***Korablin S.**, Doctor of Economics,*
Deputy Director
Institute for Economics and Forecasting
National Academy of Sciences of Ukraine

THE "LAGGING GROWTH" MODEL: ECONOMIC FACTORS AND CONSEQUENCES FOR UKRAINE

It is concluded that Ukraine's economy is dominated by the commodity model, within which it specializes in the production of low value added goods. Because of this Ukraine's economy is highly dependent on the fluctuations of the world prices for this country's export commodities.
The author proves that, over the last 20 years, all the three economic, financial and FX crises observed in Ukraine (1998-1999, 2008-2009, and 2014-2015) took place against the background of the decline of the world prices for Ukrainian export items. And, vice versa, the revivals of the global conjuncture for raw materials were associated in Ukraine with economic growth, balanced budget and strong foreign exchange market position.
In this article, the world commodity market conjuncture is analyzed through the prices for steel, wheat, sunflower oil and nitrogen fertilizers exported by Ukraine.
It is stated that the causes of economic, financial and FX crises can vary significantly depending on the type of economy: commodity or industrial one, small or big one, and having or not a free access to international financial markets. It is concluded that, in small commodity based economies, financial, monetary and FX misbalances are not always the initial point of a crisis. In a number of cases they only play a secondary role in the crisis origination.
It is stressed that the phases of economic cycle in Ukraine as well as the stance of its finance, budget and exchange rate of the Hryvnia are to a great extent determined by the commodity nature of national production. Meanwhile the high volatility of the latter could be explained by a long-term technological decline.
Ukraine is featuring a lagging growth model according to which national GDP rates are lower than those in the most countries with emerging markets. As a result, Ukraine has been helplessly slipping down towards the commodity based periphery of the global economy although, in formal terms, its GDP dynamics may remain positive.
It is underscored that a systematic eradication of the above mentioned drawbacks would involve a technological revival, and the development of the manufacturing sector with its shifting to the production of high value added goods.

Key words: Ukraine, commodity based economy, cycle, world conjuncture, commodity prices, GDP, exchange rate, general government budget.

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In August 2016, Ukraine celebrates its 25th independence day. The quarter century that has passed appeared to be very difficult both in terms of changes that occurred in our society, state institutions and the national economy, and their actual results.

On the one hand, we must recognize the systemic changes through which Ukraine has attained the domination of private property, national labor and capital markets and its own financial system and currency, business development, recogni-

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tion of its market economy status by the international community, a considerable presence of Ukrainian business in foreign markets, the country's accession to and active work within the international financial institutions and their sincere attention to our country's future and support of our efforts to overcome the global impact of the Great Recession of 2008–2009.

At the same time, it should be noted that the level of our achievements definitely lags far behind both the expectations and the country's potential [1]. Moreover, some facts today not only confuse Ukrainian society, but actually split it. Crimean "referendum" of 2014 and subsequent occupation of the peninsula and part of Donbass were a result not only of our geopolitical and military failures, but also economic mistakes, which prevented us from gaining any sustainable social welfare benefits or material means of their sovereign protection.

In this context, we must recognize that the forerunner of the irreparable loss of thousands of lives in eastern Ukraine was the deeply antagonistic stratification of society, protracted decline of social standards and the relative fragility of the material wealth of Ukrainian families, foreign and even domestic guest-working of millions of our countrymen and massive spread of undisguised dreams of emigration to wealthier and more successful countries.

The phenomenon of disbelief, of course is a special challenge for economic thought. But even greater is its responsibilities for the formation of an ideology that would make it impossible to repeat the Maidan tragedy and would be worthy of the purity of Maidan's ideals as they were during the bloody weeks of January and February 2014.

The shocking statistics

During 1991-2014, Ukraine's real GDP fell by 35%[1]. According to the World Bank data [2], this is the worst result in the world during those 24 years. Of the 166 countries that had and revealed their complete statistics of GDP over this period, the value of that indicator declined only in five cases. In this list Ukraine is "ahead" of Moldova (-29%), Georgia (-15.4%), Zimbabwe (-2.3%) and the Central African Republic (-0.94%).

In other countries GDP increased. With minimal growth in Barbados (8.9%) and Tajikistan (10.6%) and the maximum growth in China (GDP grew 10 times) and Equatorial Guinea (61 times).

