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PAYMENTS FOR RUSSIAN GAS IN RUBLES AND THE STRATEGY OF CURRENCY RESERVES' MANAGEMENT BY THE NATIONAL BANK OF UKRAINE

The article is about the risks arising from the arrangement of payments for Russian gas in rubles, in conjunction with the strategy of management of currency reserves. Author claims that the absence of unified national reserves management strategy is dangerous for economy of Ukraine. In the paper two risks are described, depending on the preliminary accumulation of the currency: the currency risk and the risk of conversion. The currency risk may lead to gains, while the risk of converting leads to unambiguous loss. Author finds that If the devaluation of the Russian ruble against the U.S. dollar in 2012 will not exceed 5 %, the ruble assets can lead to gains in comparison with dollar-denominated assets.

Keywords: currency risk, risk of conversion, currency reserves.

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ASSESSING OF GOVERNMENT DEBT SUSTAINABILITY IN UKRAINE

The article is devoted to the investigation and evaluation of Ukrainian government debt sustainability. The approaches to sustainability and solvency defining are revealed, the Ukrainian government debt policy is analyzed and compared with European countries and the baseline scenario alongside with four shock scenarios were developed to show the level of government debt sustainability.

Keywords: government debt, sustainability, solvency, debt burden, debt management, debt indicators.

Introduction

For a government, as well as for any other agent in the economy, the possibility of borrowing money requires that the lenders have the confidence that the loan will be repaid and the interests honored. In both cases, foreign or domestic borrowing, the assurance of the solvency and the honesty of the debtor, in terms of its will to pay, are fundamental. The process of building confidence in potential creditors and of being effectively able to borrow and pay is to maintain a sustainable debt. Maintaining a sustainable debt is a process that requires attentive actions: a continuous strategy to develop the market, a lucid financial risk management and other aspects, that will be discussed. The sources of information for the article included publications of Ukrainian and foreign economists, acts of law, statistical data and instructions of the governing bodies and databases of the international organizations such as IMF, OECD, CIA, DB Research, World Bank etc.

Problem Description

The global crisis has caused a hitherto unseen fiscal deterioration that leaves the world economy with serious challenges. In many developed markets as well as in a few emerging markets public finances

have already become, or are at least at risk of becoming, unsustainable. The common definition of debt sustainability goes beyond the absence of a de jure sovereign default. Consequently, government debt sustainability is defined as a sovereign's ability to service debt without large adjustments to public revenue and/or expenditure and without ever-increasing government-debt-to-GDP ratios. Hence, this definition refers to both a country's ability and willingness to repay its debt [1].

The concept, especially in the last few years, has been defined as a group of indicators and, lately, as a set of thresholds. In most of the cases the concept is closely linked to the question of its assessment, and practically identified with indicators used to assess sustainability. These indicators are usually based upon the present value of fiscal budget constraints, or primary surpluses, vis-à-vis the present value of debt interest payments. An entity's liability position is sustainable if it satisfies the present value budget constraint without a major correction in the balance of income and expenditure, given the costs of financing it faces in the market [1]. This line of thought derives from the concept proposed by Hamilton and Flavin [6].

Solvency has also been used as a synonym of sustainability and has been defined in the following way: an entity is solvent if the present discounted value (PDV) of its current and future primary expenditure is no greater than the PDV of its current and future path of income, net of any initial indebtedness, and a simple and practical formula is offered [1].

$$\sum_{i=0}^{\infty} \frac{E_{t+i}}{\prod_{J=i}^{\eta}(1+\Gamma_{\tau+J})} \le \sum_{i=0}^{\infty} \frac{Y_{t+i}}{\prod_{J=i}^{\eta}(1+\Gamma_{\tau+J})} - (1+\Gamma_i)\times D_{\tau+J}, \quad (1)$$

where $\sum E_{t+i}$ represents the sum of future primary expenditures, $\sum Y_{t+i}$ – the sum of the current and future path of income, D – the initial stock of debt, $\prod(1+\Gamma_{\tau+J})$ – the product of the rates at which expenses and incomes are discounted [1].

Sustainability is then defined as a combination of liquidity and solvency. An indicator, consequently, gives an idea of the future solvency and of eventual sustainability. An entity is illiquid if, regardless of whether it satisfies the solvency condition, its liquid assets and available financing are insufficient to meet or roll-over its maturing liabilities. The distinction between solvency and liquidity is sometimes blurred because illiquidity may be manifested in rising interest rates in the limiting case that no further financing is available, the marginal interest rate becomes infinite, which eventually calls into question the entity's solvency [5, p. 251].

