal monsoons, and new rural housing / infrastructure / road projects are likely to improve rural income levels, supporting 2W demand.

### Scooters likely to continue to outpace motorcycles

Segment-wise, we expect scooter sales to grow at a fast clip, benefiting from improving female literacy, higher income levels, and better road conditions. We therefore pencil in a 12% CAGR over FY18/3-21/3F. On the other hand, we estimate motorcycle sales to grow at a comparatively slower 6% CAGR during the same period. Thus market share of scooters is likely to approach 40% of all two wheelers by FY22/2F. We think Honda (Honda Motorcycle and Scooter India, HMSI) might face capacity constraints, especially in scooters, over FY19/3-20/3F, providing Hero MotoCorp (HMCL IN) and TVS Motor (TVSL IN) with an opportunity to gain market share.

### Hero Motocorp and Royal Enfield better positioned vs. Bajaj Auto

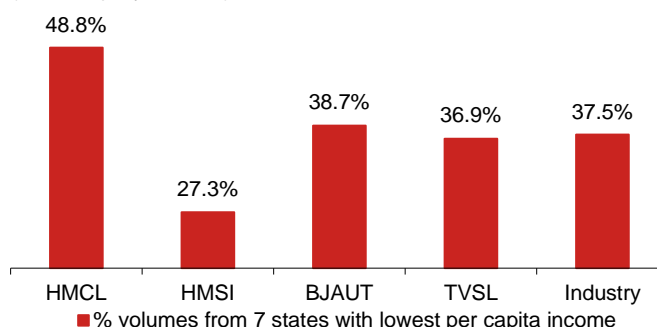
Company wise, HMCL is likely to benefit from the government's increased focus on rural India as roughly 50% of HMCL's volumes come from low income states. We also like HMCL's aggressiveness in gaining share in scooters and its increased focus on premium motorcycles, both of which are high-growth segments. In the premium motorcycle segment, we think Royal Enfield (EIM IN) has significant opportunities for growth, due to 1) low ownership levels (<5%) in low-income states, and 2) a huge base of entry-premium segment users (Pulsar, Avenger, Hunk etc.) looking to upgrade. Thus, we expect Royal Enfield to comfortably achieve double-digit volume growth over the medium term. On the other hand, Bajaj Auto (BJAUT IN) is likely to find it challenging, in our view, to grow volumes due to stiff competition from HMCL in the economy and executive motorcycle segments, from Royal Enfield in the premium motorcycle segment, and the company's lack of presence in scooters.

Fig. 97: Two-wheeler market growth summary

(mn units)	FY16/3	FY17/3	FY18/3	FY19/3F	FY20/3F	FY21/3F
Two-wheelers	16.46	17.59	20.19	22.15	25.13	25.75
% y-y	3	7	15	9.7	13.4	2.5
Mopeds	0.72	0.89	0.86	0.88	0.96	0.87
% y-y	(4)	23	(3)	2	10	(10)
% Mkt Share	4.4	5.1	4.3	4.0	3.8	3.4
Scooters	5.03	5.60	6.72	7.52	8.58	9.44
% y-y	12	11	20	12	14	10
% Mkt Share	30.6	31.9	33.3	33.9	34.1	36.7
Motorcycles	10.70	11.09	12.61	13.76	15.59	15.44
% y-y	(0)	4	14	9	13	(1)
% Mkt Share	65.0	63.1	62.5	62.1	62.0	60.0

Source: SIAM, Nomura research

Fig. 98: HMCL has the highest share from low income states  
(% of company volumes)



Source: SIAM, Nomura research

### Impact of stricter safety and emissions regulations on 2W

Combined braking systems (CBS) for 2W with engines <125cc and anti-lock braking systems (ABS) for the rest are mandatory for new models launched after April 2018. The same specs would apply to existing models from April 2019 onwards. Based on our industry interactions, CBS would increase costs by ~INR 500 (~1% of ASP) per motorcycle, while ABS would add INR 1,500 (~2%). Also, ABS equipment would lead to greater penetration of disc brakes, which cost ~INR 2,000 (~3%). Thus, we expect 2W prices to rise by ~1-5% over the next two years. However, given that most of the high volume motorcycle models such as Splendor, Passion and Shine, and scooter models such as Activa and Jupiter, are equipped with engines which are <125cc, cost increases are likely to be lower at ~1%, as ABS is not required. Looking ahead, India is likely to adopt BS-VI emission regulations by April 2020, leapfrogging from the current BS-IV standards. This will make fuel injection systems mandatory, thus increasing costs by ~INR 4,000-5,000 per vehicle (~10% of ASP).

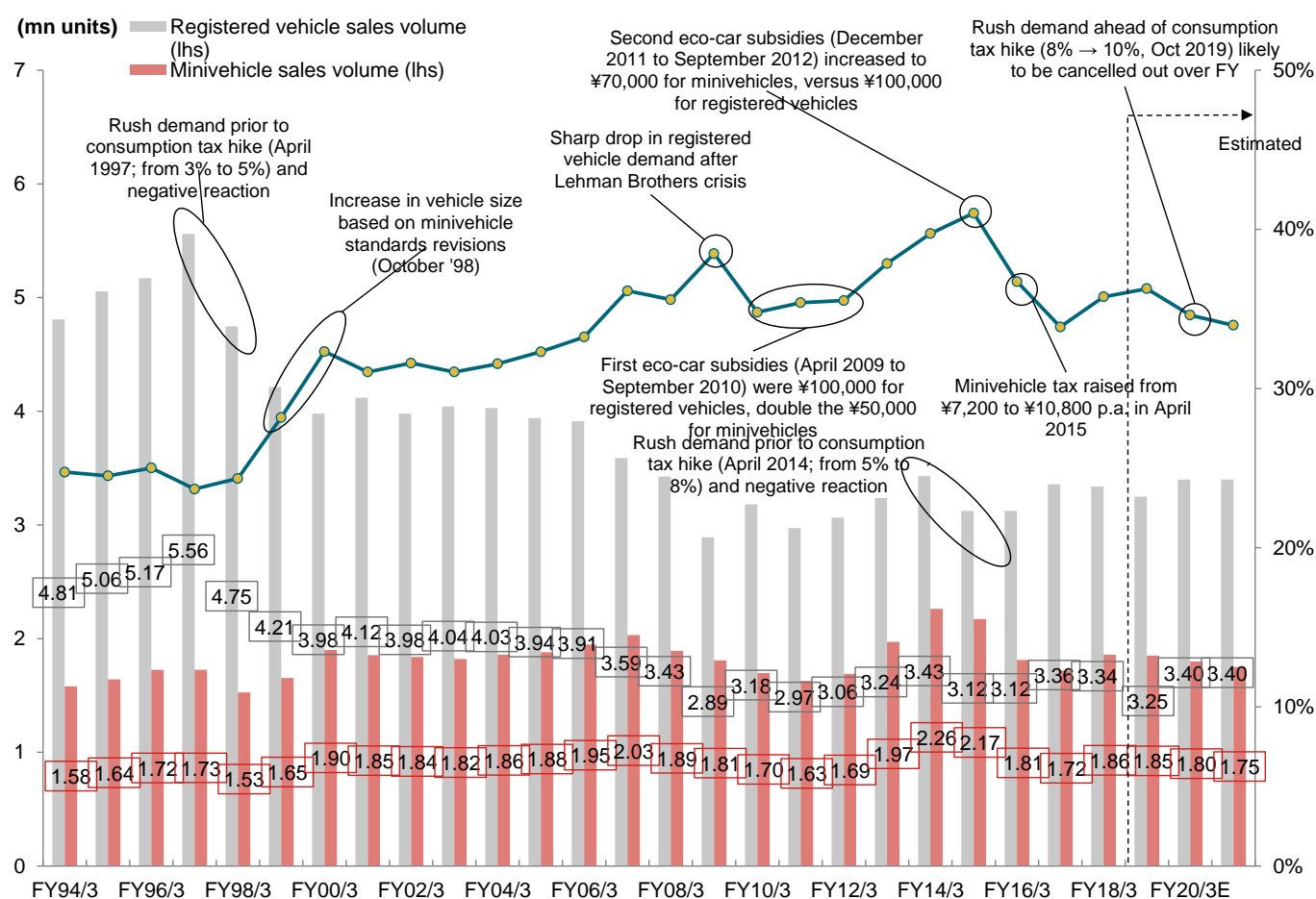
# Japan: Registered car sales likely to decline due to lack of new models

We expect total vehicle sales to fall by 2% y-y in FY19/3. Although minivehicle demand is likely to stay stable, registered vehicle sales is likely to fall by 3% y-y due to a lack of new, high volume model launches, thus pulling down the headline number.

## We expect FY19/3 registered vehicle sales to fall 3% y-y due to lack of new, high volume models

New vehicle sales grew 2% y-y to 5.20mn vehicles in FY18/3, with registered vehicle sales down 1% to 3.34mn units and minivehicle sales up 8% to 1.86mn units. The Japanese economy continues to remain healthy, consumer confidence remains high, and the adverse effects at Nissan and Subaru from inspection irregularities have fallen out of the picture. Despite these positives, we think total vehicle sales will drop by 2% y-y in FY19/3 as we expect registered vehicle sales to fall 3% y-y to 3.25mn vehicles due to lack of new models in the mainstay B and C segments as well as the minivan segment. Without new models, it will be difficult to stimulate demand for registered vehicles.

Fig. 99: Minivehicle and registered vehicles sales volume in Japan and minivehicle weighting (FY-basis)



Source: Japan Automobile Manufacturers Association, Nomura

## Minivehicle demand likely to stay stable in FY19/3, while price competition remains muted

We expect minivehicle sales in FY19/3 to remain flat. We expect full-year contributions from high-volume new models that were launched in 2H FY18/3, such as the Honda N-Box and Suzuki Spacia, to sustain minivehicle sales volumes this year. We also expect increased sales of niche, high-margin models, such as the Suzuki Jimny with full off-road capabilities, as it gets its first redesign in 20 years. Price competition within the minivehicle segment is likely to remain muted as market leaders such as Daihatsu and Suzuki focus on margins and pricing rather than market share.

Fig. 100: Time table for major model launches in Japan

JAPAN	Toyota	Daihatsu	Suzuki	Honda	Nissan	Mazda	Subaru	Mitsubishi Motors
Jan-Mar	Alphard/Velfire Corolla		SX4 S-cross Every	Jade Legend	NV100 (Every)	CX-3 Scrum (Every)		Minicab (Every)
Apr-Jun			Alto Lapin	S660 StepWGN Shuttle		Roadster		
CY15								
Jul-Sep	Sienta	Cast	Solio					
Oct-Dec	Lexus RX Prius		Escudo(Vitara)					Delica D:2 (Solio)
Jan-Mar			Ignis Baleno					
Apr-Jun	Passo	Boon Hijet Caddie						
CY16								
Jul-Sep		Move Canbus		Freed	Serena			
Oct-Dec	C-HR Tunk / Roomy	Thor		NSX	Note e-Power		Impreza Justy	
Jan-Mar	Prius PHV Lexus LC		Wagon R			CX-5 Flair (WagonR)		
Apr-Jun		Mira e:S					XV Pleo (Mira e:S)	
CY17								
Jul-Sep	Camry		Swift	Civic N-BOX				
Oct-Dec	Lexus LS JPN Taxi		Spacia XBEE		LEAF	CX-8		
Jan-Mar					Serena e-Power	Flair Wagon (Spacia)		Eclipse Cross
Apr-Jun	Corolla hatchback			CR-V				
CY18								
Jul-Sep	Crown Lexus ES						Forester	
Oct-Dec	Lexus UX		Jimny	Insight				
Jan-Mar	Corolla RAV4				Dayz (eK Wagon)	Axela (Mazda3)		eK Wagon
CY19								
Apr-Jun				N-WGN	Juke			
Jul-Sep	Vitz		Hustler	Fit		Flair Crossover (Hustler)	Legacy/Outback	
Oct-Dec	Harrier	Tanto			Note			

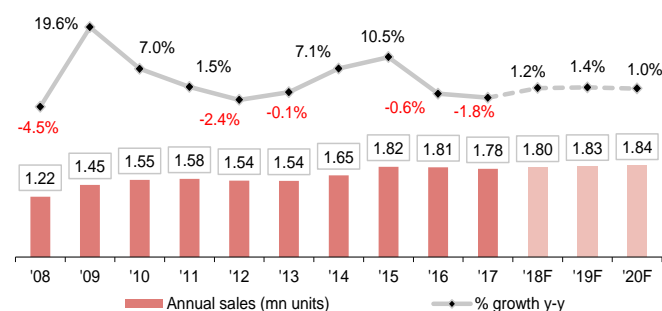
Source: Nomura estimates based on company press releases

## South Korea: Imports to gain

We forecast new vehicle sales to grow by 1% y-y to 1.80mn in 2018F, largely driven by Hyundai's new SUV models and VW/Audi's sales resumption.

### Hyundai's new models and VW's sales resumption to drive growth in 2018F

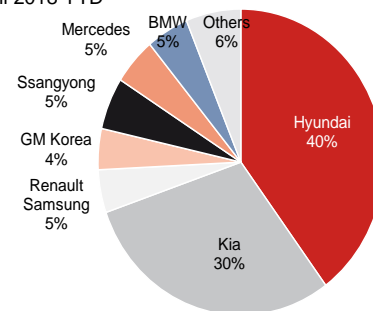
Fig. 101: 2018F demand to edge up by 1% y-y to 1.80mn units



Source: KAMA, KAIDA, Nomura estimates

Fig. 102: Market shares by automaker

As of April 2018 YTD



Source: Company data, KAMA, Nomura estimates

April 2018 YTD sales are up 1% y-y and we expect the sales pace to remain unchanged for the rest of the year. For the full year, we estimate sales to be up 1% y-y to 1.80mn units (Fig. 101). So far this year, non-Hyundai group domestic automakers (GM Korea, Renault Samsung, and Ssangyong) have seen their sales decline faster compared to 2017. On the other hand, the winners have been Hyundai, Kia, and imported vehicles. In particular, sales of imported vehicles grew by 24% y-y in April YTD, after being up 4% in CY2017. This was mainly driven by Audi/VW's sales resumption in Korea. For Hyundai, we expect sales to grow by 3% y-y in 2018, driven by the next-gen Santa Fe and a facelifted Tucson. However we expect Kia's sales to remain flattish as most of its new models are sedans (Fig. 103 and Fig. 104). We expect GM Korea to continue to lose share following its decision to close its Gunsan assembly by the end of May 2018. Although GM has not withdrawn from Korea completely, consumers might shy away from buying GM-owned brands if they perceive a lack of interest by the company in staying on in Korea for the long term.