The thesis that all disasters of Ukraine are related to the loss of part of its territories, war and the destruction of the largest industrial region, is very dubious. Because the military incapability is a result of the economic and financial weaknesses, and not vice versa. In addition, if we analyze the period of 1991-2013, when the developments of the recent two years could not be dreamt about even in the worst nightmare, it appears that the above mentioned five global losers were the same countries. With the single difference that then Moldova stood "ahead" of Ukraine.

Finally it should be noted that the most dramatic decline in the national economy took place in the 1990s, that is, during the first nine years of its independence,

[1] Taking into account the results of 2015, the amount of the fall exceeded 41%.

Ukraine lost almost 60% of its GDP. *This collapse is twice (!) the size of the fall of American economy during the Great Depression. In fact, Ukrainian economy never recovered from that shock, either in terms of quantity or quality. So the current crisis, which began with the change of the political power in 2014, is no more than another slide down towards the bottom of the pit, in which this country wallowed a quarter century ago.*

The model of lagging growth

Certainly, the reasons are numerous. The "divorce" of the former Soviet republics alone cost Ukraine several industrial branches. The more so as the USSR economy during more than 70 years developed and existed as a single economic complex. That complex was in its own way unique, and in many cases lacked protective capacity or reserve markets.

Add to that the fact that Ukraine at that time lacked independent institutions of government, proper practice of tough domestic and foreign competition, experience of cooperation with yesterday's ideological opponents. Instead this country had a chaotic mixture of objectives and models of its future economic development and was implementing very confused measures on the "radical structural reform". Under such conditions, the fall of Ukrainian economy in the 1990s looks rather a natural drama than an unexpected tragedy.

However, our subsequent economic shocks cannot be explained by the peculiarities of the post-Soviet remission, historical traumas of the hyperinflation in 1993-1994, and the weakness of the exchange rate of the hryvnia or chronic problems of public finances. Because, during subsequent 15 years, Ukraine's economy showed not only crisis declines. Thus, in 2000-2007, the growth rate of its GDP accounted for an average of 7.5% and a sharp strengthening of the hryvnia did not happen only due to the active accumulation of forex reserves of the National Bank.

For the first time the national GDP grew in 2000 (by 5.9%). But its consequent dynamics was very changeable. Even in prosperous years, Ukraine's economy remained unstable and the growth rate of GDP fluctuated from 12.1% (2004) to 2.7% (2005).

Since the beginning of the Great Recession, it was again the weakest in the world: in 2009 Ukrainian economy topped the list of the world's losers, falling by 14.8%. This gloomy glory was shared by Lithuania (-14.814%) [2]. At that time the depth of the recession of Ukrainian GDP was seven times (!) higher than the world average (-2.1%). One can only wonder why a country with a labor force of 23.2 million people (Ukraine, 2009) was shaken by the global crisis with the same ease as the tiny Lithuania (1.56 million).

Since late 2008, national GDP declined during 18 out of 30 quarters. Against this background, permanent bankruptcy, exchange fever and depreciation of the hryvnia do not look any strange. *After all, those are elements of the model of lagging growth, which Ukraine has been actually following. The main feature of this model is a steady backlog from the more dynamic competitors. The very fact of growth in this model is a "non-consolation prize" for a country that is unable not* *only to compete with the world leaders, but even to keep pace with the "average performers". As a result, such a country is doomed to "dynamic fading", whose intensity over time only increases.*

A sad example of such a model can serve Ukraine, whose GDP after 1999 in formal terms has barely improved. *But the average rate of growth is so low that it can only show continual loss of our former competitive advantage.*

Even aside from the war period of 2014-2015, it appears that during 14 years – from 2000 to 2013 – the national GDP increased by 69.8%. That is, unfortunately, the worst result among all the republics of the former Soviet Union. In terms of minimal GDP increase, Ukraine is followed by Estonia (75.7%), while the maximum GDP increase has been shown by Tajikistan (GDP increased by 2.9 times), Turkmenistan (3.1 times) and Azerbaijan (4.8 times).

Meanwhile, according to the World Bank classification, Ukraine is also behind the group of developing countries – both those with low (106.8%) and average per capita income (125.4%).