One more indicator of the government debt sustainability discussed in the literature is the present value of interests payments compared with the present value of future primary surpluses [7], [8]. Basically this means that a government will have sustainable level of debt when the primary surpluses cover the debt interest payments. It also can be required the primary surpluses to include additional resources, besides the interest payments, to assure and allow growth [11].

Another alternative measure, and on from time to time a better indicator, could be the fiscal revenues compared with the debt service. Using the different indicators templates that have also been elaborated, where variables can be measured and compared, and their critical relations can be seen through time [1].

The next modification to the government debt sustainability considers a group of defined indicators – thresholds, together with an assessment of policies and institutions for each country. Notwithstanding their limitations, empirical thresholds can help inform decisions on the financing mix and program design in Low Income Countries (LICs) provided they are treated primarily. The thresholds are calculated at different percentages and classified in three categories as poor, medium and strong. In order to assess policies and institutions the so-called CPIA index (Country Policy and Institution Analysis) is used. An assessment of policies and institutions is an integral part of the suggested threshold approach, but potentially controversial in its implementation. Empirical analysis suggests that countries with strong policies can sustain higher debt ratios. This holds for other measures of policies, but the CPIA has proven to be a particularly powerful indicator [3, p. 24].

All indicators based on future numbers, on projections, have a number of sources of uncertainty: unforeseen changes in interest rates, rates of growth, inflation, fiscal expenditure, etc. A key element is the selection of the interest rate to calculate the present values, and then long term estimations of interest rates play another important role. It can be argued that even with the existence and the limits of these uncertainties the practice of calculating indicators and creating templates, is worth doing: it enables the governments and the international institutions to detail the figures and arrive at the relevance of their assumptions, and therefore offers a tool to deal with probable future flows and probable future solvency. A systematic use of these indicators should be also a part of the routine of a debt management office.

Sustainability cannot just be conceived of as the use of ratios of indicators of future flows. Sustainability should be conceived of as a process, a series of actions and functions geared to sustain, to maintain the debt flows, the borrowing and the debt service. So sustainability is a process. And as a process,

it is characterized by several different aspects such as legal framework and institutional structure, coordination and communication, market development, staff qualification, technical tools etc [8, p. 21].

Recently the IMF developed a special framework for the low-income countries called Debt Sustainability Framework (DSF). It is designed to guide the borrowing decisions of low-income countries in a way that matches their financing needs with their current and prospective repayment ability, taking into account each country's circumstances. To assess debt sustainability, debt burden indicators are compared to indicative thresholds over a 20-year projection period. A debt-burden indicator that exceeds its indicative threshold suggests a risk of experiencing some form of debt distress. There are four ratings for the risk of external debt distress:

– *low risk*, when all the debt burden indicators are well below the thresholds;
– *moderate risk,* when debt burden indicators are below the thresholds in the baseline scenario, but stress tests indicate that thresholds could be breached if there are external shocks or abrupt changes in macroeconomic policies;
– *high risk,* when the baseline scenario indicates a protracted breach of debt or debt-service thresholds but the country does not currently face any repayment difficulties and alternative scenarios or stress tests show protracted threshold breaches; or in debt distress, when the country is already having repayment difficulties.

Low-income countries with weaker policies and institutions tend to face repayment problems at lower levels of debt than countries with stronger policies and institutions. The DSF, therefore, classifies countries into one of three policy performance categories (table 1) using the World Bank's Country Policy and Institutional Assessment (CPIA) index, and uses different indicative thresholds for debt burdens depending on the performance category. Thresholds corresponding to strong policy performers are highest, indicating that in countries with good policies debt accumulation is less risky.

Table 1. **Debt Burden Thresholds under the DSF [9]**

Type of policy	NPV of debt in percent of			Debt service in percent of	
	Exports	GDP	Revenue	Exports	Revenue
Weak Policy	100	30	200	15	25
Medium Policy	150	40	250	20	30
Strong Policy	200	50	300	25	35

Ukrainian government has always tried to pursue a balanced debt management policy, but the recent financial crisis became a considerable hit for Ukrainian economy as well as for the other countries of the world. During the years 2008–2011, at the apex of the crisis, financing needs of the state budget grew significantly and, consequently, the amount of government debt increased significantly (fig.1).

