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The Challenges of Economic Cooperation Decline between Ukraine and Russia

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Contents

The reshaping of economic cooperation between Ukraine and the Russian Federation, based on the experience of the Baltic States and Georgia, will be a complicated and painful process that can drag on for many years. Under the most optimistic scenario adaptation to new conditions of cooperation in the economic sphere can take from two to five years — on condition of absence of armed conflict on the territory of Ukraine, support from society and the presence of very favorable internal and external political factors. In case of a scenario of internal political disintegration — the painful adaptation may take five years or more. It is possible that such a scenario is intended by the Russian Federation on condition of cessation of open military confrontation in Donbas.

1. Economic cooperation between Ukraine and the RF: the complex search for a new interaction model

The sharp deterioration of relations with the Russian Federation causes a negative impact on the socio-political situation in Ukraine due to such factors, as the closing of access to the Russian market as a result of unfair competition and the introduction of trade sanctions by Russia, the reduction of industrial production, as a result of hostilities, hryvnia devaluation and rising prices on energy resources. At the same time, the decline in economic cooperation with the Russian Federation is also the result of an evolutionary reduction of the Ukrainian economy's dependence on Russia as the monopoly supplier of energy resources and the market for non-competitive (on world markets) Ukrainian goods. It is noteworthy that the gradual reduction of economic cooperation with the Russian Federation has been lasting from the collapse of the USSR. In the mid-2000s, Russia declared its course towards import substitution, which accelerated the collapse of bilateral cooperation.

Two stages can be distinguished in the process of Ukraine adapting to the new format of relations with Russia — before the critical events of 2013-2014 and after. ***The first stage of adaptation*** witnessed an evolutionary, chaotic adjustment of the Ukrainian economy to the realities of domestic, international and intra-Russian dynamics. Thus, in the foreign economy policy towards the positioning of Ukraine in relations with Russia the following trends dominated:

- maximization of income from resource rent through cooperation of Ukrainian companies with Russian energy monopolies (relevant for the metallurgy, chemical industries);

- maintenance of markets for competitive products to reduce transfer costs (relevant for agriculture, engineering and the defense industry); situational and / or deliberate reorientation of competitive products to the markets of third countries;

- preservation of markets for uncompetitive (in third country markets) products (relevant for the engineering industry, defense industry);

- maximally full exploitation of not modernized, obsolete production equipment (for most export-oriented industries), including through joint ventures, oriented at the markets of third countries;

- inhibition of cooperation in the military-industrial complex (Ukrainian MIC lost its priority for Russia immediately after Ukraine's independence, but especially so, after the official declaration of the intention of Ukraine's accession to NATO in 2002).

Therefore, for a long time the foreign trade policy of Ukraine was dominated by ***the priorities of the conservation of an economic model akin to the Russian one***, based on the exploitation of the competitive advantages of the producer of primary (with a large share of the energy component) resources. Foreign trade agreements between Ukraine and the Russian Federation were traditionally aimed at “stabilizing” (with the tendency to maximize) energy relations with Russia; other elements of cooperation, even industrial cooperation in the defense industry, were of secondary importance. At the same time, an important component of cooperation for Russia was precisely the MIC, especially one of its components, the reproduction of which on the territory of Russia was associated with insurmountable difficulties. In turn, Ukrainian partners associated with MIC, demonstrated an aggressive market position regarding the production and supply of weapons to the international market, which, according to the logic of the Russian side, threatened its national security and motivated a reassessment of risks to continuing military cooperation with Ukraine.

The beginning of the systemic crisis in relations with the Russian Federation, which occurred in the middle of 2013, marked ***the transition to a new stage of bilateral cooperation***. In the summer of last year, the Russian Federation imposed massive trade restrictions on imports from Ukraine, which led to their decline, based on the results of 2013, by 14.6% year over year. During the 1st half of 2014 exports to the RF fell by another 23.3% y/y - due to conflict escalation in bilateral relations, the rapid decline in Ukraine's industrial production and stagnation of the Russian economy.

In late June 2014 the President of Ukraine, Petro Poroshenko signed the Association Agreement and the Deep and Comprehensive Free Trade Agreement with the EU (AA). According to this agreement, Ukraine has to transform the country's economic policy significantly in the medium term that will also cause drastic changes, in particular, in the nature of relations with the Russian Federation. It should be emphasized that the basic conditions for bilateral cooperation between Ukraine and Russia will be determined not so much by the aggression of the RF against Ukraine, as by the liabilities in the context of UA together with economic factors of post-war recovery. As of September 2014, bilateral economic cooperation with the RF is characterized by:

- de facto full or partial termination of international agreements (free trade zone and others, currently it is impossible to determine an accurate list);
- dominance of politically motivated decision on ceasing cooperation in sectors that are sensitive in terms of Ukraine's national security; a discriminatory and motivated by the national interests of the Russian Federation blocking of Ukrainian exports;
- the start of the reforms in the gas market of Ukraine with the prospect of placing severe resource constraints on businesses and households; suspension of gas supplies from the RF as a result of differences in approaches to debt repayment and gas pricing;
- random imposing of sanctions and embargoes in bilateral relations; the prospect of escalating losses from discriminatory measures;
- introduction of restrictive measures in response to the methods of coercion, blackmail, open aggression (seizure of assets, etc.);
- RF's application of international pressure, including through international organizations and discrediting Ukraine as an international partner;
- termination (or drastic reduction) of cooperation in the defense industry sector (MIC); export of unique equipment of Ukrainian defense enterprises with the aim of transferring relevant production to the RF;
- encouragement of Ukrainian manufacturers to reorient competitive products to the markets of third countries; temporary implementation of a duty-free treatment for the access of Ukrainian goods to the EU market (before creating a free trade zone with the EU);
- a decrease in imports from the RF as a result of armed actions, termination of the RF supply of natural gas and currency devaluation.

Given the existing foundation of bilateral cooperation, one can define several “areas of high tension”, that will determine ***the main risks and threats in the medium and long term.***

Cooperation in the energy sector will remain to be the most controversial from the perspective of building mutually beneficial, pragmatic relations in the long run. On one hand, the RF is set to build relations with Ukraine in the gas sector from the position of strength, i.e. using gas supplies as an instrument of geopolitical struggle and keeping the Ukrainian economy in Russia's sphere of influence. On the other hand, there are many political and economic entities in Ukrainian politics, who would like to recover lost income and are therefore interested in pursuing the policy of “common resource rents". At the same time, the final determination of the "gas issue" (i.e. converting gas to a market product) will mean for Ukraine the perspective of recovering economic sovereignty of its own territory. **In other words, the "gas issue" for Ukraine — is a point of no return to Soviet Ukraine.** Currently the lack of progress in reforming the energy sector strengthens political and economic risks, including the risks of a new political crisis, economic collapse and even the collapse of the state (the new law on GTS reform was passed by parliament 08.14.2014. The success of the reform will depend on the proper implementation of the law and involvement of appropriate foreign investors, why it is necessary to end the military conflict as soon as possible).

Regardless of the factors of economic cooperation with the RF, in the context of Ukraine's international competitiveness the presence of **threat of RF invasion** leads the overall **uncertainty** as to the economic prospects of Ukraine. This means that Ukraine, being in a state of "hybrid" economic war with the RF, is perceived by the Western business community as a potentially dangerous economic partner, with whom it is necessary to limit financial communications. Therefore, if after completion of the military phase the RF continues to exert economic pressure on Ukraine, increasing sanctions and embargo, we can predict further destabilization of the financial market - the weakening of the hryvnia, followed by a chain reaction in the market of public debt and bank loans, as well as inflation and economic recession.

By sector, the impact of the factor of reformatting trade and industrial cooperation with the Russian Federation **is relatively small and varies depending on the share of Russian exports in gross output of the industry**. It is noteworthy that according to the State Statistics Service in the first half of 2014 - practically in wartime - the reduction of merchandise exports was 5.2% compared with a 8.9% fall in the first half of 2013. Based on the calculations of the German Advisory group[1] on the ratio of average annual volumes of Ukrainian exports and production (in the pre-crisis period) the mechanical engineering industry supplied up to 22% of the total output to the markets of the RF. This is the highest indicator among other industries, because the sector is aimed at exports, which is largely directed at the Russian market (the industry exports about 43% from all output, the share of exports to Russia is 52% of exports). At the same time, the potential losses of the iron and steel industry, from the closure of the Russian market, may amount to 14% of gross production of the industry. Less vulnerability of the export-oriented metallurgical industry to Russian influence is explained by significant geographic diversification of the exports' structure (the industry exports about 62% of output, the share of exports to Russia is 26% of exports). By the calculations of the German Advisory group, the share of gross output of food products exported to Russia is only 3%. This is explained by the fact, that the industry is mainly oriented at the domestic market (exports account for only 15% of the sector's output, the share of Russia in the food export — 21%). In the agribusiness sector, the share of exports to Russia does not exceed 1% of gross production.

By region, the most vulnerable to cessation of cooperation with the RF is the **Luhansk and Zaporizhzhya regions** (up to 10% of the gross regional product is exported to the Russian Federation), Mykolaiv (9%), Sumy (8%), Dnipropetrovsk, Kharkiv and Donetsk (6% each). Thus, the overall statistics of the industries' and regions' dependence on the Russian market does not confirm catastrophic forecasts, even assuming that the interaction between the two countries will stop completely. However, at the level of individual enterprises or cooperative ties the forecasts can truly be very pessimistic. Actually, in these rare cases, under the disguise of hostilities, the Russian side has resorted to the practice of robbery or conspiring with directors of enterprises to export Ukrainian production facilities in order to launch production on the territory of the Russian Federation. According to the National Security and Defense Council (NSDC) and mass media, cases of exporting equipment were reported on strategic enterprises of MIC and machine-building enterprises: Donetsk-based production association "Topaz" (manufactures advanced radars, such as "Mail"); Krasnodon-based plant "Youth" (produces relays for special equipment of the the aviation, aerospace, missile industries); Luhansk Cartridge Works (manufactures ammunition for small arms); Lugansk Plant of Electronic Mechanical Engineering (produces equipment for mono-crystal growth), Donetsk-based

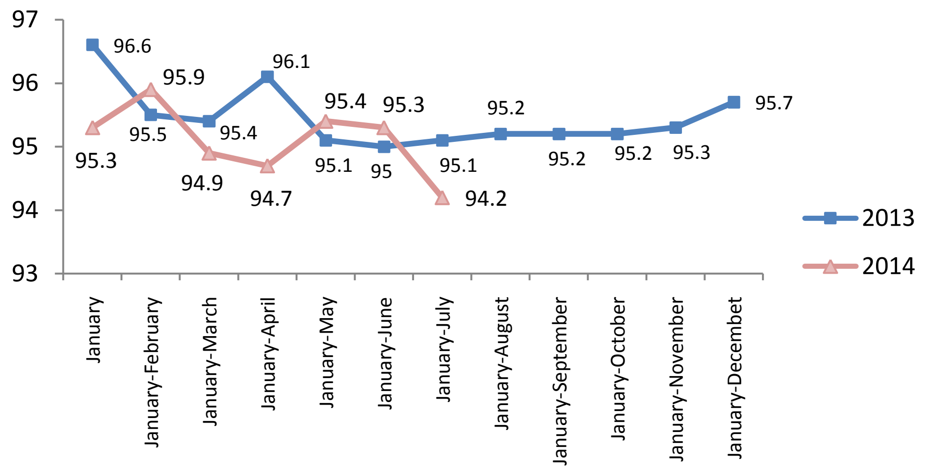
[1]"Ukrainian exports to Russia: Sector and regional exposure" German Advisory Group, Newsletter,Issue No. 68. June 2014

production association “Tochmash” (manufactures and repairs equipment for the mining and coal mining industries).

