

ОЦІНЮВАННЯ І АНАЛІЗУВАННЯ ПОКАЗНИКІВ ПОПИТУ КОН'ЮНКТУРИ РИНКУ АВТОМОБІЛЕБУДІВНОЇ ПРОДУКЦІЇ УКРАЇНИ

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Досліджено, проаналізовано та оцінено показники попиту кон'юнктури ринку автомобілебудівної продукції України. Визначено рівні ієрархії кон'юнктури ринку та представлено показники кон'юнктури ринку відповідно до кожного рівня. Досліджено, проаналізовано та охарактеризовано обсяг попиту первинного ринку загалом на автомобілебудівну продукцію України, а також на вітчизняну і імпорتنу продукцію за 2010–2014 рр. Відображено динаміку обсягу продажу автомобілебудівної продукції, абсолютних приростів, темпів зміни, темпів приросту та абсолютного значення 1 % приросту в Україні за 2010–2014 рр., а також динаміку ринку реалізації нових автомобілів у країнах Європи за 2014–2015 рр.

Ключові слова: кон'юнктура ринку, первинний ринок автомобілебудівної продукції, зовнішньоторговельний оборот, зовнішньоторговельний баланс.

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EVALUATION AND ANALYSIS OF MARKET CONDITIONS OF DEMAND INDICATORS OF AUTOMOTIVE PRODUCTS OF UKRAINE

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In most developed countries automobile industry covers the leading sector of civil engineering and industrial production over the world. In the developed countries, the industry is strategic because it provides the development of many related industries, promotes the assimilation of high technologies, creation of final products with high added value, and contributes to the employment and bring appropriate charges to budgets. It is reasonable to develop automobile industry in Ukraine as a strategic industry. The main problems of the domestic automobile industry is relatively low technical and economic level, poorly developed production of components, improper implementation capacity of international scientific and technical cooperation, the lag in implementing environmental standards, the unresolved problem of recycling old cars, although the development of automobile industry in Ukraine has all the necessary resources, namely industrial base, skilled workforce, but the current domestic automobile industry is underdeveloped.

The current domestic market of automotive products is characterized by instability, unpredictability and tough competition. Research, analysis and evaluation of automotive indicators of market conditions demand of Ukraine is an important and a urgent matter because the industry is a strategic and promising. Given the above, it is reasonable to search for theoretical and practical approaches to analyzing and evaluating indicators of market

conditions demand on domestic automotive products. The structure of the production of most domestic enterprises specialized, but for sustainable development and competitive advantage, they are trying to maintain the technological and industrial capacity production of different segments.

In the article has been investigated, analyzed and evaluated the indicators of the market conditions demand of automotive products of Ukraine. The levels of the hierarchy of market conditions and indicators of market conditions have been presented according to the market conditions at each level. The demand in the primary market in general automotive products of Ukraine, as well as domestic and imported products has been studied, analyzed and characterized for the years 2010–2014. The dynamics of the market implementation of new cars in Europe has been displaying for the years 2014–2015. The volume of exports and imports in the automotive Ukraine products in general, as well as cars, trucks and buses has been studied for the years 2009–2015. The dynamics of foreign trade balance of Ukraine and foreign automotive products has been identified and analyzed for the years 2009–2015. The dynamics of sales of automotive products, dynamics of absolute growth, dynamics of the pace of change, dynamics of growth rate and the dynamics of the absolute value of 1 % growth in Ukraine has been displayed for the years 2010–2014. The dynamics of the market implementation of new cars in Europe has been presented for the years 2014–2015.

Key words: market conditions, the primary market automotive products, external trade, foreign trade balance.

Statement of the problem. Modern automotive products market in Ukraine is characterized by instability, unpredictability and fierce competition, which is associated with a decrease in demand for all automotive products in general and the products of domestic manufacturers and import. Research, analysis and evaluation of market conditions demand of automotive products of Ukraine is a matter of important and urgent because the industry is a strategic and promising, but at this stage of development is at a standstill. Given the above, it is reasonable to search for theoretical and practical approaches to address these issues.

