

Automotive Industry in Russia

Desk Research Report
2017



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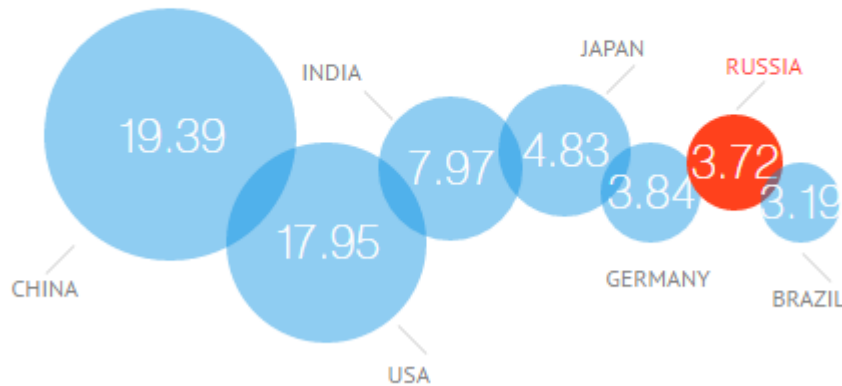
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General Evaluation of Automotive Industry in Russia

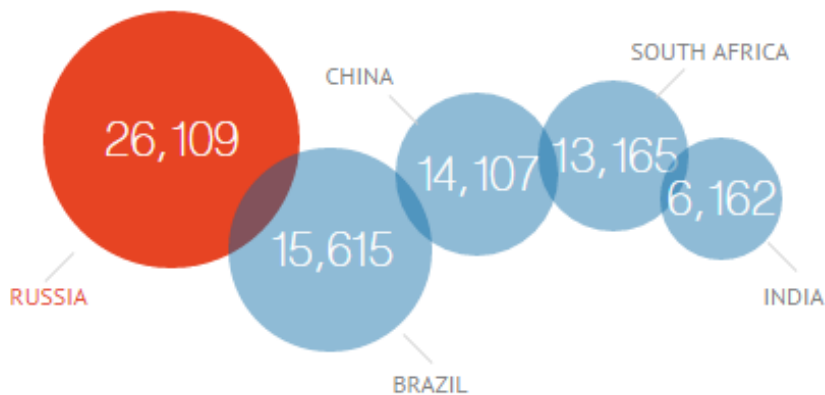


General Economic Situation in Russia

Russia is the 6th largest economy in the world.
GDP purchasing power parity, \$372trillion



Russia has also the highest GDP per capita among the BRICS countries



Russia, with a total area of around 17 million square kilometres, is the largest country. Russia shares its border with Finland in the north, Kazakhstan, Mongolia, China, Azerbaijan and Georgia in the south, Belarus, Ukraine, Poland and the Baltic countries in the west and North Korea to the east. Besides, Japan and the US are in close distance from the eastern coast of Russia. Russia's close proximity to all these nations makes it a favourable investment destination.

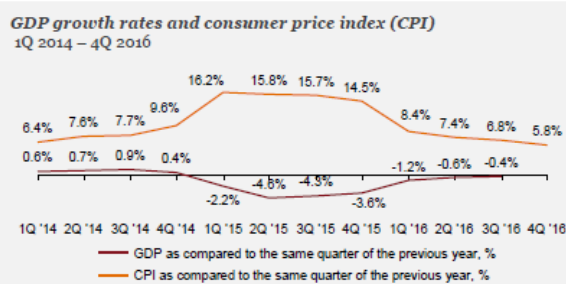
Sources: IMF, Central Bank of Russia, Russian Federal Treasury, Rosstat, Moscow Exchange, UNCTAD, World Economic Forum Global Competitiveness Report

Gross Domestic Product and Consumer Prices in Russia

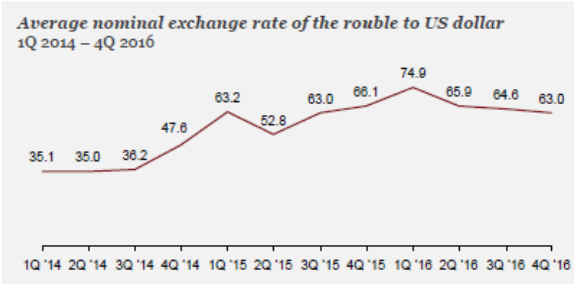
Russian economic indicators were largely affected by the restrictions, coupled with the sudden drop in oil prices. This severely weakened the Russian ruble and increased the cost of borrowing.

On the positive side, the new economic reality made Russian assets more attractive to potential investors. In the coming years, foreign direct investment is expected to surge.

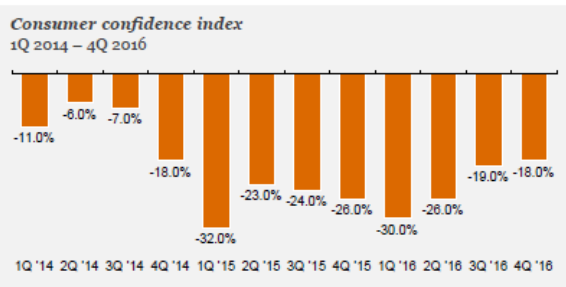
	2011	2012	2013	2014	2015	2016	2017F*	2018F*
Population, million	143.2	143.3	143.4	146.3	146.4	146.7	147.0	147.2
Real GDP growth, %	4.3%	3.4%	1.3%	0.5%	-3.7%	-0.6%	1.0	1.5%
GDP per capita, US\$	14,177	15,016	15,537	14,276	9,279	8,853	10,294	11,140
Inflation, %	8.4%	5.1%	6.8%	7.8%	15.5%	7.1%	5.1%	4.4%
Industrial Production Index, %	5.0%	3.4%	0.4%	1.7%	-4.5%	0.4%	1.1%	1.7%
Brent crude oil price, US\$ per barrel	110.9	112.0	108.9	98.9	52.7	44.1	52.9	56.6
Unemployment rate among economically active population (annual average), %	6.5%	5.5%	5.5%	5.2%	5.6%	5.9%	5.9%	5.8%
Exchange rate RUB/US\$ (annual average)	29.4	30.8	31.8	38.4	60.9	66.8	62.5	63.1
Exchange rate RUB/€ (annual average)	40.9	39.6	42.3	51.0	67.5	74.1	66.1	66.9



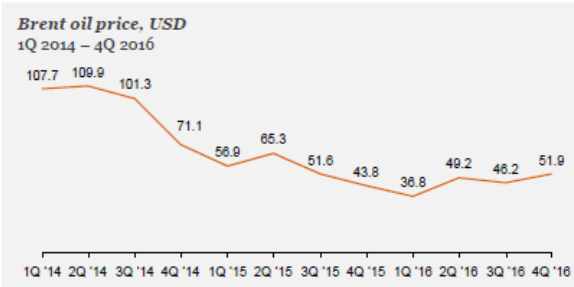
Source: Ministry of Economic Development of the Russian Federation, Rosstat



Source: Central Bank of the Russian Federation

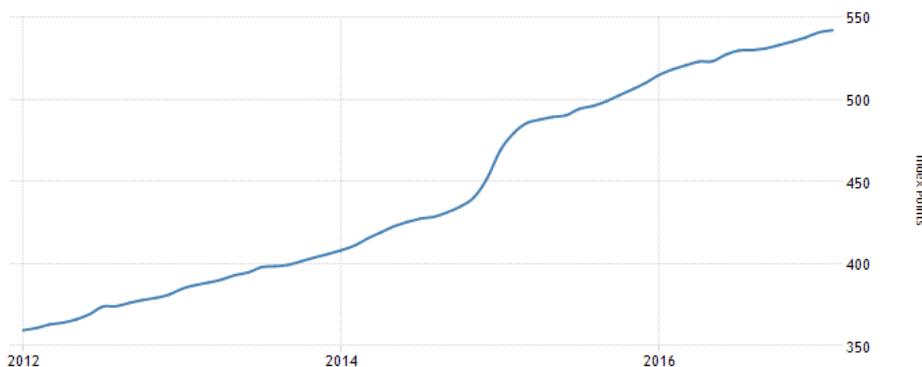
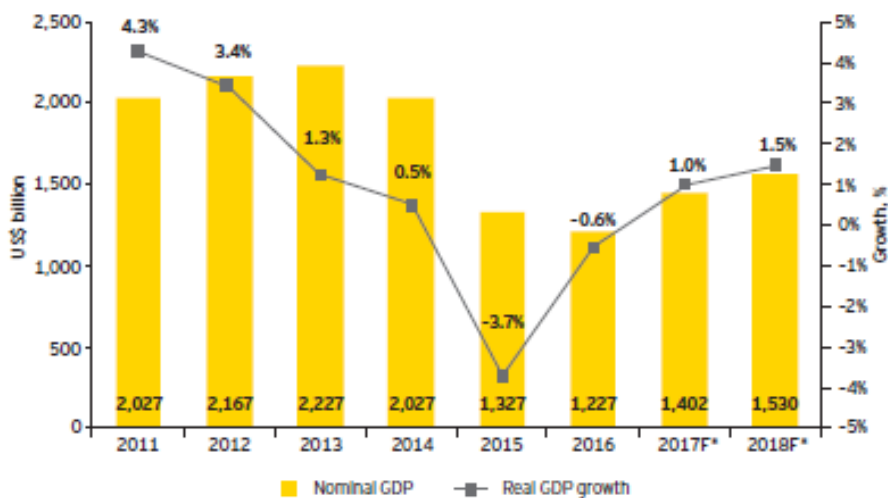


Source: Rosstat



Source: Bloomberg

Sources: BMI, MED, EIU, Oxford Economics EIA, Bloomberg, EY analysis, CEEMEA, the Development Center of the Higher School of Economics *F - Forecast



Russia Labour Market

Russia employment

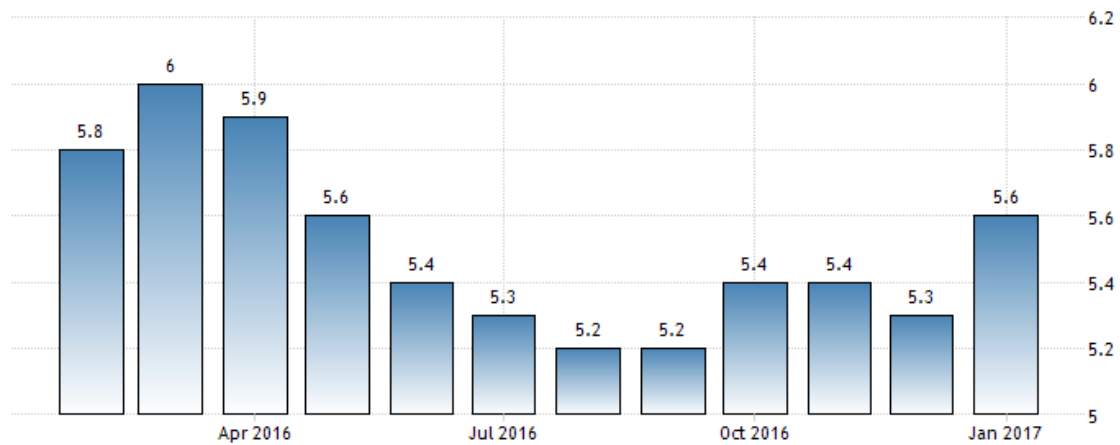
The number of employed persons in Russia decreased to 71.60 Million in January of 2017 from 72.80 Million in December of 2016. Employed Persons in Russia averaged 68.74 Million from 1991 until 2017, reaching an all time high of 74.10 Million in July of 1991 and a record low of 60.40 Million in January of 1999.

Russia unemployment rate

The unemployment rate in Russia increased to 5.6% in January of 2017 from 5.3% in December and well above market expectations of 5.6%. It was the highest jobless rate since May 2016. The number of unemployed people increased by 185 thousand to 4.288 million and the number of economically active people decreased by 100 thousand to 75.9 million, representing 52% of total population. Unemployment Rate in Russia averaged 7.77% from 1993 until 2016, reaching an all time high of 14.10% in February of 1999 and a record low of 4.80% in August of 2014.

5th Ranked in Auto Market in Europe

Russia's auto market ranked fifth in Europe in 2016 after Germany, the UK, France and Italy. In the long term, however, Russia will remain one of the most attractive markets. Its growth will be largely driven by the population's low level of vehicle ownership and the aging car fleet.



In the past Global Industrial scenario, Russian automotive industry lagged way behind the automotive industry in several industrially advanced nations like U.S and Japan in terms of the number of units produced, quality production and customer service. However, today, the automotive industry in Russia paints a completely different picture. It is one of the largest industrial sectors in Russia and is one of the growing industries in the country.

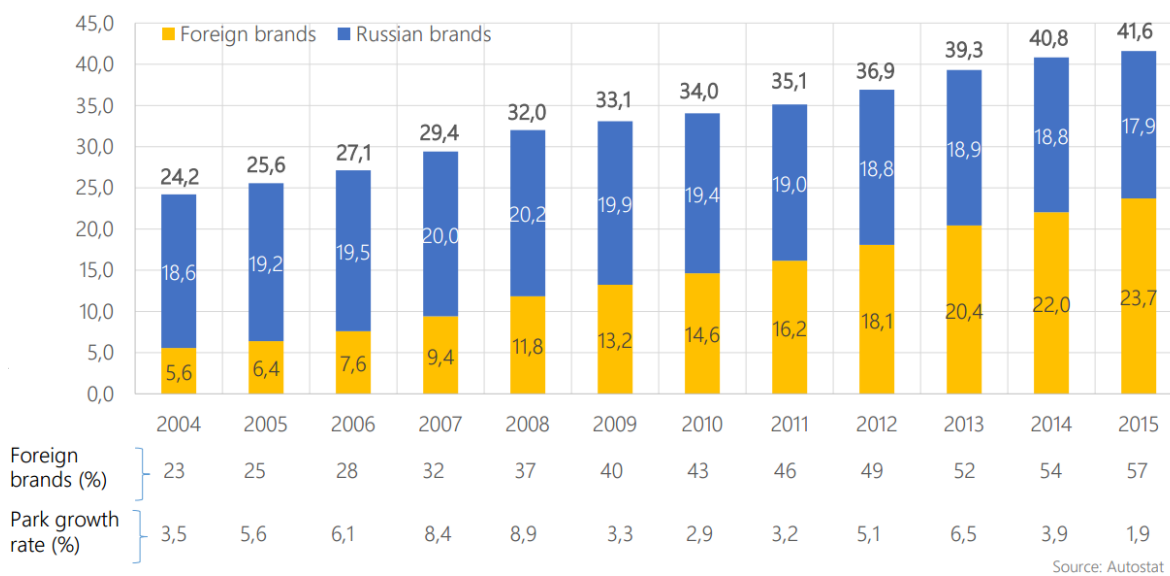
Vehicle Parc in Russia

In Russia there are 49 million units of motor vehicles

As of end of 2015, over 80% of this amount falls on passenger cars, which corresponds to approximately 41,6 million units. Light commercial vehicles have 8% of the total parc, or nearly 4 million vehicles. It is registered a little less of trucks in the country (3.7 million units). About 1% of the Russian parc is occupied by buses (about 400 thousand units).

Over the last 10 years, parc of cars in Russia grew by almost 65% - from 25.57 million units at the beginning of 2006 to 41,6 million units of the end of 2015. At the same time the parcs of the leading European countries are growing with much slower pace. If the trends continue, the Russian parc in 2-3 years will be the largest in Europe.

As you can see from the below table, foreign brands ratio is increasing in the passenger car parc.



Sources: "AUTOSTAT"

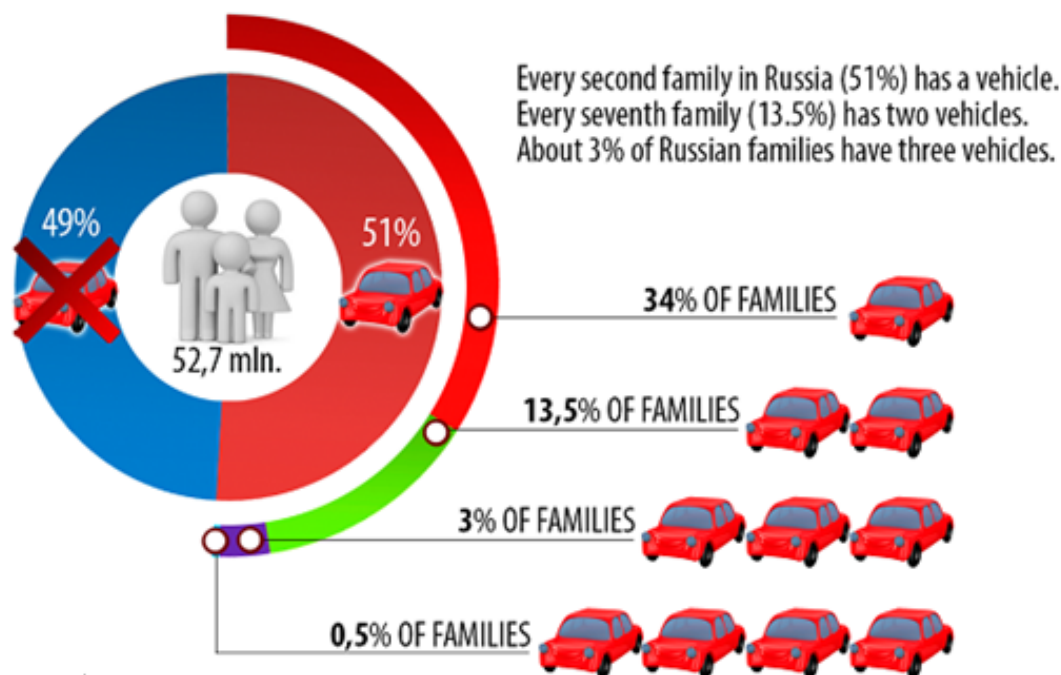
Passenger Car Market

Number of Cars per 1,000 Population

In 2016 passenger car density in Russia was 358 units per 1,000 adults, which is 42% lower than in Western Europe (615 units) and 55% lower than in North America (776 units).

According to the online pool done by "AUTOSTAT" in September 2014 with 26K respondents, 51% of Russian families have a car now - such data was received by "AUTOSTAT" within on-line survey, conducted in September of 2014, which was attended by more than 26 thousand respondents.

Number of vehicles per a family in Russia



Overall, 34% of families - use a car, 13.5% - two cars, 3% - three cars, 0.5% - four or more cars.

In that study, the term "family" refers to "household", accepted in international practice. "Household" may consist of a single person living alone and apart. Totally in Russia there are 52.7 million households; parc of cars - is more than 40 million units, among them the possession of individuals -is 38.4 million units.

The Average Age of The Vehicles

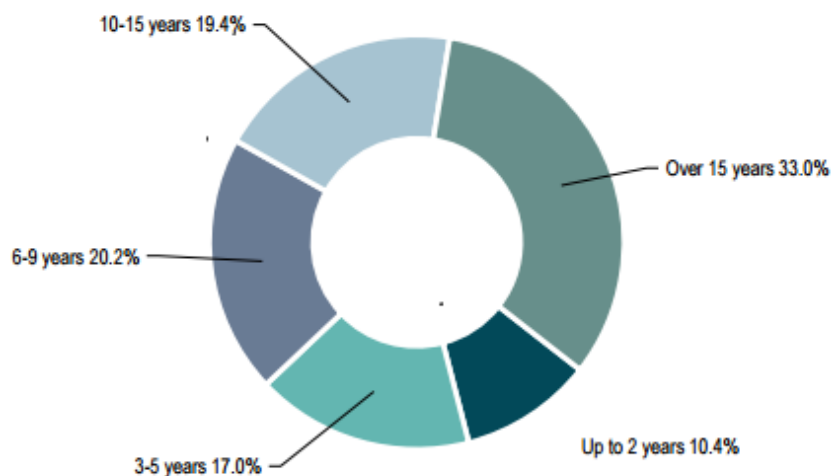
According to “AUTOSTAT” (as of January 1, 2017), the average age of cars in Russia is 12.9 years. At the same time, the average age of a foreign car is much less - 10.4 years. At the same time, the age of domestic cars (including CIS brands) is 16.4 years in average. Among the foreign cars, the youngest parc is belonged to Chinese brands (5.8 years). The average age of Korean cars is 6.9 years. In the third place there are American brands (9.1 years). This figure among European cars is 10.4 years. The oldest among foreign cars are representatives of Japanese brands (the average age is 12.6 years).

If we look at domestic brands than we will see that the smallest average age is belonged to UAZ (15,5 years), hardly above it LADA cars (15,6 years). The average age of the parc of other domestic brands is 20.5 years.

In 2015, the average age of cars in our country was 12.5 years. The increase in this indicator is largely due to a decrease in the pace of renewal of the Russian parc.

The oldest fleet in Russia belongs to trucks, with an average age of 19,4 years, according to “AUTOSTAT” data.

The average ages for buses and light commercial vehicles are 15,5 and 14 years respectively.



Registrations of New PC Vehicles

Thanks to subsidised car loan, car leasing and car fleet renewal programmes in 2015, the pace of decline in Russia's car market has slowed.

In 2015, car sales were down 36% according to AEB statistics, due to the economic decline, sharp devaluation of the Russian ruble, growing loan rates, falling real household disposable income and depressed consumer sentiment. The implementation of subsidised car loan, car leasing and car fleet renewal programmes in 2015 as well as a cut in the CBR's key interest rate have had an impact on almost all major players. These factors have also put a brake on the pace of decline in the auto market since May 2015. The decline slowed in 2016, to 12% year-on-year.

Against the background of low sales of new cars, there is an ongoing growth of demand for used cars. Presently, dealers are actively developing this line.

2016 became the fourth year in succession for the Russian market to demonstrate a drop in sales; however, as compared to the previous year, the drop rates decreased (12% reduction

in quantitative terms in 2016 compared to 36% in 2015).

In spite of the fact that many car manufacturers faced a decrease in sales compared to the previous year, some of them showed a growth in sales month-over-month, which was particularly notable in 4Q 2016. Among the sales volume leaders, LADA, Hyundai and Renault showed the best positive dynamics with an increase in their December sales by 18%, 12% and 17% respectively, as compared to December 2015.

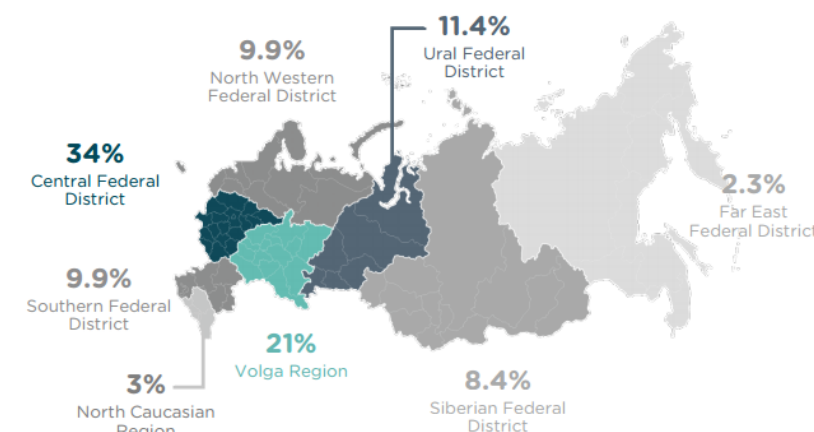
Government incentive programmes substantially supported the market. One of the most popular programmes is a subsidised car loans programme. According to the Ministry of Industry and Trade, in 2016, under the programme, 324,000 passenger cars were sold, while 270,000 were planned. Thus the plan was exceeded by 20%.

In monetary terms, in 2016 the passenger car market remained almost on the same level as in 2015, despite the drop in sales in quantitative terms.

Passenger car groups (exclusive of LCV)	Sales*, thousand units			Sales*, RUB bn			Sales*, USD bn		
	Jan-Dec	Jan-Dec	Change	Jan-Dec	Jan-Dec	Change	Jan-Dec	Jan-Dec	Change
	2016	2015		2016	2015		2016	2015	
Domestic brands	284	288	-1%	108	143	17.8%	2.5	2.3	8%
Foreign brands assembled in Russia	754	842	-11%	1,058	974	8.7%	15.8	15.9	-1%
New imported cars	273	361	-24%	555	663	-16.3%	8.3	10.8	-24%
TOTAL	1,311	1,491	-12%	1,781	1,779	0.1%	26.5	29.0	-9%

* Shipment data exclusive of light commercial vehicles.
Source: AEB, RF Federal Customs Service, PwC analysis

Car Sales in Value Terms by Region, 2015 (%)



Source: Statistics Office,

Competition in Passenger Car Market

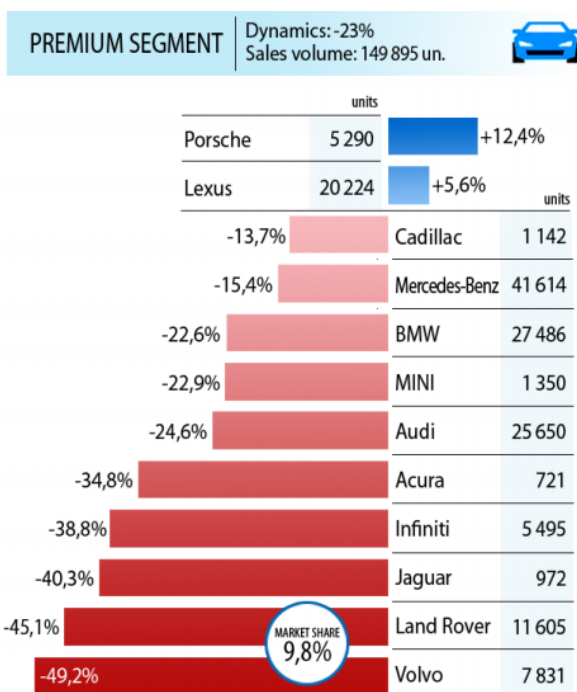
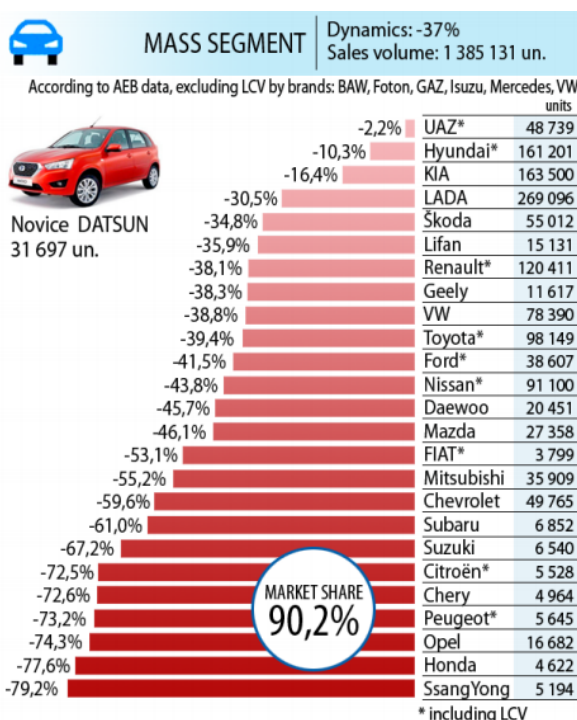
The share of premium brands is set to grow. This shift in demand is due to the smaller share of cars in the aggregate spend of people who buy premium cars. Against a backdrop of declining purchasing power, premium car owners can maintain absolute levels of car running costs similar to their pre-crisis level for longer than other car owners. Those sales were further fueled by the conversion of ruble savings into foreign currency assets, including into luxury vehicles, and more brands from premium manufacturers coming on to the market.

"AUTOSTAT" conducted a study of the Russian market of new cars, which covers the Luxury segment. At the end of 2016, the market volume of which was almost 1.2 thousand units, which is more by 6.5% than a year before.

About 60% of the total market volume of luxury cars in the country falls on one model - Mercedes-Benz Maybach S-Class. Last year,

the owners of this model were 684 residents of Russia. In the second place in the list of preferences of Russians there is traditionally Bentley Brand (318 units), the share of which was over a quarter. The top-three of leaders in the luxury segment of the brand is closed by Rolls-Royce (110 units), with a share of about 10%.

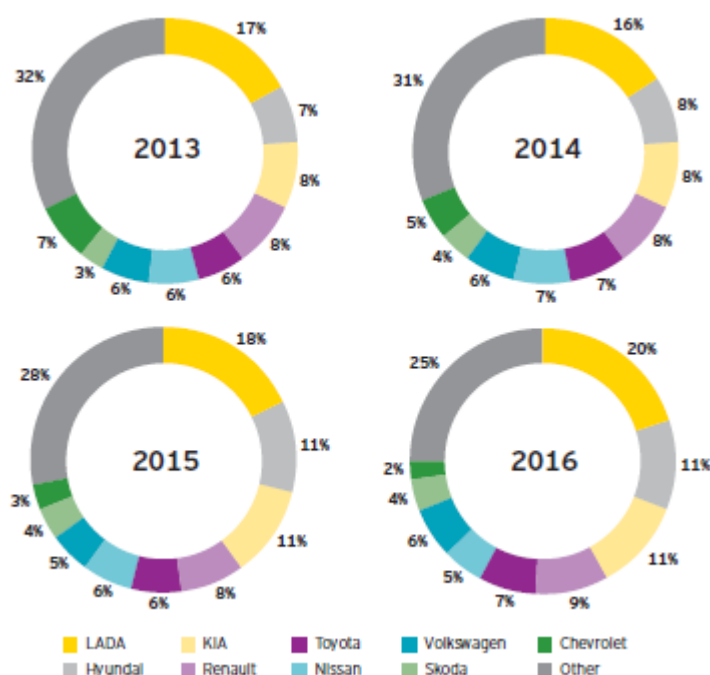
However, the share of premium brands in the structure of total vehicle sales in Russia remains modest, accounting for only 10% of the market, which is far behind the comparable figures for developed countries. For example, in Europe the premium segment captured 19% of the market in 2016. Given the above, the share of premium brands is likely to keep growing in the long term.



Sources: "AUTOSTAT", 2015 data

Most popular brands

Breakdown of major passenger car brands in Russia, %



Sources: LMC Automotive, EY analysis

Brand	Market share, 2015	Market share, 2016	Change in market share
Lada	17.6%	19.7%	↑
KIA	11.0%	11.4%	↑
Hyundai	10.8%	11.0%	↑
Renault	8.0%	8.9%	↑
Toyota	6.6%	7.1%	↑
VW	5.3%	5.7%	↑
Nissan	6.1%	5.4%	↓
Skoda	3.7%	4.2%	↑
Ford	2.3%	2.8%	↑
Mercedes-Benz	2.7%	2.7%	=
Chevrolet	3.3%	2.3%	↓
BMW	1.8%	2.1%	↑
UAZ	1.8%	2.0%	↑
Lexus	1.4%	1.8%	↑
Mazda	1.8%	1.6%	↓
Audi	1.7%	1.6%	↓
Datsun	2.1%	1.4%	↓
Lifan	1.0%	1.3%	↑

Source: AEB

In 2016, some of the top 20 brands in the volume of sales of passenger cars in the Russian market showed a positive growth in sales including Lexus, Lifan, Ford, Skoda and BMW.