Apparently, **the warfare factor** on the territory of Donbas generates a range of **sovereign and corporate risks** both in the context of bilateral cooperation and for the whole Ukrainian economy in general. The most serious threats include: exportation to the territory of the Russian Federation or the physical destruction of productive assets, disintegration of production processes, as a result, a significant decrease in the proportion of GDP, the potential loss of control over the financial system (currency deficit, deregulation of public finances, a high debt burden on the budget). As of August 2014, the undeclared war with the Russian Federation has been adversely affecting the indicators of macro-financial stability, causing weakness of the currency, capital flight, reduction in volumes of private transfers, reduction and suspension of production of certain industrial products, corporate bankruptcies.

The overall macroeconomic statistics of the first half of 2014 reflects a further drop in GDP and deterioration of other macro-financial indicators. However, the July 2014 industrial production indicators (see Figure 1) signify a further acceleration of negative dynamics, especially in the Luhansk and Donetsk regions. Thus, based on the data of the State Statistics Service, the fall in industrial production in the Donetsk region reached 10.7% compared to June 2014 and 28.5% compared to July 2013. In the Luhansk region, industry has reduced production by more than double (by 40% and 56%[2]). Overall, the decline in industry in July was recorded at 12.1% (compared to the same month last year). Given the fact that in June the figure was only 5%, we can say that in July a certain accumulation of negative factors became apparent, which affected the indicators of the general economic dynamics.

Figure 1. Industrial production index (in % y/y)



Source: State Statistics Service of Ukraine

The total foreign trade statistics for the first six months of 2014 reflects a steady negative trend in all sectors of the Ukrainian economy. According to the State Statistics Service, the fall in export volumes in the first half of 2014 amounted to 5.2% (up to 28.6 billion USD). Among the factors determining the negative trend of exports, we can note a sharp decline in industrial production, which in turn, has led to a reduction in exports of industrial products - metallurgy (by 5.2%), chemical industry (by 24.2%), mechanical engineering, including mechanical and electrical machines (by 4.7%), transport vehicles and equipment (by 44.9%, and the leaders in the decline are railway locomotives, railway cars and road equipment, the export of which was reduced by 58.8%), finished food products (by 8%). In addition, production activities, particularly the implementation of investment plans of firms, were affected by: the devaluation of the hryvnia (more than by 50%) and a sharp rise in prices on imported components for manufacturing, which led to a decline in domestic

[2]Data may be ascertained by the State Statistics Service of Ukraine

demand on investment imports. In addition, production activity was inhibited by the appreciation of loan capital and lack of investment resources due to a sharp deterioration of the investment climate. Thus, capital investment decreased by 23.1% in the first quarter (according to the State Statistics Service).

2. External economic sector: overall assessment of the "trade war" with Russia

The Russian Federation has repeatedly threatened to stop the free trade regime in relations with Ukraine and establish a trading "regime of most favored nation" used by RF in relation to third countries, if a free trade zone with the EU is established. This means, that import tariffs will be introduced or increased on Ukrainian exports to the RF — on average to the level of 10% (simple average MFN applied, 2012[3]). Other possible options of trade restrictions implemented by the Russian Federation: raising tariffs on some of the most "sensitive" products from Ukraine, referring to Annex 6 of the Foreign Trade Agreement between CIS countries (on protective measures); the ban on imports of goods of certain Ukrainian manufacturers over alleged breach of sanitary regulations, marking rules, technical regulations; sharp discriminating strengthening of customs control etc. It is noteworthy, that most of the items of Ukrainian exports, on which tariffs can be raised, can be replaced in the RF by imports from other countries (a step which entails inflationary costs).

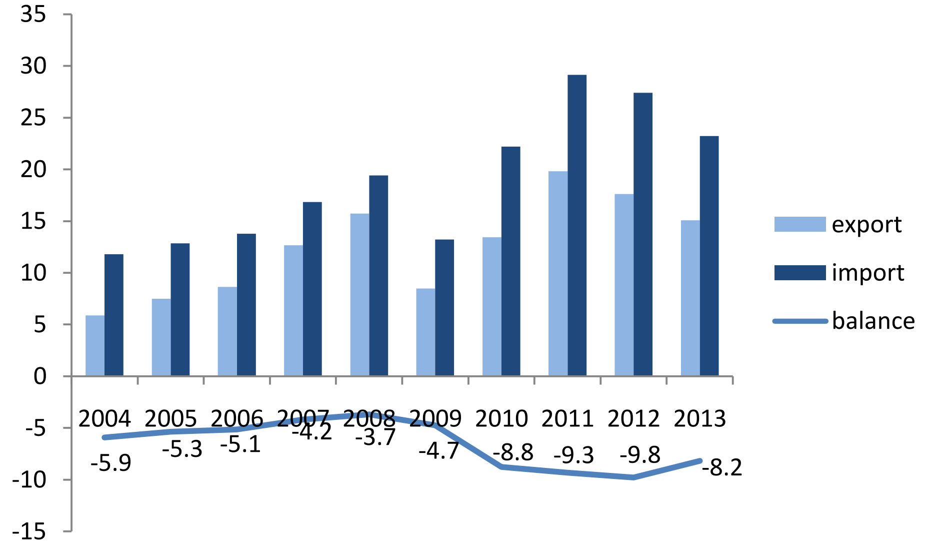
Under pressure from the RF's threat of deterioration / loss of access for Ukraine to the Russian market on September 12, 2014 Ukraine, Russia and the EU agreed to postpone the temporary application of the free trade area between the EU-Ukraine until December 31, 2015. At the same time, September 19, 2014 the RF Prime Minister Dmitry Medvedev signed a decree on the introduction of import customs duties on certain Ukrainian export products at rates of MFN customs union, if Ukraine applies economic articles of the Association Agreement with the EU ahead of the time named at the tripartite negotiations EU-Ukraine-Russia (the beginning of 2016). These products include meet, dairy and confectionary products, fruits and cereals, as well as beer, wine, alcohol and cigarettes, cars, clothes, footwear and sanitary equipment, etc. (all in all, 174 items). In addition, the Prime Minister of the Russian Federation emphasized that "*these measures are taken with the sole intention of protecting domestic producers from unfair competition*", in other words, Ukraine was accused of unfair competition prematurely - even before any actions were taken that could, in the opinion of the RF cause damage to Russian producers. Such accusations testify that Moscow is using economic arguments for political pressure on Ukraine.

In turn, sanctions initiated by Ukraine can cause damage both to the economy of the Russian Federation and Ukraine's, as Ukraine is, in general, more vulnerable to trade restrictions by Russia (the RF's share in Ukrainian exports of goods currently amounts to about 20%, the share of Ukraine in the RF's exports - about 4.5%). The Russian Federation will try to maximize Ukrainian losses through relevant or anticipatory sanctions (apply them to items or enterprises which are the most dependent on the Russian market, etc.).

At the same time, it should be noted that for the last two years there has been a tendency to reduce the role of the RF as the major sales market for Ukraine. Exports to the RF have been declining since 2012 — primarily mechanical engineering (see Figure 2). Accordingly, the share of the RF in total exports of Ukraine decreased: from 29% in 2011 to 19.9% in the 1st half of 2014. This is related to both political events and the introduction of trade restrictions by the RF, as well as the deceleration in the Russian economic growth and the sharp decline in demand for investment goods. Obviously, the reorientation process of Ukrainian producers from the Russian market to third country markets will continue, due to the deterioration of relations with the RF and easing access to third country markets (primarily due to the signing and implementation of the Association Agreement with the EU, that ensures a deep and comprehensive free trade area with the EU).

[3]http://stat.wto.org/TariffProfile/WSDBTariffPFView.aspx?Language=E&Country=RU

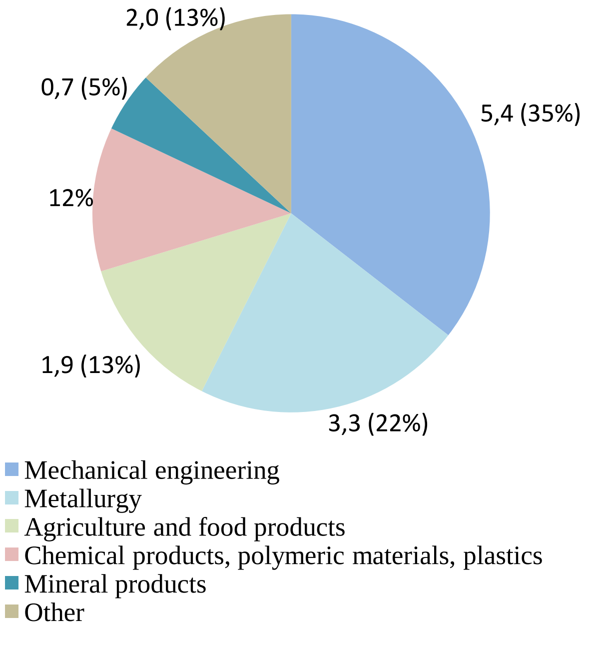
Figure 2. The dynamics of foreign trade between Ukraine and Russia in 2004-2013, billion USD



Source: State Statistics Service of Ukraine

In the commodity structure of Ukrainian exports to the RF key positions belong to: products of mechanical engineering - 35% of exports to the RF in 2013, metallurgy - 22%, food and agricultural products - 13% and chemicals - 12% (see Figure 3).

Figure 3. The commodity structure of Ukraine's exports to the RF in 2013, billion USD and %



Source: State Statistics Service of Ukraine

Overall, in Ukraine's exports to the RF of significance were products with high added value: mechanical and electrical machinery, railway cars and locomotives, finished food products, products from ferrous and non-ferrous metals, polymers and plastics (see Table 1). For many of these items, the Russian market is still the main sales market, therefore they are the most sensitive to the restrictions imposed by Russia.

Table 1. Top 12 commodity groups of Ukrainian exports to the RF, 2013.