With this dynamic, it is even difficult to imagine how marginal Ukraine's economy will be, by the time when it will eventually reach the 1990 level of GDP, and what prospects its more successful neighbors and former partners will leave for this country.

Unfortunately, this scenario is not fiction. Hard to believe, but in 1987 Ukraine's GDP was less than China's only 4.2 times. Although China's number of labor was greater than Ukraine's ... 25 times. And, at the beginning of last year, China's GDP was higher than Ukraine's almost 80 times. And after the devaluation of the hryvnia in January 2015, this gap is likely to have doubled.

Ukraine: a small commodity economy

In this sense, Ukrainian economy can be described as small, open, commodity exporting, and having speculative sovereign ratings, because:

- its share in global GDP is about 0.1%;
- share of exports (imports) to GDP has been consistently fluctuating around 50%;
- by the international scale, Ukraine's sovereign ratings have either critically speculative ("B-", S & P's), or even pre-default ones ("CCC", Fitch; "Caa3", Moody's); and their level has never been attractive for investments;
- in global markets, Ukraine with a certain success competes only in the segments of agricultural products, ferrous metals and most simple chemicals.

Clearly, the dynamics of this economy is significantly dependent on fluctuations in world prices for raw materials, which it produces and exports. Because such an economy has no determining influence on the prices for its export items, lacks domestic capacities to replace technologically intensive imports, and cannot rely on any serious investment or financial boosts from abroad.

Fig. 1 shows the dynamics of world prices for a number of key Ukrainian export commodities: steel, wheat, sunflower oil and urea (quarterly breakdown). The period is the lifetime of the hryvnia, that is the years of 1996-2015.

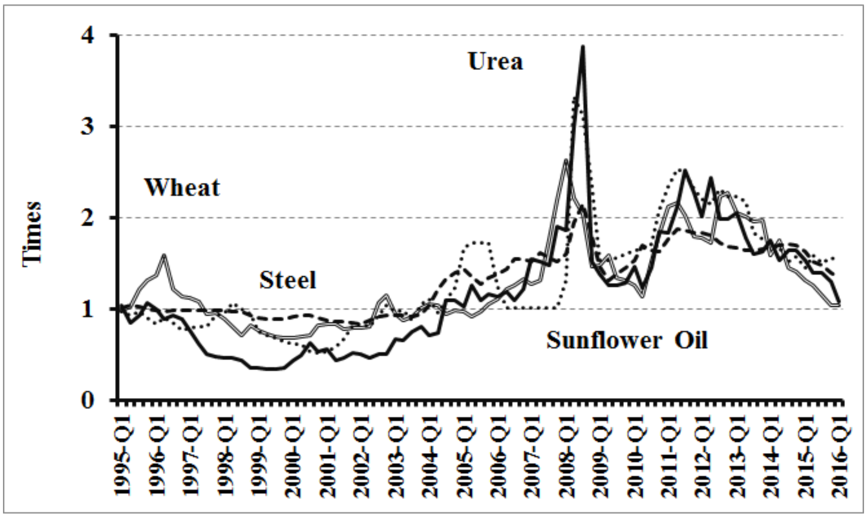

Fig. 1. Growth rates of global prices for some key commodities of Ukraine's exports: wheat, steel, urea, and sunflower oil (1990'12=1), 1996-2015

Source: calculated on the data of portal IndexMundi, available at: http://www.indexmundi.com/commodities/

Despite the different amplitude in the fluctuations of prices, they all have approximately the same profile:

- "failure" in the late 1990s;
- recovery and rapid rise in 2000-2007;
- deep decline during 2008-2009;
- growth in 2010-2011;
- protracted decline in 2012-2015.

Weighting and aggregation of price indexes in Fig. 1 provide a rough estimate of the dynamics of prices for Ukraine's commodity exports during 1996-2016 (Fig. 2).

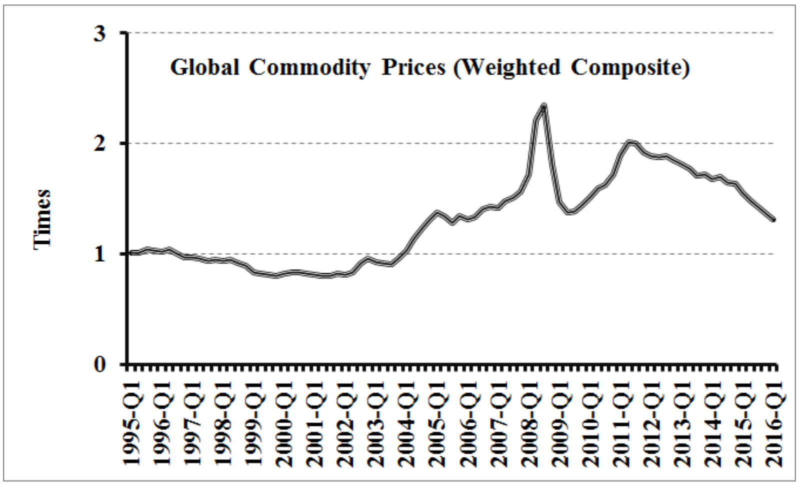

Fig. 2. Growth rates of global prices for Ukraine's commodity exports (1990'12 = 1), 1996-2016

Source: calculated on the data of portal IndexMundi, available at: http://www.indexmundi.com/commodities/

The price index calculated in this way allows considering annual growth rates with quarterly breakdown (Fig. 3). Their comparison with the corresponding values of Ukraine's real GDP enables a somewhat different look at the causes of its cyclical fluctuations over the recent 20 years.

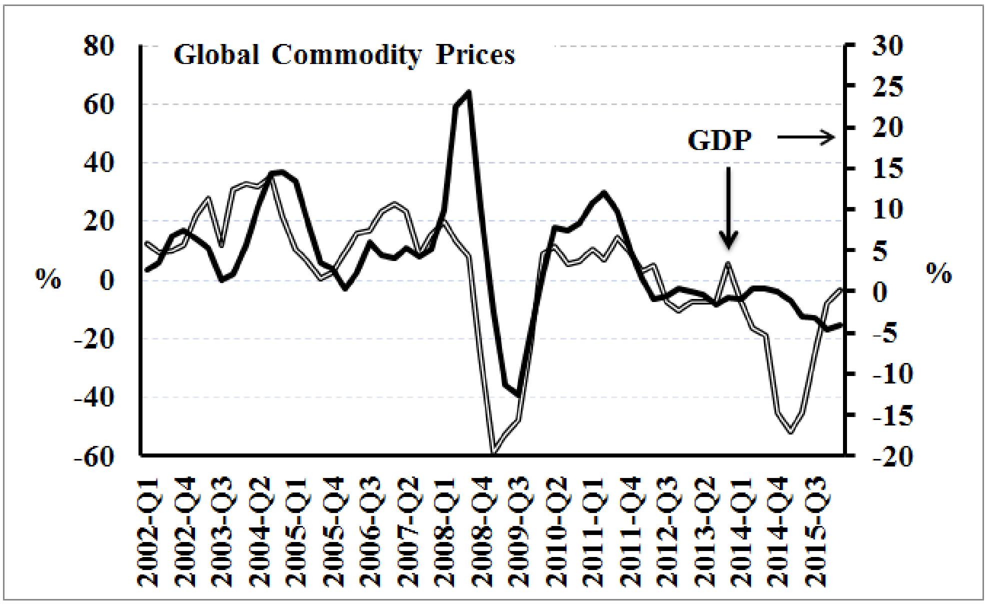

Fig. 3. Dynamics of global commodity prices and Ukraine's real GDP, 2002–2016

Source: calculated on the data from Ukraine's State Statistical Service, available at: http://www.ukrstat.gov.ua/ and portal IndexMund, available at: http://www.indexmundi.com/commodities/

Dynamics of global commodity prices and Ukraine's GDP

Figure 3 is a kind of alphabet of rises and falls of the Ukrainian economy. Because the former clearly correlate with the increases in international prices for our commodity exports, and the latter – with their declines. In particular, this clearly explains why the only period of sustained economic growth in independent Ukraine took place exactly in 2000–2007, though, during that period, egregious corruption, smuggling, shady business and political opposition were no less widespread than now.

It seems that one of the main reasons for growth during that period was quite simple: it was based neither on the "radical structural reforms", nor on a special business environment or a stable political environment, but on the absolutely independent of them rise in commodity prices.

In 2002–2007, average annual price growth (for the above mentioned group of commodities) exceeded 12%. This contributed to the 7.5% average growth of Ukraine's GDP, which was more than twice the global dynamics (3.4%). Thanks to that, Ukraine entered a "commodity Eden", receiving an unexpected inflow of foreign currency, investments and loans, an upward pressure on the exchange rate of the hryvnia with its subsequent consolidation, a record increase in forex reserves (actually from zero to 38 billion USD in August 2008), crazy incomes and budget revenues, a boom in crediting and banking, a construction fever, insane prices for real estate and an infinite number of those wishing to buy it.

However, all that "paradise" melted away in two or three months with the fall in the world prices for raw materials. In this case, their annual growth collapsed from +64% in the third quarter of 2008 to -11%, -36% and -39% in the first three quarters of 2009. It was the period when Ukrainian GDP hit its annual anti-record by plunging at 14.8%. The resulting problems still stand unresolved, such as the hryvnia devaluation, foreign debt, external debt, insolvency the borrowers and their bankruptcy, bankrupt banks, financial dependence on the IMF, falling incomes, high unemployment and a massive sense of hopelessness.

Unfortunately, all that was only a prelude. Another splash on the commodity market only lasted two years (2010–2011). Its short duration together with Ukraine's unsuccessful economic policy prevented both a revival of this country's GDP growth (from the annual average of 4.7%), and untangling the web of accumulated problems.

The current phase of national crisis began in 2012 – with a renewed recession in commodity prices, which lasted four years in a row. Given this, we can confidently say that the fall in GDP, the budgetary problems and depreciation of the hryvnia in 2014–2015 would have occurred even without external intervention. Because the structural vulnerability of Ukrainian economy and depressed commodity prices did not promise anything good even before 2014. Under these conditions, the annexation of the Crimea and war in Donbas only added firewood into the smoldering bonfire of Ukrainian problems.

Dynamics of the global commodity prices and Ukraine's consolidated budget

Given the above mentioned cycles, we can assume that the movement in world commodity prices should also affect the indicators of the consolidated budget of Ukraine. Indeed, other things being equal, rapid growth of real GDP boosts the budget revenues at all levels, at the same time reducing their gap with budget expenditures.

Conversely, inhibition of international commodity markets should be negatively reflected in the consolidated budget - both in terms of its revenues and deficit.

The correctness of these assumptions is proven by the above mentioned dynamics of prices for Ukrainian exports (steel, wheat, sunflower oil, and urea) and the two parameters of the consolidated budget during 2003-2015 (Fig. 4-5).

First of all, attention is drawn by the upward phase, which took place in 2003–2008. During that period, the annual rate of budget revenues steadily varied within 20-60% (Fig. 4). As for the fiscal deficit, it even reversed for a while, turning into a surplus in the first half of 2007 (Fig. 5).

It is indicative that fiscal stability at that time was in striking contrast with the political situation in the country, which was literally besieged by loud scandals, permanent parliamentary elections, changes of government, challenging presidential campaign and revolutionary upheavals. But despite this tension, domestic output and fiscal revenues showed not just a dynamic equilibrium: their mutual balance bit all national records as it has never been so high before or after.

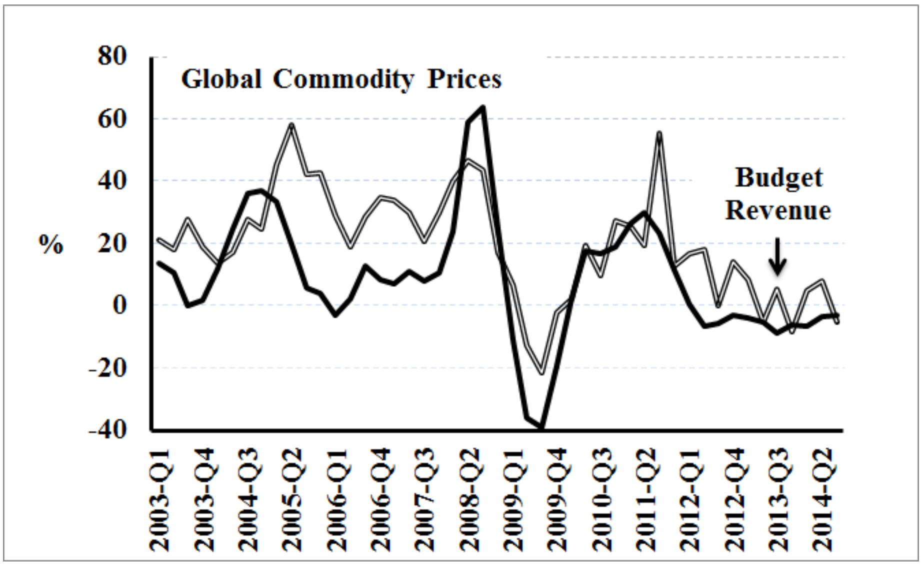

Fig. 4. Dynamics of global commodity prices and revenue of Ukraine's consolidated budget, 2003–2014

Source: calculated on the data from the National Bank of Ukraine, available at http://www.bank.gov.ua/ and portal IndexMundi, available at: http://www.indexmundi.com/commodities/

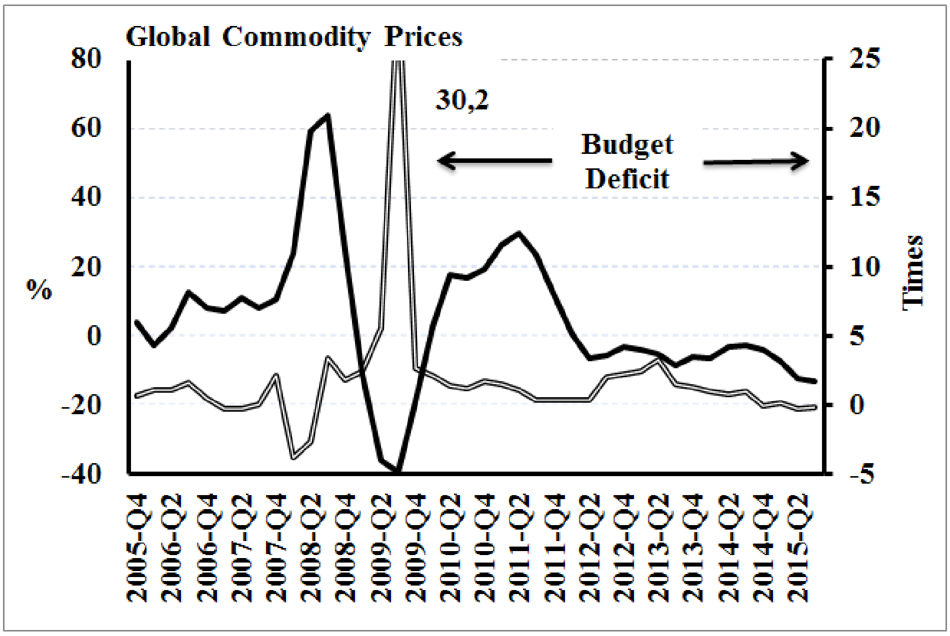

Fig. 5. Dynamics of global commodity prices and deficit of Ukraine's consolidated budget, 2005–2015

Source: calculated on the data from the National Bank of Ukraine. – http://www.bank.gov.ua/ and portal IndexMundi: available at: http://www.indexmundi.com/commodities/

One reason of these impressive results was the commodity boom. Although the rise of the world prices for Ukrainian exports was uneven, its quarterly annual growth averaged 17.5%, and sometimes 40% (2004), and even exceeded 60% (2008).

The increased revenues from the sales of commodities brought to Ukraine foreign loans and foreign direct investment. From 2004 to October 2008 their balances in Ukraine grew respectively by 74.4 billion and 42.3 billion USD [4]. The amount of that capital exceeded 116 billion USD, and its inflow increased expenses for imports and gave a boost to trade and budget revenues. They were so great that in the first half of 2008 the government began to pay compensations to the depositors of the former "Sberbank SSSR" promising up to 1 thousand UAH to everyone who lost their savings.

And this entire idyllic picture melted down in autumn 2008, as neither production nor budget revenues could resist the falling export prices. [3] At the same time, a permanent crisis seized Ukraine's finances.

In 2009, the 12-month collapse in prices for Ukrainian raw materials reached 40% (in quarterly terms). It caused a 20% or greater drop of Ukraine's real GDP and revenues of the consolidated budget (Fig. 3, 4); instead the deficit rose 30 times (Fig. 5).