The leader of the growth in sales among the top-20, Lexus, was successful in 2016 due to a

renovation of its product line and development of the dealer network.

In 2016, Ford finished a complete renovation of its product line for the Russian market, which, along with a well-balanced price policy, helped it strengthen its positions.

The attractiveness of Skoda for consumers was also mainly due to the attractive product line. In addition, the company is anticipating an even greater growth in sales in 2017, as this year a new crossover Skoda Kodiaq will be launched, as well as the updated Skoda Octavia. At the end of 2016 total sales of the Czech brand in the country increased by 0.7% and they were 55,386 vehicles, according to Skoda Auto Russia press service.

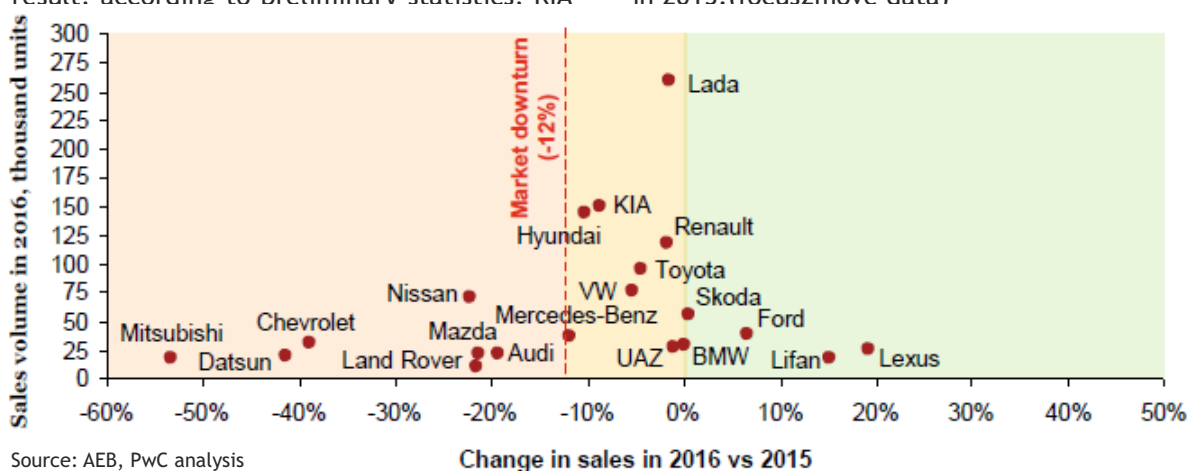
The sales volume of BMW remained practically the same as in 2015 with a slight growth in sales. Measures for the reduction of a financial load on dealer centres taken in 2016, investments in the enhancement of the quality of all processes, and attractive credit programmes offered by BMW Bank contributed to the stable development of the company in the Russian market.

Russian dealers of KIA in 2016 sold 149 567 cars - less by 8.5% than a year before. As a result, according to preliminary statistics, KIA

managed to keep the leadership in terms of sales among all foreign brands represented in Russia - as well as in 2014 and 2015. The market share of the brand was 11% in the last year, which is 0.4% more compared to 2015, the press service of KIA Motors Rus.

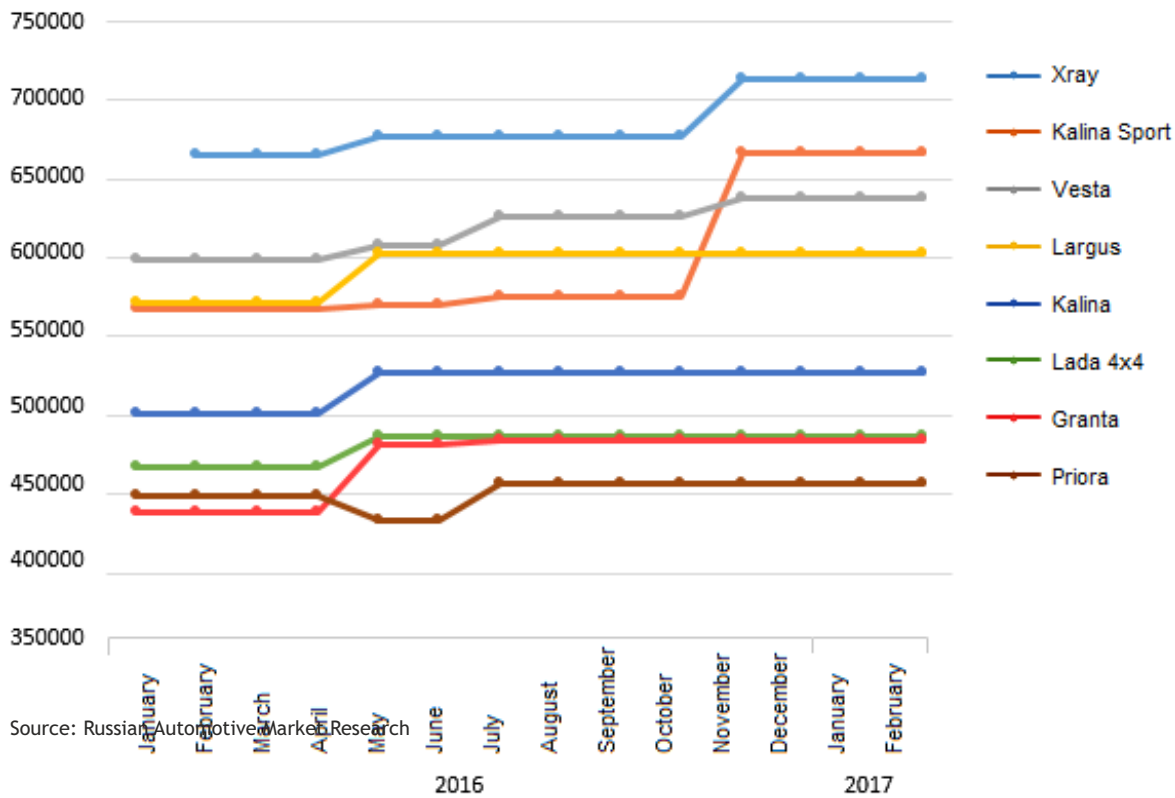
The leader of sales among Chinese automakers in Russia was again Lifan. For example, in the last year the sales of the brand reached 17,461 vehicles, by showing an increase of 15%. A positive growth in sales of Chinese manufacturer Lifan was due to the implementation of financial programmes and promotional programmes enabling the purchase of cars with maximum benefit, as well as a popular product range including crossovers.

Domestic brand, LADA, takes the 19th position in this ranking - in Europe in the last year (including Russia) there were sold 274.9 thousand such cars, which is less by 0.3% than in 2015. (focus2move data)



Source: AEB, PwC analysis

Russian Automotive Market Research reports that during the period under consideration (January 2016 - February 2017) new prices for new Lada cars grew by 3.3%. The growth was not homogeneous, however, in terms of the model range: from 0.97% (Lada Priora) to 11.46% (Lada Kalina Sport).



25 Best sold models of Cars

Russian car market in 2016, the best selling model in Russia became Hyundai Solaris by the end of 2016 with the indicator of 90380 cars (-22%). In the second place there is LADA Granta, whose sales were 87,726 vehicles (-27%). The third result was shown by KIA Rio - 87,662 sold cars, which is less by 10% compared with 2015. Sedan LADA Vesta found 55174 buyers, by occupying the fourth place in sales rankings. Sales of Volkswagen Polo sedan grew by 5% to 47,702 units.

The crossover Renault Duster remained the bestseller in the SUV segment in the Russian market in 2016, by keeping the leadership for the fourth consecutive year. Last year, sales of this model were 44,001 vehicles (+ 0.2%).

In the second place there is Toyota RAV4, which was chosen by 30603 buyers (+ 13%). Third place went to Chevrolet Niva with 29844 of sold cars (-5%). LADA 4x4 SUV was sold in amount of 27,274 units, which is less by 23% than a year ago. The new compact crossover Hyundai Creta since its launch in August of the last year has climbed to the fifth place of the sales ranking - at the end of 2016 its result was 21929 cars. At the same time since the start of sales Creta took the leadership among the SUV models in the Russian market, by becoming the best-selling segment in August - December of the last year.

As a market leader Lada has 7 models in 25 Best sold models in 2016.

Figures for the updated part of the fleet reveal that at end- 2015, Poland was home to 625,300 registered trucks with GVW above 3.5 tons, i.e. more by 3.3% than in 2014. The biggest share in total fleet (37%) was held by 11 to 20 years old vehicles. Models aged from 5 to 10 years had 27% of share, while the oldest ones - more than two decades old - 19% versus 17% for the youngest, four years and under vehicles.

In 2015, the updated fleet of trucks, special-purpose vehicles and tractor units with GVW above 16 tons accounted for 435,100 vehicles, or 5.9% more than the year before.

Most numerous categories were formed by vehicles aged from 11 to 20 years (158,900 vehicles) and from five to 10 years old (140,100). There were 91,100 youngest vehicles, under 4 years of age, and 45,000 of the oldest ones.

43.5% of the fleet were vehicles registered by businesses, and the rest by individual users. The share of individual owners in the youngest age category stood at 20% and exceeded 75% for more than 11 years old vehicles.

Ranking first with nearly 20% of market share in the segment of youngest trucks with GVW above 16 tons was DAF, ahead of Volvo (more than 17%), and MAN (17%).

The leader of the five to 11 year old truck segment was MAN(19%), outperforming DAF (more than 18%), and Scania (less than 17%).

The biggest number of trucks with GVW above 16 tons were registered in Mazowieckie (22.6%), Wielkopolskie (12.3%) and Śląskie (9.7%) provinces. On the opposite side were Opolskie (2.1%), Warmińsko-mazurskie and Lubuskie (2.6% each) provinces with the lowest number of registrations. The average age of vehicles from this group stood at 11.1 years, with median age pegged at 10 years.

#	MODEL	BRAND	January-December		
			2016	2015	YoY
1	Solaris	Hyundai	90 380	115 868	-25 488
2	Granta	Lada	87 726	120 182	-32 456
3	Rio	KIA	87 662	97 097	-9 435
4	Vesta	Lada	55 174	2 785	52 389
5	Polo	VW	47 702	45 390	2 312
6	Duster	Renault	44 001	43 923	78
7	RAV 4	Toyota	30 603	27 102	3 501
8	Niva	Chevrolet	29 844	31 367	-1 523
9	Logan	Renault	29 565	41 311	-11 746
10	Largus	Lada	29 341	38 982	-9 641
11	Sandero	Renault	28 557	30 221	-1 664
12	Camry	Toyota	28 063	30 136	-2 073
13	4x4	Lada	27 274	35 312	-8 038
14	Rapid	Škoda	25 931	24 547	1 384
15	Creta	Hyundai	21 929	-	-
16	Octavia A7	Škoda	21 759	21 373	386
17	Kalina	Lada	20 982	35 869	-14 887
18	XRAY	Lada	19 943	-	-
19	Patriot	UAZ	19 381	19 950	-569
20	Sportage	KIA	19 003	20 751	-1 748
21	Qashqai	Nissan	18 723	10 545	8 178
22	X-Trail	Nissan	17 886	20 502	-2 616
23	Priora	Lada	17 553	28 507	-10 954
24	CX-5	Mazda	15 790	17 681	-1 891
25	Cee'd	KIA	15 081	19 268	-4 187

Source: AEB

According to "AUTOSTAT", in 2016 the share of sales of new cars, equipped with automatic transmission was 51.5% in Russia. Thus, for the year, this figure has increased by more than 3 percentage points.

The market share of "automatic" cars for the first time fell in the Russian market in 2015 (up 48%), although it has grown continuously. Thus, the share was 33.5%, and in 2014 it had already reached 49% in 2010. At the same time in 2016 the sale of passenger cars with automatic transmission in Russia has surpassed the sales of cars with manual transmission.

Corporate New Car Sales

Russian Automotive Market Research reports that in 2016 corporate new car sales were 7.1% up on 2015 and amounted to 165.7 thousand cars. LADA was the market leader with a 12.3% share of the corporate new car market. The TOP-10 brands accounted for over 76% of corporate sales.

The leading regional market of new corporate car sales was Moscow with a 29.3% market share. SKODA enjoyed a greater demand in Moscow and the composition of the TOP-10 brands differs significantly from that in the whole country.

TOP-10 corporate new car brands in 2016

TOP-10 brands, Russia	2016	Share
LADA	20454	12,3%
TOYOTA	15012	9,1%
VOLKSWAGEN	14103	8,5%
HYUNDAI	13397	8,1%
SKODA	12034	7,3%
RENAULT	11899	7,2%
KIA	11839	7,1%
MERCEDES-BENZ	11176	6,7%
NISSAN	8451	5,1%
BMW	7829	4,7%
Other	39535	23,9%
Total	165729	100,0%

TOP-10 brands, Moscow	2016	Share
SKODA	6170	12,7%
HYUNDAI	6067	12,5%
VOLKSWAGEN	4856	10,0%
KIA	3808	7,9%
MERCEDES-BENZ	3612	7,4%
TOYOTA	3444	7,1%
FORD	3423	7,1%
BMW	2861	5,9%
AUDI	2591	5,3%
NISSAN	2449	5,0%
Other	9215	19,1%
Total	48496	100,0%

Used Car Market

The used car segment appears to be one of the most promising, since its decline has been slower than that of the new car market. In 2015, new car sales to buyers in Russia decreased by 45% year-on-year, while used car sales fell 19%.

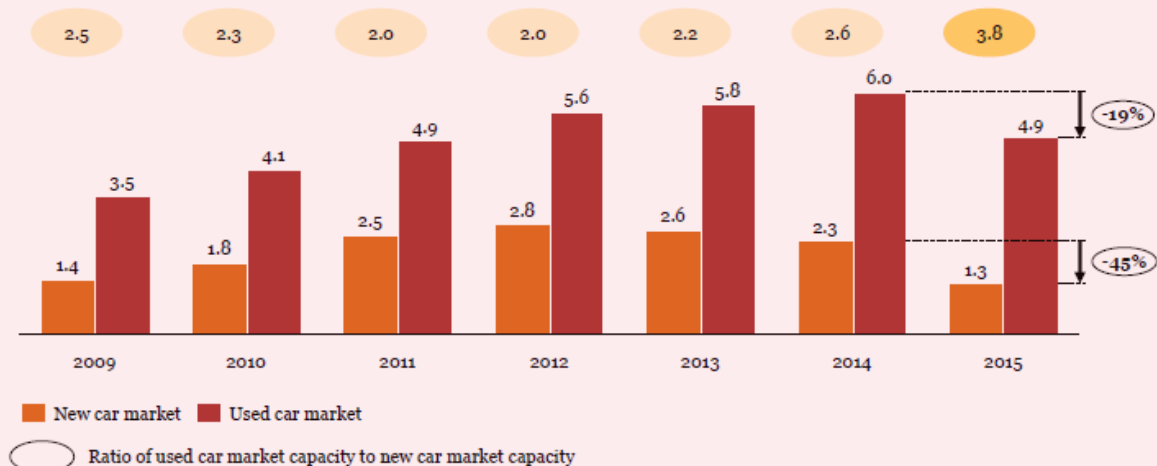
As a result, the ratio of used cars sales to new cars sales increased from 2.6 in 2014 to 3.8 in 2015.

According to the "AUTOSTAT" agency, following the results of 2016, the volume of the Russian market of used cars is 5.19 million

cars, which is 6% higher than the previous year. The Russian second hand car market has amounted to 440,800 units in December 2016, following a 0.7% shrinkage.

The coming years will see the segment grow due to the average length of car ownership decreasing following the recovery from the crisis, meaning that there will be a higher supply of used cars, including, in particular, a higher proportion of cars under five years old.

Comparative analysis of the new car & used car markets in 2009-2015, million cars



Russian manufacturer Lada has become the leader of the used cars market in 2016, with an approximate share of 28%. 1.45 million second hand Lada vehicles have been sold during the year, indicating a 3.6% year-on-year decline. Japanese Toyota has sold the most number of used cars amongst foreign brands, with 590,000 units (+10.4%). Another Japanese brand Nissan occupies the third spot (276,000), following an 11.2% rise.

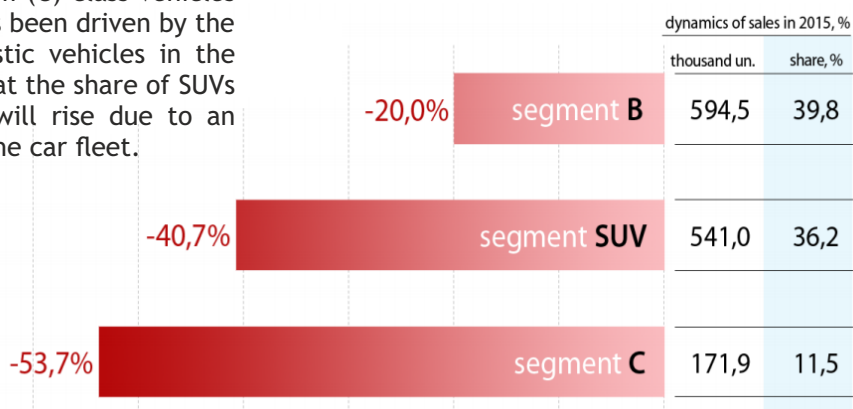
Lada 2114 has kept the top position in the best-sold used car models rankings in 2016, with a sales figure of 156,800 units, which is

almost equal to 2015 results (+0.1%). Lada 2107 follows the leader with 145,800 vehicles (-11.7%).

The most popular foreign model in the secondary market is still Ford Focus, the sales of which for the last year were 129.3 thousand units, which is more by 10% than the year before. Second place in the ranking is occupied by Toyota Corolla with 103.8 thousand resold units (+ 8%). In the top-three of leaders there is another representative of Toyota - a business-sedan Camry (71,1 thousand units; + 27%).

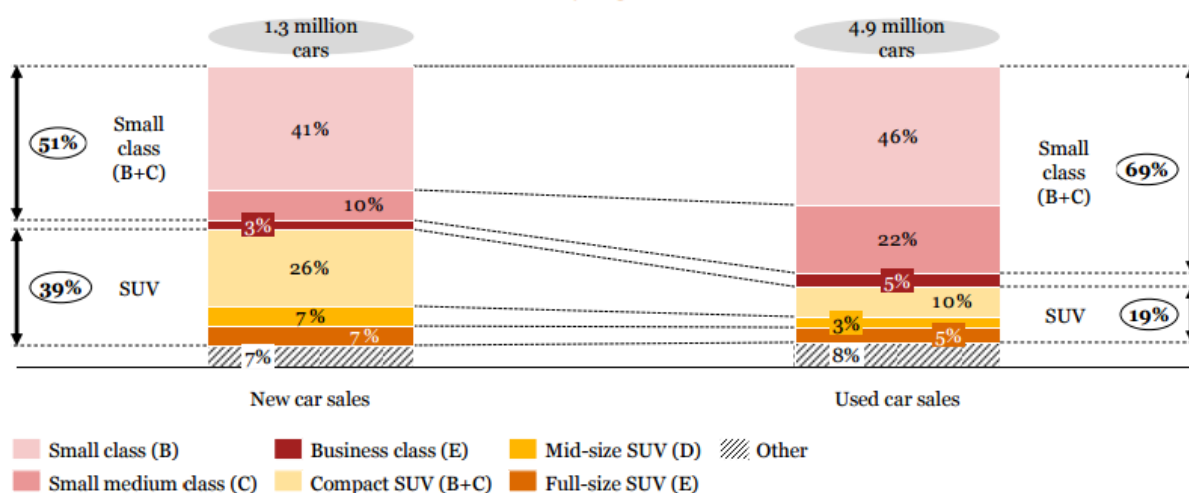
Passenger car sales by segments

The significant share of transactions with small (B) and small medium (C) class vehicles on the used car market has been driven by the high percentage of domestic vehicles in the car fleet. It is expected that the share of SUVs on the used car market will rise due to an increase in their share in the car fleet.



Sources: "AUTOSTAT", 2015 data

Breakdown of the new car and used car markets by segments in 2015



Sources: Avito Auto, PwC analysis

B and C segment cars is almost half of the market.

According to the study, by the results of 2016 it was sold 107,9 thousand cars of C-class in Russia, which is 37,2% less than a year before. This corresponds to a share of 8,2% of the total volume of the Russian market. If we compare it with the indicator of 2015 (11,5%), then it fell by more than 3 percentage points - more than other segments of the market. Analysts of the agency "AUTOSTAT" noted that the segment C with already in 2011 was the market leader, by holding 35% of the total volume. Thus, for the last 5 years, its share has fallen four times that is largely connected with the appearance of affordable crossovers and low-cost vehicles of B- class.

The leader of the C-Class in the last year became liftback Skoda Octavia, which was sold n amount of 21,8 thousand cars (+ 1,8%). In the second place there is hatchback KIA Cee'd, the result of which was 15,1 thousand units (-21,7%). The third position is occupied by the former leader - sedan Nissan Almera (14,9 thousand units; -42,7%).

Electric vehicles

According to "AUTOSTAT", in 2016, sales of new electric vehicles in Russia were 83 units, which is less by 28.4% than the year before (116 units).

The leader by the number of sold electric cars in the country is Tesla, the share of which was almost a half (47%) of the total volume. In quantitative terms, it is 39 units. The second most popular model is Mitsubishi i-MiEV (20 units), sales of which in our country are already terminated. The third position is occupied by another electric car from Japan - Nissan Leaf (18 units). Also in the Russian roads it was appeared 6 electric cars Renault Twizy.

"AUTOSTAT" noted that 60% of the total volume of sold electric cars (50 units) was registered in the capital region (Moscow and Moscow region). Ten cars will go to St. Petersburg (including Leningrad Region), nine - in the Primorsky Krai, two - in Tatarstan, Krasnodar and Novosibirsk region. Inhabitants of Murmansk, Penza, Kirov, Kurgan, Irkutsk, Amur, Tomsk regions and Chuvashia purchased by one electric car each.

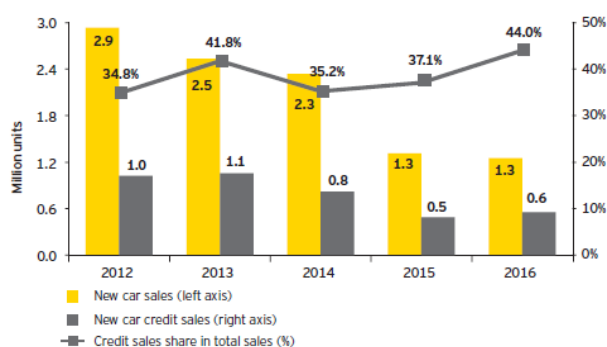
The EV market in EAEU countries is still extremely sensitive to price.

Car loan market

In 2014, the share of credit sales in total sales dropped substantially as a result of the deteriorating availability of car loans, with higher interest rates and lower real household disposable income, and on the back of Russian ruble devaluation. In 2015-16, a positive trend in the share of credit sales resumed in response to the government program for subsidizing car loan interest rates.

As a result of the 2014 ruble devaluation, the Russian car loan market has demonstrated

Credit sales vs total sales of passenger cars in Russia



Sources: "AUTOSTAT" analytic agency, National Bureau of Credit Histories

stricter borrowing conditions and a growing share of credit sales in the used-car segment, in addition to higher interest rates, growing overdue balances and larger loans.

The potential of the used-car loan market rests on the following factors:

- Low sales of used cars in Russia
- The loan penetration rate in the used car segment, which is only a third of the level of the new-car segment
- The steady growth of used car sales via dealers. Commercial banks maintain by far the largest share among credit institutions on the Russian car loan market, while the West is dominated by the automakers' captive banks. In the West, 75% of credit sales are financed by captive lenders, while in Russia the figure is about 20%. This indicates that there are vast growth prospects for captive lending, which is more beneficial to consumers in terms of costs and other factors. In Russia, seven captive banks have emerged over the past decade, increasing their share in total credit sales, except in 2015.

Low diesel engine share in passenger car segment

In total Russian sales of diesel passenger cars in the last year were 101.3 thousand units, which is less by 4.4% than in 2015. Analysts of the agency "AUTOSTAT" noted, with account of the fact that the entire market fell by 12%, the share of diesel car sales in Russia rose from 7.1% to 7.7% for the year. In EU diesel ratio is more than 40%.

2017 Sales Forecasts

According to the current forecast, in 2017, the new passenger car market is expected to grow by about 7%. The average annual market growth rate in 2016-2021 will be about 11%.

When it comes to market development prospects, the year 2017 may see an upturn in market activity if the base case scenario holds up owing to an overall economic recovery.

Forecast for the new passenger car market in Russia, 2017-2021, million units

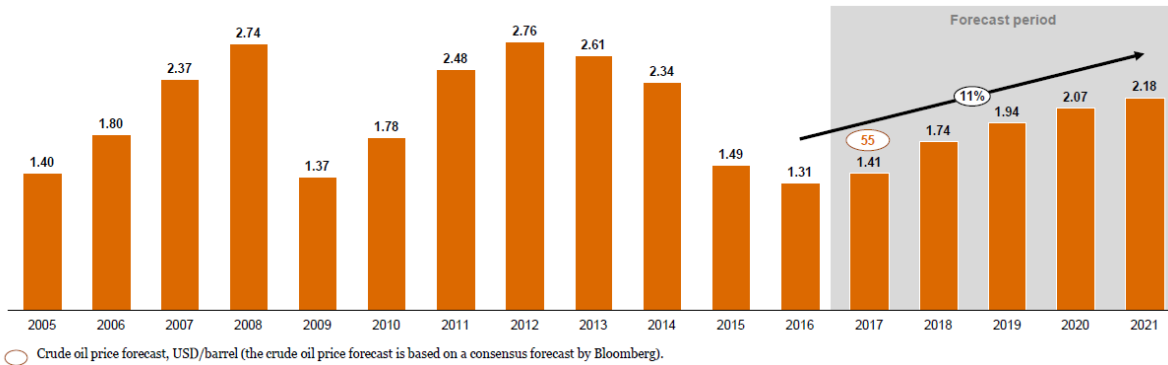
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Forecast for the new passenger car market in Russia, 2017-2021, million units



New registrations - LCVs

Light Commercial Vehicle (LCV) Market

Russian LCV market, which in the last year had stabilized after three years of decline, nevertheless, remained in the sixth place in Europe at the end of 2016. According to the agency "AUTOSTAT", the sales of light commercial vehicles in Russia in 2016 were 92700 units (+ 0.1%).

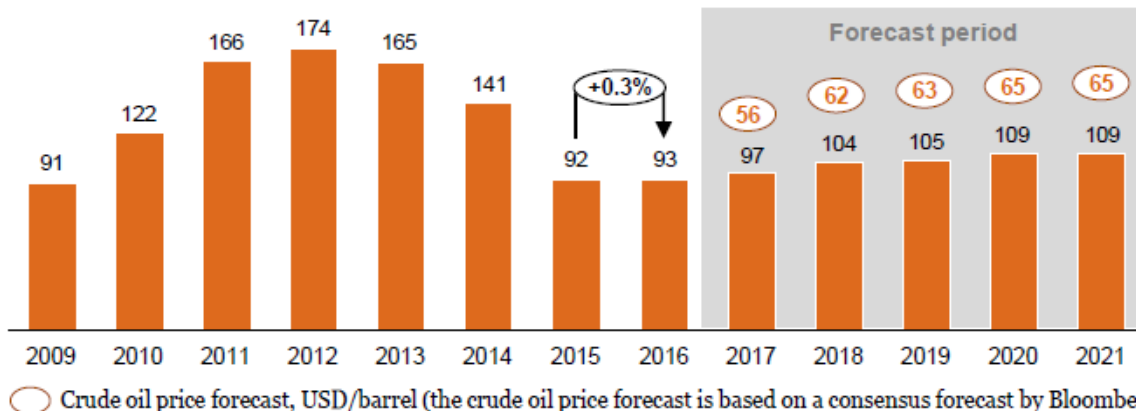
The category of light commercial vehicles comprises vehicles with a gross vehicle weight of up to 3.5 tonnes.

The main factors influencing the market of light commercial vehicles:

During 2016, some of the important indices grew, including oil price, which increased from USD 34.7/barrel in the beginning of the year to USD 56.82/barrel at the year end, the consumer confidence index, which improved from -30 to 18%, and the national currency exchange rate, which grew from 72.9 RUB/USD to 60 RUB/USD.

Various state support measures, i.e. fleet renewal, concessional lending, industrial subsidies, continued subsidising of the purchase of ambulances and emergency care cars.

LCV Market Realization and Forecast



Competition in LCV Market

Among the 2016 leaders, the following brands showed a growth in sales: GAZ (9%), Lada (11%), Ford (17%), Volkswagen (51%), Hyundai (30%) and IVECO (9%).

Brand	Market share, 2015	Market share, 2016	Change in market share
GAZ	41.5%	45.1%	↑
UAZ	21.9%	20.3%	↓
Lada	7.6%	8.4%	↑
Mercedes-Benz	9.6%	7.1%	↓
Ford	4.6%	5.4%	↑
Volkswagen	3.3%	5.0%	↑
Fiat	4.0%	2.2%	↓
Hyundai	1.3%	1.7%	↑
Peugeot	1.5%	1.3%	↓
IVECO	1.1%	1.2%	↑
Other	3.5%	2.3%	↓

Forecasts

In 2017, the total LCV sales volume is expected to grow by 5%, reaching 97,000 vehicles.