**Fig. 103: Hyundai's new model launch schedule**

Includes facelifts (FL)

HMC	2018	2019
Korea	Santa Fe (Feb)	Sonata
	Tucson FL (2H)	Genesis SUV (JX)
	Kona EV (Apr)	G80
	i40	Santa Fe HEV, PHEV
	Large-sized SUV (LX2)	
US	G70 (Mar)	Sonata
	Veloster (1H)	Large-sized SUV (LX2)
	Santa Fe (Jul)	A-seg SUV
	Kona EV (2H)	Genesis SUV (JX)
	Tucson FL (4Q)	
	FCEV (2H)	
China	Encino (Apr)	A-seg SUV
	Santa Fe (4Q)	
Europe	Santa Fe (Jun)	A-seg SUV
	Tucson FL (3Q)	
	FCEV (3Q)	
	Kona EV (3Q)	
	i20 FL (3Q)	

Source: Company data, Nomura research

**Fig. 104: Kia's new model launch schedule**

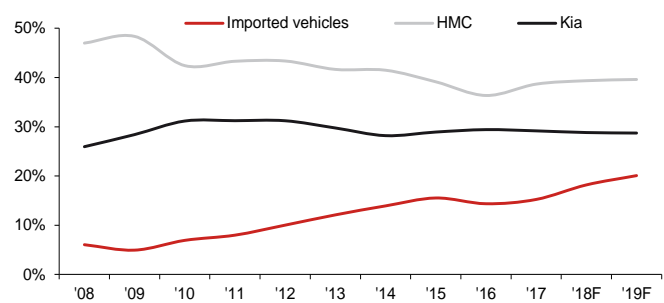
Includes facelifts (FL)

Kia	2018	2019
Korea	K5 FL (Jan)	K5
	K3 (Feb)	
	Carnival FL (Mar)	
	K9 (Apr)	
	Niro EV (Jul)	
	Sportage FL (2H)	
	Soul (4Q)	
US	Sorento FL (Jan)	Telluride
	Carnival FL (Mar)	Cadenza
	K5 FL (Jul)	Soul EV
	K3 (3Q)	
	K9 (2H)	
	Niro EV (2H)	
	Soul (4Q)	
China	K5 PHEV (1Q)	KX3 (b-seg SUV) (1H)
	YiPao (April)	
	A-seg SUV (3Q)	
	K3 / K3 PHEV (2H)	
	K5 FL (2H)	
Europe	Cee'd (1H)	
	K5 FL (1H)	
	Cee'd wagon (2H)	
	Niro EV (2H)	
	Soul / Soul EV (2H)	
	Cee'd shooting break (2H)	
	Sportage FL (2H)	

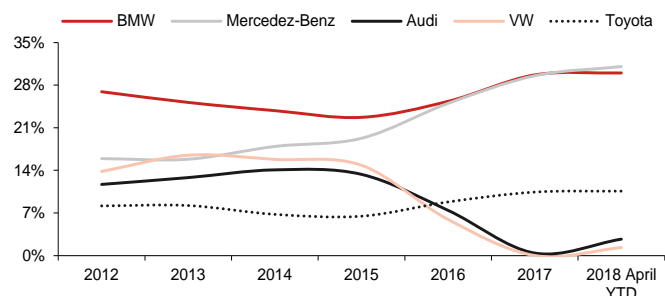
Source: Company data, Nomura research

## Resumption of VW/Audi's sales to limit HMC/Kia's share gain

Sales of imported vehicles had fallen in 2016-17, mainly due to the cancellation of VW and Audi's domestic sale licenses in 2016 in the aftermath of the diesel emission scandal. Following VW/Audi's sales resumption in February-March this year, we expect sales of imported vehicles to gain momentum (Fig. 105). Both Audi and VW are offering generous discounts and have upgraded their aftersales service centers. Additionally, they plan to launch over nine new models in Korea in 2018, including Tiguan, A3, A4, and Q3. We expect the launch of the fully reengineered Tiguan in May to drive VW's market share recovery. As such, we forecast market share of imported cars to reach 18%/20% in 2018/19F, respectively, while Hyundai and Kia's market shares are likely to stay at 39% and 29%, respectively.

**Fig. 105: Imported vehicles' share gains accelerate in '18-'19F**

Source: Company data, KAMA, Nomura estimates

**Fig. 106: Imported vehicles share split by major brands**

Source: Company data, KAMA, Nomura estimates

Note: BMW includes Mini; Toyota includes Lexus

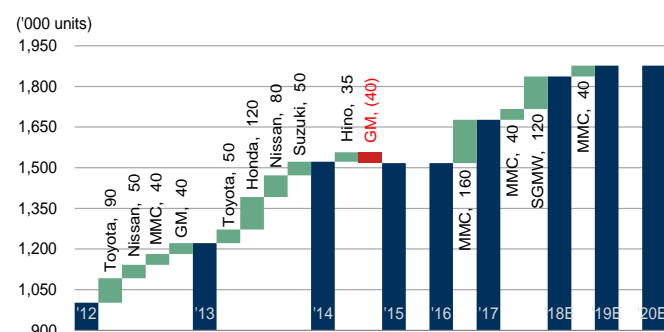
## Indonesia: Recovery from a low base

We forecast 4W sales to recover from a low base and grow 7% y-y in 2018, supported by improving GDP and buoyant commodity prices. However, the recovery remains fragile, given the recent depreciation in the IDR which could lead to higher interest rates. We expect lower-middle class buyers to benefit from higher social spending by the government in 2018. This should be positive for 2W demand and therefore we expect 2W volumes to grow by 5% y-y in 2018F.

### Four Wheelers: Recovery faces headwinds from weaker rupiah and higher interest rates

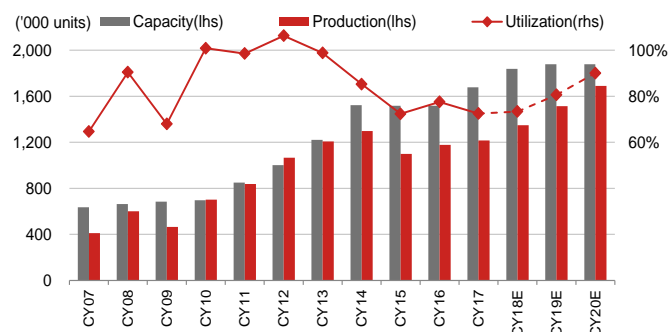
Following a 2013 peak at 1.23mn units, the Indonesian auto market has struggled to regain its growth momentum despite relatively low ownership levels. At the same time, the auto industry has suffered from low utilization rates (Fig. 108) after automakers expanded production capacity rapidly over 2013-2014 (Fig. 107) in anticipation of higher domestic sales following several years of double-digit growth (Fig. 109).

**Fig. 107: Changes in production capacity by company**



Source: Nomura estimates based on Fourin data and company press releases

**Fig. 108: Production, capacity, and utilization**

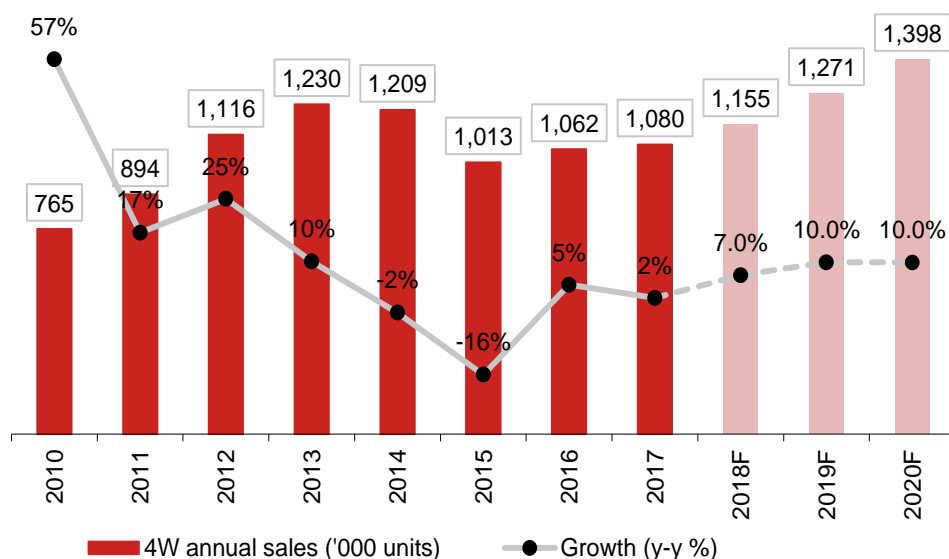


Source: Nomura estimates based on Fourin, Marklines and GAIKINDO data

According to Astra management, current industry capacity is 2.0mn to 2.2mn units annually. Given our volume estimate of 1.16mn in 2018F (Fig. 109), competition is likely to remain quite intense. Automakers have become more aggressive, launching new, exciting and innovative products, as a differentiated product is more likely to succeed in gaining market share. This was certainly the case for Toyota and Daihatsu, whose 7-seater LCGC launched in August 2016 led to market share gains. The story was similar for Mitsubishi Motors' Xpander launched in August 2017. This year Suzuki introduced the next-gen Ertiga in an effort to regain lost market share.

**Fig. 109: 4W volume growth in line with our expectations so far**

Annual 4W volumes vs growth



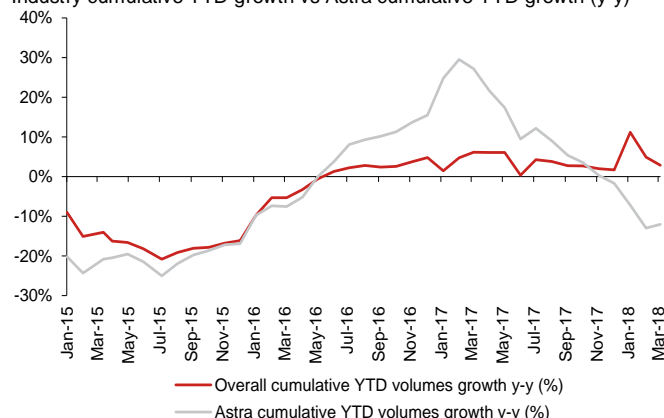
Source: GAIKINDO, Nomura estimates

The LCGC segment has grown quickly, with the launch of several 7-seater models which have proven to be popular with car buyers. Lately, the LCGC segment has stabilized at around 20% of the total four wheeler (4W) market (Fig. 111), as 1) there haven't been too many new LCGC launches, and 2) financing for this segment tightened, shutting out customers with low credit quality.

April YTD sales were up 6% y-y to 394k units. After a slow start to the year, sales in the month of April jumped 14% y-y to 102k units as demand picked during the period leading to the Hari Raya. We think this is a positive sign as demand during the festive / Hari Raya seasons had been relatively weak in the past. In 2017, this period was marked by general caution amongst the middle / upper-middle class buyers due to over-aggressive tax scrutiny by the tax authority, leading to slow sales. We forecast auto sales to recover from a low base and grow by 7% y-y in 2018, supported by acceleration in the GDP growth rate and relatively buoyant commodity prices. However, we would caution that the recovery remains fragile, given the recent depreciation in the IDR which could prompt the central bank to raise interest rates.

**Fig. 110: Mitsubishi Xpander's success has hit Astra**

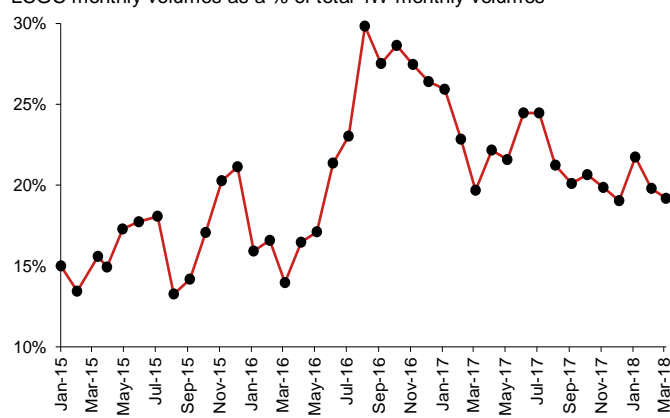
Industry cumulative YTD growth vs Astra cumulative YTD growth (y-y)



Source: GAIKINDO, Nomura research

**Fig. 111: LCGC has now accounts for around 20% of 4W**

LCGC monthly volumes as a % of total 4W monthly volumes



Source: GAIKINDO, Nomura research

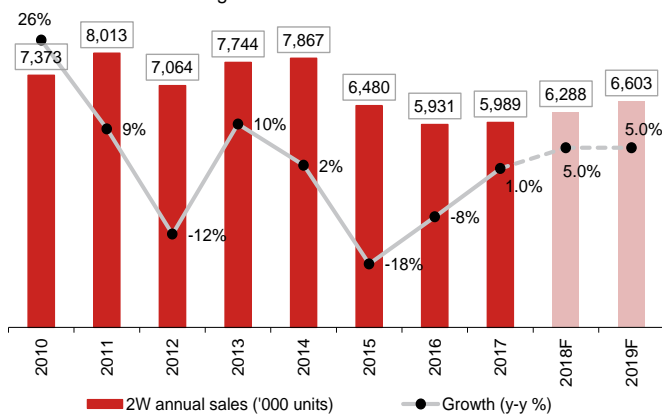
## Two Wheelers: Stabilizing, but unlikely to return to double-digit growth

The growth momentum seen in 2H17 continued into 2018, with early indications for the month of April pointing to a sales volume of 580k units, almost double that recorded in the same month last year. However, we would point out that sales in April 2017 were particularly weak, despite it being the festive season when sales peak. April 2018 YTD sales should therefore be up by 13%, driven mostly by base effects.

In 2018, we expect lower-middle class buyers to benefit from higher social spending by the government. Thus we expect two wheeler (2W) volumes to grow by 5% y-y following four extremely tough years which saw annual volumes contracting by 26% during this time (Fig. 112). Even though we do not expect demand growth to return to double digits due to market saturation (especially in the bigger cities), we still think that a sustained recovery in commodity prices could help drive 2W growth to the mid-single-digit level.

**Fig. 112: 2W volumes should continue recovery since 2H17**

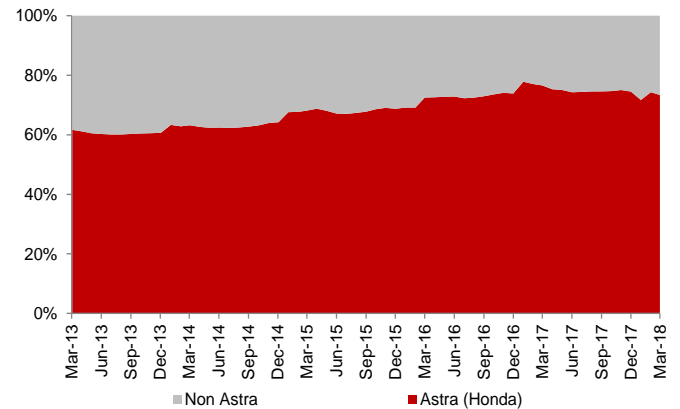
Annual 2W volumes vs growth



Source: GAIKINDO, Nomura estimates

**Fig. 113: Honda maintains its dominant market share in 2W**

2W market share trends



Source: GAIKINDO, Nomura research

## Neutral on the automotive sector as weaknesses are finally priced in

We recently upgraded our outlook on the automotive industry to neutral from negative previously, as we now believe that weaknesses such as an oversupply of four wheelers and intense competition are finally priced in (see [Astra International – Upgrade to Neutral](#), 18 April 2018). We now think that headwinds from rising competition (e.g. from Mitsubishi Motors) and Astra's lack of differentiated new models are now fully reflected in the company's stock price. Additionally, downside risks to our earnings estimates are now limited given that 1) consensus is now fully pricing in Astra's market share loss in 4W (at 48% in 1Q18, down from 58% in 2017), and 2) dealer inventories have come down to healthy levels, reducing the need for heavy discounts.