Commodity group UCC FEA	Volume of exports to the RF, million USD	The share of the commodity group in total exports to the RF, %	The share of the RF in total exports of the group, %
84 Mechanical machinery, nuclear reactors, boilers	2 222,0	14,7%	57,9%
72 Ferrous metal	2 162,4	14,3%	15,1%
86 Railway locomotives, cars	1 743,4	11,6%	70,8%
85 Electrical machines	1 101,2	7,3%	35,1%
28 Products of inorganich Chemistry	908,9	6,0%	52,1%
73 Ferrous metal products	843,8	5,6%	32,6%
48 Paper and cardboard	769,8	5,1%	71,3%
25 Salt; sulfur; soil and stones	473,5	3,1%	66,5%
39 Plastics, polymers	391,3	2,6%	65,2%
04 Milk and dairy products, poultry eggs; honey	381,9	2,5%	55,2%
18 Cocoa and products from cocoa	336,6	2,2%	60,4%
22 Alcoholic and soft drinks and vinegar	230,8	1,5%	58,2%
Total	**11 565,4**	**76,5%**	**36,0%**

Source: State Statistics Service of Ukraine

Imports from the RF amount to about 30% of total imports to Ukraine (in 2013), while the RF's share in imports is gradually decreasing. The main commodity item of the Russian imports to Ukraine — are energy resources (62.2% of total imports from the RF in 2013). Russia remains the main supplier of energy resources to Ukraine (almost 70% of all energy imports (commodity group 27 UCC FEA) come from the RF, 2013). The RF's increasing natural gas prices for Ukraine, since 2009, has led to a sharp increase in volumes of imports and the amount of negative balance in trade with the RF and the total foreign trade of Ukraine (see Figure 2). This, in turn, was one of a number of factors of the worsening macroeconomic indicators, concerning the balance of payments, currency stability, dynamics of industrial production. During 2012-2013, volumes of imports from the RF began to decline (mostly at the expense of energy resources), owing to the decline in industrial production and implementation by Ukraine of special measures to reduce gas consumption (its replacement by coal, increasing energy efficiency in the industry). **Further measures of the Ukrainian government to diversify energy supplies and increase the economy's energy efficiency will accelerate the tendency towards reducing the role of the RF in Ukraine's imports.**

Apart from energy resources, the Ukrainian market is an important one for Russian mechanical-engineering, although its imports have also declined in recent years (in particular, due to Ukraine introducing protective measures against imported cars, including ones from the RF). In the future, access to the Ukrainian market for Russian manufacturers of machinery can become more complicated due to the reform of technical regulation and implementation of technical regulations that meet the requirements of the EU (Ukraine's commitments under the Association Agreement with the EU).

The armed conflict in Donbas intensified the negative tendencies of recent years in trade with the RF. After the conflict is resolved, Ukraine will face the need to restore economic relations with the RF and return them to the legal field.

3. The consequences of the deterioration of economic relations with the RF by sector

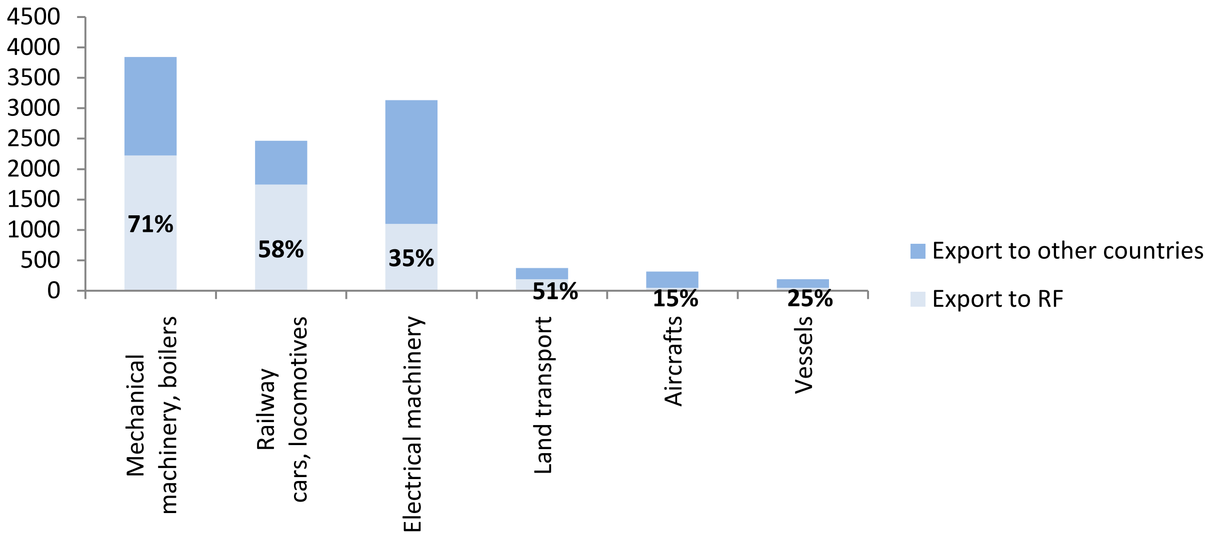
3.1 Products of military-technical purpose and mechanical engineering

Products of mechanical engineering is the main export commodity from Ukraine to the RF. In 2013, the share of machinery accounted for 36% of all Ukraine's exports to the RF.

The possible break in cooperative relations in mechanical engineering and MIC between the RF and Ukraine is the most acute issue on the economic agenda, at present. The mechanical engineering sector is characterized by the greatest dependence on Russian orders, as: 1) it is aimed at exports (about 43% of the sector's output is exported) and 2) for many items, the RF is the main (sometimes with no alternative) market - the share of exports to the RF is over 50% (52% in 2013). According to the German Advisory Group, in 2013 about 22% of total sector's output was directed to the RF, which is a quite significant dependence. Accordingly, mechanical engineering is the most sensitive sector to the implementation of trade restrictions / closure of the Russian market.

Major commodity goods exported to the RF, are: railway cars and railway locomotives, road equipment (the RF's share — about 70%), mechanical machinery and boilers (including turbo-jet engines, turbo-prop, other gas turbines) (share of the RF - 60%), means of land transport other than railway (51%), electrical machinery (share of the RF - 35%) (see Figure 4).

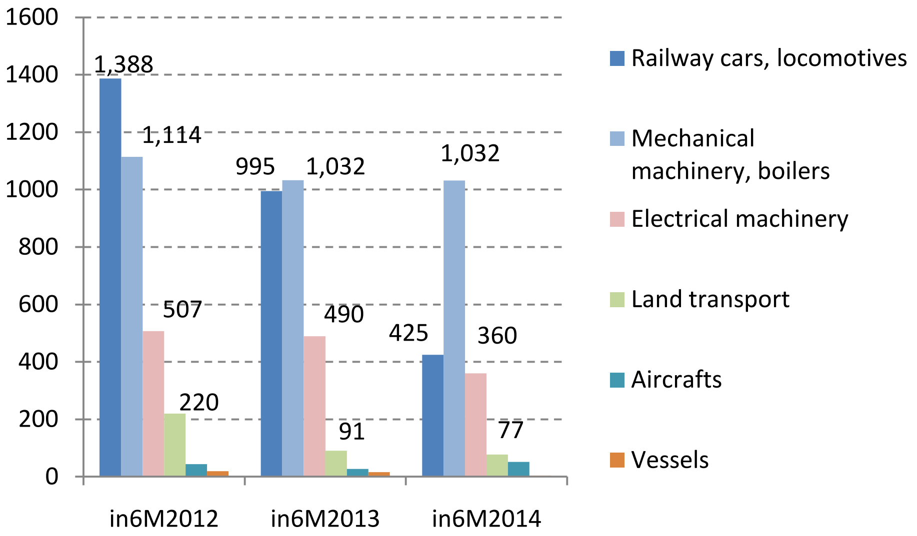
Figure 4. The share of exports to the RF of total exports of mechanical engineering products from Ukraine in 2013, billion USD and %.



Source: State Statistics Service of Ukraine

At the enterprise level, dependence on the Russian market can be even more significant. In the mechanical engineering industry there still remain some powerful enterprises, whose production is oriented mainly at the market of the RF / CIS, with little or no alternative markets (e.g. railway car building). In addition, there is an evident downward trend in orders to mechanical engineering enterprises, where the RF is able to produce their own counterparts. However, the RF also has a critical dependence on Ukraine on a number of MIC items.

Figure 5. The dynamics of exports of mechanical engineering products from Ukraine to the RF in 6 months in 2012-2014, billion USD



Source: State Statistics Service of Ukraine

Among the major manufacturers of mechanical engineering products of Ukraine which are oriented at the RF, the following can be singled out:

- enterprises - manufacturers of locomotives and railway cars and tanks,
- manufacturers of equipment for the oil and gas industry and power,
- manufacturers of aircraft engines,
- the missile and space industry,
- manufacturers of engines for military ships.

Enterprises manufacturers of locomotives and railway cars and tanks, include: “Avtozahalmash”, “Kriukov Car Building Works”, “Luganskteplovoz”, “Stakhanov Railway Car Building Works”, “Dniprovagonmash”. The bulk of exports of all these enterprises goes to the Russian Federation (in some cases up to 80%). Meanwhile, in recent years there were active efforts of the RF to reduce imports from Ukraine. In 2013, the Russian Federation made a decision to suspend certificates on the supply of railway cars from “Avtozahalmash”, “Kriukov Car Building Works”, “Dniprovagonmash.” In addition, in 2013 almost all manufacturers of railway cars and locomotives began to experience problems with exports to the RF, which greatly affected the export earnings of these companies. At present, “Luganskteplovoz” has suspended work due to the destruction of part of the equipment as a result of shelling[4]. It was reported earlier that "Luganskteplovoz" is ceasing production in Ukraine, in order to launch it on Bryansk Engineering Plant[5].

Among the main mechanical engineering enterprises of Ukraine, which manufacture products for the Russian **oil and gas sector and the electricity sector, are**: “Sumy Frunze Machine-Building Science and Production Association”, “Turboatom” and “Zaporozhtransformator”.

In 2013, “Sumy Frunze Machine-Building Science and Production Association”,which produces compressor units and compressor station components for the oil and gas industry and energy,

[4] http://news.eizvestia.com/news_economy/full/555-luganskteplovoz-ostanovil-proizvodstvo-iz-za-razrusheniya-podstancii

[5] http://bryanskienovosti.ru/News.php?news=479699

experienced a significant drop in export earnings, which fell by more than double. Currently, the enterprise is preparing for bankruptcy. Furthermore, according to the statements of one of the members of the enterprise's board of directors, they are evaluating the prospect of transporting the enterprise's equipment to the Russian Federation[6].

In 2013, “Turboatom” also experienced almost a double reduction in export earnings due to a decline in shipments to the RF. At that, “Turboatom” is one of the "Rosatom" subcontractors, which uses Ukrainian turbines in the construction of electric power stations in the RF and abroad. The only competitor of “Turboatom” in the RF is the concern "Power Machines", which received the order that the Ukrainian enterprise was counting on.

“Zaporozhtransformator” also experienced a significant decrease in export revenues from the RF. The federal network company, which is the operator of RF's energy networks reduced its investment program for 2014-2019 by 43% (from 620 billion rubles to 354 billion rubles), which was one of the causes for reducing orders to “Zaporozhtransformator”.