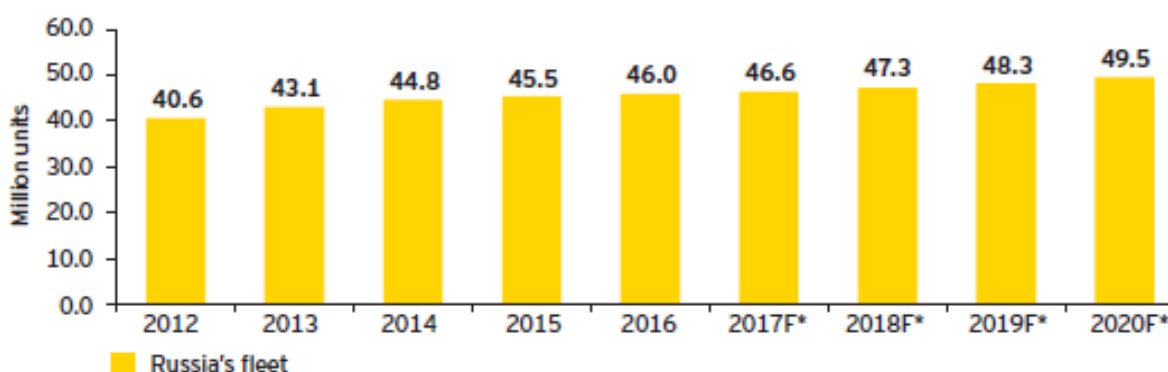
Future sales of vehicles will depend on the following factors:

- Movements in the exchange rate of the Russian ruble, oil prices and real household disposable income
- Access to auto loans, and interest rates
- The volume and effectiveness of government support measures

- The expansion of transport infrastructure and potential savings on vehicle ownership costs
- The localization rate of the auto companies, which impacts the cost and prices.

For the future projection, it is expected to have almost 50 million fleet of passenger cars and LCVs in Russia.

Fleet of passenger cars and LCVs in Russia



New registrations – Truck

Truck Market

Truck sales depend on the number of current investment projects in the oil & gas and other major buying industries, commercial freight volumes, as well as wholesale and retail turnover.

The medium and heavy-duty truck market (Medium and heavy-duty trucks are vehicles with gross vehicle weight rating (GVWR) of over 6 tons) is far more exposed to the negative economic trends than the passenger car and LCV market, due to the susceptibility of the end-buyer companies' investment programs to the crisis, significantly reduced freight traffic and limited access to debt financing for new investment and infrastructure projects.

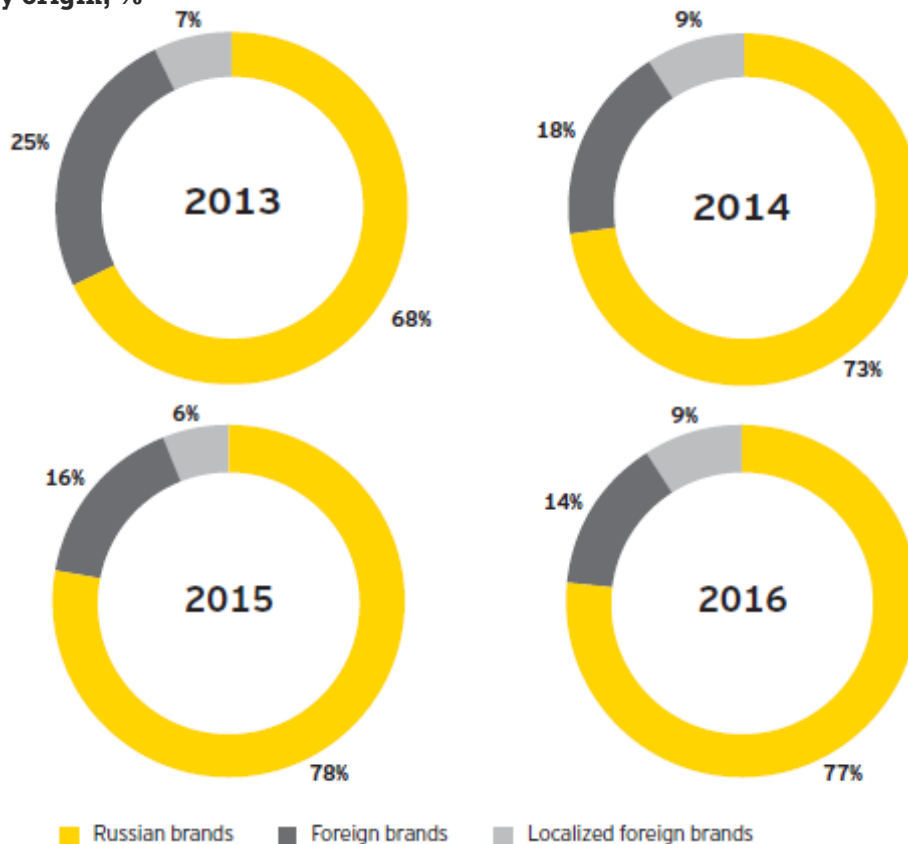
In 2012-2015, truck sales fell by 53% versus a 46% drop in sales of passenger cars and LCVs. 2016 marked the beginning of a recovery in

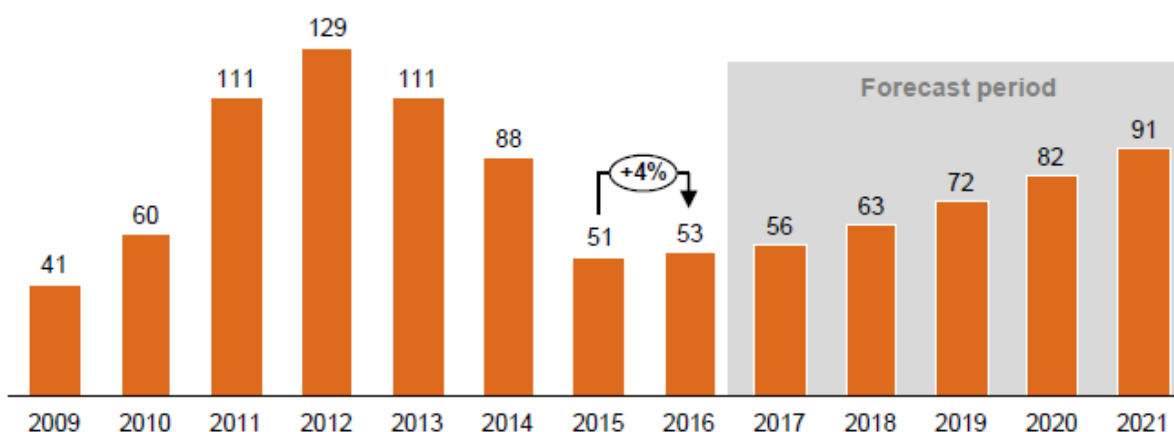
the truck market, despite the shrinking passenger car and LCV market. According to the agency "AUTOSTAT", sales of trucks in Russia in 2016 were 53,330 units (+ 4.2%).

The downturn is pushing demand towards Russian truck brands due to their price advantage, extensively localized production and a higher resilience of their costs and prices to ruble devaluation. The Russian companies' price advantage is further enhanced by the fact that they receive the majority of the government support. In addition, longterm relationships with Russian metals companies and significant purchase volumes give domestic manufacturers the benefit of better prices for raw materials.

The medium and heavy-duty truck market is dominated by the Russian brands.

Medium- and heavy-duty truck sales in Russia by origin, %





First registrations of passenger car by market segment

In the short term, the truck market will feel the pressure of uncertainty over oil's upward trajectory and the freezing of investment projects in the oil & gas and related sectors. The market recovery may gain momentum from the need to replace obsolete vehicles and purchase new ones in order to satisfy pent-up demand and re-launch investment projects that were shelved.

Along with the rebound in the freight sector and investment inflows, long-term market growth will be driven by the following factors:

- The insufficient fleet of reliable trucks for long-haul freight transportation
- The development of fleet management and operating lease services, especially in the foreign brand segment (this process will accompany the improvement in road quality, as well as the enhancement of transport and telecommunications infrastructure)
- The gradual development of a dealership and service network in the foreign brand segment, which will stimulate growth in both sales and the number of serviced vehicles.

The main factors influencing the truck market:

- There has been a decrease in sales since 2012, and companies will have to renew their fleets realising the so-called deferred demand accumulated during the previous years.
- The state support measures including fleet renewal programmes, concessional lending, industrial subsidies, etc.
- The growth of crude oil prices from USD 34.7/barrel in the beginning of the year to USD 56.82/barrel at the year end coupled with the improvement of the consumer confidence index from -30 to -18%.
- The increase of transport service costs including credit rates, increased rates of fully comprehensive motor insurance (KASKO) and compulsory third-party insurance (OSAGO), the necessity to install tachographs and ERA-GLONASS sensors, and the increase of Platon system rates.

Competition in Truck Market

Among the top ten brands of trucks, the following showed a growth in sales compared to the results from the previous year: KAMAZ (15%), GAZ (3%), Ural (2%), MAN (20%), ISUZU (0.2%) Mercedes-Benz (4%), NEFAZ (29%) and VOLVO (60%).

Brand	Market share, 2015	Market share, 2016	Change in market share
KAMAZ	34.3%	37.9%	↑
GAZ	13.8%	13.6%	↓
MAZ	7.1%	6.2%	↓
Ural	5.1%	5.0%	↓
SCANIA	5.0%	4.7%	↓
ISUZU	4.9%	4.7%	↓
MAN	3.6%	4.2%	↑
Mercedes-Benz	3.9%	3.9%	=
VOLVO	2.9%	3.6%	↑
Hyundai	2.1%	3.2%	↑
Other	17.3%	13.1%	↓

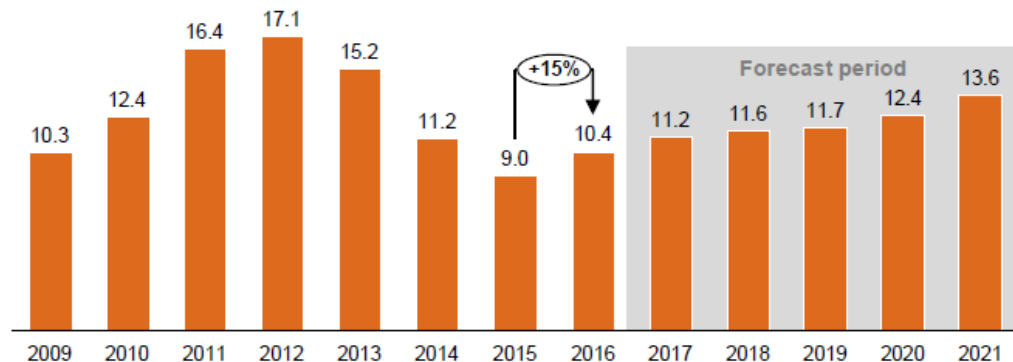
New registrations - Bus

Bus Market

The bus segment includes all transport vehicles designed for the transportation of passengers and baggage that are equipped with more than eight seats exclusive of the driver's seat, except when the transport vehicles fall within the category of light

commercial vehicles. According to the analytic agency "AUTOSTAT", the market of new buses (excluding LCV) in Russia was 10.4 thousand units by the end of 2016, which is more by 15.9% than a year earlier.

Historical and projected sales volumes of bus in Russia



Source: "AUTOSTAT", PwC analysis

Fleet renewal, preparation for big sports events and state purchase of buses provide for stable demand in the category.

The main factors influencing the market of buses:

- The bus segment includes all transport vehicles designed for the transportation of passengers and baggage that are equipped with more than eight seats exclusive of the driver's seat, except when the transport vehicles fall within the category of light commercial vehicles.
- Of all the category leaders, only Marcopoloshowed a drop in sales in absolute terms (-29%) and IVECO (-18%); other brands increased the volume of sales compared to 2015.

In 2017, the total bus sales volume is expected to grow by 8%, reaching 11,200 vehicles.

Competition in Bus Market

Of all the category leaders, only Marco-poloshowed a drop in sales in absolute terms (-29%) and IVECO (-18%); other brands increased the volume of sales compared to 2015.

Domestic companies account for more than 90% of all bus sales in Russia.

The leader of this market is the Russian

manufacturer PAZ brand of Pavlovo Bus Plant, which is a subsidiary of GAZ Group, the share of which in the last year was 57% of the total volume. In quantitative terms, it corresponds to approximately 6 thousand units - more by 9.2% than a year before. In second place there is another domestic brand - LIAZ, which reached about 1.9 thousand units (+ 76.7%). The top-three is closed by the Belarusian MAZ (825 units; + 53.3%). The top-five of leaders also included Russian NEFAZ (606 units; -0.5%) and KAVZ (370 units; + 22.9%).

The sector was partially supported by the government, which allocated RUB 3bn in 2015 to 23 regions for the purchase of buses and communal services equipment running on natural gas.

The most popular model of the Russian bus market is a high floor bus of small class PAZ-3205, the market volume of which in the last year was about 3.8 thousand units (+ 11.1%). In the second place, with a huge gap from the leader, there is another representative of Pavlovsk car plant - bus of small class PAZ-3204 (979 units; + 39.3%). The top-three is closed by low-floor of a large class LIAZ-5292 (797 units; + 36.7%). The top-five also included two other domestic models: LIAZ-4292 (737 units) and NEFAZ-5299 (606 units; - 0.2%).

Brand	Market share, 2015	Market share, 2016	Change in market share
PAZ	60,7%	57,4%	↓
LIAZ	11,8%	18,1%	↑
MAZ	6,0%	8,0%	↑
NEFAZ	6,8%	5,8%	↓
KAVZ	3,4%	3,6%	↑
Volgabus	3,1%	2,7%	↓
Marcopolo	1,3%	0,8%	↓
IVECO	0,8%	0,6%	↓
YUTONG	0,1%	0,5%	↑
KING	0,3%	0,5%	↑
Other	5,8%	2,1%	↓

Source: "AUTOSTAT", PwC analysis

Motorcycle market

Analytic agency "AUTOSTAT" conducted a study of the market of new motorcycles in Russia by the results of 2016. According to the study, during this period the market volume of motor vehicles in Russia was 11.4 thousand units, which is worse by 39.6% than the figure in 2015 (18.9 thousand units).

The most popular brand among Russian motor-fans is Racer, the primary market of which in the last year was about 1.5 thousand units (-45.7%). BMW ranks the second one with a score of 1.4 thousand motorcycles (-7.4%), and the top-three of leaders is closed by Stels (1.3 thousand units; -14.1%).

Among the models the leader is the representative Racer - RC250 motorcycle was the most popular among Russians in 2016. Its figure was 582 units, which is less by 32.2% than in 2015. Besides it, the top-three of leaders also included Stels Desna (413 units; +86.9%) and Racer RC200 (405 units; -52.6%)

Summary (sales)

- In 2016, falling rates in the Russian economy slowed, but the consumer confidence index still remains at a low level.
- In 2016, the sales of new passenger cars in quantitative terms dropped by 12%. In rouble terms, the market remained practically unchanged while in dollar terms it dropped by 9%.
- Among the market leaders in the growth of sales in 2016 there are brands offering new or updated models.
- In 2017, the extension of the traditional state support programmes and introduction of new more target-oriented measures is planned.
- In 2017, growth of the new passenger car market is anticipated in quantitative terms up to 1.4 million cars. According to the forecast, by 2021, the new passenger car sales volume will reach 2.18 cars per year, providing there are no external shocks.
- The sales of light commercial vehicles in

2016 actually remained at the level of the previous year, amounting to 93,000 vehicles. In 2017, the total LCV sales volume is expected to grow by 5% to reach 97,000 vehicles. The gradual recovery of the economy and the state support have a positive influence on the category of light commercial vehicles.

- Following the results of 2016, the truck market grew by 4% compared to the same period of the previous year amounting to 53,300 vehicles. In 2017, the total truck sales volume is expected to grow by 5% amounting to 56,000 vehicles. Among the main factors of growth in the next few years are the growing deferred demand and state-supported measures, while a constraining factor is the increasing vehicle maintenance cost.
- Following the results of 2016, the bus market grew by 15.4% compared to 2015 and amounted to 10,400 buses. In 2017, the growth is expected to be 8% with the sales reaching 11,200 buses. Fleet renewal, preparation for big sports events and the state purchase of buses provide for a stable demand in the category.

Tractor market

The Russian market of agricultural tractors in 2015 decreased by 39.2% compared to 2014 year. Sales of tractors amounted to 26.852 thousand units, of which only 2,610 thousand tractors Russian brands.

The market of agricultural tractors in Russia in January-June 2016 decreased by 27.2% compared to the same period last year. According to the analytical company ASM-holding, total sales of tractors in January-March 2016 was 11.1 thousand units.

The share of imports of new foreign brands of tractors also decreased from 25.2% to 21.7%. Their sales fell by 37.4% and amounted to 2.4 thousand units. Import of second-hand tractors decreased by 47.3%, and its share declined from 11.4% to 8.3%. Overall, sales of new imported tractors, including import from Belarus and Kazakhstan, decreased by 37.6% to 6.6 thousand units.

Production

While the world's total vehicle production increased 1,1% to 90.78mn units in 2015, Russian automotive production slumped by 26,6% as a result of the economic crisis and the oil price plunge.

In 2015, the country ranked in terms of sales and 14th worldwide in terms of production. In 2015 a total of 1.38mn units were produced in Russia, 1.2 mn of these being passenger cars and 170,000 commercial vehicles.

Russian Prime Minister, Dmitry Medvedev, signed a decree in March 2015 on the allocation of 10 billion Rubles for compensation of costs in connection with the production of motor vehicles. It will permit to provide additional load of production capacity in the first quarter of 2015 in the amount of about 110 thousand cars, to keep jobs and employees of enterprises of automotive and related industries. In addition, the relevance of these measures is due to the fact that in 2014 the cost of cars produced in Russia has increased significantly due to increased costs for the purchase imported components for assembly of cars by Russian automakers due to fluctuations of foreign currency exchange rates and high inflation in Russia.

In 2016, total vehicle production increased 4,4% to 94.976.569 units. , Russian automotive production continued to decrease by 5,4%.

In 2016, the country ranked in terms of sales and 16th worldwide in terms of production.

In 2015 a total of 1.349mn units were produced in Russia, 1.124 mn of these being passenger cars and 179.000 commercial vehicles.

Source: Automotive Industry Report 2016, Polish Association of Automotive Industry (PZPM) / Central Statistical Office (CSO) analysis based on Central Register of Vehicles (CEP)

2016 Production Statistics

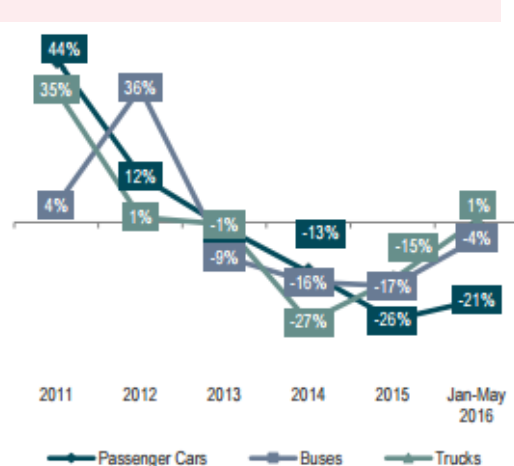
Country	Cars	Commercial vehicles	Total	% change
China	24,420,744	3,698,050	28,118,794	14.5%
USA	3,934,357	8,263,780	12,198,137	0.8%
Japan	7,873,886	1,330,704	9,204,590	-0.8%
Germany	5,746,808	315,754	6,062,562	0.5%
India	3,677,605	811,360	4,488,965	7.9%
South Korea	3,859,991	368,518	4,228,509	-7.2%
Mexico	1,993,168	1,604,294	3,597,462	0.9%
Spain	2,354,117	531,805	2,885,922	5.6%
Canada	802,057	1,568,214	2,370,271	3.8%
Brazil	1,778,464	377,892	2,156,356	-11.2%
France	1,626,000	456,000	2,082,000	5.6%
Thailand	805,033	1,139,384	1,944,417	1.8%
UK	1,722,698	93,924	1,816,622	8.0%
Turkey	950,888	535,039	1,485,927	9.4%
Czech Rep.	1,344,182	5,714	1,349,896	8.3%
Russia	1,124,774	179,215	1,303,989	-5.4%
Indonesia	968,101	209,288	1,177,389	7.2%
Iran	1,074,000	90,710	1,164,710	18.6%
Italy	713,182	390,334	1,103,516	8.8%

Source: OICA

Automotive Production, thousand units

	2011	2012	2013	2014	2015	Jan-May 2016
Passenger Cars	1,738	1,954	1,927	1,669	1,234	434
Buses	43	58	53	44	37	12
Trucks	207	210	209	153	130	46
Motorcycles	12	30	78	47	19	6
Trailers for Passenger Cars	31	42	47	55	96	39

Automotive Production, % change, y/y



Source: CEIC, Statistics Office, Forbes

Russian automotive manufacturers are looking to substantially increase their exports, partially as an alternative to the shrinking domestic market. Russian car manufacturers have the potential to expand their presence in export markets; however, to preserve and strengthen their competitive ability, it is necessary to introduce technologies and innovations and maintain quality standards.

The market potential is also underpinned by the fact that foreign companies are carrying on with their plans to expand local production capacity, including the development of new plants and production of auto components. Though plunging sales suspended the output of certain brands and models, as well as triggering lower capacity utilization rates, companies that have localized their production do not intend to abandon their business development plans. The major exception is General Motors, which has stopped assembling Chevrolet and Opel and mothballed its St. Petersburg plant indefinitely. A number of new market players, including those from China, are working on their plans to enter the Russian market.

The following facts show that the market has strong potential:

- Almost 20 major local and international-manufacturers operating in Russia
- Annual capacity of over 3 million cars, with prospects to increase by 2020
- Nearly 100 localized global suppliers, many of which have several production sites
- About 600 local suppliers servicing Russian assembly lines
- Passenger cars sold through some 4,000 dealers.

Company	Location	Annual production Capacity Units
Hyundai-Kia	St Petersburg	200,000
GM*	St Petersburg	98,000
Ford	St Petersburg	125,000
Ford	Yelabuga, Naberezhnye Chelny	200,000
PSA Peugeot-Citroen	Kaluga	125,000
Renault-Nissan-Avtovaz	St Petersburg	50,000
Renault-Nissan-Avtovaz	Togliatti	350,000
Renault-Nissan-Avtovaz	Moscow	160,000(e)
Volkswagen	Kaluga	225,000

Source: Euromonitor International

In 2015, the market of light delivery vehicles with GVW up to 3.5 tons demonstrated a dramatic surge by nearly 17% (compared to the previous year) to 53,285 vehicles. The growth rate was doubled compared to the figure for 2014, marking the best performance since 2008 when companies registered 3,500 more vehicles. The year 2015 ended with a bumper performance in December which saw 6,347 vehicle registrations. This is an all-time record among PZPM statistics. The result for December was higher by 22.8% versus December 2014.

The 2015 leader on the market of LCVs with GVW below 3.5 tons was once more Fiat with 12,012 new registrations, more by 12.5% than in 2014. Despite a surge in registrations, the Italian auto maker has not managed to retain its market share which shrunk by nearly one percentage point to 22.5%. Ranking second was Renault (7,649; a rise by 20.8%) which outranked Peugeot (5,272; up by 12.3%) and Ford (5,230; up by 24.1%). Further down the list were Volkswagen (4,804 vehicles, 20.1% more versus 2014), Mercedes-Benz (3,628 vehicles; up by 14.3%), Citroen (3,612; up by 15.4%), Iveco (3,260; up by 58.2%), Opel (2,594; up by 52.8%) and Dacia which came last in the top ten with 1,916 registrations, a result higher versus 2014 performance by 15.1%.

Most popular models in 2015 included Fiat Ducato (8,116 vehicles), Renault Master (6,078), Iveco Daily (3,256), Peugeot Boxer (3,093) and Mercedes-Benz Sprinter (2,545).

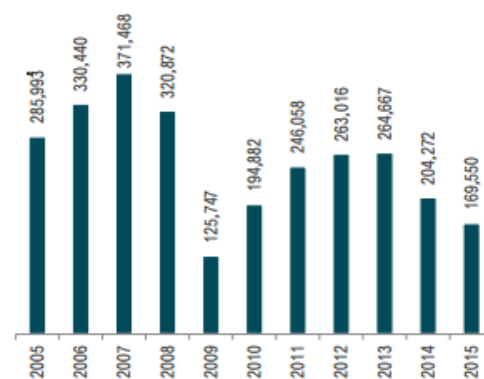
According to the Polish Leasing Association, the lease of delivery vehicles with GVW up to 3.5 tons in 2015 covered 42,600 LCVs valued at PLN 3.5 billion, what marks a decrease by more than 22% versus 2014 when the lease value stood at nearly PLN 4.5 billion, inclusive of leased passenger cars with CV type-approval.

Considering that the current production capacities of Russian and localised car manufacturers amount to about 3.1 million cars per year, following the results of the year, the production capacities were utilised by 36%.

Commercial Vehicle Production

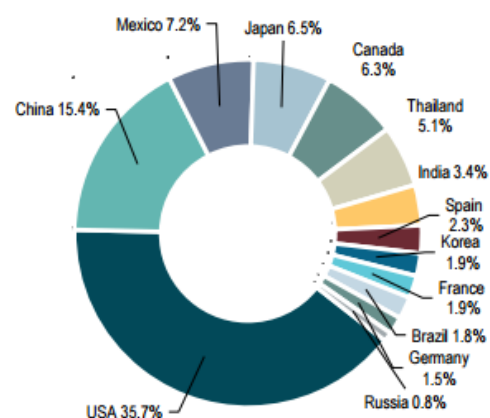
Over the last ten years, Russian commercial vehicle production has been vulnerable to the chronic economic crisis in the country. In 2009, the global recession induced manufacturers to slash production by 60% to 125,747 units. Between 2009 and 2013, production managed to increase more than two-fold, to 264,667 units, but it still remains well below the pre-Lehman record levels of 371,468 units. Western sanctions, coupled with the oil price plunge, worsened economic conditions in Russia. Capital expenditures, which are one of the main drivers of CV demand, went down along with the construction sector. As a result, CV production fell to 169,550 units in 2015, 36% lower than in 2013. In 2015 Russian commercial vehicle production ranked 13th globally - down from 11th position in 2014 - and accounted for a 0.8% of the world's total CV production.

Russia Commercial Vehicle Production*, Units



*CV include LCVs (mass between 3.5 and 7 tonnes), heavy trucks, coaches and buses

Global Positioning, %



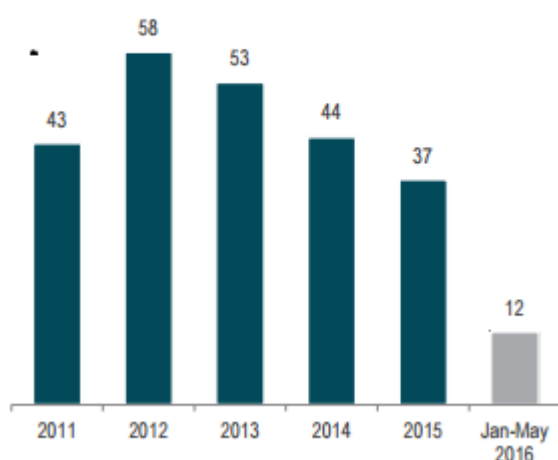
Source: OICA

Bus Production

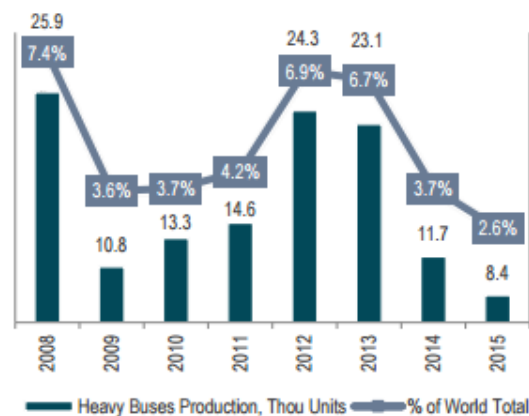
In 2015 a total of 37,000 buses were produced in Russia - 16% fewer than in 2014. This was also 36% less than 2012, when a record number of 58,000 buses were manufactured in the country. In 2015 Russia produced 8,400 heavy buses (as defined by OICA: more than eight seats and mass ranging from 3.5 to 7 tonnes). This was just a third of the level of production in 2012, before the economic crisis. From a global perspective, the Russian share in the world heavy buses production fell to 2.6% in 2015 from 6.9% in 2012. The latest available data for the bus park in Russia are for 2013, but we believe the situation has not changed since. According to market researcher "AUTOSTAT", as of 2013, there were about 400,000 buses in Russia with approximately 80% of the bus park consisting of vehicles assembled by manufacturers from Russia and other CIS states. Domestic companies also work with foreign bus producers. For example, Russia's GAZ Group equips its bus product line with Scania chassis. At the end of 2014, GAZ Group had plans for permanently suspending production at KAvZ, which manufactures buses in Kurgan. However, due to a rise in orders in 2015, the company abandoned the plans for suspending production.

According to "AUTOSTAT" data, the bus production in Russia grew by 18.6% in 2016, up to 43.2 thousand units.

Total Bus Production, thousand units



Production of Heavy Buses and Coaches*



*More than eight seats and mass ranging from 3.5 to 7 tonnes

Source: OICA, Statistics Office, GAZ Group

Truck Production

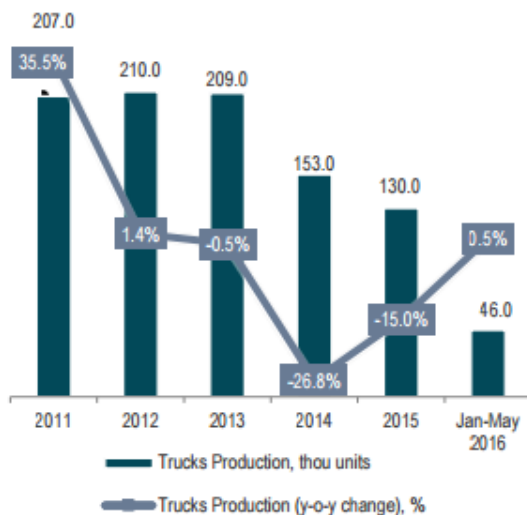
After falling by 26.8% in 2014 and by a further 15% in 2015, the truck manufacturing industry is starting to stabilise. In the first five months of 2016, total production of trucks in Russia inched up to 45,000 units, 0.5% up on the same period of 2014. The overall economic crisis in Russia since 2014 has diminished the demand for heavy trucks and production fell by 36% to 52,200 units in 2015. The country's global market share by production shrank to 1.5% in 2015, from 2.1% in the 2011-2013 period. The market leader in the truck segment of the automotive market is Kamaz Group, which - according to company officials - has a share of 62% on the Russian truck market. Domestic demand for trucks is heavily dependent on the construction industry and future truck production will be subject to its dynamics. In 2015 the Swedish automaker Scania announced that, by September 2016, it would move truck production from its St. Petersburg factory to the MAN Truck and Bus plant in the city. Scania's plant has a capacity of 7,500 trucks per year while MAN's factory claims an annual production capacity of 6,000 trucks.

According to Rosstat, the production of commercial vehicles was 137,000 units in 2016, which is more by 6.9% than a year ago.

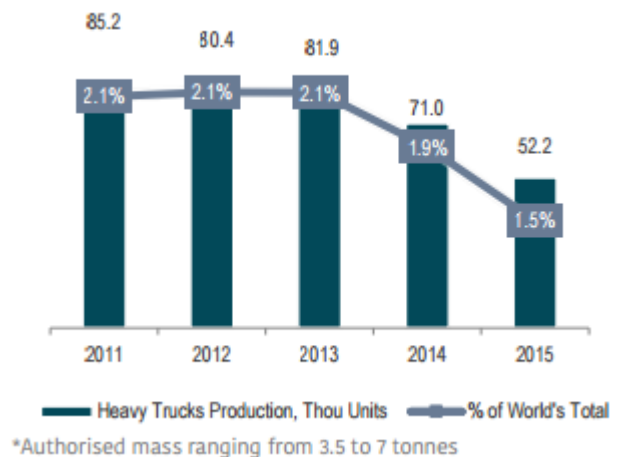
In the last year KAMAZ produced 35.416 trucks and car kits in the last year, which is more by 9% than the planned business plan. Among them, it was 22 million units of all-wheel drive and heavy family and more than 9.5 million - the upgraded trucks. Assembly of the flagship of new model range of company - the main tractor KAMAZ-5490 - exceeded 1.5 times the planned figure and it was more than 2500 units.

It should also be noted that KAMAZ in 2016 began the production of trucks of the new model range KAMAZ-6580 and KAMAZ-65802. GAZ extended the range of versions of its vehicles with a new minibus "Gazelle Next», as well as medium-duty truck "GAZon Next CNG », running on compressed natural gas. "Autotor" mastered the assembly of light-duty trucks Hyundai HD35.

Total Trucks Production, thousand units



Heavy Trucks Production*, thousand units



Source: IHS Automotive, Kamaz Group, OICA, Statistics Office

Truck Production

Tractor production in Russia decreased compared to the previous year of 19.6% in 2015. During the year the domestic machine-building enterprises produced 6.3 thousand tractors.

In particular, tractors for agricultural purposes was made 5.2 thousand units, which is 19.3% lower than a year earlier, said the report's analytical and consulting company "ASM-Holding".

According to the agency, the share of domestic tractors in total vehicles produced in 2015, had 46.8%: at the MTZ tractors from sets of machinery - 36.9%; the assembly of kits Kharkov Tractor Plant of S. Ordzhonikidze - 8.5% and imports (Versatile, New Holland, Agrottron, Axion, John Deere, Xerion) - 7,8%. During January-December 2015 it was shipped 7.1 thousand tractors, which is 14.3% less than in the corresponding period last year.

The Russian Ministry of Industry and Trade worked out a development plan for agricultural machinery sector by 2030. According to the strategic development project, the production of the domestic agricultural machinery should increase three-fold to reach 280 billion RUB over the next 13 years. The market share of the domestic producers will increase up to 80% compared to 54% last year.

Moreover, Russian agricultural machinery exports are supposed to reach 93 billion RUB. Thus the employment of production capacity will ramp up to 80-90%, while the number of people engaged in this sector will increase by half by 2030.

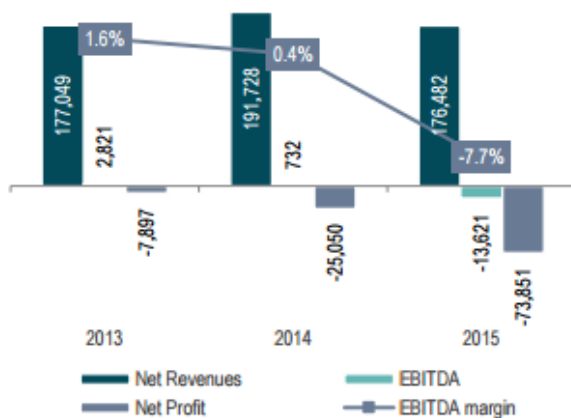
Automotive Companies in Focus

Avtovaz Group

Avtovaz, established in 1966, is the leading manufacturer of passenger cars in Russia. Avtovaz's consolidated revenues fell by 8% in 2015 to RUB 176,482mn, after the company's sales of its Lada brand plunged by 30% to 269,096 units. The company's EBITDA went negative at RUB 13,621mn in 2015, from a positive figure of RUB 732mn in 2014. Its net loss deepened to RUB 73,851mn. In 2015 Avtovaz's consolidated liabilities exceeded its assets and its equity capital went into negative territory to the tune of RUB 38,727mn.

In 2016, company executives warned that Avtovaz might not "continue as a going concern" and may go into bankruptcy without shareholder support. Avtovaz breached covenants on RUB 43bn of loans and received waivers from Societe Generale and Turkiye Garanti Bankasi. Total net debt surged by 50% in 2015 to RUB 88.77bn.

Income Statement (Consolidated, RUB mn)



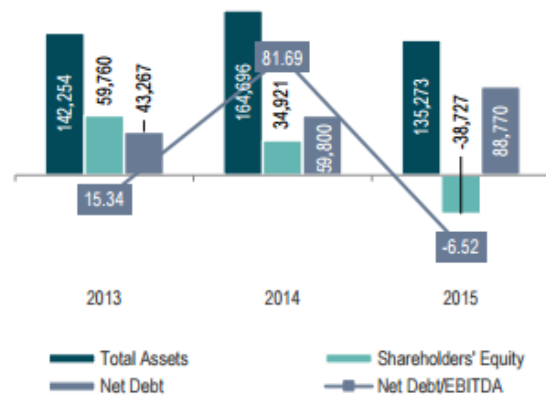
*Financial Statements under IFRS

At the same time, the management of Renault - which owns a 50% stake in Avtovaz's holding company - said in early 2016 that the company "will do whatever it takes to sustain Avtovaz and to allow Avtovaz to compete when the recovery comes".

Source: Avataz

The state-owned Rostec which holds 33% of Avtovaz's holding company, has released plans for Avtovaz to convert part of its debt into shares, thus recapitalising the financially troubled company.

Balance Sheet (Consolidated, RUB mn)



*Financial Statements under IFRS

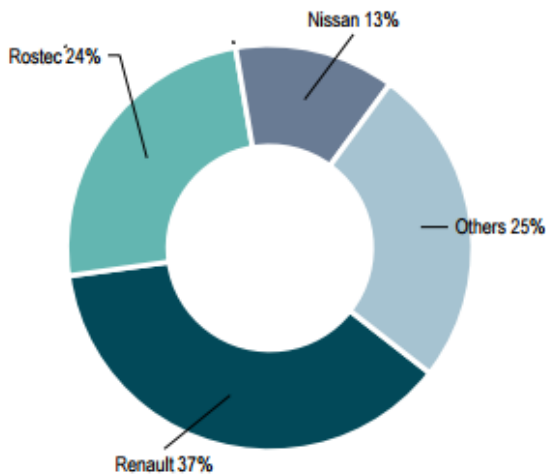
Avtovaz Group's manufacturing facilities are based in the cities of Togliatti and Izhevsk. The group's main brand Lada includes the Kalina, Granta, Priora, Lada 4x4, Lada Largus, Vesta and XRAY models.

Avtovaz also produces several brands of the Renault-Nissan alliance: Renault Logan II, Renault Sandero II, Datsun on-Do, Datsun miDo and Nissan Almera New.

As of June 2016, Alliance Rostec Auto held 74.51% of the total shares of Avtovaz Group. Renault holds 50% less one share in Alliance Rostec Auto, Nissan International Holding holds 17.13% while the state-run Rostec holds 32.87%. Thus, the indirect ownership structure of Avtovaz Group is Renault 37%, Nissan 13%, Rostec 24%, and other shareholders (37%).

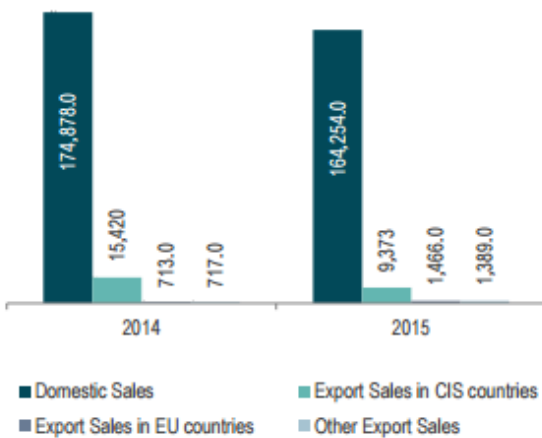
AVTOVAZ plans to increase the exports by 50% up to 30,000 vehicles in 2017, informed the company's president, Nicolas Maure.

Indirect Ownership Structure, %



Most of the group's sales were on the domestic market - in 2015, revenues from domestic sales amounted to RUB 164,254mn. Revenues from exports totalled RUB 12,228mn, with the bulk of them (77%) reflecting sales in CIS countries.

Sales Structure, RUB mn



Source: Avataz

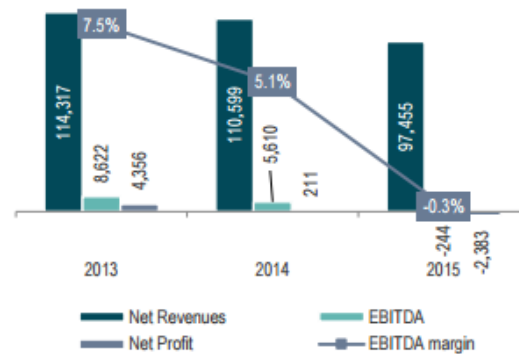
Lada is the top-selling brand in Russia, with an 18.5% market share in January-June 2016. During the first six months of 2016, 124,000 units of the brand were sold.

Kamaz Group

Kamaz is the largest truckmaker in Russia and the 16th-largest heavy truck manufacturer in the world. The company, established in 1969, produces a wide range of vehicles, including trucks, trailers, buses and tractors, as well as engines and power units. The group includes 12 automobile plants and employs around 55,000 people.

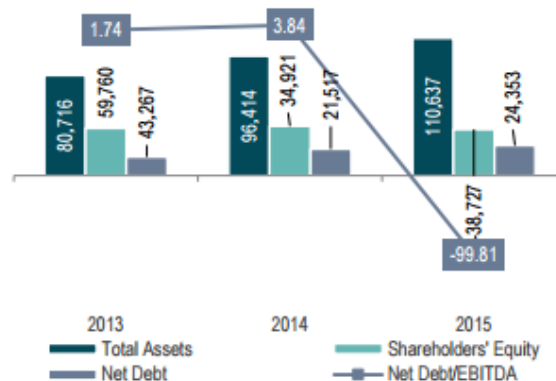
In 2015, Kamaz's consolidated net revenues decreased 12% to RUB 97,455mn, while total truck sales were down 25% to 29,000 units. The company generated net losses of RUB 2,383mn, compared to a net profit of RUB 211mn in 2014. The company plans to increase revenues to RUB 112.1bn in 2016.

Income Statement (Consolidated, RUB mn)



*Financial Statements under IFRS

Balance Sheet (Consolidated, RUB mn)



*Financial Statements under IFRS

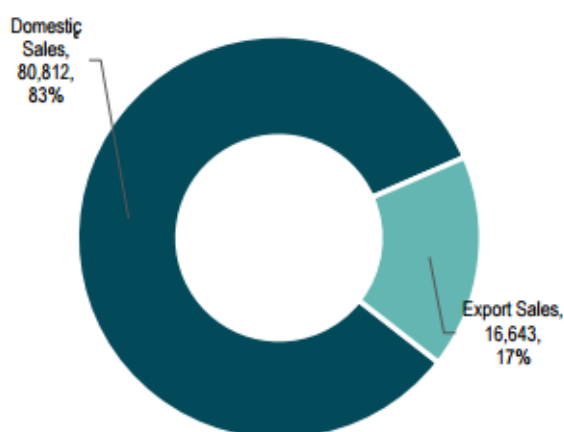
Source: Kamaz

In 2015, as part of the state's stimulus package for the local industry, Kamaz received a RUB 224.27bn subsidy to compensate part of its loan interest payments, as well as a RUB 2.874bn federal government subsidy to make up for part of its programme for purchasing components from local suppliers.

In 2015, Kamaz sold 22,000 trucks on the domestic market and exported around 7,000 units. Kazakhstan and Turkmenistan were the largest export markets in 2015.

	Domestic Sales	Export Sales
Trucks and assembly kits	52,833	13,324
Spare parts	12,678	2,130
Buses, truck trailers and mixer trucks	7,233	993
Long-term contracts	902	-
Finance lease income	853	-
Other sales, services	6,313	196
Total	80,812	16,643

Domestic vs Export Sales, 2015, RUB mn



At the beginning of 2016, Kamaz started a joint venture with Daimler to produce painted cabin frames.

Kamaz Group produces and sells trucks mostly in Russia and CIS countries. The Group's manufacturing facilities are primarily based in Naberezhnye Chelny.

As of end-2015, 23.54% of shares in the Company were owned by Avtoinvest Ltd. The State Corporation Rostec owns 49.9%, 15% of the shares are owned by Daimler AG, 3.72% of the shares are owned by one of the Group's subsidiaries, and the rest (7.84%) are traded on MICEX.

The company's Strategic Plan calls for 60,000-70,000 truck sales in 2020 and revenues of RUB 230bn-270bn.

Long-Term Strategic Plan

	Strategic Targets 2020
Truck Sales Volumes	60,000-70,000 units
Foreign Sales Share, %	20-30%
Revenues	RUB 230bn-270bn
EBITDA, as % of Revenue	8-10%
Investments	RUB 60bn-80bn

GAZ Group

GAZ Group, established in 1932, is the largest commercial vehicle manufacturer in Russia. The group comprises 18 plants in 10 regions of Russia and produces light and medium-duty commercial vehicles, heavy-duty trucks, buses, passenger cars, construction and road-building equipment and powertrains.

With the acquisition of an assembly line and production license from Chrysler to produce D-class Sibers, GAZ Group is reviving its passenger car capabilities. GAZ Group is comprised of six product-line Divisions: Buses, Trucks, Engines, Light Commercial Vehicles, Passenger Cars, and Road Construction Equipment. GAZ Group plants are located in ten regions of Russia: from Bryansk to Miassa. The most significant of these plants include:

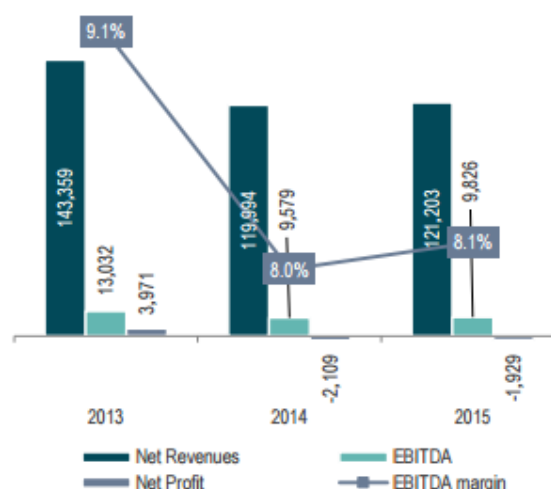
- Gorkovsky Automobile Plant (Nizhny Novgorod) is the largest producer of light commercial vehicles (car groups “GAZel” and “Sobol”), trucks (models “Valday” and “Sadko”), as well as passenger cars (“Volga” and “Siber”) in Russia.
- Pavlovsk Autobus Plant (Pavlovo, Nizhny Novgorod Oblast) is the Russian market leader in small and medium size city-buses, suburban and long-distance transportation.
- Likinsky Bus Plant (Likino-Dulevo, Moscow Oblast) produces LiAZ city-buses (controlling about 60% of Russia's city-bus market).
- Avtodiesel (Yaroslavl) is the largest producer of heavy diesel engines and power equipment in Russia.
- Ural Automobile Plant (Miass, Chelyabinsk Oblast) is a producer of 'Ural' heavy-load off-road trucks.
- Tver Excavator Factory (Tver) is the Russian leader in production of caterpillar and rubber-tire mounted excavators.

Despite the overall weakness of the commercial vehicle segment in Russia, GAZ Group's consolidated revenues in 2015 remained at the levels achieved in 2014, at RUB 121,203m. According to the company, the general decline in sales was compensated by an increase in the sales of products in higher price segments - and also by a 42% growth of shipments to CIS countries.

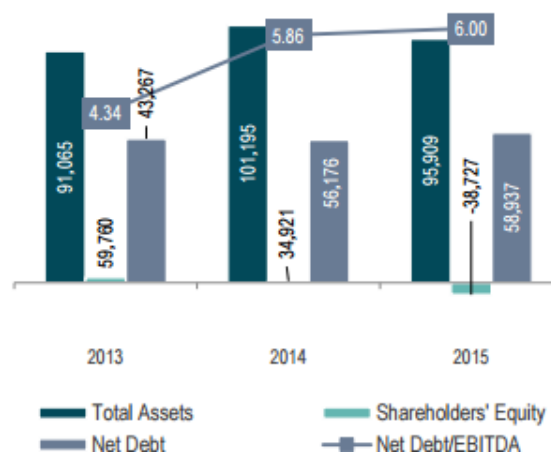
Specifically, revenues from sales of light commercial vehicles and vans were up 7.5% to RUB 38,186mn, while revenues from sales of mid- and large- capacity trucks surged 17% to RUB 27,676mn. Revenues from the company's bus segment declined by 12% to RUB 14,760mn.

The company managed to hold its EBITDA margin at 8% and decreased its loss to RUB 1,929mn in 2015, compared to RUB 2,109mn in 2014. This was due to the company's costreduction program, whose economic impact for 2015 was RUB 6,000mn.

Income Statement (Consolidated, RUB mn)



Balance Sheet (Consolidated, RUB mn)



In 2015, the group's market share in the segment of average-tonnage vehicles increased to 71% (from 56% in 2014), while its share of the bus market increased from 75% to 80% overall - and from 21% to 35% in the micro-bus segment.

The company has two plants - the Ural car plant, which manufactures all-wheel drive heavy-duty trucks, and the Gorky automobile plant, which produces commercial vehicles, special vehicles and vehicle components.

Since 2013, under a contract assembly agreement, GAZ has been producing the Skoda Yeti, the Volkswagen Jetta, the Skoda Octavia and Mercedes-Benz Sprinter commercial vehicles.

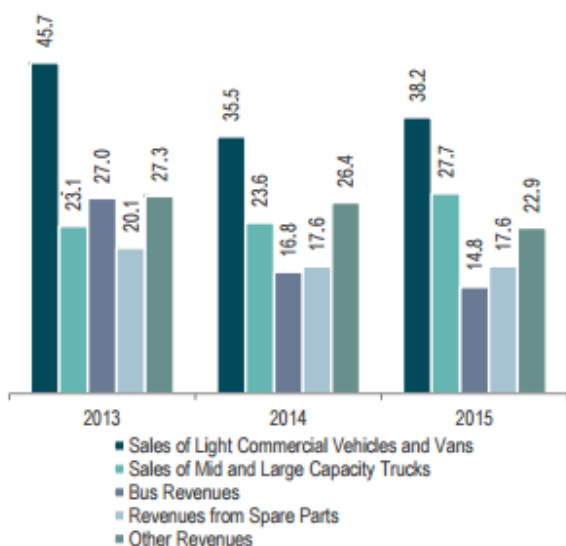
In 2015, the group's sales of light commercial vehicles and vans amounted to RUB 38.2bn (32% of total sales) and those of mid- and large-capacity trucks to RUB 27.7bn (23%), while bus revenues came in at RUB 14.8bn (12% of total sales).

with high export potential. For the last 5 years, "GAZ Group" has invested more than \$ 1 billion to upgrade the model range and it made vehicles of a new family Next in all classes - from light commercial vehicles to heavy-duty trucks and large buses.

Products of "GAZ Group" are traditionally well represented in the CIS countries, where one of the priority markets for the company is Kazakhstan. At the moment, "GAZ Group" has the assembly plant in Turkey and Kazakhstan. GAZ Group will resume GAZel production in Turkey in 2017 (manufactured in cooperation with Turkish Mersa Otomotiv since 2012). The company plans to manufacture around 500 vehicles in the country.

Turkey is a good springboard to enter Western Europe with cars from Turkey with an import duty of 10%, instead of 22% from Russia.

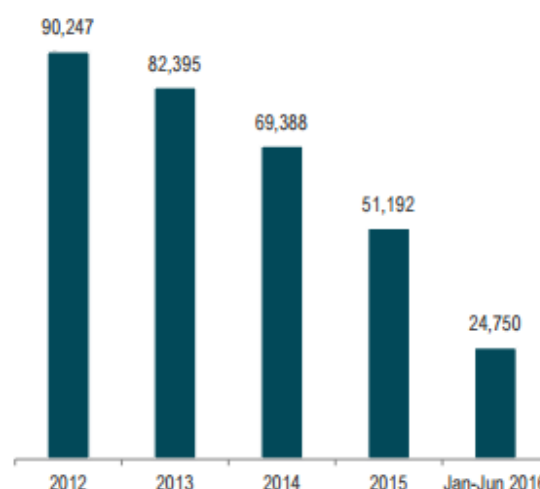
Revenues Segmentation, RUB bn



With today's export share of 20% of total sales "GAZ Group" sets itself the goal to increase it up to 50% in a few years, without conceding at the same time the Russian domestic market to rivals.

The agency "AUTOSTAT" was informed by the press service of "GAZ Group", by noting that the company has a full line of vehicles

New LCV Sales, units



The high potential for import substitution in the car production in the Russian Federation remains one of the main features of the Russian automotive component market. The volume of the primary market for auto components in 2012 accounted for USD 20.57 billion according to estimates of the specialized information agencies Avtostat and ASM-Holding. For 2016 experts forecast a market volume of USD 6-12 billion.

The position of Russian automotive component suppliers



products and develop their customer base. Their products are of poor quality, which prevents them from supplying components to foreign OEMs.

2. Joint ventures created by Russian and foreign manufacturers employ relatively modern production technologies and equipment supplied by international partners. They are usually engaged in the production of technically simple components with low added value (bumpers, harnesses, lights, etc.) designed by foreign partners, or on licensed assembly of sophisticated

- ▶ Around only 10 suppliers are able to compete as they are.

 - ▶ 35-60 suppliers need partners, joint ventures, license agreements or to sale their business.
 - ▶ Consolidation is possible within limited product groups.

 - ▶ More than 500 suppliers should descend to another tier or leave the market.
 - ▶ This segment has the highest potential for business consolidation.
- Source: EY analysis

New players are expected to enter the market since many automotive component production segments witness a relatively low level of competition. For many years, there was no independent supplier industry in Russia, because all the traditional manufacturers produced the automotive parts themselves. The Russian Government is supposed to provide comprehensive support to joint productions of Russian and foreign partners to attract new technologies to the country.

In Russia, there are three main categories of original equipment suppliers:

1. Companies engaged in the production of components for existing and outdated Russian car models, primarily affiliated with domestic OEMs and independent companies. They usually have a worn or obsolete technological base, lack new technologies, and often professional management. They are also typically short on investment resources and lack engineering skills to master new types of

components with low level on sub-component localization (transmission gears, engines, etc.). They have practically no intellectual property rights, in-house engineering and R&D centers and generally specialize in a small range of products of one or two component categories.

3. Foreign original equipment suppliers are relatively new to the Russian market and still have a low level of localization of both subcomponents and raw materials. Usually, they have insignificant production scale determined by overspecialization and rather limited customer base. Foreign original equipment suppliers currently focus on technically simple components with low added value (eg. seats, ignition plugs, exhaust systems, etc). Global OEMs are interested in seeing their traditional Tier-1 and Tier-2 partners follow them as they enter the Russian market.

Due to the fact that the genuine Russian automotive industry cannot reach the necessary quality standards, several international automotive suppliers have appeared on the market recently.

Components with good potential for local sourcing are:

- Metal casting, forging and stamping
- Seats and seat systems
- Interior and exterior plastics (panels, bumpers, etc.)
- Batteries
- Tires and wheels
- Automotive glass and mirrors
- Painting and coating materials
- Wiring harnesses
- A major challenge remains the following

production groups:

- Power train (engine, transmission, drive shafts, differentials, etc.)
- Chassis, driving axles, suspensions, etc.
- Electronics
- Thermal systems (Heating Ventilation Air Conditioning, hoses).

Company name	Headquarter	Components produced in Russia
Antolin	Spain	
Asahi Glass	Japan	glass
Autoliv	Sweden	security belts
BASF	Germany	nitrocellulose paint, catalysts, polyurethane
Benteler Automobiltechnik	Germany	elements of suspension
Continental	Germany	engine control systems
Continental	Germany	plants for tires, plugs, fuel systems
Cummins	USA	joint venture with Kamaz; assembly of engines
Delphi	USA	electrical elements, plastic details
DuPont	USA	nitrocellulose paint
Eberspächer	Germany	exhaust systems
Faurecia	France	plants for elements of the interior and exhaust systems
Federal Mogul	USA	piston blocks
Grupo Antolin	Spain	elements of the interior, lightening of the passenger compartment, window regulators
Hella	Germany	lightening systems
Hyundai Mobis	South Korea	plastic details for the interior and exterior
Inergy Automotive Systems	France	fuel tanks
Johnson Controls	USA	seats, seat covers
Lear	USA	seats, wiring harness
Leoni	Germany	wiring harness
Magna International	Canada	elements of the interior and exterior, details of the body, passive security systems
Magneti Marelli	Italy	lightening systems
Michelin	France	tires
PPG Industries	USA	coatings
Robert Bosch	Germany	plugs, wiring harness, starters, generators, fuel pumps
Schaeffler Group	Germany	
T.RAD	Japan	
Takata	Japan	plant for steering wheels, security belts, airbags
Tenneco	USA	exhaust systems
TI Automotive	Great Britain	fuel and brake systems
Toyota Boshoku	Japan	seats
Valeo	France	wiring harness, climate control systems
Visteon	USA	elements of the interior, audio systems, electronics
ZF Friedrichshafen	Germany	gear boxes

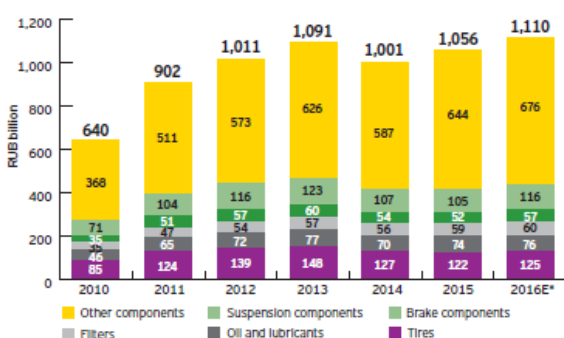
Secondary market for automotive components and spare parts

The downward trend on the secondary market for spare parts is less apparent compared with both car sales and the primary market for automotive components, largely due to the rising number of motor vehicles. The decline is being driven by the diminished purchasing power and increased mileage, as well as by savings through extending the service life of spare parts.

The share of Russian brand spare parts has decreased to one-third of the total market, mirroring the changes in the car fleet structure. Tires, suspensions, brakes and steering components dominate the Russian market due to the poor road surface and aging car fleet, which is not the case for Europe where tires and oils are predominantly in demand. In Russia, nearly half of the expenses incurred during the first three years of using a car are on oils, liquids, filters and other consumables.

Original spare parts comprise only 20%-30% of the total sales due to the availability of cheaper non-original parts and counterfeit products, notably in the fast wearing parts segment. More than 70%-80% of the components are sold in Russia through retail stores and spare parts markets, which stands in stark contrast to Europe where this figure barely reaches 20%. The rest is sold through authorized dealerships and independent service centers. Practically all secondary market segments are dominated by imports, except for tires, since tire manufacturers are actively localizing production and developing exports on the back of the ruble devaluation. It seems likely that this trend will persist in the foreseeable future since there is no information on whether foreign players have any significant construction plans, while the quality of local products remains low.

Russian secondary market for automotive components



Localization and production of automotive components

Localization processes are regulated by the industrial assembly regime and are stimulated by the import benefits granted when localization increases. The number of M&A deals and joint ventures on the automotive component market has been on the rise since 2013 due to new contract commitments. At the same time, the actual localization rate has come short of expectations, mainly due to the lack of local suppliers complying with international requirements for costs, quality and technology. The current situation suggests that 90% of the 600 Russian suppliers will have to terminate their business in the foreseeable future unless they obtain immediate government support or assistance from foreign partners. The most underperforming segments include the production of complex components, i.e. transmissions, engines and electronics, which realistically can only be developed in cooperation with foreign manufacturers.

Only a few Russian suppliers are able to compete as they are. Others need foreign partners to survive (through mergers, license agreements or joint ventures), in which case they would provide tangible assets (land, buildings, communications) and access to their customer base in Russia, while their foreign partners would provide technology. For most suppliers, the only opportunity lies in descending to the second or lower tier and consolidating their facilities to generate economies of scale. Turning to operating efficiency, the greatest effect may be achieved by upgrading the basic production types (casting, stamping, mechanical processing), and using numeric control machines and high performance machinery. They also need to introduce state-of-the-art management disciplines, improve supply chain and working capital management (the “Just-in-Time” system) and consolidate the production facilities of medium-size suppliers to generate economies of scale.

Structure of the Russian secondary market broken down by spare parts origin

Original parts	20-30%
Non-original parts (replica)	40-60%
Counterfeit products	20-30%

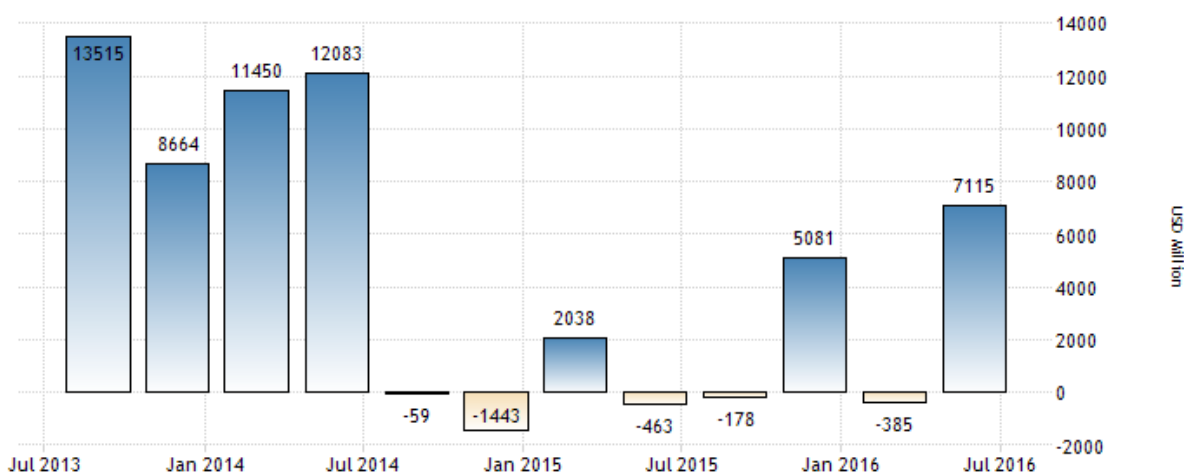
Source: EY analysis

Investment Structure in Russia

Russia Foreign Direct Investment

Foreign Direct Investment in Russia increased by 7115 USD Million in the second quarter of 2016. Foreign Direct Investment in Russia averaged 5802.69 USD Million from 1994 until 2016, reaching an all time high of 40140.00 USD Million in the first quarter of 2013 and a record low of -3922.00 USD Million in the fourth quarter of 2005.

respect for property rights, such as intellectual property rights. The Russian government has taken appropriate steps to improve structural reforms and ensure clarity in the Russian administration and tax law, improve the corporate governance, make the investment procedures more transparent and make the legal system more reliable.