On Indomobil, despite a sharp re-rating for the stock recently due to the de-consolidation of its loss-making associates, we note that Nissan and Datsun sales are stagnating. We therefore retain our bearish view on the stock.

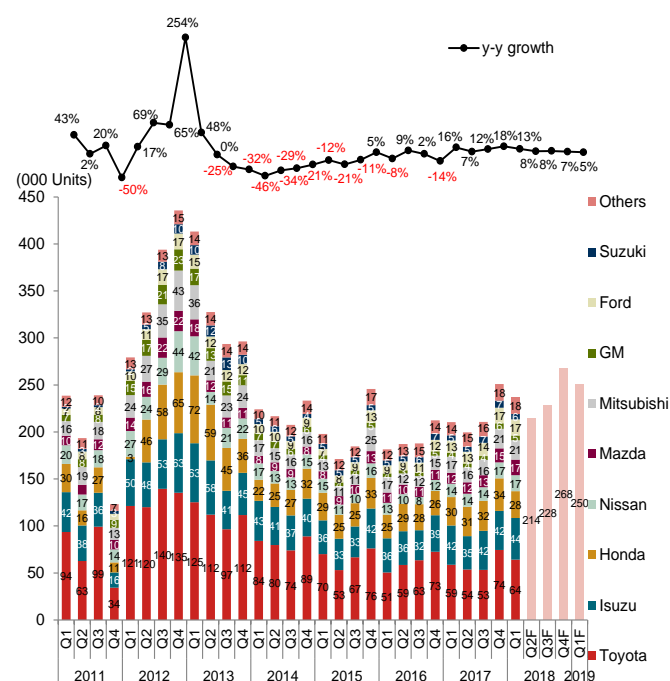
# Thailand: Recovery to continue

We forecast demand for new cars to grow at a high single digit in 2018F, up 9% y-y to 0.95mn units, modestly above our prior 0.94mn unit estimate. We expect this growth to be supported by an improvement in consumer sentiment after the end of the mourning period following the death of the Thai king. Additional support is likely from the original beneficiaries of the first-time-car-buyer scheme, as their five-year lock-in periods end.

## 1Q18 auto sales grew 13% y-y as consumer sentiment improved

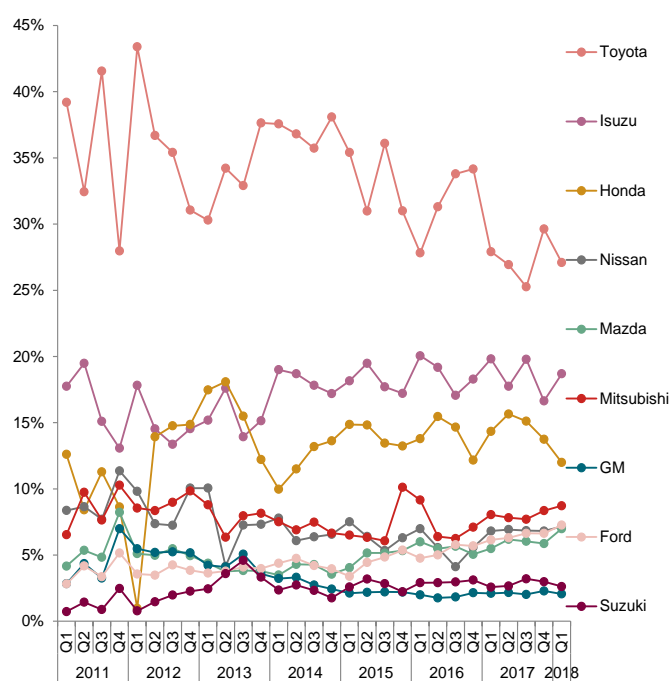
New vehicle sales in Thailand grew 13% y-y in 1Q18, as consumer sentiment improved following the end of the year-long mourning period after the death of the Thai king in October 2016. Additional support came from the original beneficiaries of the government's first-time car buyer scheme, which ended in 2012-13. The scheme had a five-year lock-in period, which has now expired. Amongst the major automakers, we note that Toyota's market share has eroded from 37% in 2014 to 28% in 2017 (Fig. 115), while other smaller players in the Thai market such as Mazda, Ford, and Mitsubishi Motors have gained as they have expanded their product portfolio, offering a broader choice to car-buyers. We therefore think it would not be easy for Toyota to recover its lost market share in 2018.

**Fig. 114: Auto market volume by manufacturer & overall growth**



Source: Fourin, NNA, Nomura research

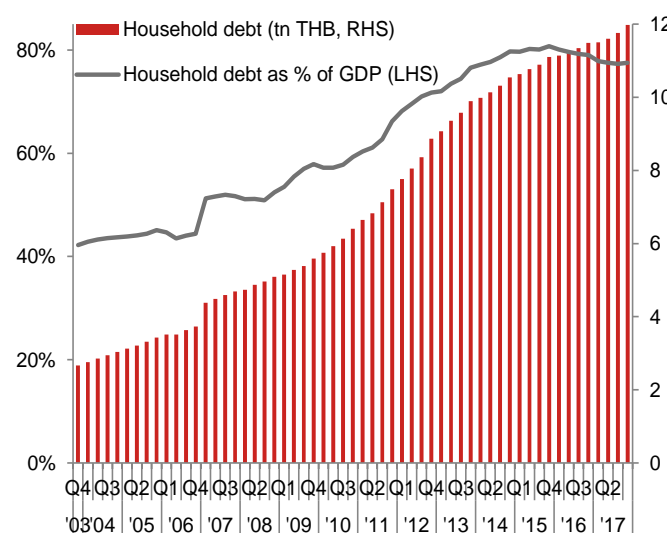
**Fig. 115: Market-shares of the major OEMs**



Source: Fourin, NNA, Nomura research

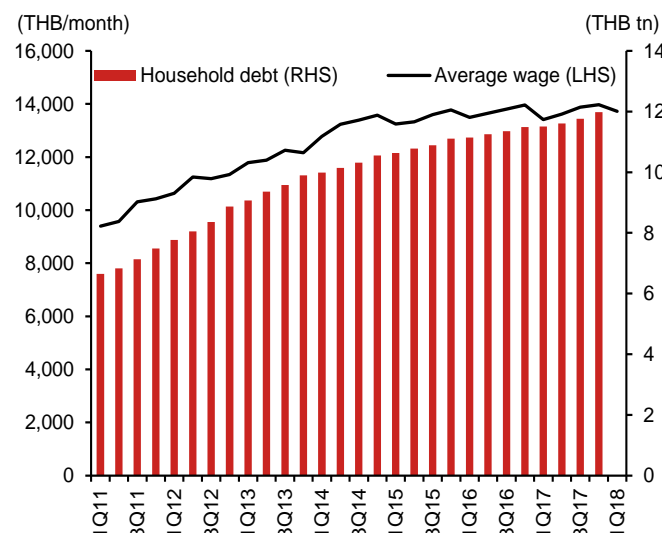
On the macroeconomic front, although our economists lowered their forecast (in early May) for 1Q18 GDP growth by 50bps to 3.9% due to weaker-than-expected public and private investment, they continue to maintain their 4.0% forecast for the full year as growth is expected to pick up in the second half. This is likely to be driven by a pick-up in populist public spending in 2H18, ahead of the general election in February 2019. Private consumption expenditure still faces some headwinds as household debt remains high and deleveraging is proceeding slowly (Fig. 116), while wages have been stagnating (Fig. 117). Household deleveraging is likely to continue, as the country's central bank, concerned about the size of household debt, implemented measures to tighten consumer access to credit card and personal loans, effective 1 September 2017. Tighter access to unsecured credit should reduce the risk of defaults, and improve the health of the finance industry.

**Fig. 116: Total household debt and ratio to GDP**



Source: Bank of Thailand, National Statistics Office, Nomura research

**Fig. 117: Household debt and average wage trends**

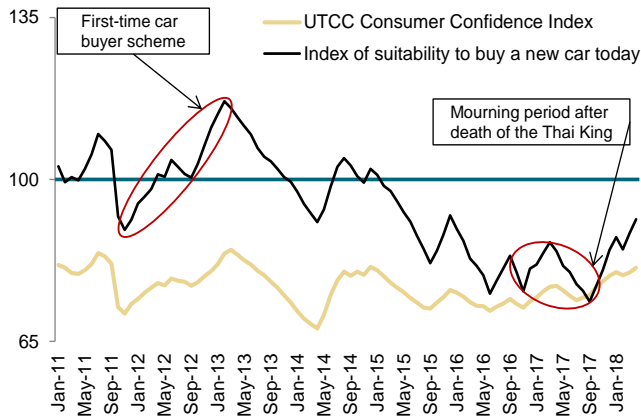


Source: Bank of Thailand, National Statistics Office, Nomura research

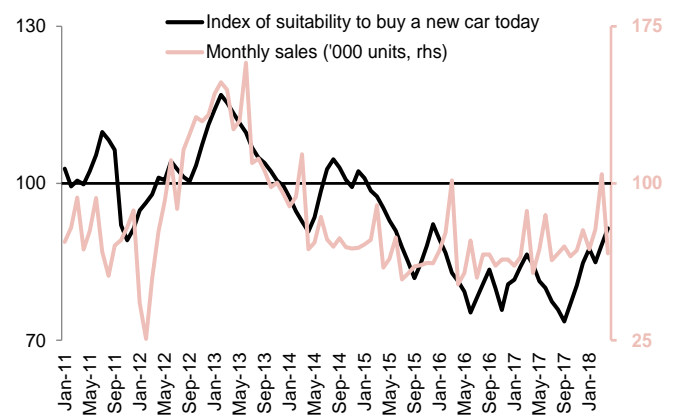
Banks' willingness to lend, especially for auto loans, is improving, as we found when we visited carmakers and dealers in Thailand in March 2018. Auto loans generally have a 5- to 6-year duration. Thus, currently banks are facing the prospect of a rapid decline in the size of their auto loan books, as the loans they had disbursed in 2012-2013 (when the auto market was booming due to the first-time-buyer scheme) are about to be paid off. To offset this, banks have become more willing to hand out auto loans to car buyers, compared to last year, given that non-performing auto loans are still at manageable levels. Ease of financing is likely to provide an additional fillip to car sales in 2018.

## Volumes to grow 9% y-y to 0.95mn units in 2018F

The first-time-buyer scheme boosted vehicle sales over 2012-2013 (Fig. 114). Thus, we think that the sequential expiration of the five-year holding period will continue to provide a tailwind for vehicle sales in 2018. Consumer confidence has also been on the mend after the one year mourning period following King Bhumibol's death. Although the UTCC Consumer Confidence Index still remains below the 100-mark (which indicates that more people think conditions are worsening), consumers are becoming less pessimistic, with the index touching a 40-month high in April 2018 at 80.9 (Fig. 118). This is rubbing off on consumer tendencies to buy a new car (Fig. 118). On balance, we continue to expect demand for new cars to grow at a high single digit in 2018F, up 9% y-y to 0.95mn units, modestly above our 0.94mn unit estimate previously.

**Fig. 118: Consumer confidence & outlook for buying a new car**

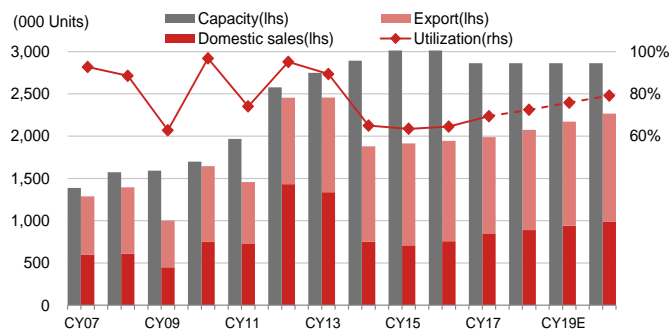
Source: UTCC Center for Economic and Business Forecasting, Nomura research

**Fig. 119: Outlook for buying a new car and car sales**

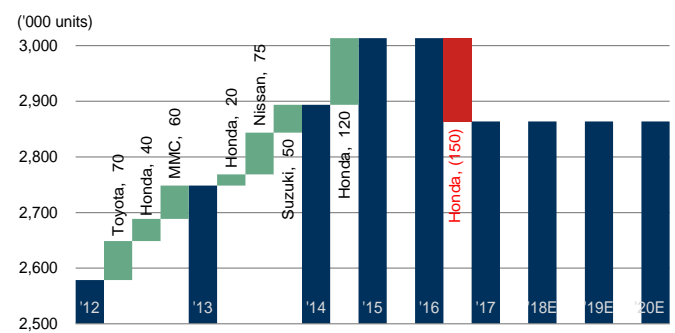
Source: UTCC Center for Economic and Business Forecasting, Fourin, NNA, Nomura

## Capacity utilization to improve as domestic demand improves and exports to the Middle East stabilize

The auto industry almost doubled production capacity from 1.70mn units at the end of 2010 to 3.01mn by the end of 2015 (Fig. 121). Apart from meeting domestic demand, automakers had planned to use Thailand as a cost-competitive manufacturing base for exports to nearby markets in Southeast Asia / Oceania, as well as the Middle East.

**Fig. 120: Production, installed capacity and utilization rate**

Source: Nomura estimates based on Fourin and Marklines data

**Fig. 121: Changes in installed capacity by company by year**

Source: Nomura estimates based on Fourin data

However, an extended period of low oil prices impacted demand from the Middle East. This led to exports to the region falling from a high of 288k in 2014 to 112k in 2017, down 61% over the period. Almost concurrently, domestic demand plunged in the years following the end of the first-time-buyer scheme (Fig. 114 and Fig. 120). The resulting overcapacity led to Honda reducing its installed capacity by 150k units in 2016 (Fig. 121). Looking ahead, we expect industry utilization levels to improve as exports to the Middle East stabilize (Fig. 122) on the back of firmer oil prices, and the Thai domestic market continues to recover.