Analysis of recent research and publications. The questions of researching demand for automotive products engaged such scientists as: O. Dima, I. Kolomiets, L. A. Moroz, R. R. Riphayak, O. V. Yurynets, O. J. Maruschak, A. V. Peretiatko, G. L. Prohnytska, U. V. Chaychenko, L. G. Lypych, T. P. Radischuk, S. S. Jaremenko, V. V. Movcharenko, V. V. Hlyvenko, A. P. Savich, A. M. Safonenko and other scientists. Detailed information of market of automotive products in Ukraine has been studied by domestic consulting firms such as Ukravtoprom, Autoconsulting, Credit Rating and others organizations.

Goals of the article are to examine, analyze and evaluate the market conditions demand indicators of automobile products of Ukraine. The main objectives are: to research levels of market conditions; to determine, to analyse and to evaluate of demand in the primary market in general automotive products Ukraine, as well as domestic and imported products for the years 2010-2014; to study the dynamics of sales of automotive products, the absolute growth, the pace of change, growth rate and the absolute value of 1 % growth in Ukraine for the years 2010–2014; to determine market dynamics implementation of new cars in Europe for the years 2014–2015; to research output of exports and imports of automotive products in Ukraine in general, as well as cars, trucks and buses for the years 2009-2015; to determine and to analyse of foreign trade and trade balance of Ukraine concerning automotive products for the period 2009–2015.

The main material of research. According to the cycle of market conditions certain level hierarchy of duration and caused a known set of reasons, there are three types of equilibrium states: equilibrium “first order”, equilibrium “second order” and equilibrium “third order” according to M. D. Kondratyev. Equilibrium “first order” created by the interaction of market demand and market supply, so scientist proposed at this stage to investigate indicators such as supply and demand. Deviations from this

equilibrium is short oscillation, period of 3–3.5 years, ie cycles in commodity stocks. Equilibrium “second order”, according to scientists, is achieved in the interbranch flow of capital. At this stage, the scientist offered to investigate price. Deviations from this equilibrium is cycles expectancy and balance “third order” associated with upgrading, modernization, development of new “basic material goods”: industrial buildings, infrastructure facilities and skilled workforce, which currently serves as technical means of production result scientific and technical progress. The scientist explained it this way: “... Stock core capital goods must be in balance with all the factors determining the existing technical means of production, with established industrial structure, existing raw materials and energy sources, prices, employment and public institutions, as monetary system, etc. Periodically, this equilibrium is disturbed and there is also the need to create a new stock of “core capital goods” that would meet the new technical means of production. According to Kondratyev, this update “core capital goods”, which reflects the movement of scientific and technological progress is not smooth, but jerks is the material basis of large cycles market conditions. Upgrading and expansion of “core capital goods” that occurs during the upward phase of long cycle radically alter and redistribute productive forces of society. This requires huge resources in kind and cash. They can exist only in the event when accumulated more than invested in the previous phase. In the recovery phase when continuous growth in prices and wages raises people tend to spend more, during the recession, falling prices and wages. The first is the desire to save, and the second – to lower purchasing power. Accumulation of funds is also due to falling investment during the general recession, when profits are lower and the risk of bankruptcy” [1, p. 55]. At this level the researcher felt the need to explore investment. However, according to the author of the article, if the “balance of the first order” is achieved by the interaction of market demand and market supply through the pricing of the product, it should investigate the demand, supply and prices. Price, as an essential element connects the supply and demand. The balance of “second order”, according to the author, achieved during the inter branch flow of capital invested mainly in equipment, ie investment in fixed assets, so at this point it is worth exploring investment. A balance “third order” related to the upgrade, modernization, development of new “basic material goods”: industrial buildings, infrastructure facilities, provides essentially the study of innovation, scientific and technical progress, because, according to the author, that at this stage it is necessary to explore innovation.

Demand is an important element of market research, because it dictates the conditions of production, determines the need for goods and services. It should be noted that the Ukrainian market automotive products presented passenger cars, trucks and buses, production of both domestic and foreign manufacturers, the primary and secondary markets. Both primary and secondary market represented domestic and imported products.

Consider the primary market for domestic and foreign products., sales of automobile products in Ukraine for 2011–2014 years presented in fig. 1.

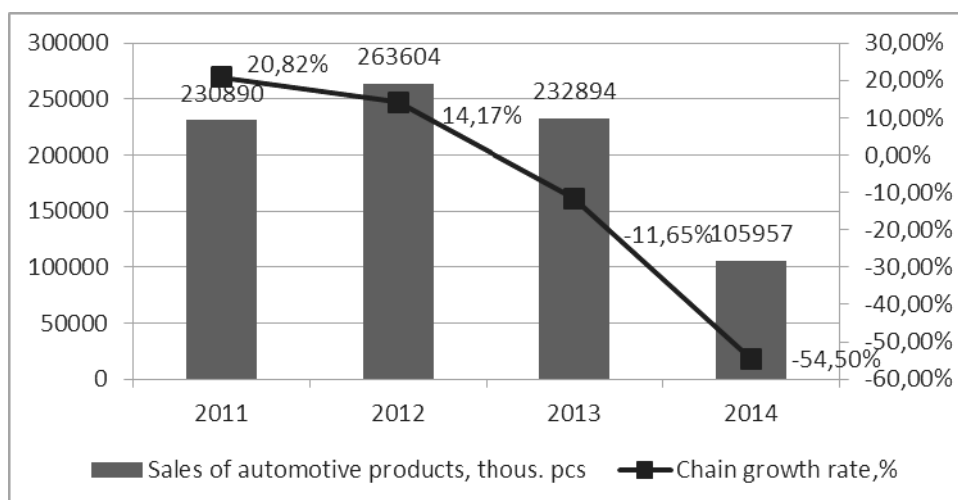


Fig. 1. Sales of automotive products in Ukraine for the years 2011-2014

Source: formed by the author based on [2]

From Figure 1 shows that demand for automotive products since 2012, falls.

The dynamics of sales of automotive products, absolute growth, the rate of change (basic and chain), growth rate (basic and chain) and the absolute value of the 1 % rate in Ukraine for the years 2010-2014, displayed in tab. 1.

Table 1

The dynamics of sales of automotive products, absolute growth, the pace of change, growth rate and the absolute value of 1 % growth in Ukraine for the years 2010–2014

Years	Sales of automotive products, thous. pcs.	Absolute increments, thous. pcs.		The rate of change, %		The growth rate, %		The absolute value of 1 % increase, thous. pcs.
		basic	chain	basic	chain	basic	chain	
2010	191109	–	–	–	–	–	–	–
2011	230890	+39781	+39781	120,82	120,82	+20,82	+20,82	1911,09
2012	263604	+72495	+32714	137,93	114,17	+37,93	+14,17	2308,90
2013	232894	+41785	-30710	121,86	88,35	+21,86	-11,65	2636,04
2014	105957	-85152	-126937	55,44	45,50	-44,56	-54,50	2328,94

Source: calculated by the author based on data [2]

Tab. 1 shows that the most favorable year in sales of automotive products in Ukraine for the years 2010–2014 was 2012, the growth rate was 37.93 % and 14.17 % respectively basic and chain. Since 2013, demand decreased and amounted to 232 894 p. In 2014, sales fell even more – by 44.56 % (base rate increase), and compared to 2013 – to 54.50 %.

The domestic primary market automotive products represented 8 plants, namely: PJSC “ZAZ” Corporation “Bogdan”, JSC “Eurocar”, HC “AvtoKrAZ”, JSC “BAZ” (Corporation “Standard”), PJSC “Plant” Chasivoyarski bus”, JSC “Chernigov car factory” (Korrobotyia “Standard”), PJSC “Cherkasky bus”, but back in 2014 worked LLC “PA KrASZ” and in 2011 produced products of JSC “ZKT “OOO “LAZ” and LLC “Road Works” AntoRus.

Notably, Zaporizhia Automobile Building Plant – the only enterprise in Ukraine with a full cycle production of passenger cars, which includes stamping, welding, painting, assembly equipment and car body. The enterprise belongs to the group of companies “UkrAVTO”.

Zaporizhia automobile plant – a modern enterprise which is developing dynamically and constantly improving products produced. Production capacity is 150 thousand cars per year. PJSC “ZAZ” during the years 2007–2015 held the leading position in the market of automobile products in Ukraine, however, its share constantly decreases, it indicates increased competition in the market. It should be added that during 2007–2012 years, except 2009, the market controlled by domestic manufacturers of three producers, namely PJSC “ZAZ”, Corporation “Bogdan” and JSC “Eurocar”. Since 2013, LLC “PA” KrASZ “ahead Corporation” Bogdan “in production at 4,58 %, in 2014 – and the Corporation “Bogdan” and JSC “Eurocar” and HC “AvtoKrAZ” and JSC “Chernigov car factory” (Korrobotyia “Standard”) combined at 0,31 %. However, in 2015 the company has produced not a single unit of automotive products. It is advisable to note that the Corporation “Bogdan” lost its leading position, as evidenced by the decrease in production.

According to own research and estimates, about 88,86 % of the market automotive products in 2015 controlled by PJSC “ZAZ”, JSC “Eurocar” and HC “AvtoKrAZ”, in 2014 – 84,48 % – PJSC “ZAZ”, JSC “VO “KrASZ” and JSC “Eurocar” in 2013 – 80,96 % – JSC “ZAZ”, JSC “Eurocar” and LLC “PA” KrASZ.

The main suppliers of automotive products in the market of Ukraine are foreign manufacturers whose products are displacing domestic enterprises in the market, limiting their profitability. It should be noted that the dynamics of particles of foreign cars on the Ukrainian market since 2005 increases: 43,2 % in 2005, 54,5 % in 2006, 66,0 % (2007), 77,0 % (2008), 73,3 % (2009), 74,9 % (2010), 76,7 % (2011) and 82,7 % (2012) [4; 5, p. 45].

In Ukraine, more than 300 manufacturers of car components and parts, of which about three dozen joint ventures with foreign investment. The number of companies official importer – 40, representing the market 60 automobile brands. Number of official dealerships of about 1000. The volume of investments of the residents of Ukraine and foreign companies over the past 20 years in the construction of showrooms, warehouses, manufacturing sites – more than 2.0 billion. euro. Number of people employed in the

automotive industry (official import and distribution of official dealers – sales and service, manufacturing plants and suppliers of components) – more than 50 000 employees [3].

It is worth noting that in recent years happens change preferences of consumers. So, every year more and more cars sold high and middle price segments, while car sales in the low price segment constantly declining. According to leading domestic auto dealers, the decrease in sales in 2014 affected most cars higher price segment, while the decline in sales in the low price segment there is less. Note that the volume of car sales in 2014 declined by almost half, dropping to the market performance in 2002.

Production on domestic car factories decreased for the year by 35 %, and in the last months of the year there was a decrease in production in 60–80 % [5, p. 45].

The level of availability of passenger cars in Ukraine on 1000 people to 2011 was only 178 cars, which is much lower than in European countries. While in Russia – 228, Slovakia – 295 Hungary – 301, Czech Republic – 441 and Poland with 453 auto in the same period [5]. This shows the promise of market automotive products, which depends on several factors, key of which is state support of the market, and policy aimed at enhancing and stimulating the market and purchasing power and the level of lending and providing financial resources.

Market dynamics implementation of new cars in Europe for the years 2014–2015 presented in tab. 2.

Table 2

Market dynamics implementation of new cars in Europe for the years 2014–2015, pcs.

Rating			Country	2015	2014	15/14, %
2015	2014	2015/2014				
1	1	0	Germany	3206042	3036773	+5,6
2	3	1	United Kingdom	2633503	2476435	+6,3
3	4	1	France	1917226	1795885	+6,8
4	2	-2	Russia	1601000	2491404	-35,7
5	5	0	Italy	1574872	1360578	+15,8
6	6	0	Spain	1034232	855308	+20,9
7	7	0	Belgium	501066	482939	+3,8
8	8	0	Netherlands	449393	387565	+16,0
9	9	0	Poland	354975	327709	+8,3
10	10	0	Sweden	345108	303948	+13,5
11	12	1	Switzerland	323783	301942	+7,2
12	11	-1	Austria	308555	303318	+1,7
13	13	0	Czech Republic	230857	192314	+20,0
14	14	0	Denmark	207552	188925	+9,9
15	16	1	Portugal	178496	142826	+25,0
16	15	-1	Norway	150686	144202	+4,5
17	18	1	Ireland	124945	96284	+29,8
18	17	-1	Finland	108812	106237	+2,4
19	22	3	Romania	81162	70172	+15,7
20	20	0	Slovakia	77968	72237	+7,9
21	23	2	Hungary	77171	67476	+14,4
22	21	-1	Greece	75805	71218	+6,4
23	24	1	Slovenia	59450	53296	+11,5
24	25	1	Luxembourg	46473	49793	-6,7
25	19	-6	Ukraine	46443	92352	-49,7
26	26	0	Croatia	34820	33409	+4,2
27	28	1	Bulgaria	23500	20359	+15,4
28	27	-1	Estonia	20349	20969	-3,0
29	29	0	Lithuania	17085	14503	+17,8
30	31	1	Iceland	14029	9537	+47,1
31	30	-1	Latvia	13765	12452	+10,5
32	32	0	Cyprus	10344	8276	+25,0
			Total	15849467	15590641	+1,7

Source: the author formed according to ACEA, AEB, AUTO-Consulting

As shown in tab. 2, Ukraine is ranking among European countries on 25 place in 2015, although back in 2014, took 19th position. Sales declined by almost half and accounted in 2015 on 49.7 % decline. This catastrophic situation that requires direct methods of state regulation improving this situation.

It is advisable illustrate the dynamics of production, sales, exports and imports of automotive products in Ukraine for the years 2009–2015.

Dynamics of production, sales, exports and imports of automotive products in Ukraine for the years 2009–2015 has been displayed in tab. 3.

Table 3

Dynamics of production, sales, exports and imports of automotive products of Ukraine for the year 2009–2015, thous. pcs.

Indexes	Years						
	2009	2010	2011	2012	2013	2014	2015
Production	69,295	83,083	104,653	76,281	50,449	28,751	8,292
Sales	107,809	191,109	230,890	263,604	232,894	105,957	52,341
Export	19,74	35,43	41,82	29,73	7,42	3,11	1,01
Import	88,06	163,88	306,69	354,34	301,07	145,99	86,33

Source: formed by the author according to the State Statistics Committee of Ukraine

As shown in the tab. 3, the dynamics of supply (production) and demand (sales) on the automotive products shows that domestic production does not meet demand.

This unmet need satisfies imports of automotive products. Gradually stops domestic production automotive products, reflecting the unfavorable dynamics of exports, which since 2012 has fallen sharply.

It is advisable to analyze commodity structure of Ukraine's foreign trade of automotive products sectors. Commodity structure of foreign trade of Ukraine passenger cars for the years 2009–2015 has been presented in tab. 4.

Table 4

Commodity structure of foreign trade by cars for the years 2009–2015

Years	Export			Import		
	mln.\$	Rate of change	thous. un.	mln.\$	Rate of change	thous. un.
2009	126,43	–	18,08	935,10	–	61,26
2010	217,47	172,01	32,71	1743,52	186,45	106,78
2011	283,28	130,26	39,89	2979,47	170,89	189,90
2012	214,09	75,58	27,17	3247,14	108,98	204,96
2013	48,92	22,85	6,04	2995,49	92,25	173,20
2014	19,77	40,41	2,14	1209,95	40,39	62,62
2015	12,57	63,58	0,3	824,04	68,11	62,33

Source: calculated by the author according to the State Statistics Committee of Ukraine "Export / import of certain goods Ukraine on the world

As shown in the tab. 4, exports of passenger cars for the years 2013-2015 significantly reduced compared to 2009 both in value and real terms. Imports for the years 2010-2012 tended to increase, however, since 2013, falls.

Commodity structure of foreign trade of Ukraine by buses for the years 2009-2015 has been presented in tab. 5.

Table 5

Commodity structure of foreign trade of Ukraine by buses for the years 2009–2015

Years	Export			Import		
	mln.\$	Rate of change	thous. un.	mln.\$	Rate of change	thous. un.
2009	11,89	–	0,28	27,38	–	0,97
2010	21,38	179,81	0,53	31,21	113,99	1,65
2011	38,74	181,19	0,63	56,79	181,96	2,84
2012	50,26	129,74	1,07	86,54	152,39	4,15
2013	24,82	49,38	0,54	46,36	53,57	2,93
2014	8,84	35,62	0,19	15,43	33,28	1,25
2015	3,30	37,33	0,09	15,54	100,71	1,51

Source: Calculated by the author according to the State Statistics Committee of Ukraine "Export / import of certain goods Ukraine on the world

As shown in the tab. 5, the volume of exports and imports of buses for the years 2010–2012 tended to increase, however, since 2013, falls.

Commodity structure of foreign trade of Ukraine by trucks for the years 2009–2015 has been presented in tab. 6.

Table 6

Commodity structure of foreign trade of Ukraine by trucks for the years 2009–2015

Years	Export			Import		
	mln.\$	Rate of change	thous. un.	mln.\$	Rate of change	thous. un.
2009	42,84	–	1,38	234,96	–	25,83
2010	61,09	142,60	2,19	426,56	181,55	55,45
2011	63,06	103,22	1,30	768,76	180,22	113,95
2012	58,81	93,26	1,49	846,56	110,11	145,23
2013	58,02	98,66	0,84	755,11	89,20	124,94
2014	54,98	94,76	0,78	359,60	47,62	82,12
2015	38,96	70,86	0,62	161,39	44,88	22,49

Source: Calculated by the author according to the State Statistics Committee of Ukraine "Export / import of certain goods Ukraine on the world"

As shown in the tab. 6, exports of trucks for the years 2010–2011 tended to increase, but since 2012, having fallen, and the volume of imports for 2010–2012. Grew, and in 2013–2015 having fallen.

Commodity structure of foreign trade of automotive products of Ukraine for the years 2009–2015 has been presented in tab. 7.

Table 7

Commodity structure of foreign trade of automotive products of Ukraine for the years 2009–2015

Years	Export			Import		
	mln.\$	Rate of change	thous. un.	mln.\$	Rate of change	thous. un.
2009	181,16	–	19,74	1197,44	–	88,06
2010	299,94	165,57	35,43	2201,29	183,83	163,88
2011	385,08	128,39	41,82	3805,02	172,85	306,69
2012	323,16	83,92	29,73	4180,24	109,86	354,34
2013	131,76	40,77	7,42	3796,96	90,83	301,07
2014	83,59	63,44	3,11	1584,98	41,74	145,99
2015	54,83	65,59	1,01	1000,97	63,15	86,33

Source: calculated by the author according to the State Statistics Committee of Ukraine "Export / import of certain goods Ukraine on the world"

In the structure of foreign trade exceeds import, Export occupies only a small portion of import, In 2009, exports amounted to 15,13 % of imports in 2010 – 13,62 % of imports in 2011, -10,12 % in 2012 – 7,73 %, 2013 – 3,47 % 2014 – 5,27 %, 2015 – 5,48 %, There is a downward trend, although since 2013 the export share increased slightly,

It is necessary to analyze and evaluate the trade turnover (TT) and trade balance (TB) of automotive products. The dynamics of foreign trade turnover (TT) and trade balance (TB) of automotive products for the period 2009–2015 has been displayed in tab. 8.

Table 8

The dynamics of foreign trade turnover (TT) and trade balance (TB) of automotive products for the period 2009–2015, thousands of dollars

Years	Trade turnover (TT)	Trade balance (TB)
2009	1378,60	-1016,28
2010	2501,23	-1901,35
2011	4190,10	-3419,94
2012	4503,40	-3857,08
2013	3928,72	-3665,20
2014	1668,57	-1501,39
2015	1055,80	-946,14

Source: formed by the author according to the State Statistics Committee of Ukraine

During this period, Ukraine had a negative balance of foreign trade of automotive products. This means that for the period increased dependence on imports in this area, especially for the period 2011–2013, but, as we see from the table, the negative balance of foreign trade declined in 2014 year and is 40.96 % amount balance for 2013 year, and in 2015 – 25.81 % amount balance for 2013 year. This is a positive trend for the market of automotive products.

Conclusions and recommendations for further research. The dynamics of demand, supply, exports and imports of automotive products shows the unfavorable situation that reflects the current state of the market automotive products. Production of domestic automotive products stops, sales of both domestic and foreign products in 2015 year fell by half compared with 2014 year. Exports from 19.74 th. pcs. in 2009 dropped to 1.01 th. pcs. in 2015, while imports fell by almost half. These facts show that if public policy is not aimed at the revitalization of the domestic automotive companies, the next year the market will cease to function. Among the important factors that affect the market can be defined as follows: the unstable political and financial situation in the country, the lack of effective state support domestic automakers, the adoption of laws that hinder the development of the domestic automotive industry, unfavorable customs policy to revitalize the market, the overall drop in income, devaluation of the national currency, reduction of car loans because of high interest rates and reducing the terms on car loans, rising prices for fuel and oil products. Given the above, as well as increased competition in the market from foreign producers, lack of state support, problems related markets outlet, unstable economic, financial and political situation, the current state of the market is in a catastrophic state, as evidenced by important performance indicators market.

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