Since 2000s many transnational automotive companies has implemented their assemble-cars-projects in Russia. Large population, low level of motorization and reduction of taxes on auto components became significant factors for attracting investors into the industry. As a result, by 2015 the share of locally-made foreign models increased to 52%.By the end of 2015, there were 16 plants producing cars of foreign brands. Depending on the volume of investment and the method of project`s implementation, all enterprises can be divided into several groups: assembly without significant FDI, joint ventures with national companies and FDI to construction of full cycle factories. Among these groups there are enterprises established on the basis of old automobile centers, at the facilities of non-core plants, and newly-built factories.

When investing in Russia, the key concerns of the foreign investors include transparency, corporate governance, rule of law, and

Over the 2014-2016 period the Russian automotive sector has witnessed around 15 M&A and ECM deals with buyers coming from Russia predominantly. The reluctance of foreign investors to enter the market was due to the geopolitical uncertainty related to the Ukrainian crisis and the mutual sanctions that Russia and the Western World imposed on each other.

In 2015 General Motors closed an Opel plant and already has no assembly factory in the country while Nissan Motor said it suspended Russia production for 16 days in March 2015. The Chinese Ssangyong Motor shipped no vehicles to Russia in January and February 2015 because of weaker ruble and VW laid off 150 workers and reduced shifts at its car plant in Russia as part of measures to cut costs in the shrinking Russian market. The Russian auto producer Sollers cancelled its partnership with Toyota to produce the Land Cruiser brand.

Other companies like Ford stayed committed to the Russian market. The company's joint venture Ford Sollers opened a USD 275mn factory in September 2015 with capacity of 105,000 engines a year with possibility to expand to 200,000 units. In a year, Ford's Russia sales nosedived 41%. The joint venture now operates four plants in Russia. New models, such as the Fiesta hatchback and EcoSport SUV, have been adapted for Russian conditions of bad roads and extreme cold, with higher ground clearance, anti-corrosion finishes and engines adapted for lower grade fuel.

Mercedes-Benz of Daimler reached agreement to build a plant outside Moscow which is expected to start production in 2019. The German automaker has invested US\$264m in the facility, which will begin making its E-class sedans and SUVs in 2019.

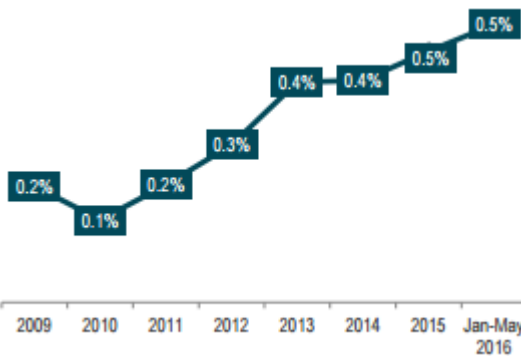
Many of the global automotive suppliers did not choose to invest in greenfield projects in Russia, but looked for partners among the local players. This had the advantage that they could profit from existing workforce and infrastructure and in some cases even open doors to Russian OEMs and aftermarket access. On the other hand, the Russian partners benefited from the technical know-how, improved quality and process management systems of the foreign companies. However, while the benefits for both sides are obvious, there are also some hidden threats which should not be underestimated - those include difference in business cultures, overly optimistic expectations from both sides, etc. Unfortunately, quite a number of joint ventures had therefore to be stopped.

Russia Exports By Category (2015, Top15)	Value
Mineral fuels, oils, distillation products	\$216.10B
Iron and steel	\$15.22B
Commodities not specified according to kind	\$10.80B
Fertilizers	\$8.85B
Machinery, nuclear reactors, boilers	\$8.68B
Pearls, precious stones, metals, coins	\$7.87B
Aluminum and articles thereof	\$7.06B
Wood and articles of wood, wood charcoal	\$6.31B
Cereals	\$5.65B
Copper and articles thereof	\$4.46B
Inorganic chemicals, precious metal compound, isotope	\$3.84B
Electrical, electronic equipment	\$3.46B
Organic chemicals	\$2.96B
Fish, crustaceans, molluscs, aquatics invertebrates	\$2.79B
Vehicles other than railway, tramway	\$2.73B

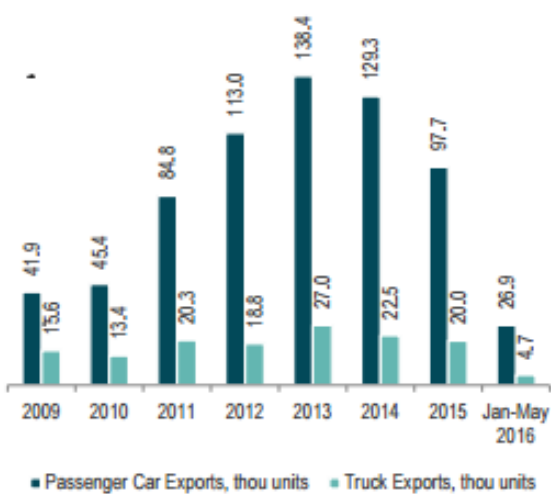
The automotive export

Vehicle imports have decreased at faster rates than exports have. The share of passenger cars and trucks in total Russian exports has been increasing since 2010, but still remains low. In January-May 2016 it stood at 0.5%

PC and Truck Exports, % of Total Exports



Vehicle Exports, Volume



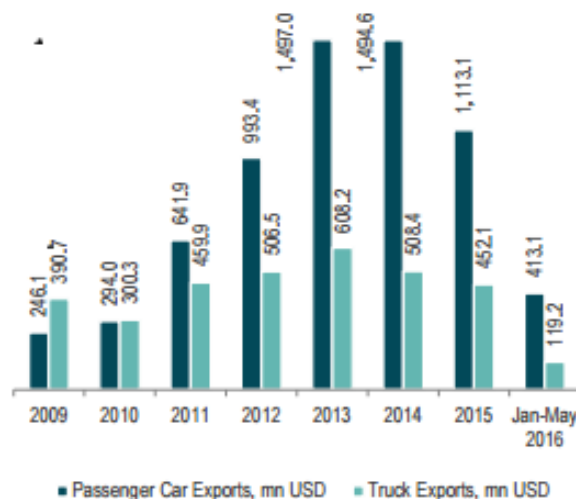
The main export market for Russian cars is Germany, which had a 24% share in January-May 2016, followed by China (23%) and the U.S. (8%). In August 2015, Volkswagen and Hyundai announced plans to boost production in their Russian factories for exports to the Middle and Far East, to take advantage of the weak ruble. Hyundai had plans to deliver around 4,000 cars to Middle Eastern countries by end- 2015. This was an unprecedented step for foreign producers with assembly plants in Russia. In the past only domestic companies

like AvtoVAZ, GAZ Group, KAMAZ and UAZ have produced cars locally for export markets.

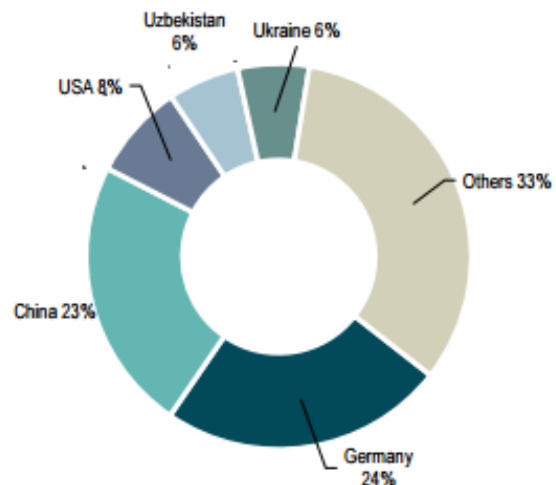
Car exports from Russia shrank by 30.2% in 2016 to 68,000 units, at a total monetary value of \$1.0975 billion. 23,400 of these vehicles were exported from non-CIS countries for \$553.3 million and 44,600 from CIS countries for \$544.2 million.

Truck exports fell by 28.5% to 14,300 vehicles, generating \$352.9 million. 6000 trucks have been exported to non-CIS countries for \$206 million and 8300 to CIS countries for \$146.9 million

Vehicle Exports, Value



Passenger Car Exports In Jan-May 2016



Export potential of Russian vehicle manufacturers

- In Russia, there is under-utilisation of production capacities; thus exporting cars to foreign markets can become one of the sources for partial utilisation of free capacities. The realisation of an export strategy will enable car manufacturers not only to provide for the additional utilisation of their capacities but also to improve brand recognition and develop their client base.
- The main competitors of Russian car manufacturers in the developing markets are Asian manufacturers, primarily, Chinese, which have a considerable price advantage over other market participants.
- Presently, the products of Russian car manufacturers are likely to be popular in the developing markets, in which there are high car market growth rates, a demand for medium and low price cars, and comparatively favourable market access conditions
- It is not only necessary to build a sales network but also to provide for the availability of spare parts and maintenance services. A substantial share of many developing markets belongs to unofficial dealers and service centres, with which it is also necessary to compete.
- Choosing a strategy to enter the developing markets depends on the capabilities of a manufacturer, its ultimate goals and the particular features of the export market. When entering a new market, companies can choose indirect export when products are sold through independent intermediaries, or direct export when a company performs export operations independently, i.e. establishes a trade representative office or engages foreign distributors. An important component of success in foreign markets is the availability of appropriate partners and contractors. Irrespective of the strategy selected, the solution to the task generally requires investment and a good assessment of the potential outcome.
- Tariff and non-tariff foreign trade regulation methods used in different countries can hinder export development; however, they can be partially removed if the state and car manufacturers join together in their efforts.

Tariff regulation methods

- **Tariff regulation** methods imply the necessity of paying customs duties when importing cars into a country's territory.
- In many developing countries including BRIC* and ASEAN* member-states there are high import duties limiting export from other countries, which is mainly aimed at protecting local car manufacturers and promoting the localisation of production. Thus, import duty on a passenger car in India and Thailand is 60% and 80%, respectively.

- Among the measures able to ease the regulatory mode and have a positive impact on the volume of export by Russian manufacturers there are execution of free-trade agreements and special intergovernmental agreements.
- Thus, for instance, to extend the economic relations, a free-trade agreement between the Eurasian Economic Union (EEU) and Vietnam was concluded on 5 October 2016. One of the main provisions of the agreement deals with a gradual reduction of import duties for passenger cars manufactured in Russia and other EEU countries from 50–70% to 0% and from 17% to 0% for trucks within ten years.
- Also, in October 2016, a Russian-Vietnamese intergovernmental protocol on the support of motor vehicles in the territory of Vietnam came into force, providing authorised companies (Groups GAZ, KAMAZ and Sollers) with the right to import motor vehicles and vehicle sets to the country within the quota limits.

Non-tariff regulation methods

- **Non-tariff regulation** methods imply the application of foreign trade regulation tools different from customs duties.
- The most popular regulation methods are licensing and quantitative restrictions of products (i.e. in Algeria and Ecuador), compulsory certification of products to confirm the compliance with technical and ecological standards applicable in a country (i.e. Euro-6 in the EU), and providing export subsidies.

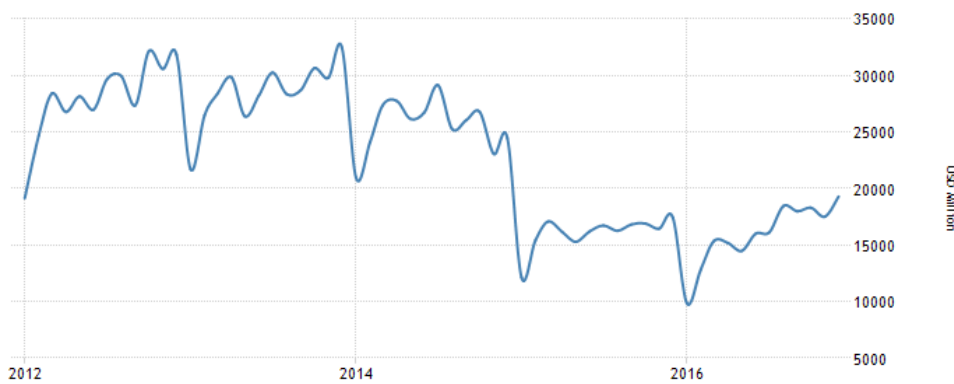
- Non-tariff regulation methods often result in the need to adapt the products of car manufacturers to local specifics, which, in turn, requires substantial investment and optimisation of operation costs.
- Therefore, it is very important for car manufacturers to track global car production trends to consider all present and future requirements of car products.
- Thus, Russian car manufacturers have the potential to expand their presence in export markets; however, to preserve and strengthen their competitive ability, it is necessary to introduce technologies and innovations and maintain quality standards.

Source:PWC

Role of the automotive sector in the Russian imports

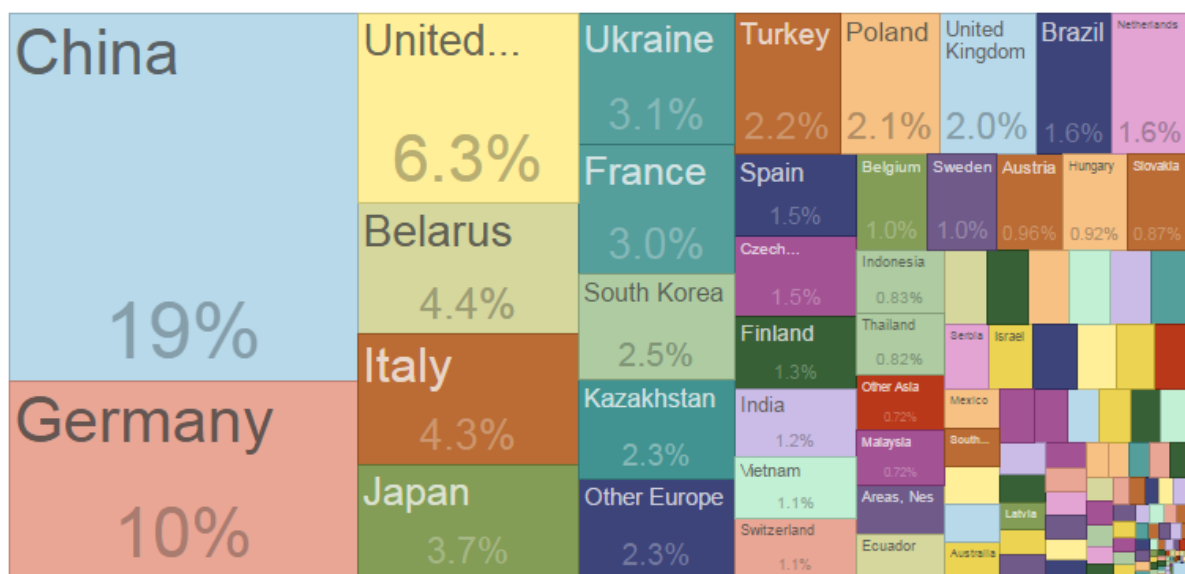
Russia Imports

Imports to Russia went up 10.6% to \$19.3 billion in December 2016 from \$17.4 billion a year earlier, marking the fifth consecutive month of gains. Imports from non-CIS countries climbed 10.5% (from 6.1% in November) and those from CIS countries advanced by 11.5% (from 9.3%). Considering the full 2016, imports declined 0.8% to \$191.4 billion. Imports in Russia averaged 13044.18 USD Million from 1994 until 2016, reaching an all time high of 32481 USD Million in December of 2013 and a record low of 2691 USD Million in January of 1999.



Sources: www.tradingeconomics.com Federal Statistics Service

Destinations of Russian imports



Sources: www.tradingeconomics.com Federal Statistics Service

Russia Exports By Category (2015, Top15)	Value
Machinery, nuclear reactors, boilers	\$34.15B
Electrical, electronic equipment	\$21.11B
Vehicles other than railway, tramway	\$15.38B
Pharmaceutical products	\$8.69B
Plastics and articles thereof	\$7.63B
Optical, photo, technical, medical apparatus	\$5.11B
Articles of iron or steel	\$4.08B
Edible fruits, nuts, peel of citrus fruit, melons	\$3.94B
Iron and steel	\$3.30B
Inorganic chemicals, precious metal compound, isotope	\$3.25B

Import in Automotive Industry

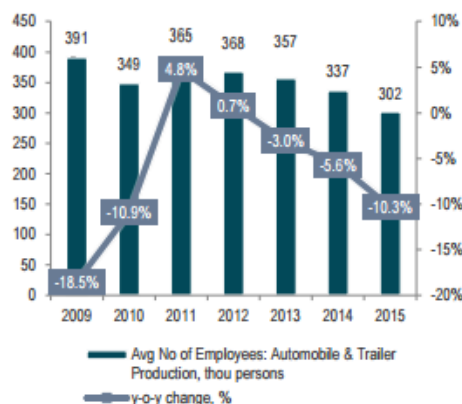
In 2015, new passenger car imports totalled 350,000 units, which was 68% lower than 2011 when a record 1,082,000 cars were imported. In 2015 alone car sales halved compared to 2014. During the first five months of 2016, the annual rate of decrease eased to 32.9%. In January-May 2016, 6,900 trucks were imported by Russia - 19.9% less than in the corresponding period of 2015. In 2015 Russia imported 23,000 trucks, 81% less than the record of 120,000 units achieved in 2012.

Car imports to Russia fell by 23.7% in 2016, to 267,000 vehicles. According to Russian Federal

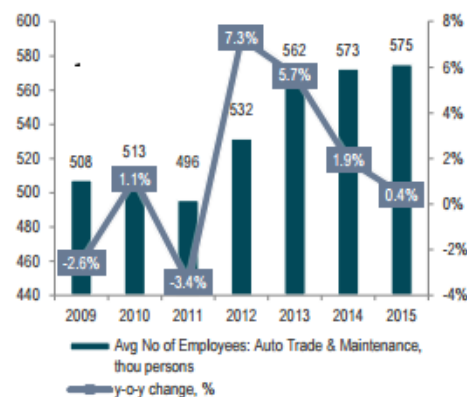
Customs House (FTS) data, the monetary value of automobiles imported to Russia within the aforementioned period amounted to \$6.0274 billion. 252,900 vehicles have been imported from non-CIS countries at the worth of \$5.8196 billion and 14,100 from CIS countries for \$207.8 million.

Truck imports were also down last year, by 9.8% to 20,300 units, with a total value of \$1.0306 billion. 16,600 of these trucks were imported from non-CIS countries for \$556 million and the remaining 3700 from CIS countries for \$475.1 million.

Employees in Automotive Sector



Employees in Auto Trade and Maintenance



Tyres for vehicles

Tyre Market

According to the TechSci Research report, "Russia Tire Market Forecast & Opportunities, 2012-2022", tire market in Russia is projected to exhibit a CAGR of 9.3% in value terms during 2017-2022. Passenger car tire segment dominated Russia tire market over the past few years, on account of continuously expanding passenger car fleet size in the country. Central Federal District accounted for the highest share in the country's tire market during 2012-2016, owing to presence of major cities such as Moscow, which also houses a large number of administrative and business centers of the country.

In 2016, Russia tire market was dominated by passenger car tire segment, followed by two-wheelers, light commercial vehicle, medium & heavy commercial vehicle and OTR vehicle tire segments. Few of the prominent tire manufacturing companies in Russia include Nizhnekamskshina, Pirelli, Nokian, Cordiant, Continental, among others. In 2016, Central Federal District accounted for the largest market share in Russia tire market, followed by Privolzhsky Federal District, South Federal District, Ural Federal District, Siberian Federal District, North Caucasus Federal District, North-West Federal District and Far East Federal District.

Future Expectations & Trends

Despite the downturn, foreign automotive companies are not leaving the Russian market and some auto manufacturers are planning to build new auto plants. Presently, several foreign car manufacturers are preparing to start manufacturing their cars in the territory of Russia.

Considering the car manufacturers' plans for increasing the production capacities in Russia and the current market forecast, the capacity utilisation is expected to reach 57% by 2021, reaching a production volume of 1.8 million cars.

Particularly, within the next five years, the production capacities are scheduled to be increased by 0.2 million cars to 3.3 million cars. This is due to the anticipated opening of three car plants:

- Haval is building a plant with an annual capacity of 150,000 vehicles in the Tula region, which is scheduled for commissioning in 2018.
- LIFAN is planning to launch the construction of a plant with an annual capacity of 60,000 vehicles in the Lipetsk region in 2017.
- Mercedes-Benz is planning to build a new plant with an annual capacity of 25,000 vehicles in the Moscow region by 2019.

In such a challenging environment, some players appear to be more successful than others. Among them are OEMs with localised assembly operations, those introducing new and upgraded models, especially in the crossover and SUV segments which are still the most attractive for Russian motorists, and those with intelligent pricing policies with a view to current economic uncertainty.

The development of the automotive industry will also stand to gain from reducing the tax burden on motorists, enhancing transport infrastructure, and taking other measures to reduce ownership costs. At the same time, it is crucial to develop capacity for collection and scrapping of old fleet in order to trigger its renewal.

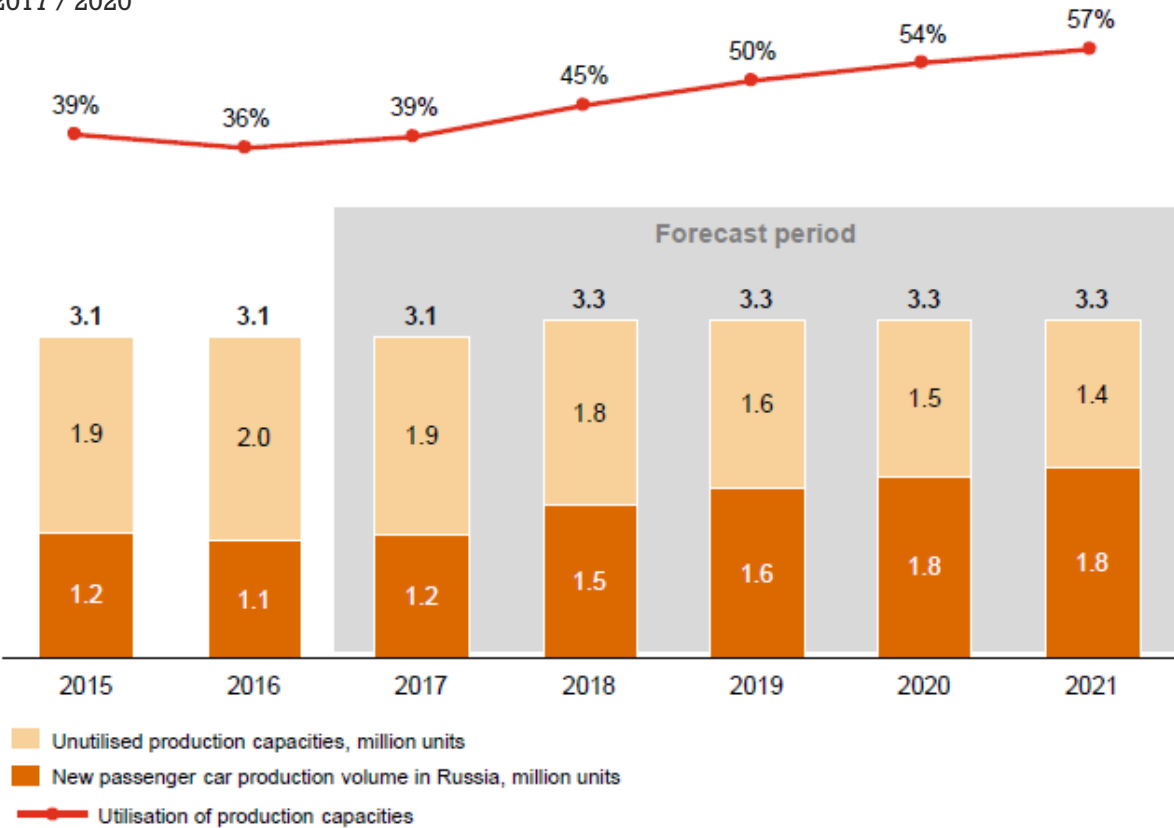
Russian automotive manufacturers are looking to substantially increase their exports, partially as an alternative to the shrinking domestic market. The government significantly increased its support to the industry in 2015-17.

Offering products with expressed technological advantages as compared to the products of Chinese brands while preserving an optimal price-quality ratio can help improve the potential of Russian manufacturers in export markets.

Localization is required in order to minimize currency risks and to cut down logistics costs at different supply chain levels.

In addition, many car dealers have managed to adapt to the new realities and are now expanding in those segments less affected by the crisis. One such segment is the used car market, which outpaced the new car market in cash terms in 2015. As Internet and distribution technologies develop and the market becomes more transparent, the used car market will remain an important component for car dealers' business in 2016 and beyond.

New Passenger Car Production Estimation, 2017 / 2020



Source: PwC analysis



Investment Incentives ■ in Automotive Sector



Summary

Russia's primary approach to attracting foreign direct investment (FDI) has been to pass a variety of measures intended to induce companies to localize their production in Russia. President Putin signed the Industrial Policy Law (No. 488-FZ) in December 2014, which stipulates preferences for Russian-made products in government procurement and major government-funded projects; the law also "recommends" similar preferences for purchasing by state-owned enterprises (SOE). The law also provides for special investment contracts, which would guarantee some preferential treatment for foreign companies that localize production of an item not currently made in Russia.

Most sectors of the economy are open to foreign investment, though there are ownership restrictions in strategic sectors. The Strategic Sectors Law (FZ-57) stipulates 45 activities for which foreign investment requires government approval. Foreign ownership in air transportation, financial services, insurance, media, and agricultural land is also restricted.

Russia joined the World Trade Organization (WTO) in August 2012. Congress also enacted legislation to extend permanent normal trade relations to Russia in the same year.

Russia's membership in the WTO has the potential to create opportunities for U.S. exports and investments.

U.S. manufacturers and exporters should have more certain and predictable access to the Russian market, because of Russia's commitment not to raise tariffs on any products above the negotiated rates. For industrial and consumer goods, Russia's average bound tariff rate declined from almost 10% to under 8%

Russia's changing business environment is bringing forth new opportunities for investors. Tax incentives are a useful tool for increasing business profitability and thus maximising the potential of these opportunities.

The most important tax incentives available in Russia include:

- The standard profit tax rate of 20% can be reduced to 0%;
- The standard property tax rate of up to 2.2% (of the cadastral value or net book value of assets, depending on regional legislation) may be reduced and certain types of assets may even be exempt;
- The standard regressive social security contribution rates may be reduced from: - 30% on annual remuneration up to RUB 718k (approx. USD 10k); - 27.1% on annual remuneration between RUB 718k and RUB 796k (approx. USD 10.7k); - 15.1% on annual remuneration exceeding RUB 796k*;
- Special VAT and customs regimes

Companies can benefit:



a 150% super deduction of respective costs to reduce profits tax and federal subsidies

if it is conducting certain activities for development / improvement of new products, services or technologies



the "Skolkovo" regime (reduced burden for almost all taxes)

if it is focusing on developing a new product, technology in the energy efficiency, nuclear engineering, space technology, medicine or IT industries and is ready to move to Moscow



regional tax incentives (profits and property tax reductions)

if it is going to invest in building/renovating a plant or other equipment or property



0% profits tax rate, reduced SIC rates and wide range of federal and regional subsidies

if it is an agricultural goods producer



Special Economic Zones (reduced burden for almost all taxes)

if it is going to build a manufacturing plant or establish an R&D center / high-technology company or start a hospitality business (in specific locations determined by the Russian Government)



reduced social contribution rates

if it is engaged in software development



0% profits tax rate

if it is engaged in medical or educational activity

Regional tax incentives

The availability of regional tax incentives, which are provided by the majority of Russia's regions, is an important factor to consider in choosing locations for production facilities.

Typical requirements:

- Project fits in with regional business priorities;
- Minimum investment determined by regional law.

Benefits:

- Reduction in regional component of profit tax (the maximum reduction is 4.5%; profit tax rate can be reduced to 0% in some regions);
- Property tax reduction or exemption.

Comments:

In some regions, the approval process requires the investor to enter into an investment agreement with the regional authorities, while in other regions tax incentives are provided on a self-assessment basis, with no preapprovals required.

Special Economic Zones (SEZ)

- Each of the 26 currently established Special Economic Zones has geographical boundaries and falls into one of four categories:
- Manufacturing, Technology & Innovation, Tourism & Recreation, and Port & Logistic*. SEZs are established for a period of 49 years. Although originally slow to take off, many of the Technology & Innovation SEZs boast advanced infrastructures, and more than 400 investors - including foreign investors - are now in place.

Requirements:

- Russian legal entity incorporated within a Special Economic Zone with no external branches or representative offices;
- Specific qualifying activities, depending on the category of the Special Economic Zone:
 - Manufacturing;
 - Technology & Innovation;
 - Tourism & Recreation;
 - Port & Logistic.

Benefits:

- Maximum profit tax rate may be reduced from 20% to:
 - 2% (for Manufacturing and Port Special Economic Zones);
 - 0% until 2018 for Technology & Innovation and Tourism & Recreation Special Economic Zones.
- Property tax exemption for ten years;
- “Free customs zone”;
- Reduced regressive social contribution rates for Technology & Innovation SEZs (effective until 1 January 2018):
 - 14% on annual remuneration up to RUB 718k (approx. USD 10k);
 - 12% on annual remuneration between RUB 718k and RUB 796k (approx. USD 10.7k);
 - 4% on annual remuneration exceeding RUB 796k**.
- Accelerated depreciation (Manufacturing and Tourism SEZs only);
- VAT exemptions for Port & Logistic Zones.

Comments:

In practice, the approval process could take

2-6 months;

In many cases, the construction of production facilities inside the Special Economic Zone is required.

Starting from 2015, the residents of Technology & Innovation SEZs are allowed

Regional investment projects and special investment contracts

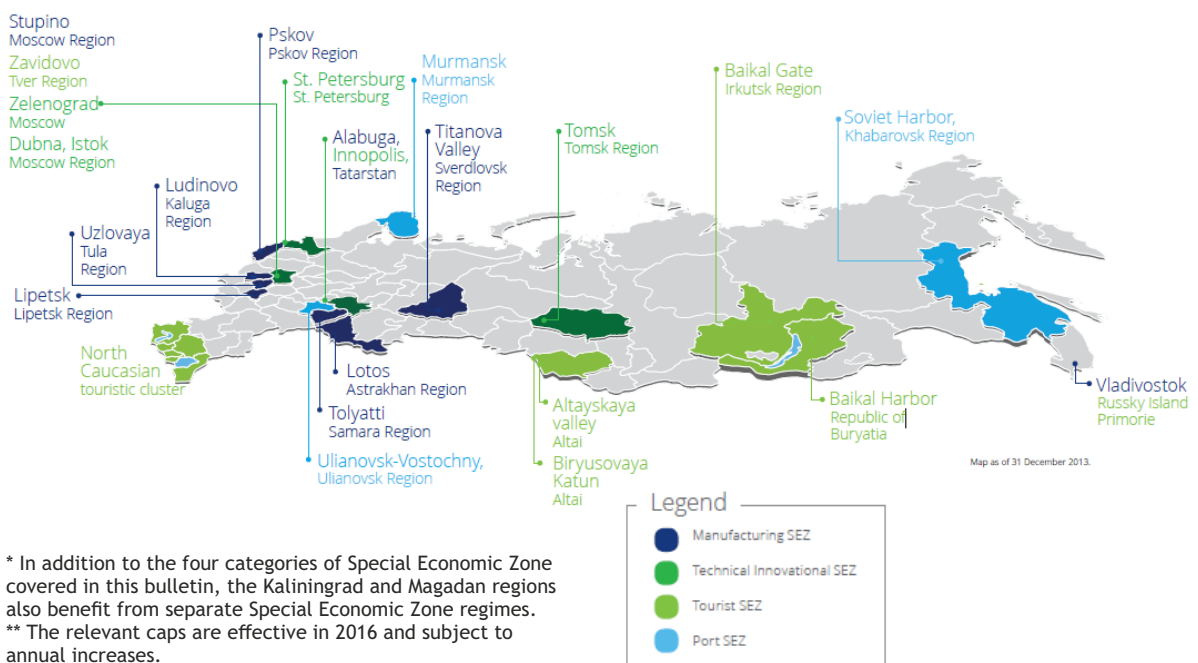
Tax incentives were expanded for investors involved in regional investment projects (RIPs) and special investment contracts (SPICs) in 2016.

Regional investment projects

From 2016 RIPs may be implemented in all Russian regions.

Requirements

- Production of goods;
- Specific qualifying activities ;
- Capital investment:
 - At least RUB 50 million (approx. USD 700k) for 3 years;
 - At least RUB 500 million (approx. USD 7.1 million) for 5 years.



Benefits

- The profit tax rate may be maximally reduced from 20% to:
 - 0% for the first 5 years after the resident makes a profit and 10% for the next 5 years (for RIPS in one of the regions of Siberia or the Far East);
 - 10% starting from the year in which the resident makes a profit until the year in which the total amount of received tax incentives equals the amount of capital investment (for RIPS in any region other than those in Siberia and the Far East);
- Mineral extraction tax (MET): The effective rate is subject to a coefficient ranging from 0 to 0.8, depending on the period in which this coefficient is applied.

Comments:

- Generally, a RIP may only be implemented within a single Russian region;
- An investor may apply for tax incentives if appropriate regional legislation is adopted by the region;
- More than 90% of revenue derives from RIPS, otherwise the application of profit tax incentive is not allowed.

Special investment contracts

Under a SPIC, an investor agrees to invest in establishing a new production facility or upgrading existing production facilities to achieve a certain production volume with a specific level of localization.

Requirements

- Manufacturing industry (except food processing);
- Capital investments depend on the level at which the SPIC is entered into:
 - At least RUB 750 million (approx. USD 10.7 million) for federal SPICs;
 - Subject to local legislation for regional SPICs.

Benefits

- The profit tax rate may be maximally reduced from 20% to:
 - 0% at the federal level;

--0% at the regional level; for 10 years after the investor makes a profit;

- A grandfather clause;
- Other benefits, such as property tax exemptions, depend on the adoption of amendments to the local legislation of the Russian regions.

Comments:

- An investor may apply for tax incentives if appropriate regional legislation is adopted by the region;
- More than 90% of revenue derives from a SPICs, otherwise the application of profit tax incentive is not allowed.
- The conditions and procedures for entering into SPICs are set not in all regions.

Special tax regimes

There are several special tax regimes available for companies that choose to be located in the Far East and Siberia: Territories of Advanced Social and Economic Growth (TASEGs) and the Free Port of Vladivostok.

Territories of Advanced Social and Economic Growth (TASEGs)

Introduced in 2015, TASEGs are a legal framework that aims to bolster development in the territories of the Russian Far East and in struggling singleindustry towns across the country. So far, the regime is spreading rapidly into new territories. Each TASEG will retain this special status for 70 years.

Requirements:

- Specific qualifying activities;
- Implementation of an investment project;
- Minimum investment depends on the TASEG.

Benefits:

- Declarative procedure for VAT refunds without bank guarantees;
- Reduced profit tax rate: 0-5% for the first five years after the investor makes a profit, 12-20% for the next five years, depending on the region;
- Reduced mineral extraction tax rates for 10 years;

- Reduced regressive social insurance contribution rate for 10 years:
 - 7.6% on annual remuneration up to RUB 718k (approx. USD 10k);
 - 6.5% on annual remuneration between RUB 718k and RUB 796k (approx. USD 10.7k);
 - 0.1% on annual remuneration exceeding RUB 796k.*

* The relevant caps are effective in 2016 and are subject to annual increase.

** Organizations working in the financial, insurance, wholesale and retail industries are not eligible for these incentives.

Research & Development tax incentives: 150% profit tax super deduction

The Russian government offers tax incentives first introduced in 2009 to encourage R&D efforts leading to companies' increased domestic business growth.

Requirements:

- For companies from various industries conducting eligible R&D activities.
- R&D expenditures must relate to the development of new products, the improvement of production processes, or the development of new services.
- A contractor performing R&D for a third party cannot claim the incentive.
- Eligible "R&D activities" must be included in a government-approved list (significantly extended in 2012).

Benefits:

- Companies conducting eligible R&D activities can apply for a 150% super deduction of qualifying costs to reduce profits tax/increase deferred tax assets
- Application of the R&D tax incentive may lead to the reduction of profits tax in the amount of 10% of qualifying costs.
- Qualifying costs include labour costs, R&D contractor expenses, depreciation of equipment used for R&D, and other relevant expenses, with limitations.

Comments:

- In accordance with the RF Tax Code R&D activity eligible for tax relief extends to day-to-day operations (activities related to the development or creation of new products and services, technologies and management)
- A super deduction can be claimed even if eligible R&D activities fail to produce a new product or service.
- A super deduction can be claimed for previous and future periods.
- Documentation: R&D reports are to be filed with the annual profits tax return. R&D expense registers should be prepared.
- No preapproval procedure, the reports are evaluated during calculation of profits tax within routine tax audit procedures.

Skolkovo

Announced in 2010, the Skolkovo Innovation Centre - dubbed "Russia's Silicon Valley" - is located just outside the Moscow Ring Road.

The Centre aims to attract R&D activity in a number of specific technical fields and to increase Russia's innovation potential.

Requirements:

- Russian legal entity;
- Project company (strictly speaking, no ongoing activity of a supporting nature, such as R&D outsourcing centres, is permitted);
- Eligible activities are limited to research and development within the framework of five priority clusters, as well as the commercialization of the results, which includes the disposal of IP rights, providing R&D consulting services and production connected with the results of R&D activity.
- Targeted industries:
 - Energy Efficient Technologies;
 - Nuclear Technologies;
 - Space Technologies and Telecommunications;
 - Biomedical Technologies;
 - Information Technologies.

Benefits:

- Profit tax exemption;
- VAT exemption;
- Property tax exemption;
- Reduced social contribution rate of 14% on annual remuneration up to RUB 796k (approx. USD 10.7k)* and exemption for remuneration exceeding that cap;
- Cash grants covering eligible research activity. In the majority of cases, the total tax burden will be limited to 14% social contributions on salaries paid.

Comments:

- The approval process is straightforward;
- The company should be registered within the Skolkovo area;
- Starting in 2019, companies having Skolkovo project participant status will be unable to have branches or representative offices outside of Skolkovo area. Operating such an Office would result in the company losing its status as a Skolkovo project participant, thus preventing it from applying the relevant tax and SIC incentives;
- There are generous revenue and profit thresholds in place before tax exemptions are taken away.

* The relevant caps are effective in 2016 and subject to annual increases.

Reduced social contribution rates

Reduced social contribution rates

Companies engaged in software development qualify for reduced social security contribution rates.

Requirements:

- Russian legal entity;
- More than 90% of revenue derives from software development services and the sale of software; excluding foreign exchange gain;
- More than 7 employees;
- State accreditation from the Ministry of Communications and Information Technology.

Benefits:

- Reduced regressive social contribution rate:
- 14% on annual remuneration up to RUB 718k (approx. USD 10k);
- 12% on annual remuneration between RUB 718k and RUB 796k (approx. USD 10.7k);
- 4% on annual remuneration exceeding RUB 796k*.

Comments:

- The regime is applied automatically**

Additional opportunities

- There are various opportunities that provide for the reduction of the social insurance contributions that generally apply to large manufacturing companies (especially, in the mining and milling industries):

Reduction of SIC rate for compulsory social insurance against industrial accidents and occupational illnesses

Internal restructuring can bring about different SIC rates for compulsory social insurance against industrial accidents and occupational illnesses.

This could decrease SIC rates against industrial accidents and occupational illnesses by as much as 0.2% (while maximum overall rate is 8.5%) for individual business units within the company

Reduction of standard SIC rates for unexperienced employees

In accordance with tax and labor legislation, companies that offer apprenticeships agreements to unexperienced employees (e.g. students, entry-level job seekers) do not have to pay social insurance contributions during the employee's training period. This could impact the payroll budget for such employees by 30%, providing all legislation requirements are met and the process is properly documented

* The relevant caps are effective in 2016 and subject to annual increases.

** The incentive is granted upon the submission of specific documents to the tax office, with no preliminary permission or agreement required.

0% profit tax rate

A 0% profit tax rate was introduced in 2011 to support companies engaged in high-priority medical and educational activities, as well as producers of agricultural goods.

Requirements:

- General:
 - State license;
 - More than 15 employees;
 - Limitations for financial transactions;
- For companies engaged in medical or educational activities:
 - Engagement in medical or educational activities included in a government-approved list;
 - More than 90% of revenue derives from medical or educational services;
 - More than 50% of employees are medical specialists (medical activity only).
 - For companies engaged in producing agricultural goods only:
 - More than 70% of revenue derives from the production and processing of agricultural goods;
 - A 0% rate is applicable for revenue derived from the production of agricultural goods only.

Benefits:

- 0% profit tax rate.

Comments:

- No preapproval procedure.

Other tax incentives and grants

Tax incentives

- VAT exemption

There is an import VAT exemption for technological equipment, no equivalent of which is produced in Russia, as determined by a government-approved list (an 18% import VAT normally applies).

Applying this regime may improve working capital positions for a VAT-payer, or reduce equipment costs for VAT-non payers;
- Exemption from import customs

Exemptions from import customs are provided for goods imported by a foreign

investor as a capital contribution to its Russian subsidiary;

- Accelerated depreciation

Accelerated depreciation can apply to fixed assets used in R&D activities. However, the definition of R&D for purposes of accelerated depreciation is not clear.
- Property tax exemption for energy-efficient assets

A property tax exemption is available for energyefficient assets (including buildings) for 3 years, starting from the date of the asset's entry into operation, with no preapproval from the tax or any other authorities. In practice, the application of this incentive is thus far very limited.

Grants and subsidies

- Direct grants are provided by the federal government, ministries and other state bodies upon the carrying out of tender procedures for R&D in strategic areas, such as energy efficiency, IT, medicine, life sciences, etc.
- Partnership with Russian state universities

These grants are usually provided with respect to collaborative R&D in partnership with a Russian state university, provided that at a minimum, the company's investment in the project matches the amount of funds granted. Project implementation timelines range from 1-3 years, with grant amounts ranging between USD 1 and 5 million.

- Subsidies provided by Federal target programmes (size of subsidies and project timelines depend on the programme):
 - “Pharmaceutical Industry 2020;”
 - “Research and Development in Strategic Areas of Science and Technology 2014 - 2020” - covers a broad range of research. The scheme allows applicants some freedom to propose their own innovative topics within the priority areas defined by the government;
 - “Development of the Industry and Increasing its Competitiveness.”

Subsidies covering interest expenses for manufacturing companies,

Basic requirements:

- subsidy covers interest expense for loans in Russian banks;
- the project is aimed at the creation of a manufacturing facility (list of industries is limited);
- fixed assets became or will become operational after 1 Jan 2014.

0% profit tax rate

Russia has established regional industrial zones to support investors. For example in the St. Petersburg district where Toyota and Nissan - and until recently, GM - have production plants, as well as in Kaluga (VW), investors with capital expenditures over USD 100mn receive such support. Smaller investors can qualify for benefits only by establishing JVs. Investors in the sector can receive tax credits, depreciation allowances, tax discounts and tax holidays for a number of years. Unlike SEZs, these tax incentives allow foreign and local firms to choose the destination of their investment and still receive tax support. Regional governments also have tax programmes, e.g. St Petersburg has granted a 50% reduction of property tax to auto producers for 2016-2018.

Imports Substitution/Localisation Policies

In order to cut import dependency, the industry ministry has developed an ambitious import substitution plan, with incentives for companies that locate their production in Russia. Foreign car producers and OEMs can benefit from import tariff exemptions as low as 0% if they source more than 60% of their components from domestic suppliers for the first six years and produce a minimum of 300,000 units per year in three years, as well as starting R&D activities in Russia. OEMs that make engines in the country are obliged to source at least 15% of their components from local companies by 2017, 30% by 2018 and 45% by 2019. In 2014, the government prohibited state bodies from purchasing vehicles produced outside the Eurasian Economic Union.

Local manufacturers that participated in the industrial assembly regime were exempted from import duty for a large number of major components needed for the assembly of vehicles. For most other components, the rate

of import duty was reduced to 3-5%.

At the beginning of February 2011, the Russian Government adopted new conditions for local manufacturers, introducing more rigid rules. Under the new conditions, foreign manufacturers can import parts and components under special conditions (zero or minimal import duties) until the end of 2020. The main requirements are as follows:

- Production of 300,000 vehicles a year in completely new production facilities or 350,000 vehicles a year in existing facilities, which must be upgraded
- Not less than 30% of vehicles produced must have locally produced engines or gear boxes. The level of localisation must reach 60% during the first six years
- SKD1 can be used in addition for 5% of vehicles produced during the first three years of an agreement
- Manufacturers must create research and development centres

In 2016, the Russian Government initiated the formulation of a strategy on the development of the automotive industry for the period until 2025 that would set long-term state priorities for the industry in terms of revisions to the investment regime for manufacturers, as well as developing exports of vehicles and supplies, and increasing local production of auto components. The strategy is expected to be approved by the government in mid-2017.

Localisation Policies in the Context of WTO Accession

Russia's import substitution and localisation policies raise concerns about compliance with the rules of the World Trade Organization (WTO), which the country entered in mid-2012. Last year, the EU and Japan voiced general concerns about Russia's reliance on such programmes while the U.S. pointed to the country's increasing reliance on "buy Russia" policies and the ban on government purchases of imported automobiles. Russia responded that it had agreed to remove import restrictions and subsidy benefits after a transition period lasting until July 1, 2018 and that subsidies are being given to local automotive producers that are controlled by foreign investors and companies.

0% profit tax rate

vestors. For example in the St. Petersburg perty tax to auto producers for 2016-2018.

Incentive Programs for Automotive Industry

The 2013 program for subsidizing car loan interest rates and the 2014 vehicle scrappage program were both resumed in 2015-16, and supplemented by car leasing subsidies as well as direct subsidies for vehicle procurement by public sector entities.

2015 Incentive and Support Program:

In 2015, the government put in place a support and incentive programme for the automotive market with a budget of RUB 26.5bn. It included implementation of subsidised car loans, subsidised car leasing and a car fleet renewal programme.

Under the subsidised car loan programme, loans were available for customers that bought a car which cost RUB 1mn or less. The budget also financed two-thirds of the key interest rate. Total available funds for this programme were RUB 1.5bn and the direct effect so far was over 137,000 units sold.

The subsidised car leasing programme financed a 10% discount on car prices as part of down payments, but no more than RUB 500,000. Federal budget spending under the car leasing scheme has been around RUB 5bn and the effect was over 27,000 leased units.

Over 228,000 units were sold under the car fleet renewal programme, with public spending of around RUB 20bn. Automobile customers received discounts ranging from RUB 40,000 to RUB 350,000 for buying a new car under scrappage or trade-in programmes.

2016 Subsidy Programme Extension:

In January 2016 the Russian authorities announced that the incentive programme would continue for the automotive sector. Subsidies will be provided for demand and supply stimulation, with an expected outcome of up to 620,000 cars sold and RUB 137bn in spending. The demand stimulus includes RUB 11.3bn for subsidised car loans with an expected outcome of 270,000 cars sold, RUB

5bn for subsidised car leasing and expected sales of 32,000 cars. An additional RUB 22.5bn is ensured for vehicle fleet renewal via trade-ins and scrappage and the result is expected to be the assembly of an extra 320,000 cars. There is a programme for subsidising the procurement of trolley buses and tramcars for RUB 1bn, which is targeting sales of 110 units, and a programme for municipal vehicles running on natural-gas-based fuel for RUB 3bn, targeting sales of 1,700 vehicles. On the supply side there are subsidies for stimulating assembly operations for total of RUB 90.2bn. These include compensation of interest payments under investment loans (RUB 7.2bn), subsidy of energy costs (RUB 3.89bn) and of costs for maintaining employment (RUB 46.3bn). For assembly of lower-emission cars RUB 30.2bn has been provided, while RUB 3.3bn has been earmarked for export subsidies.

The government has voiced its willingness to maintain its substantial support for the industry in the future. It has announced that the program for subsidizing car loan interest rates and leasing will continue in 2017, and there is a plan to complement these with new programs aiming to subsidize demand among certain groups of consumers, such as first-time car buyers, buyers of family cars, and others. Export support measures will be enhanced.

However, direct subsidizing of demand does not address the fundamental drawbacks in the industry that arise from excessive capacity, low localization, and a persistent quality gap between domestic and foreign products, including automotive components. The industry support program is therefore being designed to include extra measures to build up exports, develop the supplier base, promote R&D, and secure technological independence.

Programme	Financing	Expected outcome
Subsidies to Russian organisations for partial compensation of expenses connected with the manufacturing of wheeled vehicles	RUB 17.5bn	Providing for the additional manufacture of 250,000 vehicles and the preservation of jobs in car manufacturing companies and related sectors
Programmes including First Car, Family Car, Russian Tractor, Russian Farmer, Private Business, the support of sales of natural gas-engine vehicles and public city electric transport, the purchase of school buses and ambulance cars	RUB 17.4bn	Sales of 90,720 cars in 2017
Subsidising wheeled vehicles leasing	RUB 10bn	Sales of 41,500 cars in 2017
Compensation for some expenses for interest payments on the credits received for the implementation of investment projects, and payment of coupon profit of bonds issued for the same purposes	RUB 7.4bn	Compensation for some expenses for the servicing of investment credits of more than 32 car manufacturers and car part manufacturers due to a degradation of crediting terms
Subsidies to Russian credit organisations for the compensation of a shortfall in income from credits granted by Russian credit organisations in 2015–2016 to individuals for the purchase of cars	RUB 7.0bn	Sales of 270,000 cars
Subsidies to Russian credit organisations for the compensation of a shortfall in income from credits granted by Russian credit organisations in 2015–2017 to individuals for the purchase of cars (2017 liabilities)	RUB 3.0bn	Sales of 350,000 cars in 2017

Source: List of measures aimed at providing the stable social and economic development of the Russia in 2017, dated 19 January 2017, PwC analysis

Conducting Business in Turkish Automotive Industry

Turkish government explicitly declares intentions to develop automotive industry to

become one of the leading car manufacturers in the world.

Regardless of the location of the investment, all automotive industry investments in Turkey (including sub industry investments) are supported by several measures. Local and foreign investors have equal access to.

Regional Investments Incentive Scheme Measures

Incentive Item		Region I	Region II	Region III	Region IV	Region V	Region VI
VAT exemption		+	+	+	+	+	+
Custom duty exemption		+	+	+	+	+	+
Tax reduction as of investment contribution rate	Out of OIZ	15%	20%	25%	30%	40%	50%
	Within OIZ	20%	25%	30%	40%	50%	55%
Social Security Premium Support (employer's share)	Out of OIZ	2 Years	3 Years	5 Years	6 Years	7 Years	10 Years
	Within OIZ	3 Years	5 Years	6 Years	7 Years	10 Years	12 Years
Land allocation		+	+	+	+	+	+
Interest support	Local loans	-	-	3 Points	4 Points	5 Points	7 Points
	Foreign currency loans			1 Points	1 Points	2 Points	2 Points
Social Security Premium Support (Employee's Share)		-	-	-	-	-	10 Years
Income Tax Withholding Allowance		-	-	-	-	-	10 Years

Various governmental and industrial institutions provide additional incentives

Institution	SME or General	Incentive details
KOSGEB	SME	Gives R&D, innovation and industrial application incentives.
TÜBİTAK	General	Uses industry incentives by Ministry of Economy; R&D investments receive R&D tax discount of %100 as of 2008; the companies that use law no:5746 discount cannot use law no:5520 discount at the same time.
Ministry of Science, Industry, and Technology	General	Supports attempts of cumulative industrialization with legislation called "Cumulative Support Program Legislation"; support amount provided by ministry without payback, for business plan cannot be more than 50% of budget, while for each supported area cannot be more than 75% of the budget.
TTGV	General	Supports two types of R&D projects <ul style="list-style-type: none"> •Technology development projects support (suspended in current in 2013): "Technological product" and "Technological Process Innovation", classified as R&D projects are supported; maximum support is 1 million USD, maximum support duration is 2 years and supports need to be paid-back •Advanced technology projects support: Companies applying for this support have R&D projects in food processing, biomedical, or climate control technologies); manufacturing and software companies are targeted and can receive a maximum support of 3 million USD to be paid back in three years.

Russia vs Turkey

In order to support automotive industry Russia had some support programs like; 2013 program for subsidizing car loan interest rates and the 2014 vehicle scrappage program were both resumed in 2015-16, and supplemented by car leasing subsidies as well as direct subsidies for vehicle procurement by public sector entities. In 2017, subsidizing car loan interest rates and leasing will continue. Export support measures will be enhanced.* Russia is targetting to increase localization in automotive industry for that reason assembly regime is being applied.

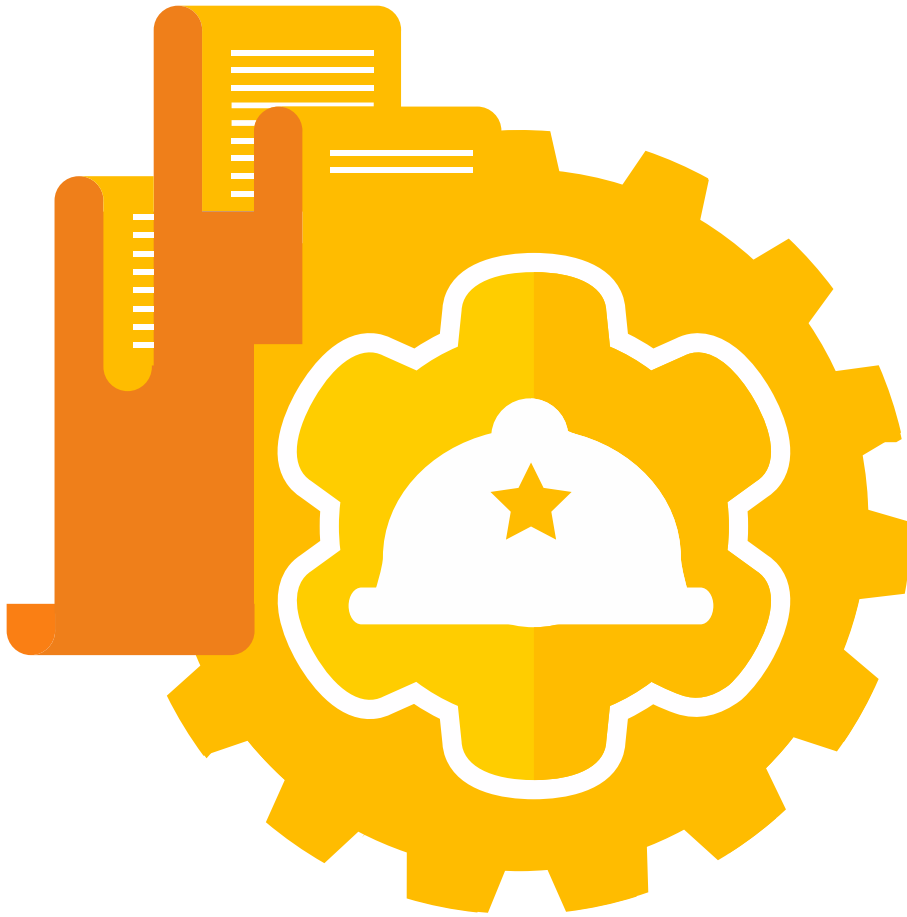
Other incentive programs are similar in Turkey. You can find the list of supports for both countries below.

Overall Russia offers more inclusions for investors and supports its automotive sector more closely than Turkey.

	Russia	Turkey
Tax incentives		
Profit tax	X	
Property tax	X	
Tax incentives for R&D	X	X
VAT exemption	X	X
Exemption from import customs	X	X
Reduced social contribution rates	X	X
Tax Exemptions in Specific Economic Zones	X	X
Subsidizing car loan interest rates and leasing	X	
Imports Substitution/Localisation Policies	X	
Tax exemptions in Technology Development Zones		X
TUBITAK (Scientific and Technological Research Council of Turkey) support		X
Export Support	X*	X
Interest Rate Support		X



Labor Costs in Automotive Sector



Russia Wages

Wages in Russia decreased to 35650 RUB/Month in January from 47054 RUB/Month in December of 2016. Wages in Russia averaged 12135.95 RUB/Month from 1992 until 2017, reaching an all time high of 47054 RUB/Month in December of 2016 and a record low of 1 RUB/Month in January of 1992.



Taxation in Russia

- Russia has a uniform rate of tax on the income of individuals. As of 2016 tax in Russia is payable at the rate of 13% for an individual on most income. (non-residents 30%). Russian residents pay 9% on dividend income. (Deduction at source). Non-residents pay 15% on dividend income.
- Exemptions are granted to certain income earners.
- The standard rate of Russia corporate profit tax in 2016 is 20%.
- Companies pay 9% tax on dividend income. Under certain terms dividend income received by companies with holding of 50% or more is entitled to participation exemption.

Russia Income Tax for an Individual

- An individual is liable for tax on his income as an employee and on income as a self-employed person. Tax will be payable on income earned in Russia and overseas by an individual who meets the test of a "permanent resident" of Russia. A foreign resident who is employed in Russia pays tax only on income earned in Russia.
- To be considered a Russian resident,

residence must be established of at least 183

- days in Russia during 12 months in a calendar year.
- An employer is obligated to deduct, immediately, each month, the amount of tax and national insurance due from a salaried worker.
- A self-employed individual is obligated to make advance payments on income tax that will be offset on filing an annual report. In the case of a new business, the advance payments will be calculated on the basis of the business owner's estimate. The advance payments will be made at least 3 times in each year.
- Certain payments are deductible from taxable income as detailed below.

Highly qualified specialists (HQSs)

- An HQS is a foreign national with work experience, skills, or accomplishments in a specific field who is employed in Russia at a monthly salary of at least 167,000 Russian roubles (RUB) (with certain exceptions).
- Income earned from labour activity by non-resident individuals with HQS status is

- taxed at a rate of 13% instead of the 30% tax rate that applies to such income earned by non-residents who do not have HQS status.

Russia Corporate Tax

- The tax on company profits is made up of 2 rates:
 - Federal tax - 20%.
 - Regional tax - 18% (with a possible incentive reduction of up to 4.5%).
- The maximum profit tax is 20%.

Social contributions

Social contributions are to be accrued on the majority of payments to individuals within employment relationship and under civil legal contracts of a service nature. Generally the base for accrual of contributions includes salary and most benefits provided to employees as well as remuneration for performance of works and (or) provision of services under civil-legal contracts. The legislation also provides a close list of payroll items which are exempt from social contributions. This list includes the majority of social allowances, several types of payments to employees of a compensatory nature, several types of material aid to employees, etc. Social contributions should be calculated on an individual basis (i.e. separately for each individual) and the applicable rates of social contributions are dependent on the amount of cumulative annual income of each individual subject to accrual of social contributions.

Value-added tax (VAT)

Taxpayers for VAT purposes are (i) organizations, (ii) private entrepreneurs, and (iii) persons who are deemed to be taxpayers of VAT in connection with the conveyance of goods across the customs border of Russia.

Registration Taxpayers cannot elect to register separately for VAT purposes. Tax registration is for the purposes of all corporate taxes. Rates VAT is levied at a general rate of 18% on taxable supplies, which include the majority of domestic sales of goods and services. Certain basic food products, children's goods, certain medical products, medicines, drugs, newspapers, and magazines are subject to a reduced rate of 10%.

Exported goods and some other specified supplies (e.g., sales to diplomatic missions) are subject to VAT at a zero rate. Supplies to the CIS member states are treated as exports.

Individual cumulative year-to-date income subject to social contributions	Up to RUR 512,000*	Over RUR 512,000
Pension Fund	22.0%	10.0%
Social Insurance Fund	2.9%	0
Medical Insurance Fund	5.1%	0
Total	30.0%	10.0%

* This threshold limit value will be increased to the level of RUR 563,000 in the year of 2013.

Termination of Employment

An employee may terminate the employment relationship at any time with two weeks prior written notice to the employer. Termination by the employer is restricted to an exhaustive list of reasons. Termination without a specific, expressly stated and valid reason is null and void. A termination may also be considered invalid because the employer has not complied with the procedure for termination set out by the labor law. A competent court may reinstate an employee illegally dismissed in his/her former position with payment of salary with interest for the period of exclusion from the workplace, and possibly levy further amounts for moral damages as well.

Certain limited reasons entitle the employer to dismiss the employee without a notice period or any severance pay. In other cases, the employee is entitled to a notice period and severance pay, depending upon the circumstances of the employment and the termination.

Various post-employment restrictive covenants (confidentiality, non-competition, non-dealing with customers/suppliers, nonsolicitation of remaining employees, etc.) are hard or impossible to enforce.

Sanctions for non-compliance

Currently the fine for non-compliance with labor legislation imposed on responsible executives (i.e. General Director, Chief Accountant, HR Director) amounts to RUB 1,000-5,000 (approx. USD 30-160). With regards to legal entities the fine amounts to RUB 30,000-50,000 (approx. USD 1,000-1,700). If a violation leads to salary underpayment, an employer is likely to be obliged to repay the underpaid amount plus potentially the interest for each day of delay. An alternative sanction may be applied, which is the suspension of the activity of the organization for up to 90 days (though in practice this happens extremely rarely). Violation of labor laws and labor protection laws by a person who has been administratively penalized for a similar administrative offense in the past may entail disqualification for a period from one to

three years. Cases of suspension of a company's activity and disqualification of company executives may be enforced only through a court decision. Labor law in Russia is complicated and contains a lot of rules and conditions which are obligatory for all the employers and companies operating in Russia.

Remuneration

Under Russian labor law, an employer has significant discretion regarding the level of compensation and the methods through which this is delivered.

The development of the Russian labor market has brought it closer to the labor markets of Western European countries, and human resources management practices are approaching global best practices. More companies benchmark their pay levels against the market using the results of compensation and benefits surveys, and take into consideration market practice when developing benefits packages. Competition for qualified personnel also forces employers to provide better opportunities for professional and career growth.

On an annual basis, Ernst & Young conducts numerous compensation and benefits surveys which are focused on various industries and job categories of employees, allowing us to present our clients with accurate and comprehensive data on salary levels, benefits, social programs and HR policies in various segments of the labor market in Moscow, other regions of Russia and throughout the CIS.

It should specifically be noted that care should be taken before implementing any global stock option plans or other equitybased compensation plans for Russian employees, as the legislative framework for such programs is limited and the accounting, tax, labor law, and currency control implications are complex.

Russia Labour Market

The number of employed persons in Russia decreased to 71.60 Million in January of 2017 from 72.80 Million in December of 2016. Employed Persons in Russia averaged 68.74 Million from 1991 until 2017, reaching an all time high of 74.10 Million in July of 1991 and a record low of 60.40 Million in January of 1999.

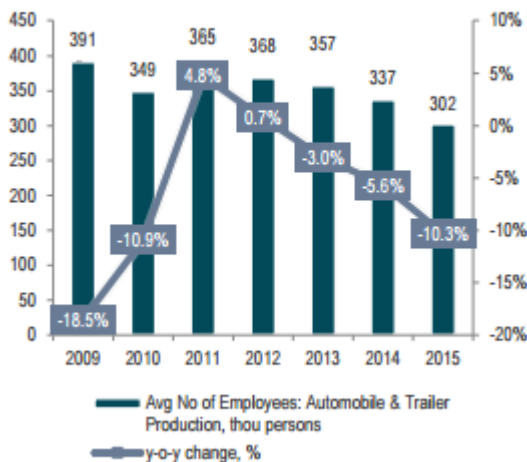


Sources: www.tradingeconomics.com Federal Statistics Service

Employment and Wages in Automotive Industry

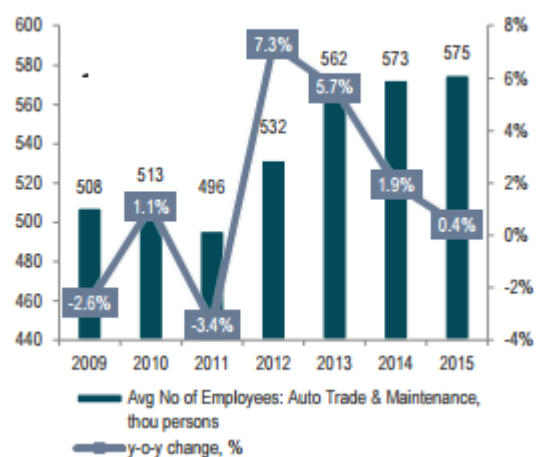
The number of employees in the automotive manufacturing sector has been decreasing over the last three years in line with the crisis that hit the industry. For example, VW laid off some 150 workers while General Motors idled an Opel plant in the country. At the same time the auto trade and maintenance sector have increased the employees hired as the Russian auto consumers reduced purchases of new cars and spent on carrying existing ones.

Employees in Automotive Sector



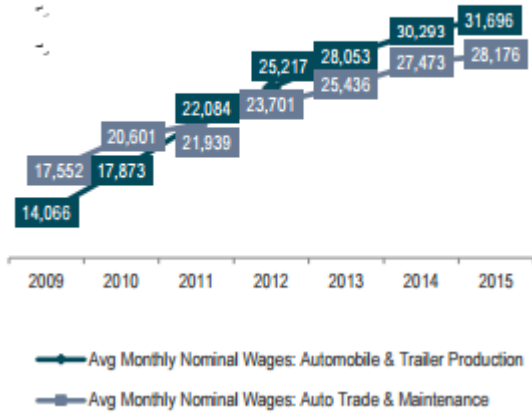
Sources: Statistics Office

Employees in Auto Trade and Maintenance



The average monthly wages in Automotive Production is in line with Industry wages in Russia.

Average Monthly Wages, RUB

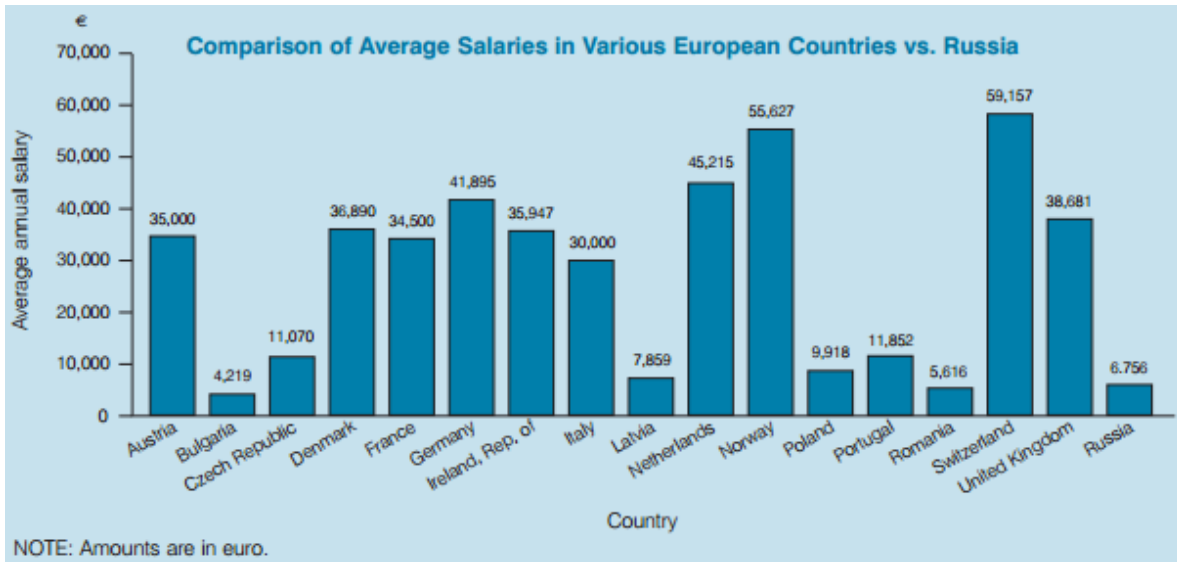


Compared with other emerging markets, the Russian labour market is characterized by the availability of a highly skilled workforce, still with comparatively low salaries. In other emerging markets, the share of young people with higher- or secondary-level professional education is growing, though it still remains quite low compared with Russia.

It is important to note that, because the governmental statistical institutions offer only limited data a further detailed labor cost analysis requires quantitative research methods.

Average labour cost per year is 9.716 € in main industry and 9.564€ in sub industry. In Bulgaria, it is around 6.756€ which is approximately %70 of Turkey.

When compared to European countries only Russia, Bulgaria and Romania have lower annual wages.





Taxes on Automotive Sector



Car registration

1. Car registration

1.1. When does a car need to be registered?

Registration is compulsory if a car is to be used in Hungary. As soon as a new or second-hand vehicle is put into use on Hungarian public roads, the vehicle should be registered. According to Hungarian legislation, the process of registering the vehicle must begin within 30 days of the vehicle's arrival in Hungary or of the date when the domestic owner takes possession of the vehicle.

1.2. Who can register a car?

Registration can be done by a natural person, or in the name of a legal person or incorporated organisation.

1.3. Is a foreign owner allowed to register a vehicle in the country?

Yes, a foreign person who is resident in Hungary can register a vehicle. A foreign owner who is not resident in Hungary can only register a vehicle with the assistance of a fiscal representative, or of the operator who is resident in Hungary.

1.4. Can a vehicle with a foreign number plate be used on public roads?

As the general rule, a vehicle can be used only with a Hungarian licence and number plate if

- a) its operator is a domestic person/entity or
- b) its driver has a residence in Hungary.

A vehicle with a foreign number plate can be used in exceptional cases. The exceptions from Point a) are:

- if the operator is not a natural person who performs its regular activity abroad where its site (branch) is registered; or
- if the owner of the vehicle has already initiated the registration of the vehicle in Hungary.
- Point b) does not have to be applied:

- if the driver's usual place of residence is not in Hungary; or
- if the vehicle is used in Hungary for a period not exceeding 30 days within any 6 months' period, and the driver has a declaration from the owner of the vehicle stating the start and end date of the rental period; or
- if the driver received the vehicle from its foreign operator for regular work in Hungary; or
- if the vehicle is owned by a car-fleet vehicle operator (as defined by the Act on Registration Tax) and the registration tax has been paid on the vehicle.

The restrictions do not have to be applied in case of certain Hungarian governmental employees, employees of the institutes of the EU and their immediate family members.

The above exceptions have to be proven by the operator or the driver at the time of an inspection.

A vehicle which is registered in a third country outside the EU and is under a temporary importation procedure in Hungary may be used for six months or for a period set by the customs authorities in their decision on temporary importation. When this six-month period expires, the vehicle has to be registered in Hungary and then the foreign number plate is replaced with a Hungarian one. by the Polish ones.

1.5. Registration of pledge over a vehicle

Starting from July 1, 2014 a new pledge on a vehicle is enforceable against a third party only after its registration in a special register kept by Russian notaries (except for the case when such third party knew or should have known about the pledge existence before it was registered).

2. Car taxation

2.1. What are the different car taxes?

In accordance with Russian tax legislation, a car producer, owner or user may be subject to the following taxes and charges:

- State charges/duties for legal actions in respect of cars
- Transport tax for legal entities and individuals
- Property tax for legal entities (this tax is not levied on individuals)
- Recycling fee
- Upon importation of cars, the following taxes are due:
 - Excise tax
 - Import VAT
 - Import duties
 - Recycling fee

Costs associated with acquisition/use of the cars may be deducted for the purposes of calculation of the following taxes:

- Profits tax (due by legal entities)
- Personal income tax (due by individuals, in case cars are used by them for business purposes and the respective individuals are registered as individual entrepreneurs).

Starting from 2016 companies are also liable for environmental fee. Environmental fee is payable in respect of imported goods / packaging included in the list established by the legislation.

Environmental fee is payable in respect of imported goods / packaging included in the list established by the legislation. For 2016, a very limited list of products (tires, batteries, paper, plastic and metal packaging, incandescent lamps and curved glass, and oil products) is subject to environmental fee. The first payment of environmental fee should be made by April 15, 2017 for the whole period of 2016 year. Amount of environmental fee depends on type of goods and it is defined by multiplication of the following elements: environmental fee rate, recycling coefficient and weight of goods / packages.

2.2. Registration tax

2.2.1. Recycling fee

2.2.1.1. Taxable event

Starting from September 1, 2012 new charge was introduced in Russia. The announced reason behind the introduction of the recycling fee is to fund the future safe utilization of wheeled vehicles and chassis. In 2016 recycling fee is also charged on construction, agriculture and some other types of machinery.

2.2.1.2 Taxpayers The payers of recycling fee are:

- Car / vehicle importers (from September 1, 2012)
- Local car / vehicle manufacturers (from January 1, 2014)
- Car / vehicle owners (in certain cases).

2.2.3.1 Amount of Tax

The recycling fee is payable on both imported and locally produced vehicles/chassis.

The rates are established by the Russian Government and depend on the type of vehicle and its engine volume or full weight. The following rates of recycling fee are established for different categories of new vehicles:

- For light vehicles: 28,400 RUR - 181,600 RUR (357 EUR - 2,280 EUR) per vehicle For trucks: 124,500 RUR - 718,500 RUR (1,563 EUR - 9,022 EUR) per vehicle
- For buses: 148,500 RUR - 495,000 RUR (1,865 EUR - 6,216 EUR) per vehicle
- Off-road hoppers: 3,360,000 RUR - 9,165,000 RUR (42,190 EUR - 115,081 EUR) per vehicle
- Chassis: 198,000 RUR - 718,500 RUR (2,486 EUR - 9,022 EUR) per unit
- Construction, agriculture and some other types of machinery: 60,000 RUR - 9,165,000 RUR (753 EUR - 115,081 EUR) per vehicle.

Recycling fee for imported vehicles/chassis is administered by the customs authorities and for locally manufactured vehicles - by the tax authorities.

Compliance and payment procedures should differ for “large” and “regular” producers. Classification criteria for large producers are determined by the Ministry of Industry and Trade (MIT). The register of companies - the largest producers of vehicles and chassis is published on official MIT website.

The expected outcome of the incentive is that an additional 320,000 vehicles will be assembled.

2.1.4. Subsidy

Starting from 2014 the Russian Government introduced subsidies for Russian car manufacturers aimed at compensation of some of their costs (e.g. electricity, payroll related costs, R&D, certain production and warranty costs), based on special Governmental Resolutions.

To receive subsidies a manufacturer should sign an agreement with the Russian Ministry of Industry and Trade.

Whilst the recycling fees result in additional expense for car manufacturers, the subsidies represent additional income that may, to a certain extent, mitigate economic burden of such additional expense for car manufactures, although there is no direct link between the obligation to pay the recycling fees and the right to receive the subsidies. With that, the subsidies may be received by car manufacturers with some delay as compared to payment of the recycling fees.

Environmental fee is payable in respect of imported goods / packaging included in the list established by the legislation. For 2016, a very limited list of products (tires, batteries, paper, plastic and metal packaging, incandescent lamps and curved glass, and oil products) is subject to environmental fee. The first payment of environmental fee should be made by April 15, 2017 for the whole period of 2016 year. Amount of environmental fee depends on type of goods and it is defined by multiplication of the following elements: environmental fee rate, recycling coefficient and weight of goods / packages.

2.2.2. Other state charges/duties

2.2.2.1. Taxable event

State charges/duties for legal actions in respect of cars become due when a taxpayer requests the authorized state and municipal bodies/officials to perform state legal actions towards the respective vehicle. For example, such legal actions may include:

- Issue of a number plate for a vehicle;
- Issue of a certificate confirming state registration of a vehicle, etc.

2.2.1.2. Taxpayers

Payers of state charges/duties are both legal entities and individuals who request state and municipal bodies/officials to perform respective actions in respect of cars.

2.2.3.1. Amount of Tax

The amount of charge/duty depends on the type of legal action to be performed by the state and municipal body/official and is determined as a fixed amount which is usually immaterial. For example, the following charge/duty rates are valid for 2016:

- Issue of a number plate for a car/other vehicle - 2,000 RUR/1,500 RUR (25 EUR/19 EUR);
- Issue of a vehicle certificate of title - 800 RUR (10 EUR);
- Issue of a certificate confirming state registration of a vehicle - 500 RUR (6 EUR).

2.3. Transport tax for legal entities and individuals

2.3.1 Taxable event

There is no taxable event per se. Transport tax is due by taxpayers merely based on the fact that there are vehicles registered in their name.

2.3.2 Taxpayers

The payers of transport tax are legal entities and individuals if there are vehicles registered in their name in accordance with Russian legislation.

2.1.4. Subsidy

For cars, buses and motorcycles/scooters the amount of tax due is calculated based on the tax rate multiplied by engine capacity of vehicles expressed in horse power (hp) and a scale-up factor which was introduced starting from January 1, 2014 with a view to levy higher taxes on luxury cars:

Amount of tax = Tax rate x Engine capacity x Scale-up factor

Fixed tax rates (i) are established by the regional legislation of each particular region within the limits specified by the federal legislation and (ii) depend on the type of vehicle and the horsepower of the vehicle. The effective federal tax rates are the following

Type of vehicle	Engine capacity (hp)	Tax rate (RUR)
Light cars	≤100	2.5
	>100 ≤150	3.5
	>150 ≤200	5
	>200 ≤250	7.5
	>250	15
Motorcycles and scooters	≤20	1
	>20 ≤35	2
	>35	5
Buses	≤200	5
	>200	10
Freight cars	≤100	2.5
	>100 ≤150	4
	>150 ≤200	5
	>200 ≤250	6.5
	>250	8.5

The Russian regional authorities have the right to increase or decrease the abovelisted federal tax rates no more than ten times.

Scale-up factors are established by federal law in respect of light cars only and depend on the price of vehicle and its age. The scale-up factor rates are as follows:

Price of vehicle (mill RUR)	Age of vehicle	Scale-up rate
>3 ≤5	≤1	1.5
	>1 ≤2	1.3
	>2 ≤3	1.1
>5 ≤10	≤5	2
>10 ≤15	≤10	3
>15	≤20	3

2.3.4. Tax period

The tax period for all taxpayers is established as a calendar year, while legal entities are required to make advance tax payments on a quarterly basis.

2.4. Property tax for legal entities

2.4.1. Taxable event

Property tax is payable only in respect of vehicles accounted for as fixed assets by a taxpayer prior to January 1, 2013. Vehicles that are accounted for as fixed assets after January 1, 2013 are exempt from the property tax (except for vehicles acquired as a result of the related party transaction or reorganization/liquidation of entities).

For foreign legal entities having presence in Russia, many double tax treaties exempt movable property (in particular, vehicles) from taxation to the extent it does not relate to a permanent establishment of such foreign legal entities in Russia.

2.4.2. Taxpayers

Property tax is payable by Russian legal entities and foreign legal entities that carry out their activities in Russia through a permanent establishment and (or) own immovable property in the territory of Russia.

2.4.3. Amount of Tax

Property tax is calculated as a tax rate multiplied by an average annual residual balance value of fixed assets of a taxpayer. The maximum property tax rate is 2.2%, but this may be reduced by the regional authorities.

2.4.4. Tax Period

The tax period is established as a calendar year; however, taxpayers are required to make advance tax payments on a quarterly basis. .

3. Income taxes – taxable persons

3.1. Taxes

In accordance with Russian tax legislation, legal entities are subject to profits tax, whilst individuals are subject to personal income tax (PIT).

3.2. 1. Profits tax

The acquisition costs of a car are generally deductible via depreciation based on statutory depreciation rates. The annual depreciation rate is 20-33% for light vehicles and minivans (depending on the planned usage period); 10-20% for trucks (depending on the tonnage and planned usage period). Generally, a depreciation premium of 30% should be available for vehicles, i.e., 30% of the acquisition cost may be deducted at once, when the car is put into use (this premium, however, should be recaptured if the car is sold within 5 years).

Other car-related expenses are also generally deductible for profits tax purposes of the company as long as the car is used for business activities, with the following exceptions:

- Expenses on obligatory insurance of civil liability may only be included within the insurance tariffs established by Russian legislation and the requirements of international conventions;
- Compensation to employees of expenses associated with the use of their personal cars for business purposes is deductible within the statutory limits, which are very low.

As Russia is a form-driven jurisdiction, deductibility of car-related expenses largely depends on the ability of a company to provide the specific documentary support required to prove that the car is used for business purposes.

Intra-group transactions (e.g. intragroup purchase or lease of cars) may be subject to new transfer pricing rules effective since January 1, 2012.

3.2.2. Personal income tax (PIT)

Individuals being individual entrepreneurs who use cars for performing business activities may reduce their taxable income by deducting car-related expenses provided that these expenses are (i) related to income-generating activities and (ii) properly supported by documents. Individual entrepreneurs applying patent tax system, presumptive tax system or simplified tax system (with 6% tax rate on revenue) are not eligible for the deduction.

Employees using their private cars to perform their job duties do not receive any deductions for PIT purposes. The compensation received by them from the employer for the use of their private cars for business purposes (if any) is not subject to PIT within the statutory limits, which are very low.

3.3. Leasing

Two following types of lease should be distinguished for profits tax purposes: operational lease and financial lease. Lease payments are generally deductible for profits tax purposes. However, for a financial lease the Tax Code establishes specific deductibility rules depending on whether the leased object is recorded on the balance sheet of the lessee or the lessor, as follows.

3.3.1 Leased property is accounted for on the balance sheet of the lessor

If the leased property is accounted for on the lessor's balance sheet, the lessor depreciates the property and deducts depreciation charges for profits tax purposes. Accelerated depreciation (with a coefficient of up to 3) is generally available with respect to fixed assets leased under financial lease arrangements; however, this coefficient is not applicable to light vehicles and minivans.

The deductible expenses of the lessee in this case would consist of lease payments.

3.3.2 Leased property is accounted for on the balance sheet of the lessee

According to the Russian Tax Code, if a lease agreement provides that the leased property is accounted for on the lessee's balance sheet, the lessor has the right to deduct the cost of

such leased property over the period of the lease agreement proportionally to lease payments.

In such case, the lease property shall be depreciated by the lessee (with availability of accelerated depreciation). The lessee would then deduct the lease payments reduced by the amounts of the depreciation charge for profits tax purposes.

3.3.3 Other considerations

- Sale and lease-back arrangements may be associated with certain tax risks - it may be argued that such arrangements do not qualify as a financial lease in terms of the Russian law.
- Leasing contracts should be carefully drafted to avoid negative tax consequences for both the lessor and the lessee (e.g. free-of-charge transfer of fixed assets at the end of the leasing term, non-deductibility of leasing payments and non-recoverability of related VAT for a lessee).

4. VAT

4.1 General

The supply of goods, services and works on the Russian territory, as well as the importation of goods into Russia are regarded as taxable transactions for VAT purposes and shall be taxed at the standard VAT rate of 18% (unless they qualify for the application of the reduced rate or specific VAT exemption(s)).

A taxable person is a legal entity or an individual entrepreneur. For import VAT purposes, individuals may also be recognized as taxable persons. The taxable amount is normally defined as the market value of goods (services, works) supplied including the amount of excise duty and excluding the amount of VAT.

The taxable value for import VAT purposes is defined as the customs value of imported goods, increased by applicable customs and excise duties.

4.1.1. VAT recovery in respect of locally purchased cars

Input VAT should be recoverable for a taxpayer under the following conditions:

- The car will be used in VAT-able activity;
- The taxpayer acquires ownership title to the purchased car and properly accounts for the purchased car;
- The transaction is properly documented.

4.1.2. VAT recovery for imported cars

Import VAT is recoverable for an importer under the following conditions:

- Import VAT was actually paid by the importer to the Russian budget at customs;
- The car will be used in VAT-able activity;
- The importer acquires ownership title to imported cars and properly accounts for these cars;
- Payment of import VAT is supported with proper documentation.

Customs VAT should be physically paid to the Russian budget. Therefore, there will be a certain time lag between the payment of customs VAT and its further recovery and this would result in some cash-flow cost for the Russian importer.

4.2. Second hand cars

Upon the supply of cars purchased from individuals (not VAT payers) for further resale, the taxpayer determine the output VAT based on the margin between the sales price of the car inclusive VAT and the related purchase price.

4.3 Customs taxes

When importing cars and releasing them for free circulation in Russia an importer must pay customs payments, which include the following.

4.3.1 Customs processing fees

Customs processing fees are established as a flat rate depending on the customs value and vary from 500 RUR (7 EUR) to 30,000 RUR (420 EUR) per customs declaration.

4.3.2 Customs duty

In August 2012 Russia, joined WTO and took commitments on gradual reduction of customs duty rates on a range of goods, including vehicles (down to 10-20% depending on type of vehicle). Currently duty rates applicable to vehicles are as follows:

- The customs duty rate for new light vehicles is 25% of the customs value, but not less than a fixed amount calculated as the engine volume in cm³ multiplied by a fixed rate varying from 1 EUR to 2.35 EUR per cm³ depending on the car's actual engine volume.
- The customs duty rate for used light vehicles is 25% of the customs value but not less than a fixed amount calculated as the engine volume in cm³ multiplied by a fixed rate varying from 0.450 EUR to 1 EUR per cm³ depending on the car's actual engine volume.
- The customs duty rate for used light vehicles older than seven years is a fixed amount calculated as the engine volume in cm³ multiplied by a fixed rate varying from 1.40 EUR to 3.20 EUR per cm³ depending on the car's engine volume.
- The customs duty rate for cars with electronic engines is varying from 0% to 17% of the customs value.
- The customs duty rates for new heavy vehicles (trucks, etc.) are from 0% to 17% depending on the type of the vehicle.
- The customs duty rate for Sport Utility Vehicles (SUV) with engine capacity exceeding 4,200cm³ is 18.6% but not less than 1.75 €/cm³.

Russia continues to fulfil its commitments to the World Trade Organization (WTO) by downsizing a number of import duties. The automotive industry is among the frontrunners in this duty-reduction drive. By 2019, the rates will be reduced to 15% for new passenger vehicles, to 10-15% for various SUVs and to 20% for used vehicles (up to seven years old).

4.4. Excise tax

Imported cars (both used and new) are subject to excise duty in Russia. Excise tax is calculated based on the engine power of the car as follows:

- Zero for cars with an engine power less or equal to 90 horsepower.
- 41 RUR per horsepower for cars with an engine power from 90 horsepower to 150 horsepower (inclusive). For example, if the imported car has an engine power of 100hp, the excise duty equals 100hp x 41 RUR = 4,100 RUR (51 EUR).
- 402 RUR per one horsepower for cars with an engine power from 150 horsepower. For example, if the imported car has an engine power of 200hp, the excise duty equals 200hp x 402 RUR = 80,400 RUR (1,010 EUR).

4.5. Import VAT

VAT is assessed at the rate of 18% on top of the customs value inclusive of customs duty and excise.

5. Company Car

5.1. VAT due on private use of company cars

There is no VAT due on the private use of a company car. At the same time, recovery of input VAT associated with the acquisition of the respective car may be challenged by the tax authorities based on the grounds that the car is not used for business purposes.

5.2. Company car – income taxes

Under Russian tax legislation, in case a company car is provided to an employee for private use on a free-of-charge basis, the employee receives an in-kind benefit. This in-kind benefit is subject to PIT based on its market value.

Additionally, there is a risk that the company (employer) may be required to charge obligatory insurance contributions on the amount of such in-kind benefit.

6. Income taxes – drivers' personal taxation

As outlined above, car related costs are not deductible for PIT purposes unless an individual acts as an individual entrepreneur. The compensation received by an individual from its employer for the use of private cars for business purposes is not subject to PIT within the statutory limits.

7. Electric vehicles

There are no special taxation/registration rules for vehicles with electric engines in Russia. Generally, electric and hybrid vehicles are not that popular in Russia at the moment as compared to Europe.

With that, in accordance with Letter of Ministry of Finance of the Russian Federation No. 03-05-04-04/19434 dated April 7, 2015, tax burden decrease with regard to electric vehicles may be subject to further consideration by legislative bodies of Russian regions in accordance to their authority (e.g. establishment of incentives for electric vehicles owners' in the form of full or partial transport tax exemption). Currently, such transport tax exemption is established in Moscow region and Kaluga region.

Under the new regulation, which came into force in 2016, 0% custom duty was reset on the import of electric passenger cars, and 5% custom duty on the import of electric trucks (with a total weight of up to 5t), with effect until September 2017. The EV market in EAEU countries is still extremely sensitive to price.

4.1.1. VAT recovery in respect of locally purchased cars

Input VAT should be recoverable for a taxpayer un

4.1.1. VAT recovery in respect of locally purchased cars

Input VAT should be recoverable for a taxpayer un

8. Technical regulations

Unified technical regulations of the Eurasian Economic Union for certification of vehicles came into force in 2015. Technical regulations for certification of cars and trucks apply starting from January 1, 2015; for agricultural and forestry tractors and other machines (including certain types of construction machines) - from February 15, 2015.

The new rules provide for the following regulation on applicability of certification documents issued before the mentioned dates:

Vehicles subject to Technical Regulation No. 018/2011 in respect of wheeled vehicles (applies starting from January 1, 2015)	Documents issued before December 14, 2011, inclusively	Valid till the date of their expiry
	Documents issued from December 15, 2011 up to December 31, 2014.	Valid until the date of their expiry, but no longer than until July 1, 2016, except for vehicles and components limited to quantitative quotas.
Vehicles subject to Technical Regulation No. 031/2012 in respect of agricultural and forestry tractors (applies starting from February 15, 2015)	Documents issued before October 2, 2012, inclusively	Valid till the date of their expiry
	Documents issued from October 3, 2012 up to February 14, 2015.	Valid until the date of their expiry, but no longer than until March 15, 2017.
Vehicles subject to Technical Regulation No. 010/2011 in respect of machines and equipment (applies starting from February 15, 2013)	Documents issued before October 20, 2011, inclusively	Valid till the date of their expiry
	Documents issued from October 21, 2011 up to February 14, 2013	Valid until the date of their expiry, but no longer than until March 15, 2015.

- Companies which sell vehicles (e.g. distributors/dealers) may be involved in the process of registration of vehicles on behalf of owners (buyers) of such vehicles. For this purposes a company shall earn status of “specialized trading organization” under procedure prescribed by the Draft Law;
- Vehicles may be registered at any place within the territory of the Russian Federation chosen by its owner (entity or individual) regardless of the place where an entity is located in Russia or where a respective individual resides in Russia;

9. Future developments

According to the available information from open sources a draft Federal Law “On state registration of vehicles on the territory of the Russian Federation” has passed in a first reading on December 11, 2013 (hereinafter, the “Draft Law”). The Draft Law sets forth the procedures of registration and cancelation of vehicle registration as well as envisages new provisions as follows:

- Vehicle's owner shall have the right to choose alphanumeric combination of the license plate, etc. Please note that the Draft Law will be subject to further consideration later in 2016, with that the above mentioned provisions may be amended or deleted as well as other new provisions may be added.

Regulations in Turkey

Although the readjustment of the automotive sales taxes was already at a high level, it ranks again the first with a significant increase in Turkey. This topic is still the most important problem of the sector.

Motor vehicle tax taken yearly depends on the age and the engine size of the vehicle for passenger cars and motorcycles.

Engine Size	Motor Vehicle Tax (Yearly)				
	1 - 3 age	4 - 6 age	7 - 11 age	12 - 15 age	16 and above age
Passenger Cars					
1301 - 1600 cm ³	1.035,00	776	450	318	122
1601 - 1800 cm ³	1.827,00	1.428,00	841	513	199
1801 - 2000 cm ³	2.878,00	2.217,00	1.303,00	776	306
2001 - 2500 cm ³	4.317,00	3.134,00	1.958,00	1.170,00	463
2501 - 3000 cm ³	6.019,00	5.236,00	3.271,00	1.760,00	646
3001 - 3500 cm ³	9.166,00	8.247,00	4.968,00	2.480,00	910
3501 - 4000 cm ³	14.411,00	12.444,00	7.329,00	3.271,00	1.303,00
4001 cm ³ and above	23.586,00	17.687,00	10.475,00	4.708,00	1.827,00
Motorcycles					
100 - 250 cm ³	122	92	68	43	17
251 - 650 cm ³	252	191	122	68	43
651 - 1200 cm ³	646	385	191	122	68
1201 cm ³ and above	1.565,00	1.035,00	646	513	252

Motor vehicle tax taken yearly depends on:
The age and the engine size of the vehicle for panel van and motor caravans,
The age for minibuses

The age and number of seats for buses
Maximum weight and age for truck, tractors and so on.

Type of vehicle & # of seats /	Motor vehicle tax (Yearly)		
	1 - 6 age	7 - 15 age	16 and above age
Max total weight			
1) Minibus	776	513	252
2) Panel van and motor caravans			
1900 cm ³ and below	1.035,00	646	385
1901 cm ³ and above	1.565,00	1.035,00	646
3) Bus			
Max 25 people	1.958,00	1.170,00	513
26 - 35 people	2.348,00	1.958,00	776
36 - 45 people	2.613,00	2.217,00	1.035,00
46 people and above	3.134,00	2.613,00	1.565,00
4) Truck, trucktor and so on			
until 1.500 kg	697	463	228
1.501 - 3.500 kg	1.408,00	817	463
3.501 - 5.000 kg	2.115,00	1.760,00	697
5.001 - 10.000 kg	2.348,00	1.995,00	936
10.001 - 20.000 kg	2.821,00	2.348,00	1.408,00
20.001 kg and above	3.529,00	2.821,00	1.640,00

VAT

The sale of new passenger cars is subject to 18% VAT.

The VAT rate for the operational or financial leasing of the passenger cars is also 18%. The second hand sale of the passenger cars and that of the vehicles which are designed specifically for the passenger transportation is subject to VAT at the rate of 1%.

Special consumption tax

Special consumption tax is an indirect tax due for the list of the goods stated in its particular Law. The passenger cars are in this list and subject to special consumption tax.

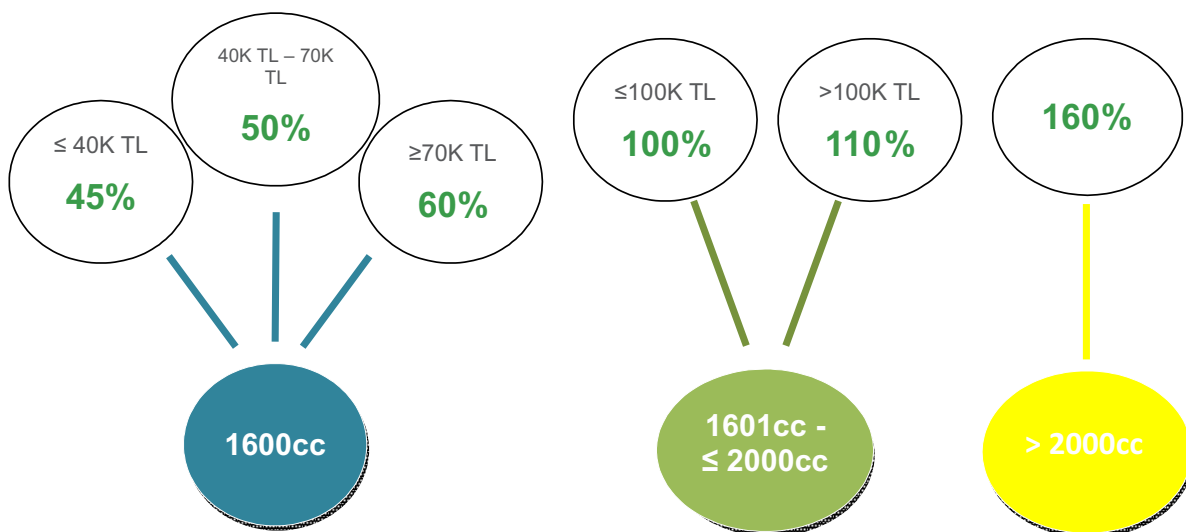
For the hybrid engine passenger cars, special

consumption tax ratio:

- If the engine does not exceed 1800cm³, the electric motor will exceed 50kW., the tax is 45%
- If the engine is between 1800cm³ - 2500cm³, the electric motor will exceed 100kW., the tax is 90%
- If the engine volume is 2500cm³ or more, there is no change, the tax is 145%.

Special consumption tax ratio for passenger cars with only electric engine is 10%.

Special consumption tax for passenger cars with combustion engine depends on the engine size and the price before tax as shown in below table in %.



Russia vs Turkey

VAT ratio is same both in Turkey and in Russia.

The recycling fee is paid to the budget and should be used to stimulate the creation and development of an end-of-life vehicles (ELV) system in Russia (state support for dismantlers and recyclers).

Transport tax in Russia and motor vehicle tax in Turkey are the ownership taxes which are applied yearly

Overall, cars are equally heavily taxed in both countries.

	Russia	Turkey
Value-added tax (VAT)	x	x
Registration fees	x	
Transport tax (legal entities and individuals)	x	
Property tax (not levied on individuals)	x	
Motor Vehicle tax (ownership tax taken yearly)		x
Special consumption tax		x



Education/Training in Automotive Sector



Knowledge of foreign languages

About a third of Russians (30%) speak English to one degree or another: 20% can read and translate using a dictionary, 7% are familiar with colloquial language, and 3% are fluent speakers, according to Romir research holding.

Only 16% of respondents claimed to speak English in 2003, and 3% of them were presumably fluent speakers, the experts said. The second best-known foreign language in Russia is German. Six percent of present-day respondents say they speak German

The percentage of Russians who speak French has not changed either (1%). Another one%

speaks Spanish (percentage was close to zero in 2003) and one% speaks Arabic. No more than 0.5% of respondents speak other languages, the experts said.

Seventy% of 1,500 respondents interviewed in all federal districts do not speak foreign languages. The index stood at 76% in 2003.

The percentage of Russians who speak Spanish, Italian and Chinese is slightly higher in the northwestern regions of the country. The percentage of Russians who speak German is two times higher in central regions and in the 25-44 age group. Most respondents who speak French are aged from 25 to 34.

Education in Russia

According to Rosstat, at present the share of the population with higher education (including retirees) is 23% and, among people born between 1981 and 1985, those with

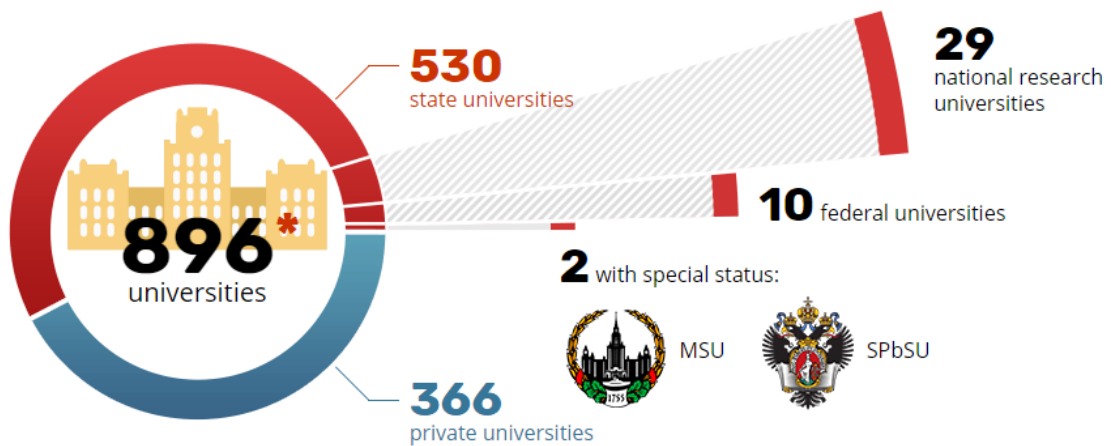
higher education account for 37%. In 2015, among employed people higher education percentage is 33%. Ratio is higher for Females (37,2%).

EMPLOYED
BY AGE GROUPS AND EDUCATIONAL ATTAINMENT in 2015 ¹⁾
(average annual data; percent of total)

	Total	Males	Females
Employed – total	100	100	100
of which by age, years old:			
15 - 19	0.6	0.7	0.4
20 - 24	7.0	7.7	6.3
25 - 29	14.5	15.5	13.4
30 - 34	13.9	14.5	13.2
35 - 39	13.0	12.8	13.2
40 - 44	12.2	11.7	12.7
45 - 49	11.4	10.7	12.2
50 - 54	13.0	11.9	14.2
55 - 59	9.3	9.5	9.0
60 - 72	5.1	4.9	5.3
Mean age of employed, years old	40.6	40.0	41.2
Employed in the economy - total	100	100	100
of which with educational attainment:			
higher	33.0	28.9	37.2
secondary vocational – total	45.0	45.5	44.4
with training programs for middle-level professionals	25.8	21.9	29.9
with programmes for skilled workers (office workers)	19.2	23.6	14.5
general	18.4	21.0	15.6
basic general	3.4	4.2	2.6
no schooling (without basic general)	0.2	0.3	0.1

¹⁾ Data source: sample labour force survey.

Source: Federal Statistics Service



Main Technical Universities with Automotive Branch

Vladivostok State University of Economics and Service

Bachelor - Automobile Service

Operation and maintenance of transport and technologic machinery and aggregates is a future-oriented profile that forms system knowledge in the business organization and management in the field of service, technical maintenance and trading of cars and technologic equipment.

Practical skills:

- projecting/reconstruction/optimization of

operation of car service stations;

- projecting/reconstruction/optimization of operation of car and technological equipment trading companies;
- implementing of innovative technologies of car repair and service;
- optimization of enterprise technical and repair department operation;
- development and implementation of enterprise technical modernization programs.

Advantages of education

- become an expert in technology and in organization and operation of companies in the filed of trading, service and repair of cars and technological equipment;
- influence automobilization level and road traffic safety through implementation of advanced technologies of car service and repair, promotion of quality cars,

- technological equipment and component items;
- continue education in graduate school in economical and legal disciplines;
- receive additional education in programs offered by VSUES.

Relevance of education.

Specialists of automobile service work in machinery and technological equipment trading companies, in enterprises supplying spare parts and operation materials for different machines, in service stations, in transport operation subdivisions of large companies.

Perm National Research Polytechnic University, Perm, Russia

This online university in Perm, Russia offers bachelors and masters degree in automotive engineering through its Faculty of Distance Education Technologies. It is one of the technical schools in Russia that provide higher education and training in various fields of technology and social administration including automotive engineering online. After getting professional degree in automotive engineering one can improve his career in automobile industry all over the world.

Moscow Automobile And Road Construction Institute - MADI

Power and Electrical Engineering - profile "Electric cars and tractors"

Graduated from the University in this area receive a bachelor's degree in the field of exploitation of research and testing of electrical and electronic equipment of land vehicles. Electrical training of students is formed by studying such disciplines as "Theory of Electrical Engineering", "Automatic Control Theory", "Fundamentals of electrotechnology", "Electrical machines", "Electrical and electronic devices" and OE Students enrolled in the direction of preparation "Power and electrical ", independently designed and

manufactured vehicle with a combined power plant and electric. As members of the team "Formula Electric MADI" ("Formula Hybrid MADI"), engaged in the modernization of its developments, regularly and successfully take part in international competitions, along with the US team, Canada, Great Britain, Italy, Switzerland, China, India and other countries where occupy the highest places.

Practice & Employment

Students who have graduated from the university in this direction may work for motor and car factories, service stations, factories, automobile and tractor industry for the production of tractor electrical equipment and kontrolnodiagnosticheskogo equipment, research institutes and various companies of motor and electrical systems.

Power engineering - profile "Internal Combustion Engines"

The purpose of training on the profile - the elite training base for an internal combustion engine, the internal combustion engine in an individual field training with specialization in test areas of research, service and diagnostics, the environment (toxicity, noise and vibration). In addition to the traditionally important research component seriously worked at a high-level scientific and technical service issues and diagnostics of modern engines based on microprocessor technology. In addition to studying core subjects, students have the opportunity to receive additional training in marketing and foreign language - now it is one of the mandatory requirements of employers who offer jobs to graduates of MADI. A number of courses taught by leading specialists from Russia, developing electronic control systems DIC dealing with environmental issues of transport, electrical and diagnostics of modern automobiles.

Practice & Employment

Practical training of students is carried out in the department, in Problem Laboratory transport engine and self-supporting scientific and industrial laboratories engaged in maintenance and repair of internal combustion engines of foreign cars with a specialization in BMW. Students of the

- department participate in scientific work on promising areas (ICE management, power systems, including internal combustion engines, gas version), including the leading producers of the country, practice at an authorized Mercedes-Benz station Car. The department has a branch in the Main Scientific Center of Russia us, which is undergoing testing of new engines and advanced study of foreign ICE.

Mechanical engineering - profile "Equipment and technology to increase durability and restoration of machine parts and devices" University graduates, trained in this area, get a bachelor's degree and are experts in the field of mechanical engineering and automotive repair, road construction and other production machines. Students deeply study the methods and means to improve the durability and other properties that define the quality of parts, assemblies and machines. Master the advanced production and disaster recovery of domestic and foreign art technology, modern methods of designing technological processes and equipment with the use of computers. The basis for this is the deep fundamental training on general scientific and engineering disciplines, which is laid on the junior courses.

Practice & Employment

Students undergo practical training at engineering plants, in research, proektnokonstruktorskih organizations. Students are also given the opportunity of practical training abroad: in Germany, the UK, the Netherlands, Denmark and Hungary. Bachelors of this profile training can work in enterprises, creating new car and construction equipment; organizations performing business maintenance and repair; producing new and regenerating worn parts of machines; in engineering and technology firms. In addition to manufacturing, service and research organizations, graduates can successfully work using their professional knowledge, in large distribution and dealer firms engaged in the supply of vehicles, construction machinery and spare parts.

St. Petersburg Polytechnic University, St. Petersburg

SPbPU's contribution to the automotive industry is not only provides quality experts for the industry, but also conducts research for its benefit. Peter the Great St. Petersburg Polytechnic University is involved in extensive development of joint projects with major Russian and foreign car manufacturers. Today, SPbPU Computer Engineering Center (CompMechLab®) is seamlessly integrated in the technological chains of such reputed car manufacturers as BMW Group, Ferrari, General Motors, Volkswagen Group, etc.

The cooperation between AVTOVAZ and the Polytechnic University dates back a long time, encouraging various companies to give lectures, share experience and maybe even create joint engineering centers.

Togliatti Polytechnic University, Samara Oblast

Togliatti Polytechnic Institute featured an automotive department to provide engineering, design and research work for AVTOVAS.

The Institute of Electrical and Power Engineering was established on the basis of TSU oldest department - the Faculty of Electrical Engineering. It has invariably preserved its face, its traditions and experience which were accumulated during more than 60 years of its activity. Nowadays the Institute comprises five departments:

- Department of Power Supply and Electrical Engineering;
- Department of Industrial Motor-Equipment and Mechanics;
- Department of Industrial Electronics;
- Department of Power Plants and Control Systems;
- Department of Automation of Technological Processes and Production.

The Institute of Electrical and Power Engineering is a leading provider of engineering talent to Samara Region enterprises. It offers undergraduate, graduate and postgraduate programs in such popular engineering fields as Industrial Electronics, Electrical Power Engineering, Electronics and Microelectronics, Electrical Equipment and Electrical Industry, Electrical Mechanics, and Electrical Technology. The programs are focused on electrical engineering principles along with supporting knowledge of mathematics, science, computing, and engineering fundamentals.

Modern approaches to engineering education are applied, including application of AutoCAD, MathCAD, Electronic Work Bench, and MatLAB systems. The emphasis is made on the technologies of today and tomorrow mirroring the vibrant industrial scene found in the Volga River region. The high level of the Institute proficiency makes it possible to carry out applied research. Its Energy Audit Center provides services to local and regional enterprises.

The Institute strives to keep its programs up with the requirements of the national and international professional community. Its Energy Supply program is accredited by the Russian Association for Engineering Education, the member of ENAEE. The EUR-ACE quality label confirms the engineering program compliance with international standards. Every year the Institute hosts the international scientific conference “Energy Efficiency and Safety of Production Process”.

Major Research Areas:

- On-board computers for motor vehicles;
- Impulsive energy source for prospecting seismology of oil fields and gas deposits;
- Vibro- and impulse technologies;
- Electromechanical converters;
- Electromagnetic compatibility of semi-conducting converters and other electrical installations;
- Power supply sources;
- Lamps with electronic start-regulating device.

The programs of the Institute are designed to

prepare students to become professional engineers and industry leaders. The graduates can carve a career in a diverse range of areas in industries such as electricity supply, automotive, chemicals, processing, and many others. Electrical Power engineers are engaged in a variety of activities including design, manufacturing, research, development, testing, construction, operation, sales, management, consulting and teaching.

Moscow State University - MAMI, Moscow

The Lomonosov Institute trained practicing engineers for vehicles manufacturing and maintenance specializing in automobile, internal combustion engines, machinery and electrical engineering.

University of group "AVTOVAZ" is the largest complex of specialized laboratories, classrooms, workshops and practice grounds.

GAZ Group's Corporate University trains employees on 480 unique programs that include instruction in the most in-demand work trades.

A fundamental system of future manpower training has been established in GAZ Group, comprising among others cooperation with educational institutions of all levels: schools, technical colleges, universities. Specialists of GAZ Group supervise students' course and graduation projects, lead students and teachers in their practical studies and internships at company plants, organize subject-specific departments in specialized educational institutions. GAZ Group is represented on the employers' boards of major Russian universities: Moscow Technical University named after N.E.Bauman, Nizhny Novgorod University named after N.I.Lobachevsky, Yaroslavl Technical University and others. All this helps ensure required proficiency levels of graduates of industry-specific universities and colleges, meeting current requirements of modern production operations. The Company in cooperation with academic institutions places the focus on training young specialists in line with the requirements of Company's enterprises, on

fusion of fundamental theoretical knowledge with practical shopfloor training.

In 2012 a new Training Center was established at Gorky Automobile Plant as part of joint projects with international OEMs - here employees master best technologies of global automotive industry in special training areas, simulating work at all stages of production and logistic operations. In total GAZ Group and Volkswagen Group Rus invested EUR 3 million in the Training Center. Up to 600 people go through training here every year.

GAZ Group supports Russian program “Robotics: Engineering and Technical Personnel of Innovative Russia” implemented by the Federal Agency for Youth Affairs of the Russian Federation and Charitable Foundation of Oleg Deripaska “Volnoye Delo”. The purpose of the program is promotion of the youth innovative creativity, fostering of engineering and technical personnel for modern production. The company supports annual “Robofest” festival and “Robocross” contest of robotic vehicles.

Universities and R&D Institutions in Turkey

Automotive industry in Turkey is one of the manufacturing sectors that employs mostly higher education graduates. Approximately 8% of the employers have engineering degrees. In the last years many universities opened new programmes specifically devoted to Automotive Engineering:

University	Bachelor	Masters	Doctorate
Afyon Kocatepe University	+		
Atılım University	+	+	
Boğaziçi University		+	
Cumhuriyet University	+		
Çukurova University	+	+	
Fırat University	+	+	
Gazi University	+	+	+
Hacettepe University	+		
Işık University	+		
İstanbul Teknik University		+	
Karabük University	+		
Kocaeli University	+	+	+
Mersin University	+		
Okan University	+	+	
Pamukkale University	+	+	
Sakarya University		+	+
Süleyman Demirel University	+		
Uludağ University	+	+	+
Yakın Doğu University	+		

Okan University, one of the most eminent and distinguished foundation universities in Turkey, is home to a diverse undergraduate and graduate student body of 14,000. Currently, Okan University has students from 43 different countries. It offers more than 138 undergraduate and graduate programs. The University comprises six faculties, two applied sciences schools and three graduate schools. The university also offers a variety of two year associate degree programs that correspond to the in-demand vocational opportunities.

The new global business era of borderless business relations demands a new set of engineering competencies. Okan University Automotive Engineering Undergraduate Program, having revised its programs accordingly, offers a rich selection of concentration areas in order to meet the unique career needs of our students. The world-class faculty members from diverse backgrounds provide a balance of theory and practice in the execution of the curriculum.

The Engineering Faculty of Atılım University has a unique position among Turkish universities, with its new and popular engineering fields such as mechatronics, manufacturing, software, informatics systems, energy systems and automotive engineering in addition to the existing conventional engineering departments. Altogether there are fourteen departments in the faculty. Having been established in 1997, the faculty, with its relatively large number of departments, a strong and dynamic academic cadre, and modern educational and research facilities, has secured a reputable position in a very short time and now is competing with the famous public universities in Turkey

Department of Mechanical Engineering at Hacettepe University offers an undergraduate program in Automotive Engineering and Master of Science and PhD programs in Mechanical Engineering. The research focus of the department lies in the areas of automotive engineering, solid mechanics and design, mechanisms and machine theory, materials, control, mechatronics, sensors and thermal-fluids engineering and energy.

Uludag University Automotive Engineering Department was established in 2010 and was started to give education on master of science

degree in 2011. The Automotive Engineering Department is a pioneer department for Turkey, as being one of the first of its kind in Turkey. The Department offers two programs to qualified students for further education and research at advanced level, leading to the degree of MSc in Automotive Engineering. The Graduate Programs are MSc with thesis and non-thesis programs in Automotive Engineering. Non-thesis program is a MSc without thesis program with the support of Politecnico di Torino (PdT) Italy.

Russia vs Turkey

Russia has a long-standing tradition in high-quality education for all citizens. It probably has also one of the best mass-education systems in the world producing a literacy rate (98%) exceeding most Western European countries. Education is split into a compulsory Basic Education, and ongoing Higher Education.

Russia's higher education system started with the foundation of the universities in Moscow and St. Petersburg in the middle of the 18th century. The system was constructed similar to that of Germany. In Soviet times all of the population in Russia had at least a secondary education. The pursuit of higher education was and still is considered to be very prestigious. More than 50% of people have a higher education.

One of the great attractions of education in Russia is the cost, especially when compared to the quality. In Russia, 22 universities are ranked among the first 800 universities in the world according to the Ranking Web of Universities.

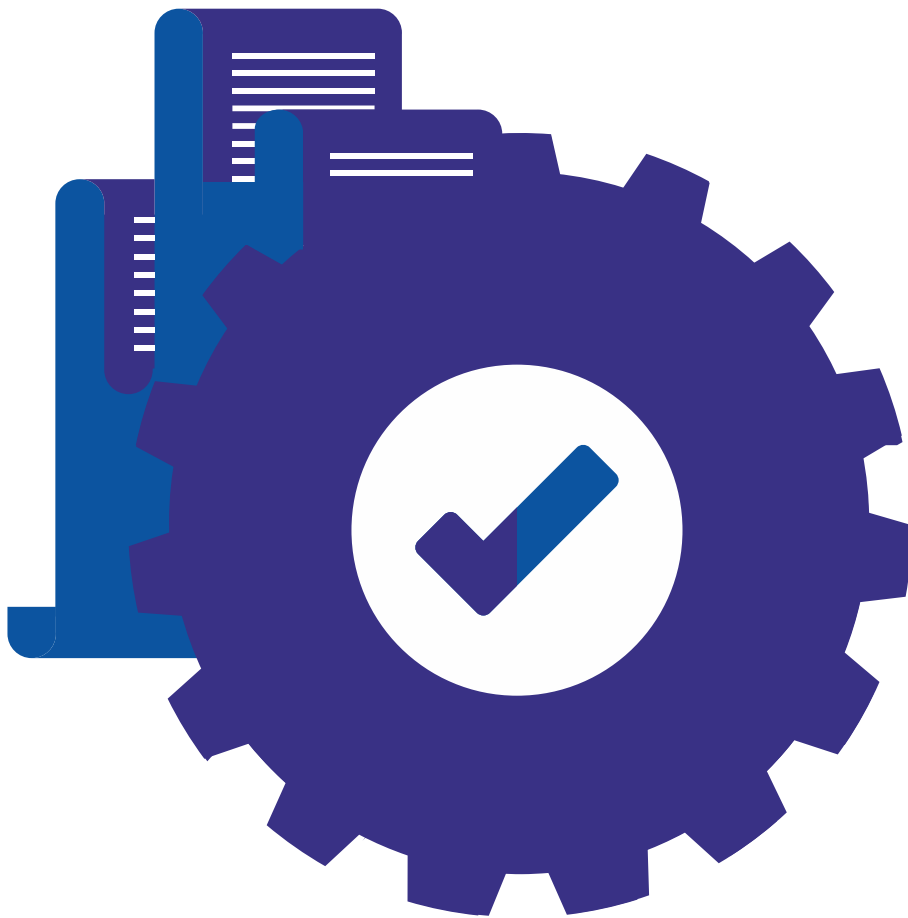
One of the advantage of Russia is that while most emerging markets first developed their automotive industry with strong participation from foreign carmakers, Russia had its own industry. And country's software industry is one of the fastest growing markets in the world.

Motivations for study in Turkey include the opportunity to gain a relatively inexpensive and good quality education, with opportunities for scholarships that also pay a monthly allowance, covering accommodation and tuition fees, health insurance and travel expenses.

Slightly Russia offers support education quality and hence a better trained workforce.

6

Conclusions



Concluding Remarks

Russia is best known among international investors for its energy industry, as a leading exporter of oil and natural gas. But, those investing in Russia are also watching its growing information technology (IT) and telecommunications sectors. In particular, the country's software industry is one of the fastest growing markets in the world.

While most emerging markets first developed their automotive industry with strong participation from foreign carmakers, Russia had its own industry. Across both the passenger and commercial segments, Russia's entry into capitalism inherited a strong indigenous automotive industry across all segments except the two-wheeler industry: passenger cars, commercial trucks of all sizes as well as busses have been produced in Russia since the early 1930s.

Russia's long-term investment attractiveness depends heavily on developing the legislative framework and reducing government involvement in the economy, as well as introducing new technologies in production and management.

Localization in the Russian Federation will be one of the main concerns for all international car manufacturers in the coming years. Some foreign automotive suppliers have concrete needs of pre-suppliers in the area of plastics, injections/blow moldings, metal stamping and metal tube bending and welding.

Growth in the domestic automotive industry is supported by government policies aimed at creating new, and expanding existing, production facilities, as well as attracting additional investment to the industry. The government has voiced its willingness to maintain its substantial support for the industry in the future.

The Russian labour market is characterized by the availability of a highly skilled workforce, still with comparatively low salaries which is an advantage for the investors.

Turkey's automotive industry offers companies a dynamic domestic market and reach to a qualified yet relatively inexpensive labor force versus European countries. The automotive

market grows and the production of vehicles increases steadily. The Turkish government supports the automotive industry in various ways and gives a special attention to R&D efforts.

TUBITAK Marmara Research Center coordinates several automotive projects including range extended electric vehicle. The current manufacturers in the Turkish automotive sector continue to increase their investments. However, it will be necessary to aim for new strategic investments to move into the next level and increase the added value in production. The positive developments in Turkish logistics sector also presents ample opportunities to Turkish automobile manufacturers.

On the other hand, import dependency of the industry and increasing energy prices are the main threats against Turkey. Also, taxes on new vehicle sales is a slowing factor for development of vehicle parc.

Turkey's growing current account deficit creates a significant macroeconomic risk for investors. Political risks such as terrorist attacks in major cities and Turkey's proximity to the civil war in Syria also add to macroeconomic instability. As the world grudgingly grows to accept Russia's role in Syria, Russia's industry is struggling to keep pace the country's geopolitical success.

Economic ties between Russia and Turkey were in the ascendant over the past two decades as trade grew, mutual investment increased, Russian tourists visited in droves, energy cooperation expanded and cultural ties strengthened. Then, on the 24th of November in 2015, a Turkish Air Force F-16 warplane shot down a Russian aircraft because of a violation of Turkish airspace. Immediately after the downing of the Russian jet, the Russian government placed some embargos on Turkey and also called its citizens not to visit Turkey, including cancelling any existing trips already planned. Russia banned the imports of Turkish fruits and vegetables, including tomatoes, oranges, apples, apricots, cabbage, broccoli, mandarins, pears, peaches, cucumbers, plums, strawberries, onions, cloves, and poultry.

Following reconciliation between the two countries, Russia started to gradually lift the sanctions. But import bans on foods such as tomato and grapes, which have a market potential of \$425 million in Russia, remain in force. Russia recently withdrew the ban of some Turkish agricultural exports such as onion, broccoli and cauliflower.

A renormalization process has been initiated, this ban has not been lifted fully yet; greatly affecting Turkish farmers negatively. Government agreement which, in principle, allowed the restoration in economic relations consisting of tourism and direct investment with Turkey was signed by Russia. Future relations between Turkey and Russia is turning around and looking positive. Both sides urgently need to rebuild confidence of the business community, as the lingering uncertainty could lead to a long pause in investment cooperation.

The ban has been lifted and the economic relations are expected to bounce back between two countries.

Turkish investors will find opportunities and advantages in the Russian market especially if they focus on the producers of buses rather than individual vehicles.

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