Getting out of this economic and financial collapse was contributed by another revival of prices for Ukrainian raw materials in 2010-2011, which later turned into a growth reaching its peak value (29.9%) in the II quarter of 2011. During those two years Ukraine's real GDP grew with an increasing annual rate (4.1 and 5.2%, respectively) and so did revenues of the consolidated budget (growth rate reached 55.5% in III quarter of 2011).

However, the favorable situation with the raw materials exhausted in early 2012, and Ukrainian economy returned to recession. Annual GDP growth rates in Ukraine decreased to 0.3% (2012) and 0.0% (2013). This immediately reduced the volume of financial inflows and budget revenues. In II quarter of 2013, the 12-month deficit of Ukraine's budget grew 3.3 times. Under these conditions, the government resorted to domestic and foreign borrowing.

There was an increased pressure on the National Bank to support budget spending. This led to a growth of government bonds in its portfolio: from zero in 2007 to 147 billion UAH in late 2013, which accounted for 58.3% of the total amount in circulation at that time.

During 2012-2015, the fall of the prices for Ukrainian raw materials reached 30%, and the duration of the price recession reached four years.

But in 2015 the condition of the consolidated budget seemed more stable than in previous years.

Unfortunately, the factors of that consolidation were purely nominal, as the balancing of the consolidated budget in 2015 occurred largely due to new loans the public sector (net financing amounted to 3.5 billion USD), writing-off of part of the debt (about 3.6 billion USD), non-repayment of the Russia's loan (3 billion USD) and the 40-50% inflation.

Certainly one cannot consider such events as attributes of a successful policy.

Dynamics of global commodity prices and the exchange rate of the hryvnia to the US dollar

The hryvnia has been pegged to the dollar since the beginning of its introduction into circulation on 2nd of September in 1996. Since then its exchange rate to the USD has fallen more than 14 fold, namely from 1.761 to 25.0 UAH/USD. Moreover, almost 70% of this decline occurred during the 2014-2015.

This steady trend to the devaluation of the national currency and low demand for it could seem surprising, but only not considering the above mentioned shortcomings of the Ukrainian economy combined with its increased vulnerability to commodity prices.

Comparison of the above mentioned dynamics with the corresponding changes in the exchange rates of the hryvnia against the USD are no less indicative than those discussed in the analysis of cyclical fluctuations in Ukraine's GDP and parameters of this country's consolidated budget (Fig. 6).

In particular, Fig. 6 shows that over recent 20 years:

- All currency crises in Ukraine followed the recessions in global commodity prices;
- During that time, Ukrainian economy and its currency could not resist any of the commodity price recessions;
- Exchange rate stability in Ukraine has been observed only under conditions of growing export prices.

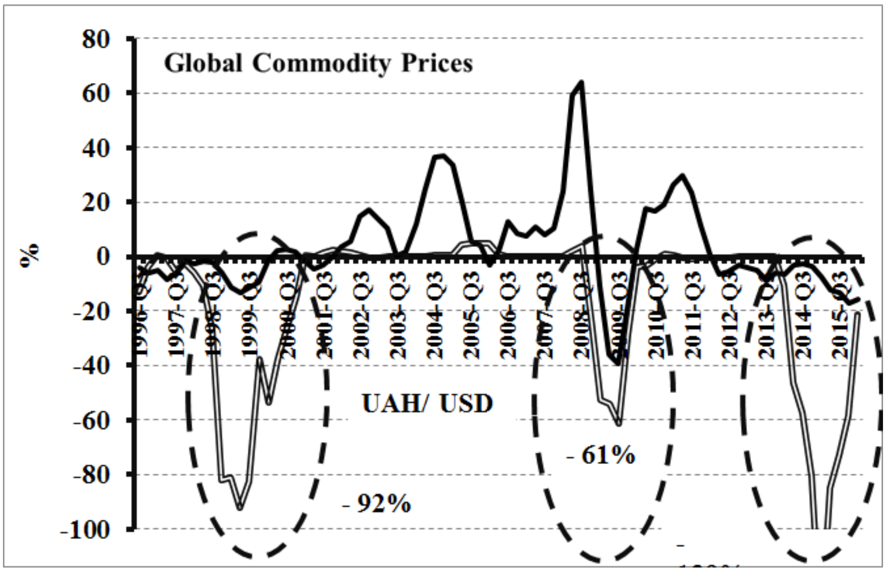

Fig. 6. Annual rates of global commodity prices and exchange rate of the UAH to the USD, 1996-2016

Source: calculated on the data from the National Bank of Ukraine, available at: http://www.bank.gov.ua/ and portal IndexMundi, available at: http://www.indexmundi.com/commodities/

It is clear that every currency crisis had its own specificity. Thus, on the eve of 1998-1999, Ukraine was still reeling from the past exchange rate shocks and hyperinflation of the early 90s, while forex for national reserves could be only obtained in the form of debts.