Fig. 122: Auto exports from Thailand by manufacturer and export destination

Exports, '000 units Jan-Mar 2018		Toyota	Mitsubishi	Ford	Isuzu	Mazda	Honda	Nissan	GM	Suzuki	Others	Total
Asia	Total	14	13	12	5	2	11	9	2	1	2	70
	y-y	2	-7	-1	1	-3	4	0	0	-0	-1	-5
Oceania	Total	21	11	15	12	12	15	7	8	0	-	101
	y-y	4	3	1	4	-2	6	0	1	-0	-	17
Middle East	Total	15	6	-	3	1	1	3	0	-	-	28
	y-y	2	-1	-	1	0	1	2	0	-	-	5
Africa	Total	2	3	-	1	1	1	1	-	-	-	8
	y-y	1	-0	-	1	-0	-0	-1	-1	-	-	1
Europe	Total	4	22	-	3	1	-	-	-	5	-	36
	y-y	1	2	-	-4	-1	-	-	-	-1	-	-3
North America	Total	6	14	-	-	0	4	-	-	-	-	24
	y-y	-5	-1	-	-	0	4	-	-	-	-	-3
Latin America	Total	9	9	-	4	2	1	0	0	1	-	28
	y-y	-0	-2	-	1	0	1	0	-0	-0	-	-1
Total	Total	71	77	27	28	19	32	21	11	8	2	295
	y-y	5	-6	0	3	-6	15	2	1	-2	-1	11

Source: Marklines, Nomura research

# Stock picks

Our new global top pick is **Suzuki Motor (7269 JP)**. Our recommendation is based on three key reasons. First: Suzuki's strong positioning in high-growth markets such as India and Pakistan. Second: Further gains in Japan driven by improving product mix. Third: Lack of exposure to US/Trump or Latin American risks. Apart from Suzuki, our regional top picks are **Geely** (175 HK), **Hyundai Motor** (005380 HK), **Maruti Suzuki** (MSIL IN), and **Tesla** (TSLA US, covered by Instinet, LLC. technology analyst Romit Shah).

## Global top pick

**Suzuki is our new global top pick in the autos space**

Fig. 123: Stock for action

Company Name	Ticker	Rating	Current price	Target price	Upside
Suzuki Motor	7269 JP	Buy	JPY 6,169	JPY 7,200	17%

Source: Bloomberg, Nomura research. Pricing date is 30 May 2018.

## Regional top picks

Fig. 124: Our regional top picks

Region	Company Name	Ticker	Rating	Current price	Target price	Upside
China	Geely	175 HK	Buy	HKD 22.15	HKD 34.40	55%
South Korea	Hyundai Motor	005380 KS	Buy	KRW 137,500	KRW 180,000	31%
India	Maruti Suzuki	MSIL IN	Buy	INR 8,588.20	INR 11,125.00	30%
US	Tesla	TSLA US	Buy	\$ 291.72	\$ 420.00	44%

Note: Tesla covered by Romit Shah and Kellan Grenier, Instinet, LLC.

Source: Bloomberg, Nomura research. Pricing date is 30 May 2018.

For our investment thesis and rationale for the recommendations, please refer to the individual company sections in the pages that follow.

## Suzuki Motor (7269 JP, Buy, TP JPY7,200)

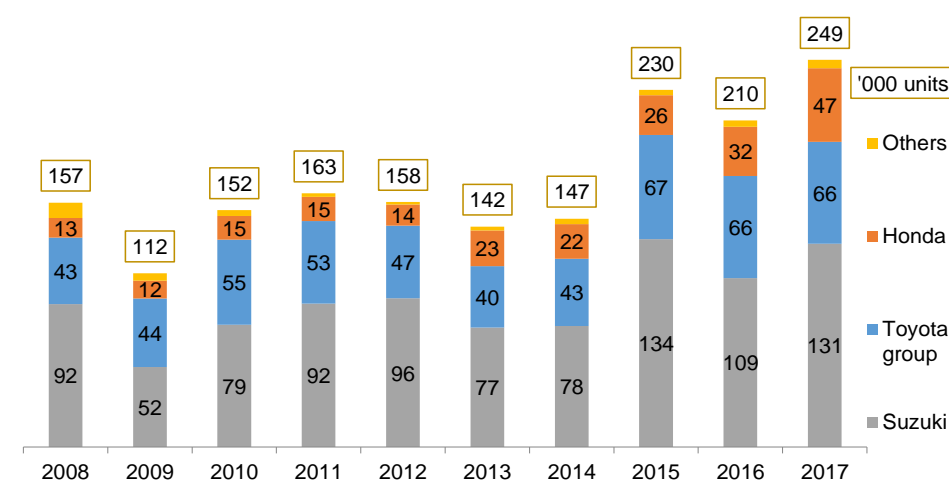
GLOBAL TOP PICK

Suzuki is our new global top pick in the automotive sector. Our recommendation is based on three key reasons. First: Suzuki's strong positioning in high-growth markets such as India and Pakistan. Second: Further gains in Japan driven by improving product mix. Third: Lack of exposure to US/Trump or Latin American risks. Considering the company's medium-term growth potential, we think valuation is attractive at an 11x P/E ratio based next year's (FY20/3) earnings.

### Benefits from growth potential for autos in India, Pakistan, and ASEAN

We recommend Suzuki Motor as our global top pick in the automotive sector. The company has over 50% market share (Fig. 125) in India and Pakistan – markets expected to see the strongest growth over the next 10 years as passenger vehicles uptake gets into full swing. Suzuki has a strong advantage in the region due to the popularity of its product with car buyers and the extensive reach of its sales network, which it can leverage to benefit from market growth, more so than other competitors. In India, Suzuki is currently constrained by capacity, but it should be able to grow sales further once its second production line becomes operational in early 2019, shortly followed by the third production line in mid-2020. Unlike Suzuki, it is very difficult for other global carmakers to optimize their product portfolio just for Indian consumers and Indian market regulations (such as sub-4 meter vehicles that are eligible for tax benefits). So Suzuki's dominance is likely to continue. Suzuki is a market leader in Pakistan's four-wheeler (4W) market as well. Pakistan is actually the first country where Suzuki started 4W production outside Japan in 1975. Pakistan 4W market grew 18% y-y to 249k units in 2017. In the first four months of 2018, total market grew by 19% y-y to 98k units, and Suzuki sales grew 27% y-y to 53k units. Pakistan is not an easy market to operate for global carmakers given difficulties in importing parts, complicated tax system, and unreliability of electricity supply, among other factors. These barriers act as a moat around incumbents such as Suzuki. Lastly, we expect Suzuki's volumes to grow in Indonesia, and other ASEAN countries over the medium term, driven by the launch and sales ramp of new models such as the Ertiga.

Fig. 125: Four-wheeler sales by company in Pakistan

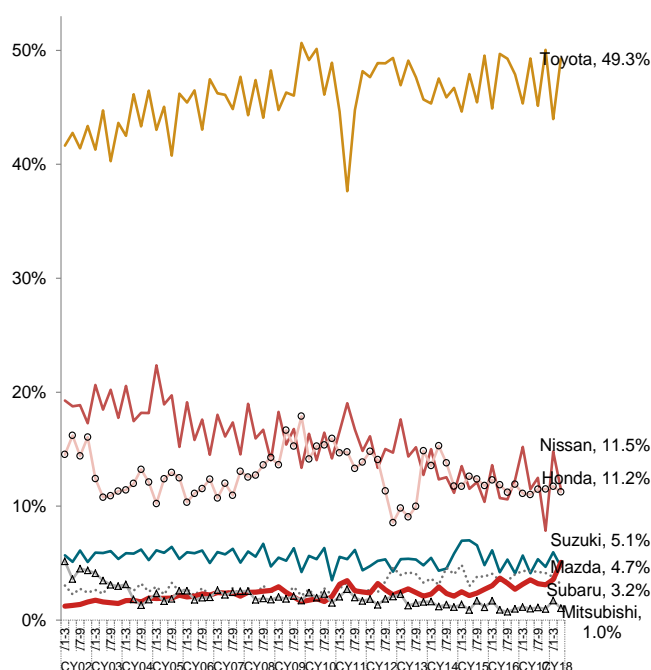


Source: Marklines, Nomura research

## Tie-up with Toyota improves Suzuki's long-term competitiveness

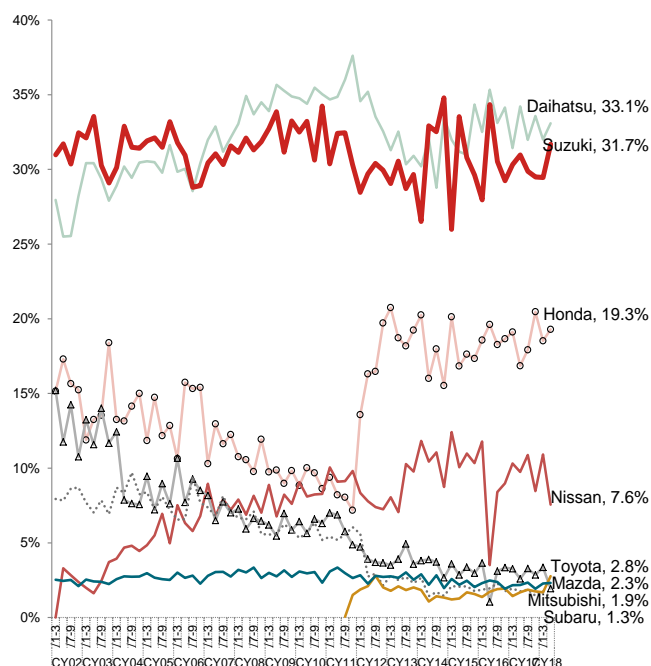
After concluding a memorandum of understanding on 6 February 2017, Suzuki and Toyota have already collaborated in a number of areas, including mutual supply of vehicles in India. It is against this backdrop that the two companies have now begun discussions to develop new products and markets, and made an official announcement to this effect on 25 May 2018. The key takeaways from their joint announcement are as follows. 1) Denso and Toyota would provide technical support to Suzuki for developing compact, ultrahigh-efficiency powertrains. 2) Toyota Kirloskar Motor will produce vehicles developed by Suzuki, which will be sold in India under both Toyota and Suzuki badges. 3) Vehicles developed by Suzuki, including the abovementioned models, would be exported to African markets from India by both Toyota and Suzuki, and then sold using both companies' sales networks. The two companies would also work together to improve logistics and services jointly in Africa.

Fig. 126: Japan registered vehicle market share



Source: JAMA, Nomura research

Fig. 127: Japan mini-vehicle market share



Source: JAMA, Nomura research

In our view, a closer relationship between Suzuki (which has a roughly 50% market share in India and Pakistan, and has strength in inexpensive compact cars) and Toyota (which is the industry leader in advanced technologies such as autonomous driving and hybrids) would have positive implications for both companies. For the powertrains mentioned in (1) above, Toyota leads the industry in the development of engines optimized for hybrid powertrains, and has already released 2L and 2.5L gasoline engines for hybrid vehicles with world-leading 41% thermal efficiency. As Suzuki works to develop compact hybrids, access to Toyota's expertise should give it substantial competitive advantages.

Next, capacity utilization has been persistently low at Toyota's Indian production facilities, and conversely Suzuki suffered from a shortage of production capacity. The production of Suzuki-developed vehicles at Toyota's Indian plants as described in (2) above therefore strikes us as a win-win solution for both parties. April to June 2018 production at Toyota's Indian plants was 51k units (150k units annualized), equating to only around 50% of its annual production capacity of 310k vehicles.

Lastly, the development of the African market mentioned in (3) above is a shrewd partnership, both because it's a market that is expected to grow considerably over the medium term and because the Japanese automakers need to find ways to counter the Chinese automakers, which have been using low-priced vehicles to gradually grow their market share. If compact vehicles developed by Suzuki can be sold using Toyota's sales network via these cooperative efforts not only in India but also in other emerging markets, we think this could lead to earnings expansion and increased market share for both companies, and we thus see this partnership as positive.

## **Guidance is cautious on boost from increased production in India and Indonesia**

Management projects a 9% y-y decline in operating profits in FY19/3, assuming USD/JPY at 105 and INR/JPY at 1.65, which we think is overly cautious, compared to our forecasted profit growth of 4%. The divergence between our views and those of the company arises mainly because Suzuki management projects growth of 3% y-y in auto sales volumes in Asia in FY19/3, while we forecast growth of 9% (an increase of 180k vehicles), driven by strong demand in India and Indonesia.

## Geely (175 HK, Buy, TP HKD34.4)

CHINA PICK

We recommend Geely as our top pick in the China autos space. We like the company as 1) it has shown fundamental improvements on all fronts in FY17, 2) its newly launched Lynk brand is likely to become an important driver of volumes and profits, and 3) exports are likely to become a longer-term opportunity.

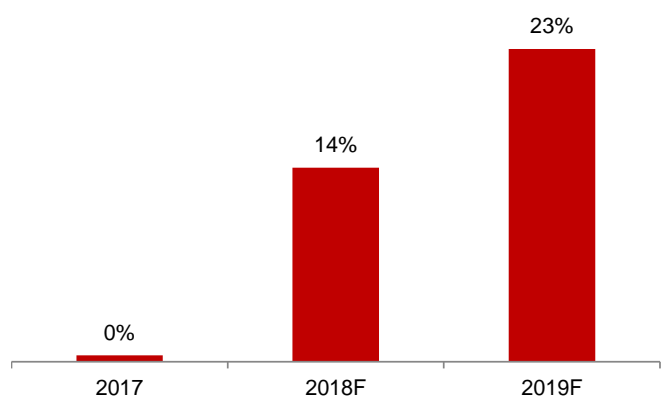
### China's emerging domestic champion

Geely is our top pick in the China auto sector. Our positive stance on Geely is bolstered by its robust FY17 results (net profits up 108% y-y; Fig. 129), which show fundamental improvements on all fronts: sales volume up 63% y-y, ASP up 7% y-y, GPM up 1.1ppt, SG&A expense ratio down 1.9ppt, lower interest outgo following successful loan refinancing, increased dividend payout, and improving working capital.

#### Premium Lynk brand to become one of the growth drivers

Following the launch of the Lynk marque, its first model Lynk 01 currently has an order backlog of over 30k units, equivalent to more than 3 months' output at the current production rate. Geely remains confident that Lynk's supply bottleneck will be gradually resolved as its new Zhangjiakou, China plant is due to start commercial production soon. This should also ensure faster production ramp-up for the new 02 (compact SUV) and 03 (sedan) models to be launched by mid-CY18F. Our sales volume assumptions for Geely are at 1.7mn/2.0mn units (+33%/+20% y-y) in FY18/FY19F respectively. Of this, we expect Lynk to represent 14%/23% respectively (Fig. 128).

Fig. 128: Lynk's sales volumes as % of Geely's: future trends



Source: Company data, Nomura estimates

Fig. 129: Financial analysis

	2016	2017	y-y
Sales of vehicles (CNY m)	52,846	91,283	72.7%
Average unit price (CNY)	68,993	73,550	6.6%
Return on equity	20.9%	30.9%	10ppt
Gross margin	18.3%	19.4%	1.1ppt
Operating margin	11.0%	13.2%	2.2ppt
Selling expenses (% of T/O)	4.7%	4.4%	-0.3ppt
Admin. expenses (% of T/O)	4.8%	3.2%	-1.6ppt
Operating cashflows	8,338	11,994	43.8%
	2016	2016	change
Inventories	3,066	6,027	96.6%
Trade/other receivables	29,041	33,478	15.3%
Trade/ other payables	39,779	47,533	19.5%

Source: Company data, Nomura estimates

#### Exports likely to become a longer-term opportunity

Investors should also take note of the longer-term growth potential from overseas markets. 1) The start of production of the Boyue SUV (rebadged as Atlas for the Russian market) at the new Belarus plant could present an upside surprise for export volumes. 2) Geely plans to formulate its ASEAN market strategy by end-FY18F and has the option to acquire its parent's interests in Proton/Lotus when they turn profitable. 3) Lynk will also enter the US and European markets, leveraging on Volvo's local production plants, thus providing further export opportunities.