The MIC is one of the few areas, where the losses of the RF from the break in cooperation may exceed Ukrainian ones. But an even bigger problem for the Russian Federation is the possible disruption of plans on army rearmament due to lack of supplies, as well as the failure of a number of foreign military orders. About a third of the four hundred companies of the Russian defense industry have cooperative ties with Ukraine[7]. There are several segments of the defence indusrty (MIC) in which the RF has a practically critical dependence on Ukraine:

Production of aircraft engines is carried out by the “Motor Sich” enterprise. Practically all helicopters in the RF use “Motor Sich” engines, including: Mi-8, Mi-171, Mi-35, Mi-28, Ka-50, Ka-52 and others. In recent years, the RF tried to solve the problem by creating analogues on its territory, but, apparently,[8] for now the RF relies on Ukrainian production capacities in this sphere. In addition, “Motor Sich” is a manufacturer of engines for a variety of aircrafts which operate in the RF.

The missile and space industry: Ukraine manufactures elements of control systems for carrier-rockets “Proton”, “Soyuz” and “Kosmos”. Moreover, Russian launch sites still use equipment manufactured by the Kiev-based “Arsenal” in the process of launching rockets. The design bureau “Pivdenne” and the enterprise “Pivdenmash” provide service of intercontinental ballistic missiles and are on Russian combat alert duty. “Pivdenne” and “Pivdenmash” produce elements for a number of operational missiles, that are on Russian combat alert duty.

Production of engines for military ships. Mykolayiv-based “Zorya-Mashproekt” manufactures gas turbine engines for military ships. Numerous Navy ships of the RF are equipped with engines manufactured by “Zorya-Mashproekt”, including frigates and destroyers.

In addition, Ukraine produces various items of military equipment for the RF: Kyiv-based “Arsenal” is the developer of the aiming system of the rocket complex "Topol-M"; Kharkiv-based “Hartron” is the developer of the missile management system of the missile complex UR-100N, Kyiv-based “Antonov” is the developer of various components of the aircrafts used in the Russian Federation; Kyiv-based concern “Artem” produces medium-range “air-to-air” missiles for MiG-29, Su-33, Su-34, Su-35 aircrafts. This is, by far, not a complete list of products from the MIC sphere, that Ukraine manufactures for the RF. Some productions are the only in CIS (such as “Motor Sich” - the production of blades and discs for jet turbines and turbojet engines for aircrafts and helicopters, “Youth” - manufactures specialized products for the missile and aerospace industries, etc.).

Absence of Russian orders for a number of Ukrainian MIC enterprises and mechanical engineering enterprises can mean their complete closure (see Table 2). In addition to economic and socio-economic aspects, the ceasing of production with high added value, which is characterisitc of the

[6]http://vlasti.net/news/198564

[7]http://inosmi.ru/russia/20140424/219799102.html

[8]http://vpk.name/news/94438_oleg_panteleev_k_2015_godu_rossiya_budet_vyipuskat_dvigateli_dlya_mi8_ne_huzhe_ukrainyi.html

Ukrainian MIC, will have other consequences, in particular, associated with the loss of the possibility of reviving the production of high-tech products and, therefore, worsening the economic structure and its prospects of recovery.

Table 2. Approximate total volume of exports and the share of exports to the RF in 2013, of some of the biggest mechanical engineering enterprises and MIC of Ukraine

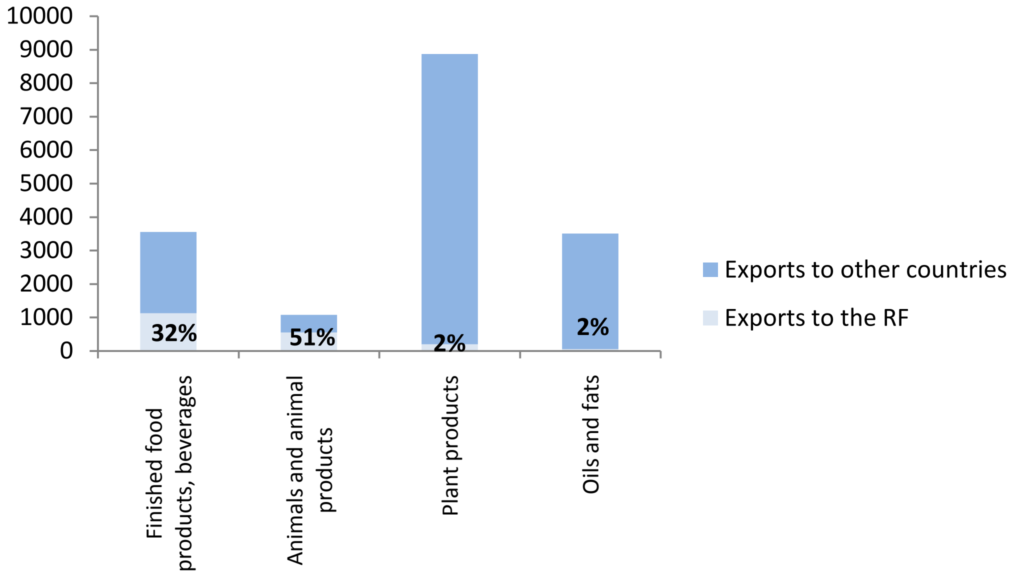
Company name	Approximate total volume of export of goods, billion UAH	Estimated share of the RF in exports
Motor Sich	6-7	up to 60%
Avtozahalmash	5-6	up to 60%
Kriukov Car Building Works	3-4	up to 60%
Luganskteplovoz	3-4	up to 80%
Zorya-Mashproekt	2-3	up to 40%
Zaporozhtransformator	2-3	up to 50%
Sumy Frunze Machine Building Plant	1-2	up to 50%
Novokramatorsk Mashinostroitelny Zavod	1-2	up to 50%
Antonov	1-2	up to 30%
Stakhanov Railway Car Building Works	0,5-1	up to 50%
Kromberg & Schubert Ukraine	0,5-1	0
Turboatom	0,5-1	up to 60%

Source: corporate sites, personal estimates

3.2. Agriculture and the food industry

Agricultural products play an important role in trade with Russia (they amount to 13% of Ukrainian exports to the Russian Federation). Russia's share in total exports of agricultural and food products (commodity groups 1-24 UCC FEA) makes 11.4% (2013), and the role of the Russian market is more significant in the export of food processing products — 21%. The main items of export include: dairy products (especially cheese), cocoa products, alcohol and soft drinks, processed vegetables, meat and by-products. Since 2013, the Russian Federation has increased economic pressure on the agroindustrial business sector. In particular, in 2013 import from Ukraine was limited of confectionery products (manufactured by “Rochen”), in 2014 new restrictions were introduced on imports to the Russian Federation of Ukrainian vodka and beer, dairy products, beef, pork, also vegetables, fruits and canned fish and some other goods. On September 5, 2014 Rospotrebnadzor (Federal Service for Supervision of Consumer Rights Protection and Human Welfare)completely banned the import of all confectionery products of Ukrainian production to the Russian Federation with an official justification - “violation of legislation on consumers' right protection regarding labelling.” Thus, the actions of the Russain Federation undermine the already weak indicators of industrial production and the economy of Ukraine. However, in general the AIC sector has small dependence on the Russian Federation, as Ukraine exports mainly food products, alcohol beverages, etc. to Russia, while the main export products of Ukraine in the agroindustrial sector are plant products, mainly cereals (wheat, corn) and oilseeds, as well as oils (primarily sunflower). Exports to Russia of these items is limited, particularly of plant products - only 1% of total exports, fats and oils - about 1.6% of total exports in this group (see Figure 6).

Figure 6. The share of exports to the Russian Federation in total exports of agricultural and food products from Ukraine in 2013, billion USD and %.

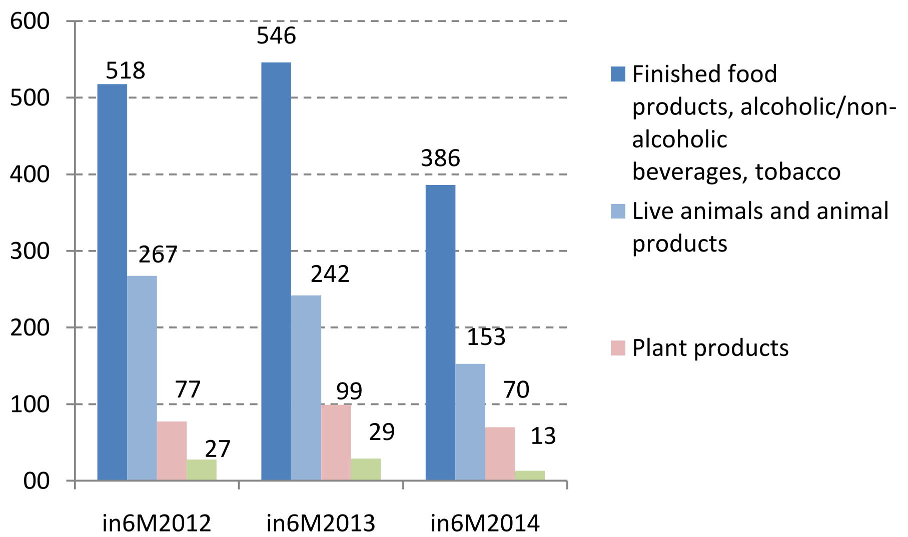


Source: State Statistics Service of Ukraine

At the same time, the Russian Federation has a very significant impact on export performance indicators in the food and livestock industry (meat and dairy products), particularly such product groups as “Live animals and animal products” and “Finished food products, alcoholic and non-alcoholic beverages, tobacco and tobacco products.”

In terms of individual items: the share of the RF in the export of dairy products reaches 55%, products from cocoa - 60%, alcoholic and non-alcoholic beverages - 58%, products of processed vegetables - 43% meat and by-products - 46% (2013). Therefore, in order to realize economic pressure, the efforts of the RF have been focused on these two groups in recent years (see Figure 7). As a result of these actions, in the first half of 2014 exports of meat and meat products to the RF decreased by 65.6% y/y, cocoa products - by 54.2% y/y, alcohol - 30, 4% y/y, dairy products - by 28.3% y/y.

Figure 7. The dynamics of exports of agricultural and food products from Ukraine to the RF in 6 months in 2012-2014, billion USD



Source: State Statistics Service of Ukraine

Companies that have suffered in the last year from the actions of the RF include: “Rochen”, “Pyryatyn Cheese Plant”, “Gadyachsyr”, “Tehmolprom”, “Obolon”, “Sun Inbev Ukraine” and others.

Among the most powerful Ukrainian agricultural companies, against which the RF imposed restrictions was also the “Myronivska Poultry Farm”, which is part of the holding company “MHP”, but the actions of the Russian Federation were not critical for the company, as it has a very diversified portfolio of foreign orders. In addition, recently one of the major agro holdings “Mriya” allowed a technical default on its Eurobonds worth 400 million USD, but the reasons for this situation are primarily linked with inadequate quality of control of the company.

Despite the high share of the RF in the export of certain sub-sectors of the food industry, its dependence on the discriminatory behavior of Russia is not critical, since the industry is aimed primarily at the domestic market and exports only 15% of total output. However, it is important that from the entire range of agricultural products produced in Ukraine, the products which are exported to Russia have a high level of processing and added value. In case of loss of the Russian market, manufacturers will not be able to quickly reorient these products to other markets, such as the EU market, due to non-compliance with European quality standards and safety requirements. Therefore, reducing exports to the RF of finished food products, alcoholic / non-alcoholic beverages, tobacco products in the short term will have a negative impact not only on the manufacturing-enterprises, but also on sectors, that supply raw materials for the production of such goods, in particular: on the agricultural sector, including such capital-intensive areas as viticulture, hop-growing and livestock, as well as adjacent areas, related to the supply and maintenance of equipment for the food sector.