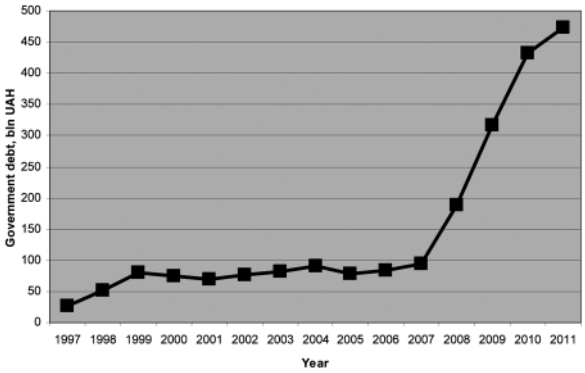

Fig. 1. General government gross debt [10]

The debt-to GDP ratio also experienced a considerable change. While demonstrating the beneficial tendency in 2003–2007, the year 2007 became a crucial point for this indicator as well as for the whole indebtedness situation. In 2007 the ratio of public debt to GDP equaled about 12 %, but at the end of 2009 this indicator rose to 34 %, at the end of 2010 – up 39 % of GDP. In 2011 the ratio debt / GDP decreased to 37 % due to advanced growth of GDP. According to the IMF projections the debt-to-GDP ratio will be improving since 2012 (Fig. 2).

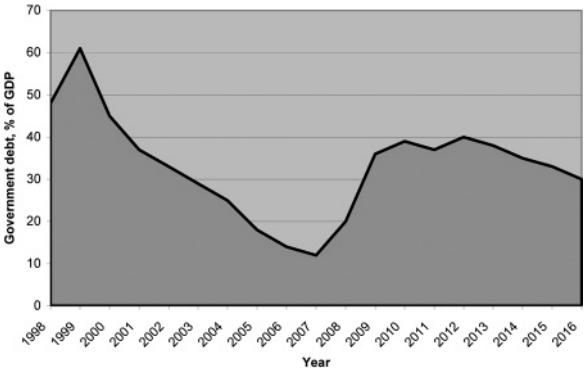

Fig. 2. Debt-to-GDP ratio [9]

Notable is the fact that while government debt starts decreasing only after 2014, debt-to-GDP ratio takes positive trend in 2012. This means that after 2012 Ukrainian GDP will augment more intensively than a government debt which is the saving penchant for Ukrainian economy. It worth paying attention to the fact that the aforementioned projections were made by IMF that is trying to implement its policies in various aspects of Ukrainian life. Consequently, this can mean that, expecting beneficial changes in Ukrainian economic situation due to the implementation which IMF is currently introducing, the IMF can easily provide Ukraine with misleading

optimistic data in order to demonstrate the positive effect of the implementations offered. Anyway, according to Deutsche Bank projections real GDP growth in Ukraine in 2010–2015 will outrun the GDP growth in Russia, Turkey, South Africa and European Union [4].

Despite of the fact that in 2010 Ukraine was the 6th country in the list of countries likely to default, in debt-to-GDP list it takes the 77th position that puts Ukraine in line with the majority of the emerging countries (table 2). Moreover, according the IMF's First Review Under the Stand-By Arrangement, during the last two years Ukrainian government debt goes in line with the Central-Eastern Europe debt median.

Table 2. **List of sovereign states by government debt, 2010 [9]**

Rank	Country	Debt-to-GDP ratio, % (CIA and Eurostat)	Debt-to-GDP ratio, % (IMF)
1	Japan	225.80	225.8
2	Saint Kitts and Nevis	185.00	196.3
3	Lebanon	150.70	138.9
4	Zimbabwe	149.00	75.9
5	Greece	142.80	130.2
6	Iceland	123.80	115.6
7	Jamaica	123.20	135.7
8	Italy	119.00	118.4
9	Singapore	102.40	98.9
10	Belgium	96.80	100.2
…	…	…	…
77	Ukraine	38.40	39.5

In order to assess predicted debt sustainability for Ukraine, baseline scenario alongside with four shock scenarios were developed on the base of investigation of Deutsche Bank researchers [2, 4, 9] that can be adjusted to Ukrainian case. To begin with, the dynamics of debt accumulation can be described in absolute terms as:

$$D_{t+1} - D_t = r_{t+1} \times D_t - PB_{t+1} \qquad (2)$$

where D denotes a country's gross government debt stock, r captures the real interest rate paid on public debt outstanding, and PB represents the government's primary balance, i. e. the government's fiscal balance before net debt interest payments. The above identity can also be expressed in percent of GDP, which puts the public debt stock in relation to the size of the economy (government's underlying potential tax base):

$$\frac{D_{t+1}}{GDP_{t+1}} = (1 + r_{t+1}) \times \frac{D_t}{GDP_t} \times \frac{GDP_t}{GDP_{t+1}} \times \frac{PB_{t+1}}{GDP_{t+1}} \qquad (3)$$