The crisis of 2008-2009 was aggravated by the pyramid of foreign currency loans. Its debris was still not removed even at the beginning of the devaluation in 2014. In addition, the official Kyiv at that time was in the state of undeclared political and financial isolation. The latter only disappeared with the change of government in the spring of 2014, but, for the hryvnia, the war in the East was an unsupportable burden.

Still, on the whole, the time and place of all three currency crises were defined by the commodity export specialization of Ukraine's economy and by declines in the prices for key commodities of this country's exports. Thus their general logic and stages were very similar:

- declining commodity prices;
- decreased exports and export related incomes;
- devaluation of the hryvnia;
- capital flight;
- dramatic aggravation of financial and budget deficits;
- banking crisis;
- exhaustion of the national reserves;
- strengthening of the currency restrictions;
- borrowing from the IMF.

Therefore, Ukraine's budget gaps, which are often regarded as a root cause of any currency crisis, often are among the crisis' consequences themselves. And the sharp increase in fiscal deficits results not only from administrative mistakes, but also from decreases in global demand for raw materials.

The most significant problems with the exchange rate of the hryvnia all began exactly with such decreases. After that, active contacts with the IMF were initiated in order to develop another program of financial assistance. Moreover, this relationship began to form before the crisis of 1998-1999, let us recall the stages: stand-by programs in 1996 and 1997, EFF in 1998, again stand-by programs (2008, 2010 and 2014), and yet another EFF program (2015).

All of these programs (except for the stand-by in 2010) coincided with the time of commodity recessions and were aimed at stabilizing the exchange rate of the hryvnia. The depth of the corresponding commodity recessions reached -104.3% in August 1999, -64.8% in September 2009 and -182.8% in February 2015.

Conclusions

- During the years of independence, in Ukraine, a raw material based model has taken root, within which this economy is specialized in the production and export of products with low added value.
- The failure to abandon this production pattern has led to a rigid dependence on the movement of international prices on exported commodities.

- In recent 20 years, all the three economic, financial and currency crises that have occurred in Ukraine (in 1998-1999, 2008-2009 and 2014-2015) took place against a background of falling global prices for this country's exports. On the contrary, the rise of global demand for raw materials is associated in Ukraine with sustainable economic growth, fiscal equilibrium and well balanced exchange market.
- The causes of economic, financial and currency crises may vary for different types of economies:
  - Raw material based and industrial ones;
  - Small and large ones.
- In small commodity economies, fiscal, monetary and currency factors of the crises can be only intermediate, but not key factors.
- The main (economic) factors of the crisis of 2014-2015 were the raw material nature of Ukrainian economy and falling prices for its main exports.
- The phases of economic cycle in Ukraine, the condition of this country's finances, budget and the exchange rate of the hryvnia are largely determined by the commodity nature of the national production. Its high volatility can be explained by the protracted decline of domestic technologies.
- Ukraine's economy is dominated by a raw material based model of "lagging growth", in which the average rates of national growth are lower than in most emerging markets. Consequently, this country's economy has been increasingly slipping down to the raw material based periphery of the world economy, although the dynamics of its GDP can be formally positive.
- A systemic overcoming of the above mentioned shortcomings is associated with technological upgrading of the production, and producing items with a higher share of added value.

References

1. Hrytsenko, A. (2016). Ukrainian economic miracle, or Where are the reforms? *Zerkalo Nedeli. Ukraine*, 22. Retrieved from: http://gazeta.dt.ua/macrolevel/ukrayinske-ekonomichne-divo-abo-kudi-vedut-reformi-_.html

2. World Bank data. Retrieved from: http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators

3. Data from the National Bank of Ukraine. Retrieved from: www.bank.gov.ua

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