Table 3. Approximate total volume of exports and the share of exports to the RF in 2013 of some major producers of agricultural and food products in Ukraine

Company name	Approximate total volume of export of goods, billion UAH	Estimated share of the RF in exports
Kernel Trade	12-15	up to 5%
NIBULON	8-12	up to 5%
Cargill	8-10	up to 5%
Serna	5-7	up to 5%
MHP	4-6	up to 15%
KONTI	1-2	up to 50%
AVK	1-2	up to 60%
Delta Wilmar CIS	1-2	up to 70%
Kraft Foods Ukraine	1-2	up to 50%
Milkiland	0,5-1	up to 70%

Source: corporate site, personal estimates

3.3 The energy sector

Supply and consumption of natural gas. In 2013, about 50.4 billion cubic meters of natural gas was consumed in Ukraine (consumption in 2012 made up about 54.7 billion cubic meters of natural gas).[9] According to the data of “Naftogaz of Ukraine”, the company sold about 30.7 billion cubic meters of natural gas[10]. The remaining 20 billion cubic meters of gas were supplied to consumers without the direct involvement of “Naftogaz of Ukraine” (imports plus domestic production). The gas consumption structure, sold through “Naftogaz of Ukraine” is displayed in Table 4.

[9] According to data of the Ministry of Fuel and Energy of Ukraine

[10] http://kompek.rada.gov.ua/kompek/control/uk/publish/article?art_id=47910&cat_id=47909

Table 4. Consumption of natural gas, sold through "Naftogaz of Ukraine"

Category of consumers	bcm
Population	16,8
Communal heating enterprises	10,1
Consumers from the industrial and energy complex	3
Budget organizations	0,824
Religious buildings and organizations to ensure the burning of the Eternal Flame	0,026
Total	**30,75**

Source: according to the Committee of the Fuel and Energy Complex, Nuclear Policy and Nuclear Safety

Among the main 2013 consumers of natural gas, which had the ability to supply natural gas on their own for private needs, were: chemical enterprise, including producers of nitrogen fertilizers ("Odessa Port Plant", "Rivneazot", "Stirol", etc.), enterprises of the Ukrainian titanium industry ("Sumykhimprom", "Crimean Titan", etc.), energy sector enterprises ("Kyivenergo", "DTEK") and some other companies.

Natural gas consumption was provided **by domestic production amounting to about 43% and through imports by 57%. The share of the Russian Federation in gas imports amounted to 92.4% in 2013, and the total gas supply (domestic production plus imports) of Ukraine - about 53%** (see Table 5).

Table 5. Production and import of natural gas to Ukraine in 2013

	bcm	% of total production and import
Production of natural gas by state-owned companies	**18,6**	**38,1%**
including		
Chornomornaftogaz	1,6	
Ukrgasvydobuvannya	15,1	
Ukrnafta	1,9	
Production of natural gas by private companies	**2,3**	**4,7%**
including		
Naftohazvydobutok (DTEK)	0,5	
Esko-North	0,43	
Natural resources	0,29	
Kub-Gaz	0,28	
Poltava Petroleum Company	0,22	
Imports of gas in 2013	**27,9**	**57,2%**
The Russian Federation	25,8	53%
Europe	2,12	4%
including		
Austria	0,53	
Germany	0,89	
Poland	0,09	
Hungary	0,61	
Total production and imports	**48,8**	**100,0%**

Source: Minenergouglya, the State Statistics Service, ua-energy.

In recent years, the volume of natural gas imports from the Russian Federation has been decreasing, for example, in 2012 the country imported 32.8 bcm, while in 2013 - 25.8 bcm. Moreover, in 2013-2014 Ukraine has continued work to diversify gas imports from Europe through the 'reverse flow' pattern. However, the potential volume of gas imports under the 'reverse flow' scheme only partially provides for the needs of Ukraine in imported gas, even with the decline in industrial production and the scheduled for September 2014 increase of volumes of natural gas supply from Slovakia (supply of gas is expected through the pipeline Voyany-Uzhgorod, the capacity of which is about 10 billion cubic meters per year). To cover the needs of the heating season 2014-2015 Ukraine needs to purchase additional 7 billion cubic meters of natural gas [11], and given the technical limitations of the 'reverse flow', Ukraine will be forced to rely on supplies from the Eastern direction.

Overall, Ukraine has great potential to reduce the volume of gas imports from the Russian Federation through the 'reverse flow' from the EU states, increasing domestic production and increasing energy efficiency, however, Ukraine is unlikely to abandon the consumption of Russian gas in the medium term. Aggravation of the conflict with the Russian Federation requires Ukraine to *intensively reduce its gas consumption*, but usually this process takes *up to two years*. Ukraine has already entered the adaptation period, but the problem of the synchronization of its different components remains. Accordingly, the social and economic costs of a tighter (reduced in time) adaptation are associated with significant social and economic risks (even in the current fall-winter period). Given that currently there is no evidence of the possibility of returning to the "pre-war" supply schemes from Russia, the scope of damage from the interruption of gas supplies depends on:

1) the terms of resolving the crisis in the political and legal dimension with the recognition of consensus by all conflicting parties (the longer the issue is not resolved, the greater the losses will be);

2) the conditions and scope of implementing alternative compensation schemes of gas imports from the Russian Federation;

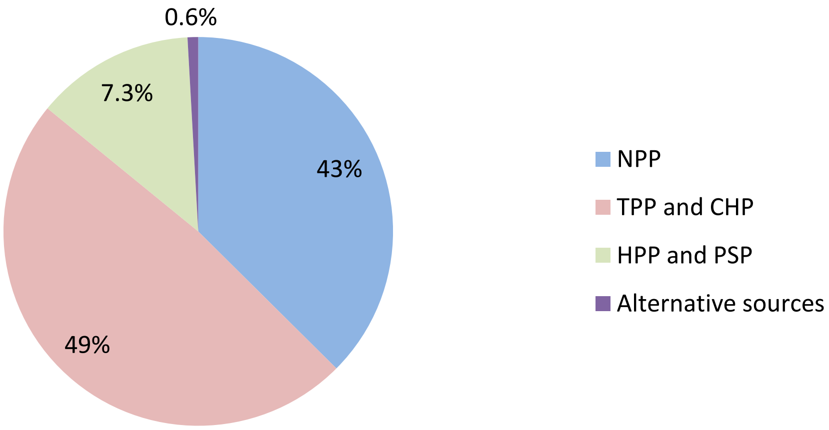
3) the progress in the implementation of programs on reducing gas consumption in the country. This means that for at least two years the population will be forced to go through challenges (domestic and financial), correspondingly Ukrainian business will suffer losses due to adaptations to the changes in the energy component of production activities;

4) volume of domestic gas production.

Production of electricity and heat

The basis for electricity production in Ukraine are nuclear and thermal power, in addition, a prominent place is given to hydropower, the least electricity in Ukraine is obtained from alternative sources (see Figure 8). A total of 193.6 billion kWh of electricity was produced in 2013. During the 1st half of 2014 electricity production in Ukraine decreased by approximately 2.5% y/y.

Figure 8. The structure of electricity production in Ukraine in 2013



Source: from the materials of SE “Energy Market”

[11] http://forbes.ua/ua/news/1372385-ukrayini-na-zimu-neobhidno-zakupiti-shche-7-mlrd-kubiv-gazu

Power generation and the generation of heat energy in Ukraine are also dependent on economic ties with the Russian Federation. About 50% of the electricity in Ukraine is produced by TPP and CHP, which operate on coal, gas or fuel oil. Also, natural gas is consumed by district heating companies. The sector (energy and district heating companies) consumed a total of approximately 11 billion cubic meters of natural gas per year, which represents 22% of total natural gas consumption in Ukraine (2013).

The suspension of gas supplies from the Russian Federation, as well as problems with the delivery of coal to TPP and CHP due to the destruction of the railway line in Donbas, where more than 80% of all coal capacities of the country are concentrated, created a shortage of energy, which leads to the imbalance between production and consumption. The Ministry of Energy and Coal Industry has warned regional power distribution companies of a possible temporary suspension of power supply and implementation of outage schedules, in order to save fuel.

In the medium term, Ukraine has the potential to reduce its dependence of electricity production by TPPs and CHPs from the Russian Federation by increasing energy efficiency and focusing efforts on diversifying energy supply and replacing it by other fuels.

Nuclear power. By the results of 2013, approximately 43% (83.4 billion kWh) of the electricity produced in the country was generated by nuclear power plants. At the same time, last year some power-generating units had to be put into reserve and for repairs due to dispatcher restrictions, the employment of installed capacity was at 68.7%[12] (one of the lowest indicators in recent years). This indicates substantial reserves of nuclear energy, which is of particular importance in the context of risk of suspension in the functioning of TPP in Eastern Ukraine, due to the aggravation of military conflict.

Nuclear generation is especially dependent on importing fuel from the Russian Federation. Ukraine has the raw material for the production of nuclear fuel, but Ukraine does not possess technologies to enrich it. Therefore, Russia is, in fact, a monopoly supplier of nuclear fuel to Ukrainian NPPs. We would like to note that, with the aim of diversifying nuclear fuel supplies two of the fifteen nuclear reactors in Ukraine have been performing adaptation tests of nuclear fuel from the American company Westinghouse for more than 8 years, but for the adaptation experiment to be complete at least several more years are required. The work to build its own capacity to enrich nuclear fuel was launched only on paper. **Therefore, the issue of dependence on Russian nuclear fuel will remain relevant at least in the medium term.**

In addition to supplying nuclear fuel, Ukraine counted on the Russian Federation regarding the issue of building its own capacity to produce nuclear fuel for nuclear power plants, as well as to obtain funding for the completion of units 3 and 4 of the Khmelnitsky nuclear power plant. Both projects are critically dependent on the participation of the Russian Federation.

3.4. The chemical industry

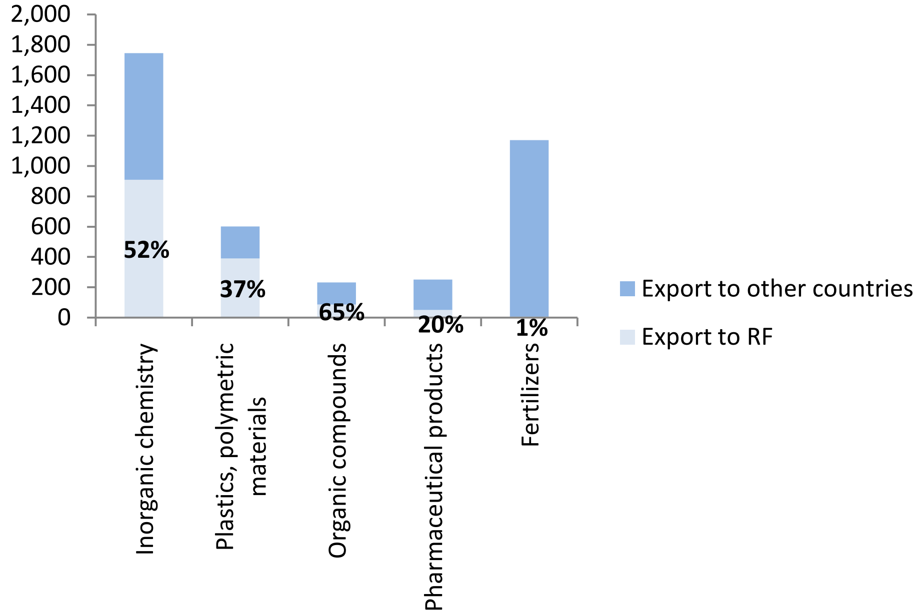
The chemical industry and its related branches (including production of polymer materials, plastics and rubber - items 28-40) make up about 11.7% of trade with Russia (2013). The sector is export-oriented, with the share of Russia in the export of the sector being 34.5%. Ukrainian enterprises depend on the Russian Federation in two main aspects:

- This is an important market for individual industries. Major export products to the Russian Federation include: products of inorganic chemistry (Russia's share - 52%), plastics, polymer materials (Russia's share - 65%), organic chemical compounds (Russia's share - 37%). At the same time, the share of Russia in the export of fertilizers is less than 1%.

- Natural gas is the primary raw material component for producers of nitrogen fertilizer, which is a determining factor in the cost of production.

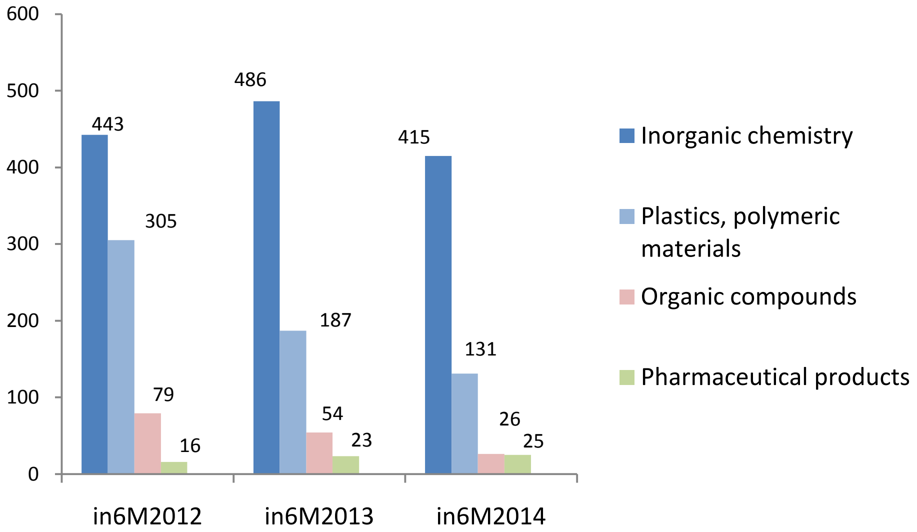
[12] http://www.energoatom.kiev.ua/ru/actvts/financial/resume_2013/

Figure 9. The share of exports to the RF in the total exports of chemicals and related industries from Ukraine in 2013, billion USD and %.



Source: State Statistics Service of Ukraine

Figure 10. The dynamics of exports of goods of the chemical industry and related industries from Ukraine to the RF in six months in 2012-2014, billion USD



Source: State Statistics Service of Ukraine

Among the producers of chemicals and chemical compounds in Ukraine, the most powerful industry is the production of nitrogen fertilizers, and nitrogen fertilizers is a major export product group of Ukraine (within 5 months of 2014, nitrogen fertilizer were exported at 370.7 million USD, which is approximately 40% less than in the same period last year). The production of nitrogen fertilizers is controlled mainly by the Group DF, which includes four of the six producers of nitrogen fertilizers in Ukraine, namely: “Rivneazot”, “Severodonetsk association Nitrogen”, “Stirol” and “Azot” (Cherkasy). In addition, “DniproAzot” (under the control of “Privat”) and “Odessa Port Plant” are also engaged in the production of nitrogen fertilizers.

Among the above mentioned six chemical companies five have a critical dependence on raw material supplies from the Russian Federation. Whereas, “DniproAzot” uses in its production natural gas of Ukrainian origin[13].

It is noteworthy that, until recently Group DF was able to purchase natural gas from the Russian “Gazprom” and sell it to its own enterprises-producers of nitrogen fertilizers; in addition, Group DF sold natural gas to “Odessa Port Plant”. Currently, Group DF does not receive gas from “Gazprom”, as well as “Naftogaz Ukraine”.

Enterprises-producer of nitrogen fertilizers Group DF do not experience acute shortage of raw materials, yet. The reasons for this are: 1) Group DF has gas reserves in underground storage facilities (4 billion cubic meters), which, according to the company's representatives, will last until the end of 2014 [14]; 2) two of the four enterprises producers of nitrogen fertilizers (“Severodonetsk Nitrogen” and “Stirol”) are located in the area of ATO and in fact, have not been functioning for several months and therefore, not using raw materials; 3) there is a surplus of nitrogen fertilizers on the global market, forcing manufacturers to cut prices and reduce the volume of fertilizer production.

As a result, the state of the industry is becoming worse. First of all, the export of nitrogen fertilizers in 5 months of 2014 compared to the same period in 2013, decreased from 786 thousand tons to 460 thousand tons, or nearly by 43% y/y. Secondly, Ukraine has increased imports of nitrogen fertilizer greatly, previously domestic demand for nitrogen fertilizers was covered mainly by domestic production[15]. In the medium term, it is expected that the slowdown in China's growth will promote further surplus in the production of nitrogen fertilizers in the world, and thus, limit the demand for fertilizers of Ukrainian origin. On the other hand, domestic demand for nitrogen fertilizers is directly linked to the activity of agricultural enterprises. In the autumn of 2014, nitrogen fertilizers will be produced only by two enterprises in Ukraine “Rivneazot” and “Azot” (Cherkasy).

The possible introduction of “an emergency state in the energy sector” by the government creates risks for producers of nitrogen fertilizers in relation to restrictions on access to gas, which is in the state underground storage facilities. Manufacturers are considering switching to the production of fertilizer from ammonia, which they can get from the “Tolyatti-Odessa” ammonia pipeline.

The field of nitrogen fertilizers production in Ukraine almost completely depends on natural gas supplies from Russia, or supplies of liquid ammonia. If the gas conflict between Ukraine and the RF continues, Ukraine may be left without its own production of nitrogen fertilizers (this statement does not apply only to “DniproAzot”). ***This generates the following risks:*** *1) tens of thousands of people across the country being made redundant, only some of whom will be able to find new jobs;2) a decline in the exports of chemical products while increasing their imports, which will worsen the balance of payments; 3) a complete replacement of fertilizers produced in Ukraine, by fertilizers manufactured abroad, which will reduce the likelihood of a re-start in nitrogen production in the case of a change in relations between Ukraine and the Russian Federation or the appearance of an “extra” gas resources in the country, which can be used in the production of nitrogen fertilizers; 4) the disappearance of the industry itself and a narrowing in the productability of the state's economy.*

The titanium industry

The titanium industry in Ukraine is oriented at foreign markets, while Russia's share in the Ukrainian export of Ukrainian producers of titanium does not exceed 20% (2013).

Group DF is in fact a major manufacturer and exporter in Ukraine's titanium industry. Currently, the Ukrainian titanium industry includes mining and enrichment of titanium ores, production of titanium dioxide (used in the paint and food industry, in the manufacturing of paper and plastic, etc.) and titanium sponge (used for the production of metal titanium). The share of Group DF

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[13] http://interfax.com.ua/news/general/210295.html

[14] http://www.theinsider.ua/business/53a8400833455/

[15] http://www.capital.ua/ru/publication/23741-eksport-azotnykh-udobreniy-sokratilsya-pochti-napolovinu-nuzhno-stimulirovat-vnutrenniy-rynok

in the global titanium dioxide market (including “Sumykhimprom”) is about 3%, of titanium sponge - 5%.

The structure of the titanium business of Group DF consists of the following areas:

- Extraction and enrichment, provided by “Irshansk Mining and Processing Plant”, “Volnogirsky Mining Metallurgical Plant”, “Mizhrichynskyy GOK”, “Val-Ilmenite”, but the bulk of the raw materials for the titanium business of Group DF is provided by “Irshansk MPP”, “Volnogirsky MMP”, which until recently, were in the lease of “Crimean Titan”[16].
- Production of titanium dioxide and titanium sponge, provided by “Crimean Titan” and “Sumykhimprom”, titanium sponge - “Zaporozhye Titanium & Magnesium Combine”, titanium alloys - “Tifast S.r.l” (Italy).

The Russian Federation has the world's only vertically integrated corporation “VSMPO-AVISMA”, which is engaged in production of titanium products, accounting for approximately 16% (2013) of world production of titanium sponge. The corporations does not have enough raw materials and this is where Russia's interest in the Ukrainian titanium industry lies. It is known that Ukrainian enterprises of Group DF annually sell “VSMPO-AVISMA” approximately 100 thousand ilmenite concentrate, in addition, Russia depends on imports of titanium dioxide, more than a third of which is of Ukrainian origin.

Given that Ukraine has a complete chain of manufacturing titanium and is oriented at foreign markets, a break in trade relations with the Russian Federation will have a moderately negative impact on the industry, with the titanium industry being one of the few industries in Ukraine that can stop supplies to the Russian Federation without experiencing critical losses (see Table 6).

Table 6. Approximate total volume of exports and the share of exports to RF in 2013 of some major producers of chemicals in Ukraine

Company name	Approximate total volume of export of goods, billion UAH	Estimated share of Russia in exports
Odessa Port Plant	8-9	0
Concern Stirol	7-8	0
Severodonetsk Association "Azov"	4-5	0
Azot (Cherkasy)	2-3	0
Rivneazot	1-2	0
Sumykhimprom	1-2	up to 20%
Crimean Soda Plant	1-2	up to 60%
DniproAzot	0,5-1	0

Source: corporate sites, personal estimates

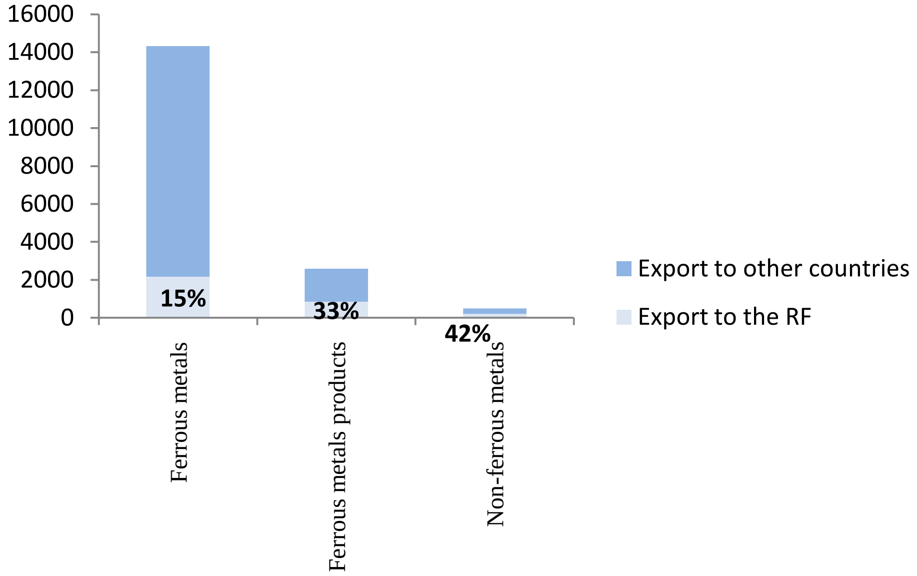
3.5. The iron and steel industry

Metallurgy — is an important sector for Ukrainian exports to the RF (22%). This is one of the most export-oriented sectors (more than 60% of output is sent to export). The share of Russia in the sector's export, is not more than 20%. The main items of exports to the RF — are ferrous metal

[16] In September 2014 the Cabinet of Ministers passed a resolution on the dissolution of the contract with “Crimean Titan”, included in the holding company Group DF, cancel leases on property complexes of state enterprises “Inshavskyy State Mining and Processing Plant” and “Vilnohirsk State Mining and Metallurgical Combine.”