After rearranging we obtain the following:

$$d_{t+1} = (1 + r_{t+1} + g_{t+1}) \times d_t - pb_{t+1} \qquad (4)$$

where d denotes the public debt stock and pb – the primary budget balance, g – the annual real GDP growth rate. As shown in equation (4), the current government debt stock depends on the past year's debt stock as well as on today's real interest rate, real GDP growth rate and primary balance. The higher the real interest rates, the lower real GDP growth and the lower the primary balance, the more the government-debt-to-GDP ratio rises. In other words, strong real GDP growth, low real interest rates and sound fiscal policies are necessary to avoid ever-rising public debt stocks or to lower public debt to more sustainable levels. Using the aforementioned formulas we get the following baseline scenario (table 3).

Ukraine still faces serious downside risks. One should not forget that the current rebound has been mainly driven by extraordinary monetary and fiscal policy stimuli. We therefore show the likely path of public debt stocks in four alternative shock scenarios: 1) a real GDP growth shock (it is assumed the growth to be permanently weaker than in the baseline scenario); 2) a real interest rate shock (it is assumed government has to continue issuing large amounts of debt, so record-high sovereign borrowing could eventually swamp financial markets and thus drive real interest rates up); 3) a primary balance shock (it is assumed that further public support for the banking system is a factor that could lead to a renewed deterioration in public finances and hence prevent any fiscal consolidation over the next couple of years); 4) combined shock or multiple-variable shock scenario (it is assumed that all of the aforementioned variables (GDP, interest rate, primary balance) were reduced simultaneously). The figure of 5 % per cent came from IMF that defines deviation of 5 % as probable.

This projection allows to assume that under all of the unfavourable circumstances, Ukraine's debt sustainability won't probably exceed the point of 46,14 %. Such a forecast keeps Ukraine in line with global trend for emerging economies (table 4).

Table 3. **Baseline scenario: IMF projections and debt calculations [9]**

Indicator	2010	2011	2012	2013	2014	2015
GDP, bln UAH	1083,195	1253,011	1441,302	1610,938	1769,391	1940,227
Interest rate	0,034	0,037	0,037	0,043	0,045	0,035
Primary balance, bln UAH	-64,9917	-78,9397	-72,0651	-16,1094	-8,84696	19,40227
Debt, bln UAH	438,493	533,6569	625,4673	668,4718	707,4	712,7567

Table 4. **Public debt sustainability of Ukraine: the results of different scenarios**

Scenario	Indicator	2011	2012	2013	2014	2015	Average
Baseline	GDP, bln UAH	1253,01	1441,30	1610,94	1769,39	1940,23	–
	Interest rate	0,037	0,037	0,043	0,045	0,035	–
	Primary balance, bln UAH	-78,94	-72,06	-16,11	-8,84	19,40	–
	Debt, bln UAH	533,65	625,47	668,47	707,40	712,76	–
	Sustainability, %	42,58	43,37	41,50	39,98	36,74	
Scenario (1)	5 % reduction of GDP, bln UAH	1190,36	1369,24	1530,39	1680,92	1843,22	–
	Sustainability, %	44,83	45,80	43,79	42,19	38,77	41,47
Scenario (2)	5 % increasing of interest rate	0,039	0,039	0,045	0,0472	0,037	–
	Debt, bln UAH	534,47	628,14	671,49	710,65	715,80	–
	Sustainability, %	50,13	46,589	44,114	40,455	34,99	41,34
Scenario (3)	5 % reduction of primary balance, bln UAH	-82,89	-75,67	-16,91	-9,29	18,43	–
	Debt, bln UAH	637,51	729,51	715,99	731,94	681,76	–
	Sustainability, %	50,88	50,61	44,45	41,37	35,14	41,74
Scenario combined	Debt, bln UAH	538,4151	631,7389	672,2953	711,0951	716,7739	–
	Sustainability, %	45,23	46,14	43,93	42,30	38,89	43,30

* – authors' calculations based on [2, 4, 9]