## Valuation and risks

Our TP of HKD34.4 is based on 16.6x FY19F P/E (+1SD above mean; CNY1.77), as we believe FY19F will better capture potential upside from the three new Lynk models. The benchmark index for the stock is the MSCI China. Risks include: 1) weaker-than-expected customer demand for new Lynk models; 2) higher-than-expected cost of production for new Lynk models; 3) delays in the launch of new models; and 4) slower-than-expected profit margin improvements.

Fig. 130: New model pipeline

Brand	Model	Type	Version	Expected launch date	
Geely	Vision X1	SUV	New	2017	May
Geely	Vision X3	SUV	New	2017	Q3
Geely	Vision S1	SUV	New	2017	Q4
Geely	Emgrand Xindihao	Sedan	Facelift	2018	Q1
Geely	Emgrand SL	Sedan	New	2018	Q2
Geely	new A-segment SUV	SUV	New	2018	TBC
Geely	new A0-segment SUV	SUV	New	2018	TBC
Geely	new MPV	MPV	New	2018	Q2
Geely	Emgrand EV450	Sedan (EV)	New	2018	Q2
Geely	Borui GE	Sedan (PHEV)	New	2018	Q3
Geely	Emgrand GSe400	SUV (EV)	New	2018	TBC
Lynk & Co	01	SUV	New	2017	Nov
Lynk & Co	02	Crossover	New	2018	May
Lynk & Co	03	Sedan	New	2018	Q4
Lynk & Co	04	TBC	New	2019	TBC
Lynk & Co	05	TBC	New	2019	TBC

Source: Company data, Nomura estimates

Fig. 131: Monthly and annual sales volumes

(units)	2016	Jan 17	Feb 17	Mar 17	Apr 17	May 17	Jun 17	Jul 17	Aug 17	Sep 17	Oct 17	Nov 17	Dec 17	2017	Jan 18	Feb 18	Mar 18	Apr 18	2018F	2019F
Export	21,779	994	653	540	648	207	804	1,016	2,054	2,058	758	1,182	329	11,243	1,054	525	1,586	1,860	14,400	18,000
Domestic	744,072	101,659	88,323	86,412	86,079	76,339	87,969	90,088	94,451	106,814	124,360	140,083	153,296	1,235,873	154,035	109,718	119,378	126,957	1,648,600	1,983,000
Emgrand EC7	240,962	26,136	20,489	20,460	16,069	14,211	15,762	16,668	16,752	21,138	24,813	24,578	22,090	239,166	25,597	17,307	19,830	19,941	252,000	270,000
Emgrand GL	30,037	10,208	8,027	8,147	9,073	7,214	8,218	8,396	10,926	12,091	13,513	14,211	14,088	124,112	15,163	10,105	12,352	12,749	132,000	144,000
Emgrand GS	60,521	10,333	8,060	8,295	9,119	10,026	12,428	12,863	13,053	14,007	16,063	17,487	18,850	150,584	20,087	11,008	12,243	12,425	162,000	174,000
Borui GC9	51,957	4,042	3,017	3,338	3,058	3,046	3,510	3,017	3,056	3,828	4,018	4,103	4,727	42,760	3,293	2,512	3,008	3,323	48,000	54,000
Boyue	109,080	20,147	20,137	20,461	21,263	21,142	21,282	21,872	22,037	26,317	30,138	30,884	31,205	286,885	30,381	20,238	21,919	23,025	312,000	360,000
Vision	137,687	14,716	14,166	11,080	11,979	7,098	10,688	10,863	11,025	11,192	11,571	16,103	14,524	145,005	20,055	14,968	11,628	12,417	150,000	156,000
Vision SUV	64,621	10,226	10,014	9,755	9,634	8,040	10,621	9,122	10,058	10,101	11,214	13,647	14,610	127,042	10,004	10,251	10,046	10,983	120,000	126,000
Vision X1						104	1,843	2,772	3,001	3,004	3,061	3,320	3,371	20,476	2,503	1,056	1,512	575	30,000	30,000
Vision X3									363	3,032	7,007	10,102	10,729	31,233	10,457	10,087	10,366	10,965	120,000	126,000
Vision S1												1,716	9,049	10,765	10,303	6,491	7,489	7,841	90,000	96,000
Lynk 01													6,012		6,173	4,012	8,507	9,079	111,000	180,000
Lynk 02																			58,000	132,000
Lynk 03																			66,000	144,000
<b>Total</b>	<b>765,851</b>	<b>102,653</b>	<b>88,976</b>	<b>86,952</b>	<b>86,727</b>	<b>76,546</b>	<b>88,773</b>	<b>91,104</b>	<b>96,505</b>	<b>108,872</b>	<b>125,118</b>	<b>141,265</b>	<b>153,625</b>	<b>1,247,116</b>	<b>155,089</b>	<b>110,243</b>	<b>120,964</b>	<b>128,817</b>	<b>1,663,000</b>	<b>2,001,000</b>
<b>y-y growth</b>																				
Export	-15.4%	-50.6%	-68.3%	-68.5%	-71.8%	-87.3%	-15.8%	-53.9%	-21.4%	-0.8%	-32.3%	-31.3%	-76.2%	-48.4%	6.0%	-19.6%	193.7%	187.0%	28.1%	25.0%
Domestic	53.7%	75.0%	182.5%	79.3%	103.5%	72.6%	92.8%	94.5%	85.1%	43.4%	30.9%	39.1%	43.5%	66.1%	51.5%	24.2%	38.1%	47.5%	33.4%	20.3%
Emgrand EC7	17.8%	16.1%	46.0%	1.9%	1.7%	-5.9%	0.8%	16.4%	23.9%	4.7%	-0.8%	-1.9%	-1.9%	-0.7%	-2.1%	-15.5%	-3.1%	24.1%	5.4%	7.1%
Emgrand GL									320.7%	91.7%	42.0%	39.4%	313.2%	48.5%	25.9%	51.6%	40.5%	6.4%	9.1%	
Emgrand GS	n.a	n.a	n.a	n.a	n.a	n.a	n.a	91.2%	73.1%	64.3%	60.2%	73.5%	84.4%	148.8%	94.4%	36.6%	47.6%	36.3%	7.6%	7.4%
Borui GC9	59.5%	-32.6%	15.4%	-23.1%	-31.6%	-24.3%	5.2%	-11.3%	-14.4%	-14.5%	-18.6%	-20.7%	-15.7%	-17.7%	-18.5%	-16.7%	-9.9%	8.7%	12.3%	12.5%
Boyue	n.a	n.a	n.a	n.a	n.a	249.5%	161.4%	116.0%	117.5%	87.3%	79.6%	67.8%	53.1%	163.0%	50.8%	0.5%	7.1%	8.3%	8.8%	15.4%
Vision	15.7%	0.5%	69.1%	-14.2%	-0.4%	-34.8%	17.9%	32.3%	33.1%	0.7%	-26.4%	11.8%	20.8%	5.3%	36.3%	5.7%	4.9%	3.7%	3.4%	4.0%
Vision SUV	12.3%	n.a	n.a	n.a	n.a	n.a	n.a	n.a	42.6%	0.4%	3.2%	24.7%	38.8%	96.6%	-2.2%	2.4%	3.0%	14.0%	-5.5%	5.0%
Vision X1						n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	46.5%	0.0%
Vision X3								n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	284.2%	5.0%
Vision S1															n.a	n.a	n.a	n.a	736.0%	6.7%
Lynk 01															n.a	n.a	n.a	n.a	1746.3%	62.2%
Lynk 02																				127.6%
Lynk 03																				118.2%
<b>Total</b>	<b>50.2%</b>	<b>70.8%</b>	<b>167.0%</b>	<b>74.2%</b>	<b>94.5%</b>	<b>66.9%</b>	<b>90.6%</b>	<b>87.8%</b>	<b>79.9%</b>	<b>42.2%</b>	<b>30.1%</b>	<b>37.9%</b>	<b>41.9%</b>	<b>62.8%</b>	<b>51.1%</b>	<b>23.9%</b>	<b>39.1%</b>	<b>48.5%</b>	<b>33.3%</b>	<b>20.3%</b>

Source: Company data, Nomura estimates



# Hyundai Motor (005380 KS, Buy, TP KRW180,000)

KOREA PICK

*Hyundai Motor (HMC) is our top pick in the Korean auto sector. While there could be some near-term pain due to its aging model line-up in the US and low capacity utilization, we urge investors to look beyond that as we expect earnings to improve sequentially driven by 1) higher capacity utilization in Korea and the US, and 2) launch of the next-gen Santa Fe, a high-volume SUV, in the US. Additionally, we think HMC is on track to increase dividend payouts from FY19F, making the stock more attractive.*

## Earnings to improve sequentially: we forecast 2H18 OP to grow 30% y-y

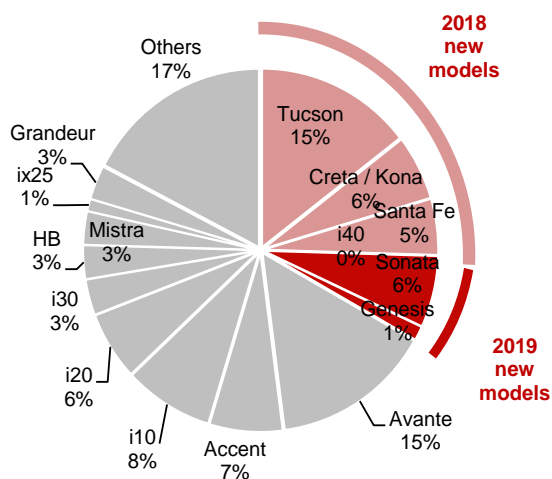
We expect Hyundai Motor's (HMC) earnings to improve sequentially, driven by Korea/China (starting from 2Q18) and the US (from 2H18). For the rest of 2018, we think plant utilization is key to an earnings recovery. We expect capacity utilization in Korea and the US to recover from 2Q and 3Q respectively, and estimate 2H18 OP to grow 30% y-y. Furthermore, we forecast HMC to raise shareholder returns given its largest shareholder Mobis may need cash in order to achieve its long-term revenue target of KRW44bn by 2025F, vs. KRW25bn currently. Given Mobis has set out a growth plan of expanding supplies to non-Hyundai automakers and increasing investment in its new businesses, we think Mobis would regard HMC as an important source of cash.

## Patience needed near term; 2019-20F dividend payout could rise

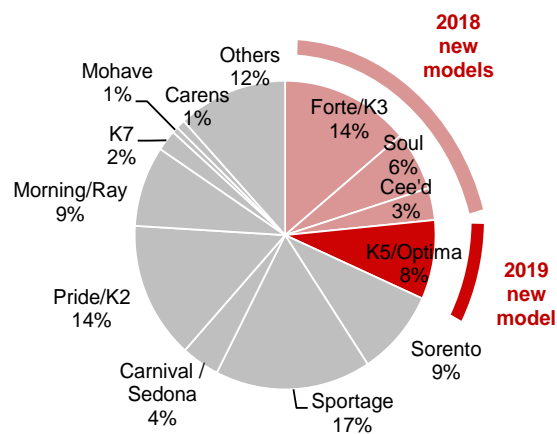
HMC's DPS has been flat at KRW4,000 since 2015. While 2018F DPS is likely to remain flat due to earnings pressure, we estimate DPS to rise to KRW5,000 and KRW5,500 in FY19F and FY20F respectively, influenced by minority shareholders' pressure and group company Mobis' need for cash. In order for Mobis to achieve its targeted 8% revenue CAGR to 2025F, we think the company needs to continue to increase capex and expand its overseas presence.

## US earnings to bottom out in 2H18 following the launch of the next-gen Santa Fe

With weak US sales volumes and high incentives, Hyundai Motor America's (HMA) net losses extended to KRW868bn in FY2017. We believe the company's weak sales momentum is likely to continue in 1H18 due to an ageing model line-up. However we expect HMA to become profitable from 2H18F onwards, following the launch of the next-gen Santa Fe. Santa Fe has the second-largest sales volume for HMC in the US, and represents c.20% of HMA's sales units. We also note that Hyundai is now focusing on the quality of its sales in the US, which is evident from its YTD incentives falling by 11% vs the 4Q17 average. If HMA breaks even, its impact could be as much as 20% of HMC's 2017 EPS, we estimate.

**Fig. 132: HMC global volume splits by model in 2017**

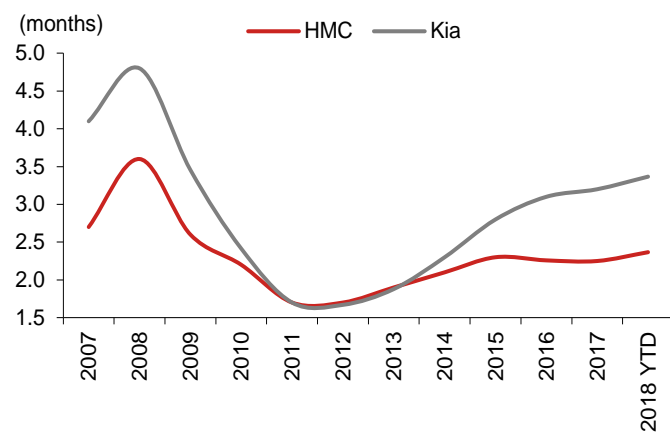
Note: as of 2017; Source: Company data, Nomura research

**Fig. 133: Kia global volume splits by model in 2017**

Note: as of 2017; Source: Company data, Nomura research

**Fig. 134: Korean OEMs' global inventory trends**

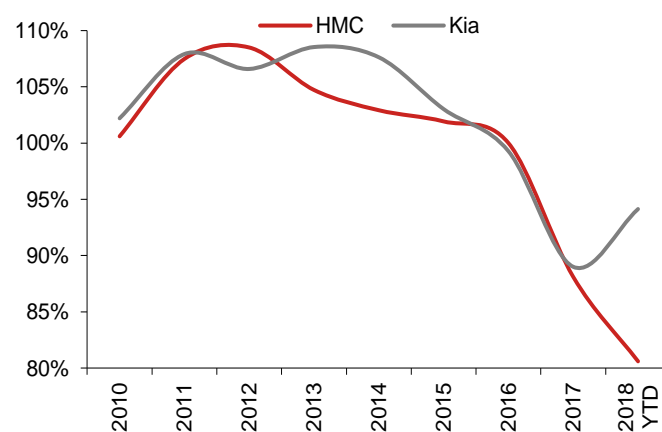
March 2018 YTD



Source: Company data, Nomura research

**Fig. 135: Korean OEMs' global utilization trends**

March 2018 YTD



Source: Company data, Nomura research

Fig. 136: HMC: SOTP valuation

<b>Target Price (KRW)</b>		<b>180,000</b>
Total shares outstanding (mn)		285.5
Implied PE		10.7
<b>HMC SOTP (KRWbn)</b>	<b>HMC's stake</b>	<b>53,196</b>
<b>(1) HMC consolidated - Auto and others</b>		<b>43,133</b>
EBITDA		6,758
Applied EV/EBITDA		4.0x
Net cash of auto business		-16,100
<b>(2) Hyundai Capital</b>		<b>1,832</b>
Equity (KRWbn)		4,386
Applied P/B		0.7x
ROE (%)		7.2%
HMC's stake in Hyundai Capital (%)		60%
<b>(3) Hyundai Card</b>		<b>558</b>
Equity (KRWbn)		3,018
Applied P/B		0.5x
ROE (%)		4.9%
HMC's stake in Hyundai Card (%)		37%
<b>(4) Hyundai Capital America</b>		<b>675</b>
Equity (KRWbn)		4,219
Applied P/B		0.2x
ROE (%)		2.4%
HMC's stake in Hyundai Capital America (%)		80%
<b>(5) China</b>	<b>Book Value</b>	<b>1,937</b>
Beijing-Hyundai Motor Company (BHMC)	50%	1,457
Beijing Hyundai Auto Finance (BHAF)	53%	480
<b>(6) Other non-core asset (after discount)</b>		<b>5,061</b>
<b>a. Available for sale</b>		<b>1,652</b>
<b>Listed companies</b>	<b>Market Value</b>	<b>1,346</b>
Hyundai Steel	7%	501
KAI	0%	0
Hyundai Glovis	5%	316
Hyundai Heavy Industries	3%	237
Others		293
<b>Unlisted companies</b>	<b>Book Value</b>	<b>306</b>
<b>b. Affiliate companies</b>		<b>8,470</b>
<b>Listed companies</b>	<b>Market Value</b>	<b>5,913</b>
Kia Motors	34%	4,264
Hyundai E&C	21%	1,197
Hyundai Wia	25%	365
HMC Investment Securities Co.	27%	87
<b>Unlisted companies</b>	<b>Book Value</b>	<b>2,557</b>
Others		2,557
<b>c. Discount</b>		<b>50%</b>

Source: Company data, Nomura estimates

# Maruti Suzuki (MSIL IN, Buy, TP INR11,125)

INDIA PICK

*Strong demand for new models, benefits from market trend towards premiumisation, and healthy cash flow generation are key positives which make MSIL our top pick in the Indian auto sector.*

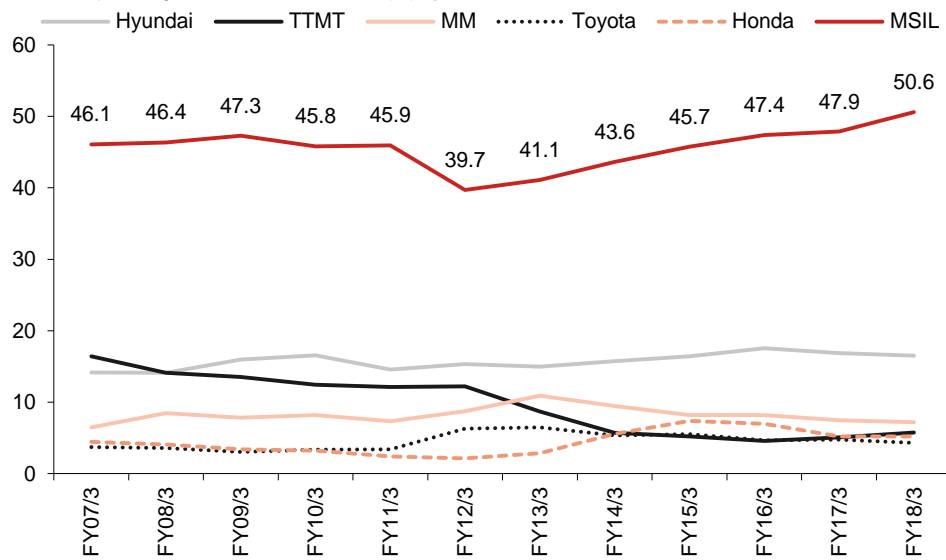
## Strong demand for new models, premiumisation key positives

India's auto industry has significant growth potential and we think it can grow to 15mn units by FY30/3F (from 3.80mn in FY18/3), which is 60% of China's current annual PV sales. MSIL, with around 50% share in the passenger vehicle market (Fig. 137), is a key stock to leverage this theme and remains our top pick in the Indian auto sector. We expect volumes to grow strongly, at around 12% CAGR over FY18/3-21/3F, underpinned by: 1) strong demand for recent launches like the new Swift/Dzire, Baleno, and Brezza (110k-unit order book as of April 2018), 2) robust new model pipeline, and 3) further uptick in industry demand. Over a 5-year period ending in FY18/3, MSIL's volume CAGR of 9% was significantly higher than that of the rest of the industry at 1%. Moreover, based on our analysis of the industry's new model cycle (Fig. 140), we think that competitive intensity is likely to remain low over next couple of years, benefiting MSIL.

Also, as MSIL's local R&D center scales up and the company implements its plans of significantly expanding production capacity and sales network over the medium term, we think the competition faces a formidable opponent. Suzuki-Toyota's tie-up to mutually supply models will allow Suzuki's to expand into the premium sedan segment (10% of industry) and insure it from technological shifts to alternative/electrified powertrains where Toyota is well-positioned.

**Fig. 137: MSIL's market share in the passenger vehicle industry continues to grow**

Domestic passenger vehicle market share (%) by automaker

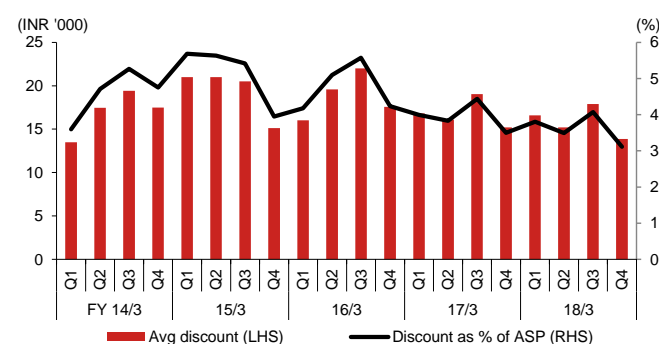


Source: SIAM, Nomura research

## Cash flow generation to remain strong

We expect MSIL's EBIT margins to improve from ~11.7% in FY18/3 to 12.8% in FY21/3, as the Gujarat plant (Suzuki Motor Gujarat [SMG]) ramps up and its supply chain localizes. We also note that MSIL and parent Suzuki agreed to lower royalty payments to Suzuki. According to the revised terms, 1) royalty payments for new models starting with Ignis (including Swift and Dzire) will be in INR (previously JPY), 2) local R&D will be reimbursed with some margin benefit, and 3) royalty rates will be lower if volumes exceed a particular threshold. Our scenario analysis (Fig. 139) indicates 50-100bps benefit in royalty rates (on vehicle prices) over the next few years would improve margins by 40-80bps and lead to 3-6% higher EBITDA compared to our current estimates. Lastly a) platform consolidation from 8 currently to around 4 over the next few years, and b) lower discounting, could lead to further margin upsides over the medium term.

**Fig. 138: Average discounts for MSIL trending down**



Source: Nomura estimates

**Fig. 139: Scenario analysis with lower royalty rates**

50-100 bps lower royalty rate could boost EBITDA by 3-6%

Indexed to 100	Current (FY20/3)	Scenario 1	% change	Scenario 2	% change
Revenues	100	100		100	
Royalty	5.3	4.9		4.4	
% of total sales	5.3%	4.9%	-45 bps	4.4%	-90 bps
% of vehicle sales	5.9%	5.4%	-50 bps	4.9%	-100 bps
Others	79.6	79.6		79.6	
EBITDA	15.1	15.6	3.0%	16.0	6.0%
	15.1%	15.6%		16.0%	

Source: Nomura estimates

## Valuation

Overall, we expect MSIL's EPS to grow at a CAGR of 21% over FY18/3-21/3. With Suzuki shouldering the incremental investments for capacity expansion, we expect MSIL's FCF generation to remain strong, helping sustain premium multiples. MSIL has raised its dividend payout ratio to 31% in FY18/3, from 25% in FY16/3. We believe there is scope for this to rise even further, which would be another catalyst for the stock. We value MSIL at 25x average FY20/3F-FY21/3F consolidated EPS of INR445.

Fig. 140: Passenger vehicle model launch pipeline

		2018	2019	2020
Entry	MSIL	new Alto (2H)		
	Hyundai	new Santro (2H)		
Hatchback	MSIL	Wagon R (5/7 Seater)		
	MSIL		New Celerio	
	Hyundai			New Elite i20
	TTMT		Premium model (45X) on Alpha (AMP) platform	
	Honda		Jazz refresh	
	MG Motors			Small car
Compact UV	Hyundai		Carlino (Qxi)	
	TTMT			Compact UV
	Mahindra	S201 (based on Tivoli)		
	Datsun	Go-Cross		
	Honda	HR-V Crossover		
	Renault		Compact SUV (HBC)	
	Kia		Compact SUV	
	MG Motors		ZS (Compact UV)	
Compact Sedan	Honda	Amaze refresh		
	Renault			Compact Sedan (LBC)
	TTMT			Compact sedan
	Kia		Compact Sedan	
SUV	TTMT		H5X SUV based on Omega (LR) platform	
	MSIL			7 Seater SUV
	Renault	7 Seater Crossover (RBC)		
	Kia		SP	
	MG Motors		SUV	
MPV	Hyundai	Codename IP		
	MSIL	New Ertiga		
	Mahindra	U321, targeting Innova (1Q)		
	MG Motors			Small MPV
Sedan	Toyota	Yaris		

Source: Nomura estimates

Tesla has a distinct flair for designing luxury cars that run on electricity. As traditional auto analysts, we recognize the short-term execution risks in manufacturing the Model 3, given: 1) Tesla's lack of experience in managing an automotive supply and distribution chain for high-volume vehicles; and 2) its track record of missing manufacturing milestones. Our US technology research colleagues at Instinet, however, see Tesla as a technology company first and foremost, albeit one that happens to manufacture and sell EVs and renewable energy products. Tesla has a large market opportunity ahead, and an increasingly well-defined product pipeline capable of capturing meaningful global share, according to them. TSLA (covered by Instinet technology analyst Romit Shah) remains a top US pick. We currently rate the Detroit Three at Neutral.

## Tesla (TSLA US, Buy, TP \$420)

### We continue to see exponential revenue growth ahead

We expect Tesla's revenues to multiply over the next few years, growing from \$12bn in 2017 to \$52bn by 2021F, equating to a four-year CAGR of 45%, easily one of the fastest ever by a multibillion-dollar company. We believe that Tesla: (1) is making meaningful progress in ramping up Model 3 production, (2) is in the midst of expanding its total addressable market by as much as 20x in the coming years; (3) remains a technology and cost leader in EV batteries; and (4) could generate over \$10bn in EBITDA by 2022.

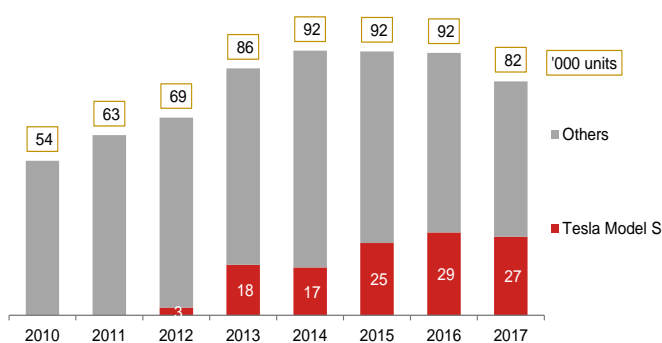
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### Investor focus about to shift from production issues and solvency to market opportunity and profitability

We like Tesla's continuous progress on Model 3 production. We believe that Tesla reached peak production of 3k to 4k units per week in May, putting Tesla's 2Q18-end target of 5k units per week well within reach, in our view. As output scales up, operating leverage benefits and cost efficiencies should rapidly improve Model 3 margins, making Tesla cash flow positive by the end of 2018, and thereby alleviate solvency concerns.

**Fig. 141: Tesla's share in US premium luxury sedan market**

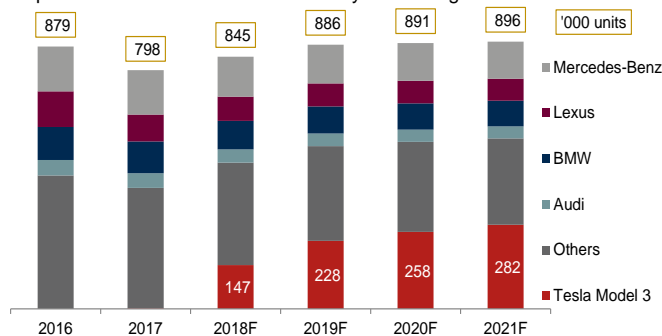


Note: Tesla covered by Romit Shah and Kellan Grenier, Instinet, LLC.

Source: Ward's Auto, company data, Nomura research

**Fig. 142: Model 3 market opportunity in the US**

Represents US middle and lower luxury sedan segments



Note: Tesla covered by Romit Shah and Kellan Grenier, Instinet, LLC.

Source: Ward's Auto, company data, Nomura research, Instinet estimates



## **Model 3 to spearhead entry into “luxury mass-market”**

Model S commands a considerable share of the US large premium luxury segment. We see a much larger (>10x) market opportunity for the Model 3 in the US (Fig. 141 and Fig. 142). Additionally, we expect global demand for the Model 3 to stay robust over the vehicle's life-cycle. The addition of the Model Y SUV to the future line-up should further expand Tesla's addressable market, taking it to more than 20x the current opportunity for Model S and Model X. Favourable government policies in a large market such as China would be tailwinds.

## **Benefits from scale, technology, and cost leadership in EV batteries**

We believe Tesla's lead in batteries is driven by three primary factors: vertical scale, pack design expertise, and cell chemistry. With the Gigafactory, Tesla can produce batteries at a scale that is still unmatched by other global automakers. Leveraging over 10 years' experience in commercializing Panasonic's cylindrical cells, the Model 3 battery packs are Tesla's most efficient yet. Furthermore, Tesla's close relationship with Panasonic provides access to the most efficient cell chemistries in the industry; with the latest packs featuring the “cobalt light” 2170 NCA cells. Our research shows that this chemistry remains one of the most energy-dense per dollar amongst available alternatives.

## **Tesla could generate more than \$10bn EBITDA by 2022**

There is considerable potential in Tesla's operating model longer term, in our view. We believe that with strong execution, Tesla could generate gross margins in the mid- to high-20% range and operating margins of over 10% by the early 2020s. On 2022F revenue of \$65bn we forecast EBITDA of \$11.7bn.

## **Valuation**

We stay positive on Tesla shares and believe that the recent volatility offers an attractive buying opportunity. We value Tesla at 2.2x EV to 2021E sales – in line with a weighted blended average of our diversified comp group – and maintain a \$420 target price.

## Appendix 1: Calculating domestic content for NAFTA-made vehicles

Our analysis hinges on our ability to estimate the current levels of regional content for NAFTA-made vehicles (imports from non-NAFTA countries are not affected), at the OEM-level with a reasonable level of accuracy. This is not an easy task, given that domestic content data for evaluating NAFTA compliance, by automaker, is not publicly available. So, we turned to the American Automotive Labeling Act (AALA) which stipulates that each new passenger vehicle sold in the US must be labeled (Fig. 144) with certain items of information. The five items which interest us the most are as follows:

- The percentage of US/Canada parts content (value basis)
- The names of any other (max two) countries which individually contribute 15% or more of the parts content, and their corresponding percentage contribution
- The final assembly country of the vehicle
- The country of origin of the engine
- The country of origin of the transmission

This data is publicly available, and the NHTSA provides an annual AALA report, collating all the data submitted by automakers on a model-year (MY) basis. These AALA reports provided us with sufficient information to conclude our domestic content analysis for vehicles made in North America. We made some adjustments and assumptions, as detailed below, given that the reporting under the AALA regulation is somewhat different from that under the NAFTA regulations (Fig. 143).

**Fig. 143: Comparison of rules used to determine domestic content in vehicles under NAFTA and AALA regulations**

Regulation	NAFTA	AALA
<i>Rule applies to:</i>	<ul style="list-style-type: none"> <li>• Entire vehicle</li> <li>• All vehicle categories</li> </ul>	<ul style="list-style-type: none"> <li>• Parts only</li> <li>• Passenger vehicles only</li> <li>• Separate, less detailed labeling rules for assembly, engine, and transmission</li> </ul>
<i>Method and basis for content determination:</i>	<ul style="list-style-type: none"> <li>• Net cost basis (excluding selling, marketing, shipping)</li> <li>• Calculated by averaging either of:               <ul style="list-style-type: none"> <li>- same model line, in same vehicle class, built at same plant</li> <li>- same vehicle class, in same plant</li> <li>- same model line, in same country</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Transaction value</li> <li>• Calculated on carline basis, rather than for each individual vehicle and may be rounded to nearest 5%</li> </ul>
<i>Domestic content may be sourced from:</i>	<ul style="list-style-type: none"> <li>• US, Canada, and Mexico</li> </ul>	<ul style="list-style-type: none"> <li>• US and Canada</li> </ul>
<i>Data publicly available?</i>	<ul style="list-style-type: none"> <li>• <b>No</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Yes</b></li> </ul>
<i>Reporting requirements:</i>	<ul style="list-style-type: none"> <li>• Upon import; to Customs</li> </ul>	<ul style="list-style-type: none"> <li>• Data must be submitted to NHTSA by date first vehicle of carline is offered for sale to ultimate buyer</li> </ul>

Source: Center for Automotive Research, Nomura research

### Adjustments, assumptions, data caveats and limitations of our analysis:

- NAFTA content is calculated on a net cost basis for the entire vehicle, excluding shipping, marketing, and other costs. The AALA reports provide the percent content values by origin for parts only, excluding the engine and transmission (as these two components have separate, less detailed origin labels – see Fig. 144), and does not include the value added by vehicle assembly.
- To align the AALA values with NAFTA, we first assumed that an engine constitutes 14% of a vehicle's total cost on average, transmission – 7%, labor and assembly – 6%, and body, interior, electronics, and other parts – 50%. (The balance 23% can be attributed to profit margins, capital, R&D, and other expenses, which are outside NAFTA's domestic content considerations). The

above breakdown is based on the results of similar auto industry studies in the past.

- Next we rebased the above ratios to total 100%: engine – 18%, transmission – 9%, assembly – 8%, and other parts content – 65%. We applied these weights to the AALA data for vehicles with final assembly locations marked as US/Canada or Mexico, giving us our origin-based weighted average content by carline, after estimating the engine and transmission sources as explained next.
- For carlines with multiple engine and transmission variants sourced from NAFTA and non-NAFTA countries, we relied on *Ward's Auto* data for powertrain installations on MY2017 vehicles in the US. This gave us a good idea about the split between the engine variants. Once we had the engine splits, we compared them with the most likely transmissions that a specific engine could be mated to, thus giving us the origin split for transmissions.
- For cases where we have the same spec'd engine (or transmission) being manufactured in two different countries, we assigned equal weights to both locations, if no additional information was available. For high-volume vehicles, if the main engine variant could be mated to either an automatic (AT) or a manual transmission (MT), we chose the AT (sales of MT-equipped vehicles are minimal, unless they are sports cars).
- Under AALA, Mexico is classified as a "foreign" country, while under NAFTA, it falls in the "domestic" category. Also, under AALA requirements, if a foreign country's individual content contribution is less than 15%, then it does not have to (but may) be mentioned on the AALA label. Thus, due to the nature of the AALA disclosures, some Mexican content might be classified as "others" in our analysis. Considering the ultimate goal of our analysis, we believe that this discrepancy does not materially influence our conclusions

Fig. 144: Sample AALA label (red boxed area) as seen on a Monroney sticker

<b>GOVERNMENT 5-STAR SAFETY RATINGS</b> <b>Overall Vehicle Score</b> ★★★★★ <small>Based on the combined ratings of frontal, side and rollover. Should ONLY be compared to other vehicles of similar size and weight.</small>		<b>PARTS CONTENT INFORMATION</b> <b>FOR VEHICLES IN THIS CARLINE:</b> <b>U.S./CANADIAN PARTS CONTENT: 62%</b> <b>MAJOR SOURCES OF FOREIGN PARTS CONTENT: MEXICO 16%</b>  <small>NOTE: PARTS CONTENT DOES NOT INCLUDE FINAL ASSEMBLY, DISTRIBUTION, OR OTHER NON-PARTS COSTS.</small> <b>FOR THIS VEHICLE:</b> <b>FINAL ASSEMBLY POINT:</b> OSHAWA, ON CANADA <b>COUNTRY OF ORIGIN:</b> ENGINE: MEXICO TRANSMISSION: UNITED STATES	<small>This label has been applied pursuant to Federal law - Do not remove prior to delivery to the ultimate purchaser. Includes Manufacturer's Recommended Pre-Delivery Service. Does not include dealer installed options and accessories not listed above, local taxes or license fees.</small>
<b>Frontal Crash</b> ★★★★★ <small>Based on the risk of injury in a frontal impact. Should ONLY be compared to other vehicles of similar size and weight.</small>			
<b>Side Crash</b> ★★★★★ <small>Based on the risk of injury in a side impact.</small>			
<b>Rollover</b> ★★★★★ <small>Based on the risk of rollover in a single-vehicle crash.</small>			
<small>Star ratings range from 1 to 5 stars (★★★★★) with 5 being the highest. Source: National Highway Traffic Safety Administration (NHTSA) www.safercar.gov or 1-888-327-4236</small>			
<b>on 4G LTE</b> <b>Equipped with the safety and connectivity of OnStar!</b> <small>Visit onstar.com for details.</small>		<small>ORDER NO RETCKSD SALES CODE E SALES MODEL CODE 10Y18 DEALER NO 25102 FINAL ASSEMBLY: OSHAWA, ON CANADA VIN 2G1125S39F9100415 DEALER TO WHOM DELIVERED GENERAL MOTORS LLC PO BOX 100 482-A25-C48 DETROIT, MI 48265-1000</small>	

Source: US News & World Report

## Appendix 2: Global EV market update

### China EV market outlook

Frequent subsidy policy changes by the Chinese government have disrupted industry economics and the profit trajectory of all players along the electric vehicle (EV) value chain (OEM, battery, and components). On the other hand, the adoption of the dual credit policy should continue to ensure solid volume growth for the industry. However, we are concerned that players will find it more difficult to translate the volume growth momentum into earnings, especially when the subsidy policy is scheduled to phase out by end-2020F. Despite this, we expect the share price for BYD (1211 HK, Buy) to rally into 3Q18 on the back of its sequential (q-q) earnings recovery driven by new model launches.

Fig. 145: China's new energy vehicle (NEV) shipments in 2012-20F

Units ('000)	2012	2013	2014	2015	2016	2017	2018F	2019F	2020F
Pure electric	9.6	8.4	42.4	142.9	256.5	467.0	707.7	1,050.8	1,551.7
y-y growth		-12.3%	406.1%	236.9%	79.5%	82.1%	51.5%	48.5%	47.7%
Plug-in hybrid	-	0.2	17.4	63.5	79.6	111.0	140.6	179.4	220.1
y-y growth		0.0%	9030.9%	264.2%	25.4%	39.4%	26.6%	27.6%	22.7%
<b>Total PV shipments</b>	<b>9.6</b>	<b>8.6</b>	<b>59.8</b>	<b>206.4</b>	<b>336.1</b>	<b>578.0</b>	<b>848.2</b>	<b>1,230.2</b>	<b>1,771.9</b>
y-y growth		-10.3%	598.3%	244.9%	62.8%	72.0%	46.8%	45.0%	44.0%
Pure electric	1.7	1.7	13.5	148.0	151.4	184.0	202.0	213.2	231.9
y-y growth		0.5%	697.2%	998.6%	2.3%	21.5%	9.8%	5.6%	8.8%
Plug-in hybrid	5.8	9.1	8.5	24.6	19.3	15.0	12.0	9.4	7.5
y-y growth		57.7%	-6.7%	189.4%	-21.5%	-22.4%	-20.2%	-21.9%	-20.0%
<b>Total CV shipments</b>	<b>7.5</b>	<b>10.8</b>	<b>22.0</b>	<b>172.6</b>	<b>170.8</b>	<b>199.0</b>	<b>214.0</b>	<b>222.6</b>	<b>239.4</b>
y-y growth		44.8%	103.3%	685.3%	-1.1%	16.5%	7.5%	4.0%	7.6%
<b>Total EV shipments</b>	<b>17.0</b>	<b>19.4</b>	<b>81.8</b>	<b>379.0</b>	<b>506.8</b>	<b>777.0</b>	<b>1,062.2</b>	<b>1,452.8</b>	<b>2,011.3</b>
y-y growth		13.9%	322.2%	363.2%	33.7%	53.3%	36.7%	36.8%	38.4%
penetration		0.1%	0.3%	1.5%	1.8%	2.8%	3.8%	4.9%	6.6%

Source: d1EV, ThinkerCar, Nomura estimates

### China's new NEV subsidy policy likely to reshuffle market dynamics

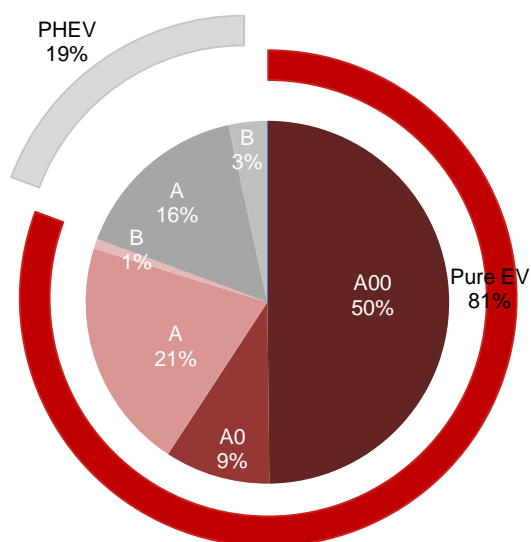
In contrast to across-the-board subsidy cuts in 2017, China's latest NEV subsidy policy makes adjustments based on the NEV type and its driving range. For instance, plug-in hybrids (PHEV) will see a uniform 8% cut to their subsidies, while battery EVs (BEV) with driving range less than 150km will no longer be subsidized (Fig. 146). Subsidies for BEVs with a driving range between 150km to 300km would be cut by 23% to 58%, depending on the driving range. In contrast, longer-range BEVs (driving range more than 300km) will see their subsidies rise by 2% to 14%. In 2017, approximately 60% of China's NEV sales were those of low driving range BEVs (A00 and A0 segment) with ASP ranging from CNY50k to CNY 80k (\$7.8k to \$12.5k) after subsidies, as this segment represented the most economic option for Chinese consumers seeking NEV license plates in cities with vehicle registration restrictions. When the new policy becomes effective from June 12 onwards, the price differential between low and long range BEVs will narrow and the latter is likely to become more appealing to and affordable for car buyers. Thus, we believe battery quality and hence vehicle performance will become more important for prospective buyers.

Fig. 146: 2018F subsidy policy for new energy passenger vehicles in China

All-electric range (km)	2017 subsidy (CNY '000)			2018F subsidy (CNY '000)			Change (CNY'000)			% change		
	National	Local	Total	National	Local	Total	National	Local	Total	National	Local	Total
Pure EV average	37	19	56	28	14	42	-9	-5	-14	-25%	-25%	-25%
100<=R<=150	20	10	30	0	0	0	-20	-10	-30	-100%	-100%	-100%
150<=R<=200	36	18	54	15	8	23	-21	-11	-32	-58%	-58%	-58%
200<=R<=250	36	18	54	24	12	36	-12	-6	-18	-33%	-33%	-33%
250<=R<=300	44	22	66	34	17	51	-10	-5	-15	-23%	-23%	-23%
300<=R<=400	44	22	66	45	23	68	1	1	2	2%	2%	2%
R>=400	44	22	66	50	25	75	6	3	9	14%	14%	14%
PHEV												
R>=50	24	12	36	22	11	33	-2	-1	-3	-8%	-8%	-8%

Source: MoF, Nomura research

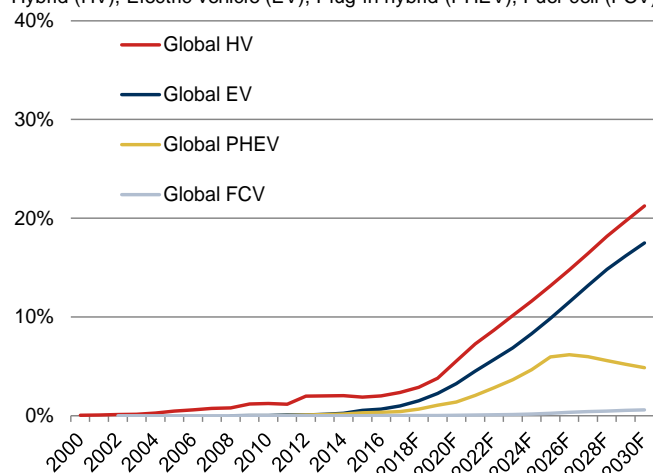
Fig. 147: China new energy passenger vehicle sales by segment and type in 2017



Source: China Auto Market, Nomura research

**Fig. 148: Global auto sales penetration by powertrain type**

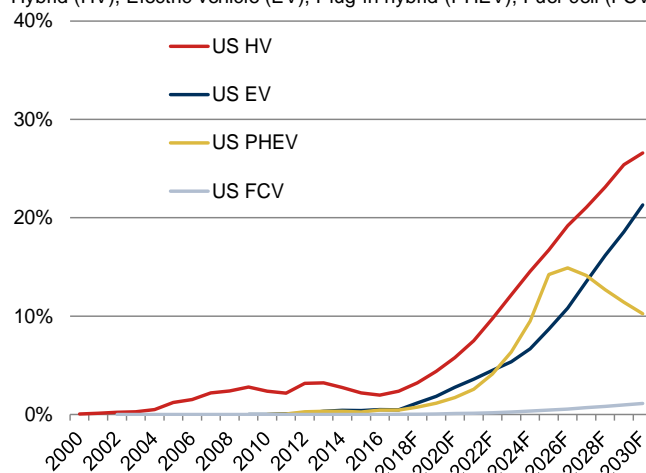
Hybrid (HV), Electric vehicle (EV), Plug-in hybrid (PHEV), Fuel-cell (FCV)



Source: Fourin, JAMA, Marklines, European Environment Agency, ICCT, Ward's Auto, Autodata, Nomura estimates

**Fig. 149: US auto sales penetration by powertrain type**

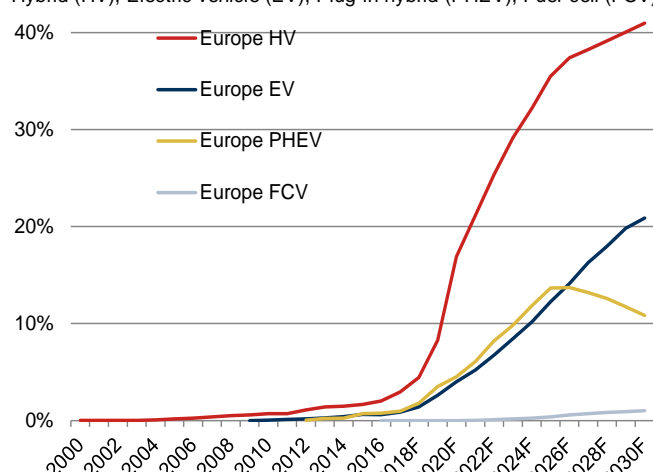
Hybrid (HV), Electric vehicle (EV), Plug-in hybrid (PHEV), Fuel-cell (FCV)



Source: Fourin, Ward's Auto, Autodata, Nomura estimates

**Fig. 150: European auto sales penetration by powertrain type**

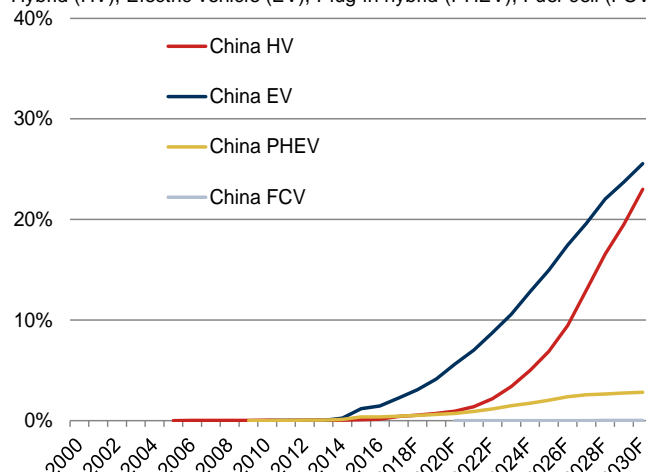
Hybrid (HV), Electric vehicle (EV), Plug-in hybrid (PHEV), Fuel-cell (FCV)



Source: Fourin, European Environment Agency, ICCT, Nomura estimates

**Fig. 151: China auto sales penetration by powertrain type**

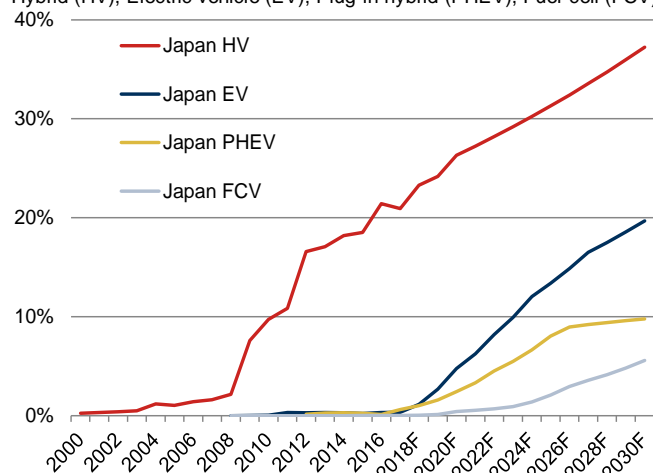
Hybrid (HV), Electric vehicle (EV), Plug-in hybrid (PHEV), Fuel-cell (FCV)



Source: Fourin, Marklines, Nomura estimates

**Fig. 152: Japan auto sales penetration by powertrain type**

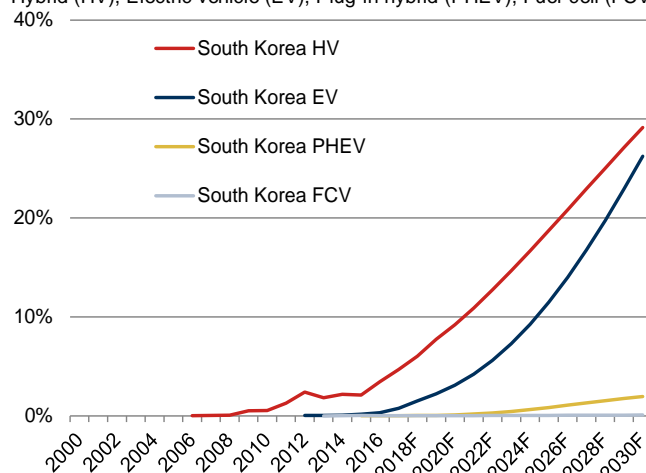
Hybrid (HV), Electric vehicle (EV), Plug-in hybrid (PHEV), Fuel-cell (FCV)



Source: Fourin, JAMA, Nomura estimates

**Fig. 153: S. Korea auto sales penetration by powertrain type**

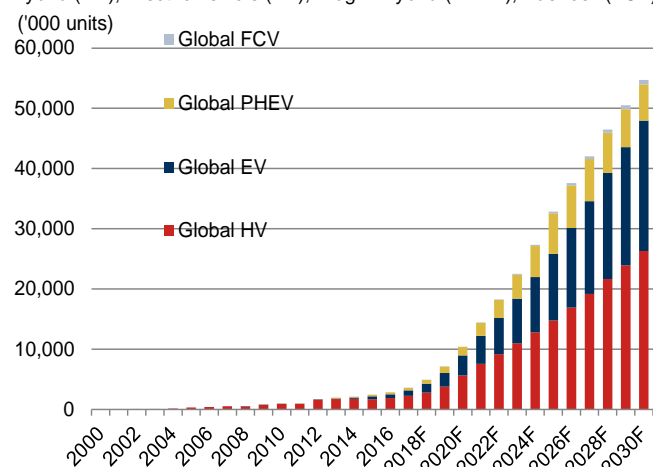
Hybrid (HV), Electric vehicle (EV), Plug-in hybrid (PHEV), Fuel-cell (FCV)



Source: Fourin, Marklines, Nomura estimates

**Fig. 154: Global auto sales volume by powertrain type**

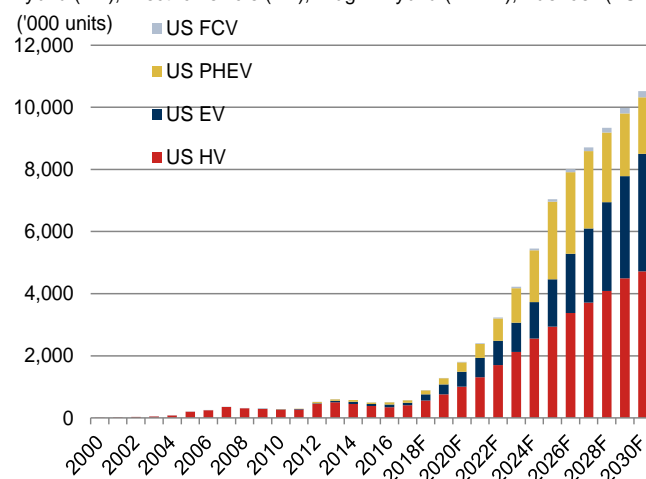
Hybrid (HV), Electric vehicle (EV), Plug-in hybrid (PHEV), Fuel-cell (FCV)



Source: Fourin, JAMA, Marklines, European Environment Agency, ICCT, Ward's Auto, Autodata, Nomura estimates

**Fig. 155: US auto sales volume by powertrain type**

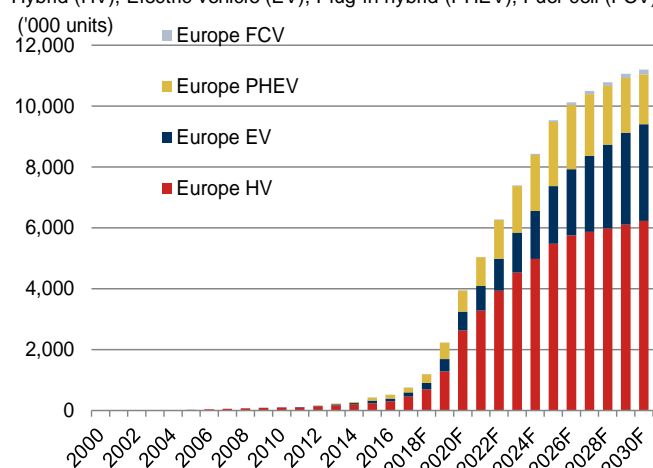
Hybrid (HV), Electric vehicle (EV), Plug-in hybrid (PHEV), Fuel-cell (FCV)



Source: Fourin, Ward's Auto, Autodata, Nomura estimates

**Fig. 156: European auto sales volume by powertrain type**

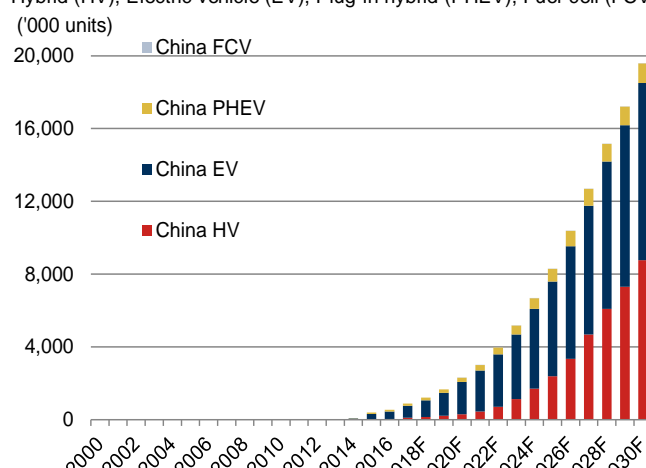
Hybrid (HV), Electric vehicle (EV), Plug-in hybrid (PHEV), Fuel-cell (FCV)



Source: Fourin, European Environment Agency, ICCT, Nomura estimates

**Fig. 157: China auto sales volume by powertrain type**

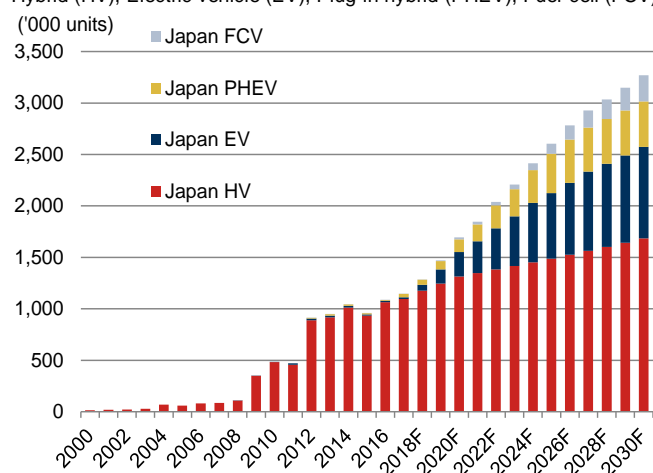
Hybrid (HV), Electric vehicle (EV), Plug-in hybrid (PHEV), Fuel-cell (FCV)



Source: Fourin, Marklines, Nomura estimates

**Fig. 158: Japan auto sales volume by powertrain type**

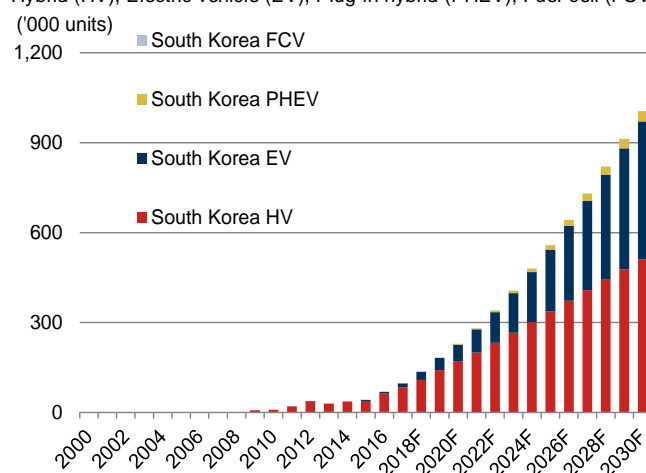
Hybrid (HV), Electric vehicle (EV), Plug-in hybrid (PHEV), Fuel-cell (FCV)



Source: Fourin, JAMA, Nomura estimates

**Fig. 159: S. Korea auto sales volume by powertrain type**

Hybrid (HV), Electric vehicle (EV), Plug-in hybrid (PHEV), Fuel-cell (FCV)



Source: Fourin, Marklines, Nomura estimates



# Appendix A-1

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Brilliance China	1114 HK	HKD 15.26	04-Jun-2018	Buy	Neutral	27-Jul-2017	N/A
BYD	1211 HK	HKD 51.45	04-Jun-2018	Buy	Neutral	19-Apr-2013	N/A
Geely Automobile	175 HK	HKD 23.20	04-Jun-2018	Buy	Neutral	09-Jul-2014	N/A
Great Wall Motor	2333 HK	HKD 7.82	04-Jun-2018	Reduce	Neutral	25-Oct-2016	N/A
Toyota Motor	7203 JP	JPY 7,401	04-Jun-2018	Buy	Neutral	09-Dec-2011	N/A
Suzuki Motor	7269 JP	JPY 6,427	04-Jun-2018	Buy	Neutral	04-Nov-2016	N/A
Astra International	ASII IJ	IDR 7,000	04-Jun-2018	Neutral	Reduce	18-Apr-2018	N/A
Indomobil Sukses International	IMAS IJ	IDR 3,350	04-Jun-2018	Reduce	Not Rated	27-Oct-2014	N/A
Maruti Suzuki	MSIL IN	INR 8750	04-Jun-2018	Buy	Neutral	31-Oct-2012	N/A
Tesla, Inc.	TSLA US	USD 291.82	01-Jun-2018	Buy	Not Rated	03-Oct-2017	Not rated

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