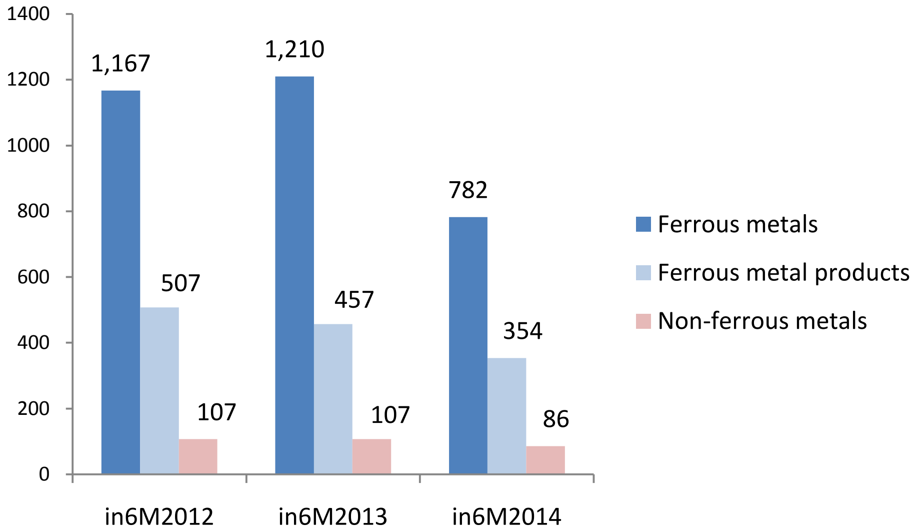
(Russia's share - 15% of the total export of goods) and products from ferrous metals (Russia's share - 33%).

Figure 11. The share of exports to the RF of the total exports of products of ferrous and non-ferrous metals from Ukraine in 2013, billion USD and %.



Source: State Statistics Service of Ukraine

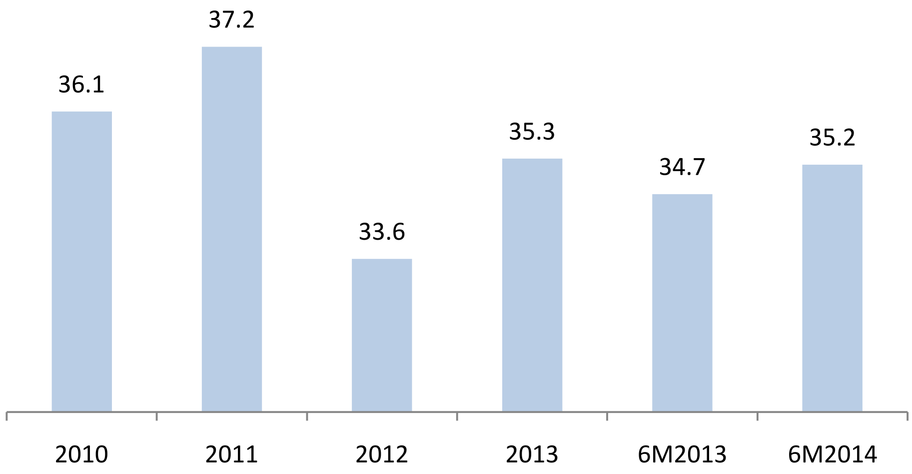
Figure 12. The dynamics of exports of products of ferrous and non-ferrous metals from Ukraine to the RF in six months in 2012-2014, billion USD



Source: State Statistics Service of Ukraine

The ferrous-metal industry of Ukraine is mainly concentrated in the central (Krivbass) and Eastern (Donbas) regions, most of the steelmaking capacity is concentrated in the Donetsk region. At the same time, statistics show that military actions in the area of ATO virtually have no effect on average daily performance indicators of cast-iron production in the Donetsk region (see Figure 13). However, according to the National Security Council as of August 27, 2014 not all enterprises of the coke and chemical industries were working in the Luhansk and Donetsk regions. This creates risks for the ferrous-metal industry (Coke Plant produces an intermediate product in the production chain of the steel industry).

Figure 13. Average daily production of cast-iron, ths. tons in the Donetsk region in 2010-2014.



Source: Donetsk Region State Administration

In addition, **manufacturers have limited direct dependence on exports of iron and steel products to the market of the RF** (table 6). The reason for this is that, on one hand, the Russian Federation has its own fairly developed iron and steel industry, the capacity of which is actually not used to the full extent, on the other hand, the RF economy has been aimed at import-substitution from Ukraine for several years now, especially in areas which offer opportunities to do so without significant investments.

Among the main risks of reducing trade between Ukraine and the RF in the iron and steel industry are:

- A refusal to export natural gas to Ukraine, which cannot be replaced in the short term by the sector's enterprises. Today, Ukraine's metallurgy consumes about 3 billion cubic meters of natural gas per year. Major manufacturers have tried to reduce dependence on Russian gas supplies. It is known that the “Metinvest” management has for several years been prudently engaged in the development of the direction of natural gas production in Ukraine, however, according to the corporation's plans in 2013 only 0.5 billion cubic meters of gas was to be extracted (on the “Naftohazvydobutok” facility), the corporation also attempted to independently import gas from Europe (it imported 0.5 billion cubic meters of gas in 2013). Natural gas consumption in the sector is reducing through the introduction of energy efficient technologies, including the coal dust injection technology to replace natural gas in the production of steel. In addition, Ukraine has a number of enterprises involved in steel production with the use of e / e, but the lion's share of steel in Ukraine is produced with the use of natural gas.

- Further reduction of import volumes from Ukraine to the RF of mechanical engineering products, which are a big consumer of ferrous-metal products.

- Further rejection of imports of ferrous-metal products from Ukraine. Since the iron and steel industry is still one of the major export sectors of Ukraine, deterioration of performance indicators in the steel industry will have a number of negative consequences of macroeconomic nature.

According to the World Steel Association, in 5 months of 2014 steel production in Ukraine compared to the same period in 2013, decreased by 7.1%, to 12.9 million tons. The main producers of steel in Ukraine are the holdings: “Metinvest”, “ArcelorMittal Kryvyi Rih”, “Industrial Union of Donbas”.

“Metinvest” Holding

“Metinvest” is the largest company in revenue in Ukraine according to the Forbes magazine. The enterprises of “Metinvest” in 2013 produced about 35% of all steel in Ukraine (about 11.3

thousand tons)[17]. The production of “Metinvest” steel has been declining in recent years: in 2013 the physical volume of steel production fell by 1%, in 2012 by 14% due to the slowdown in external demand. Meanwhile, the physical production of iron ore concentrate, by contrast, demonstrated a tendency to increase in recent years: in 2013 by 2%, in 2012 by 1.5%. This particular “Metinvest” business line was the stabilizer of business in recent years.

In 2014 the “Metinvest” company will apparently suffer substantial losses in the iron and steel line of business due to the fact that the bulk of the assets of smelting metals are located in the area of ATO, the iron ore business will be less affected, as all three ore mining and processing enterprises controlled by “Metinvest” are located in the Dnipropetrovsk area.

The decline in the holding's production and financial performance is testified by the information that appeared at the beginning of August 2014 in the mass media about the suspension of “Metinvest” taking new orders on manufacturing steel products due to the difficult situation in the country. In addition, the company's CEO announced the holding of negotiations on the postponement until 2018 the redemption of Eurobonds, the maturing date of which is in May 2015.[18] Despite the claims that this is not a restructuring but a postponement of redemption, quotation of Eurobond data on the Frankfurt Stock Exchange fell to a historic low, and the yield reached a pre-default 45% - as of 11 August 2014[19].

Among the assets of “Metinvest”, which were negatively affected in the zone of ATO, are: the “Avdiivka Coke Plant”, which was under separatist fire, leaving it completely disconnected from power; the “Krasnodonvugillya” mine, the premises of which was hit by a shell, causing masses of miners to retire; the “Komsomolets Donbas” mine, which was also disconnected from power and faced the risk of flooding; the “Khartsyzsk Pipe Plant”, which was captured by militants with the purpose of repairing equipment on its capacity, and so on. In addition, there have been numerous cases of destruction of infrastructure, including railroads, which “Metinvest” uses in their logistic chains.

“ArcelorMittal Kryvyi Rih”

One of the largest steel mills in Ukraine and in Europe. Its strength is that the company practically does not depend on the supply of iron ore, as it has large deposits of iron ore on its premises (about 1 billion tons).

In 2013, “ArcelorMittal Kryvyi Rih” produced 6.4 million tons of steel, which approximately corresponded to the previous year results. In 6 months of 2014, the company produced 3.037 million tons of steel, which is 2.7% less compared to the same period in 2013.

By the results of 2013, the company exported products at 23.3 billion UAH. Approximately 15% of these exports were directed to Russia.

“Industrial Union of Donbas”

The corporation incorporates one of the largest in Ukraine metallurgical plants and a coke plant, these assets are in Alchevsk (Luhansk region), located in the area of ATO. "IUD" also owns the “Dniprovsk Metallurgical Plant Dzerzhinskogo” and has several overseas major production assets. The “Dniprovsk Metallurgical Plant Dzerginskogo” and the “Alchevsk Metallurgical Complex” have started to successfully apply the coal dust injection technology to replace natural gas in the production of steel. The Achilles' heel of the “IUD” steel business is the lack of its own iron ore deposits. In July 2014 it was reported that, the “IUD” management was getting ready for a possible emergency suspension of production in Alchevsk city.

By the results of 2013 “Alchevsk Metallurgical Complex” exported products at a total of 12 billion UAH. About 13.6% from all exports to foreign markets was exported to the Russian Federation.

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[17] Annual report «Metinvest» from 2013

[18]http://interfax.com.ua/news/economic/217142.html

[19]http://www.boerse-frankfurt.de/en/bonds/metinvest+10+15+regs+XS0511379066

“Interpipe”

“Interpipe” includes three of the eight largest pipe plants in Ukraine: “Interpipe NPP”, “Interpipe NIKO TUBE”, “Interpipe Novomoskovsk Pipe Plant”. In 2013 in Ukraine production of pipes decreased by 17.3%. In 2013, exports of pipes by “Interpipe” enterprises decreased by about 10-20%, while the share of exports to Russia accounted for about 40% of “Interpipe NPP” and “Interpipe NIKO TUBE” and about 15% of “Interpipe Novomoskovsk Pipe Plant.”

Ferroalloys production

Ukraine is one of the largest producers of ferroalloys in the world. Within 7 months of 2014 the country exported 560.2 million tons (worth 697.3 million USD) of ferroalloys, which is 45.3% more compared to the same period in 2013. However, in 2013 the country exported 697.1 million tons (worth 906.1 million USD) of ferroalloys. In the export of ferroalloys of Ukraine almost 19% belongs to Russia.

In 2013, production of ferroalloys in Ukraine was carried out by: “Zaporozhye Ferroalloy Plant”, “Nikopol Ferroalloy Plant”, “Stakhanov Ferroalloy Plant”, all under the control of the “Privat” group. All three plants reduced the export of primary products to the RF in 2013. By last year results the share of exports to Russia of total exports made up about 20-45%, depending on the manufacturer, with “Zaporizhye Ferroalloy Plant” most depending on Russian supplies. At the beginning of August 2014, it was reported that the “Stakhanov Ferroalloy Plant” was captured by armed men, which is likely to affect its performance indicators.

Table 7. Approximate total volume of exports and the share of exports to Russia in 2013 of some major steel, pipes and ferroalloys producers of Ukraine

Company name	Approximate total volume of export of goods, billion UAH	Estimated share of Russia in exports
ArcelorMittal Kryvyi Rih	22-24	up to 15%
Illich Iron & Steel Works	15-16	up to 15%
Azovstal	15-16	up to 15%
Alchevsk metallurgical complex	11-12	up to15%
Zaporizhie metallurgical complex	9-10	up to 15%
Enakivskiy metallurgical plant	8-9	up to 15%
Donetskstal	4-5	up to 5%
Khartsyzsk Pipe Plant	3-5	up to 5%
Interpipe NPP	2-3	up to 40%
Interpipe NIKO TUBE	1-2	up to 40%
Interpipe Novomoskovsk Pipe-Production Plant	1-2	up to 15%
Nikopol Ferroalloy Plant	1-2	up to 40%
Stakhanov Ferroalloy Plant	0,5-1	up to 20%
Zaporozhye Ferroalloy Plant	0,5-1	up to 50%

Source: corporate sites, personal estimates

3.6 The banking sector

In Ukraine, there are nine banking institutions of Russian origin, four of them: “Prominvestbank”, “Russian Sberbank”, “Alfa-Bank” and “Bank VTB” - are among the Top 15 Ukrainian banking institutions by volume of assets. The other five: “Russian Standard Bank”, “VS Bank”, “Energobank”, “Bank Petrocommerce-Ukraine” and “Trust Bank” are small and captive banks. As of 07.01.14, the share of loans issued by Russian banks in the total loan portfolio of the banking system of Ukraine reaches 15%. The most significant impact on the country's economy, of course, is caused by the four major banks.

Currently, the banking system of Ukraine is virtually cut off from credit resources in foreign currency - Ukrainian banks can not enter foreign markets and are forced to rely solely on the National Bank of Ukraine and their shareholders, while European banks deal with fiscal consolidation in key countries of conducting their business. Russian banks have broader opportunities (bank shareholders from Russia are generally more capitalized, than shareholders from Ukraine) to raise capital, but also use the money received from the NBU (such as, of 06.01.14 “Prominvestbank” had 1.45 billion UAH on its balance sheet, received from NBU, “Alfa-bank” - 297 million UAH). However, in July 2014 the “Sberbank of Russia” announced its intention to allocate a subordinated loan in the amount of 112 million USD to its subsidiary structure in Ukraine.

Refusal of the holding companies in Russia to support their subsidiaries in Ukraine poses the following risks: 1) increased pressure on the National Bank and the Deposit Guarantee Fund, due to the need to service deposit portfolios Ukrainian subsidiaries of Russian banks;2) reduction of exchange earnings to Ukraine, designed to support and develop the banking business in Ukraine;3) reduced opportunities for Ukraine's banking system to grant loans to both private entities and the state; 4) deterioration of the overall liquidity of the interbank credit and currency markets.

Conclusions:

1. The overall significance of the RF economy for the economy of Ukraine is important, but not critical. For Ukraine the most acute break, is the break of ties along the energy lines, particularly, natural gas supplies to Ukraine and along the lines of engineering, as since Soviet times Ukrainian products of this industry have been built into the production chains of Russia and produced by the same standards.

2. Mechanical engineering, pipe production and the food industry, production of nitrogen fertilizers (through the gas component) are among the most affected by the economic pressure from the RF, as well as the armed conflict. Cooperation with the RF has less impact on the production of metals and chemicals (without nitrogen fertilizer). The agricultural industry almost does not feel the impact of these factors (except for companies and farmers who are unable to properly harvest in the ATO area).

3. The worsening of the gas conflict between Ukraine and the EU is becoming a catalyst of change in Ukraine's energy sector and in industrial production in general (through the energy consumption factor), in particular, for gas imports, consumption, domestic production, and so on.

4. The RF has not yet deployed all instruments of pressure on Ukraine, in particular, there is a risk of a further aggravation of trade wars, the abolition of free trade, pressure along the lines of supplying energy resources, including nuclear fuel for NPPs, etc.

5. Further deterioration in economic cooperation with the RF will accelerate changes in the geographical and commodity pattern of Ukraine's foreign trade, in particular, the share of Russia in Ukrainian exports will continue to decline, and the share of third countries will increase. Meanwhile, in the short term, the share of high and medium added value products in the exports of Ukraine may decrease (due to a decrease in exports of machinery and food products to the RF).It is obvious that in the short term, the role of agricultural production will increase and public policy should be built on this.

6. The value of the Russian market for Ukrainian manufacturers is gradually decreasing, in turn reducing the overall economic and political dependence on the RF.

7. Under the circumstances of severe cash deficit the state needs to focus on several priorities, including running an audit of the engineering industry and identifying opportunities to embed into the production chains of EU countries, Asia, Latin America and others.

8. Ukraine's power engineering (primarily the gas and nuclear spheres) in the mid term will depend, to some extent, on cooperation with the RF and reducing this dependence should be the main priority of the state policy in the economic sphere.

9. Another trennd which is already beginning to emerge, is the population's shift to cheaper products of mass consumption, which in the face of considerable devaluation (one of the factors was the falling Ukrainian export), are goods produced in Ukraine with low import component in the cost. It also necessitates the consideration of the implementation of public policy.

10. In the field of trade relations, it is important to restore the functioning of international agreements, including the free trade agreement with CIS countries. Ukraine's priority remains the construction of a free trade area with the EU and the preservation of access to the markets of the CIS countries, the search for new markets. To preserve the export potential in sectors with high added value content, Ukraine should focus on accelerating the harmonization of technical regulations, quality control and food safety systems to European standards.

4. Map of Risks

Description of the risk	Political dimension (government)	Economic dimension (business)	Social dimension (population)
A significant change in the trade regime, worsening of the conditions for access to the Russian market (prohibitions, selective restrictions, unpredictability). Sectoral and local trade wars	A political crisis, budget crisis. Instability in budget revenues	Displacement of Ukrainian companies from the Russian market, bankruptcy, decline in production, the search for new markets, conversion, opportunities for cooperation with western companies	Unemployment and a reduction in household incomes, social instability
Distribution of destabilization through Russian owners of Ukrainian assets. Using enterprises as a tool for damaging the Ukrainian economy in the short and medium term	Growth of challenges in terms of sectoral threats, particularly in the finance sphere, energy, oil industry, non-ferrous and ferrous metallurgy, engineering, commerce, communications, the transport complex	The prospect of loosing individual segments (branches) of industry. A crisis of the corporate sector, violations of contractual obligations, technical and inspired bankruptcies, violation / break of production chains. A banking crisis	Material and financial losses, readiness for mass protests
Restriction / termination of industrial cooperation in technological spheres (defense, aircraft-shipbuilding, infrastructure industries etc.) "Relocation" of industrial complexes to the territory of Russia	Loss of control over the economy by sector. Budget disintegration, increase in social spendings. An increase in the risks of breaking agreements on industrial cooperation. A decrease / sharp drop in the defence capacity	Import restrictions (growing prices) on raw materials, products and components needed for the industry of Ukraine. Of strategic priorities are enterprises related to the extraction of unique natural resources, including deposits of nonferrous metals and rare earth elements, enterprises of the nuclear, space industry, aircraft and shipbuilding.	Unemployment, a decline in living standards
Destabilization of the state's transit routes	Budget losses, increasing inflation	Increased transaction costs, loss of price competitiveness	A decline in employment and self-employment
Application of aggressive competitive patterns (bribery of partners, slander, dumping) to displace Ukrainian companies form the market of third countries	Budget losses. The loss of political support from the business community	Loss of contracts in third country markets, falling exports, a decline in production output, bankruptcy	The loss of jobs, reduced incomes
Diversions on enterprises, main-line pipelines, etc.	Loss of control over the economic system, the risk of man-made disasters	Suspension of production, the risk of accidents and man-made disasters	The growth of social tension, increase in migratory flows
Serious aggravation of energy relations with Russia, the risk of massive "energy blackmail" being applied at the international level	The situation of uncertainty will remain in the medium term. The lack of investment resources for the implementation of alternative gas supplies. Political crisis. Worsening of relations with Western partners	Rising prices on resources, the loss of competitiveness, bankruptcy. Growing problems in the housing sector	A decline in living standards, rising unemployment
Absence of gas supplies from Russia in the medium term	Reduction in revenue to the State budget. The threat of loss of control over the energy	Gas deficiency on the market, the decline in output. Bankruptcy of NJSC "Naftogaz".	A sharp decline in living conditions, a rise in the cost of living. The growing of threats to

	balance. Corruption growth	A change in the functioning mode of the gas transportation system The loss of price competitiveness	the life of people as a result of accidents in the sector of housing and mass application of autonomous life support systems
The risk of reduction / complete cessation of oil transportation through the territory of Ukraine	Deficiency of energy resources, a rise in prices. Corruption growth. Abuse with the use of antitrust laws	The monopolization of markets, production cutbacks and the rising cost of goods	Deterioration of the quality of life and a rise in the cost of living
Increased prices / complete cessation of supplying nuclear fuel to Ukrainian NPPs	A shutdown of the project for the construction of a plant to produce nuclear fuel in Ukraine. Imbalance of Ukrainian power supply system The risk of man-made disasters	Increased prices on nuclear fuel / fuel deficiency for Ukrainian NPP Higher prices on electricity Bankruptcy / decline in production in energy-intensive industries	Deterioration of the quality of life and a rise in the cost of living

5. Writing team

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