This analysis was based on government debt/GDP figures only. Therefore, neither a sovereign's net asset/liability position, nor a country's net international creditor or debtor position was considered. It was focused on government debt ratios as a percentage of GDP which is the conventional method internationally. Furthermore, the public debt structure was not taken into account, i. e. there is no differentiation of debt by holders (resident vs. non-resident), by currency denomination (domestic vs. foreign currency), by maturity (short, medium, long-term) and/or instruments (e. g. floating vs. fixed interest rate). It goes without saying that the factors listed above are all relevant for the conditions under which government is able to borrow from capital markets. The above factors also determine how vulnerable public balance sheets are to adverse shocks such as higher interest rates, currency fluctuations and/or capital flow reversals.

Obviously, this method has a significant drawback as, on the one hand, even country with a relatively low debt burden but an unfavourable debt structure could quickly come under pressure as regards its fiscal solvency if financial market conditions worsened dramatically. On the other hand, highly indebted country with a favourable debt structure has generally more room for fiscal maneuver during periods of financial distress and may still be able to borrow at relatively low interest rates for a prolonged period of time. Nevertheless, this framework is able to track the direction and/or the pace of a country's debt dynamics under different macro scenarios. Talking about Ukraine, it's worth mentioning its current unfavourable debt structure as today we came to the point when Ukraine should start repaying several large credits (IMF credits mainly) which will significantly increase Ukrainian debt burden. For this reason the results of the investigation can be a bit more optimistic than actual figures.

It's important to be conceived of a process, a series of actions and functions geared to sustain, to maintain the debt flows, the borrowing and the debt service. The right functioning of this mechanism can be achieved through adjusting legal framework and institutional structure, establishing coordination over all components of this process, market development, involving qualified staff and adequate tools.

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ОЦІНЮВАННЯ СТІЙКОСТІ ДЕРЖАВНОГО БОРГУ В УКРАЇНІ

Статтю присвячено дослідженню та оцінюванню показника стійкості державного боргу в Україні. Розкрито підходи до визначення стійкості боргу та платоспроможності країни, проаналізовано боргову політику українського уряду та проведено порівняльну характеристику з європейськими країнами, розроблено базовий сценарій та чотири шокових сценарії для оцінювання рівня стійкості державного боргу.

Ключові слова: державний борг, стійкість, платоспроможність, боргове навантаження, борговий менеджмент, боргові індикатори.

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УДК 172 : 316

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ОСНОВНІ МЕТОДИ ТА ПРИЙОМИ ВПЛИВУ НА СПІВРОЗМОВНИКА В ПРОЦЕСІ СПІЛКУВАННЯ

Статтю присвячено дослідженню результатів оцінки студентами застосування в процесі спілкування основних методів і прийомів впливу на співрозмовника.

Ключові слова: спілкування, співрозмовник, засоби спілкування, прийоми слухання, причини конфліктів, маніпулювання, телефонні вади, письмова мова.

Вступ

Одним із найважливіших чинників, що формують особистість, є мистецтво спілкування. Як основа життєдіяльності людей та їхньої взаємодії, спілкування є невід'ємною частиною людського життя. Саме спілкування допомагає глибше розглядати міжособистісні взаємини, сприйняття та розуміння співрозмовниками одне одного, їхню згуртованість чи конфліктність тощо.

Спілкування – це взаємодія двох або більше людей із метою налагодження взаємин і досягнення загального результату [4, с. 16] Змістом спілкування є наукові та побутові знання, навички та вміння володіння методами впливу на співрозмовника в процесі спілкування та сама людина, як особистість, її зовнішній вигляд, особливості характеру, манера поведінки тощо.

Постановка проблеми та отримані результати

Під час викладання навчальної дисципліни «Професійна етика» студенти бакалаврату 2 року навчання напряму підготовки «Фінанси і кредит» мали високу мотивацію та зацікавленість у набутті знань та навичок щодо культури та засобів ділового спілкування, вербальних та невербальних, їх поєднання у процесі ділової комунікації. Це й спонукало авторів статті приділити увагу таким питанням, які спрямовані не тільки на підготовку фахівців своєї справи, а й на розвиток особистості.

Для кращого розуміння методів та прийомів впливу на співрозмовника в процесі спілкування, було проведено вибіркове обстеження студентів магістерської програми «Фінанси» 2 року навчання та аспірантів, яким було запропоновано анкету, розроблену авторами статті, з певним переліком питань: