DOI https://doi.org/10.30525/2592-8813-2025-spec-5

UKRAINE' DEBT AND COUNTRY IMMINENT ECONOMIC DEVELOPMENT

Volodymyr Danko,
PhD, Professor,
Investment Management, Corporate Finance, Sources of Business Financing (MIM-Kyiv, Ukraine)
vladdanko@gmail.com, v.danko@mim.kyiv.ua

Abstract. Ukraine extraordinary tasks are: insuring country economic growth, stimulating the economy & fostering growth with respect to following inevitable challenges such as: damages of physical infrastructure like roads, bridges, buildings, and factories, disrupted production, transportation, and basic services; human capital loss – decrease of workforce and innovation potential; financial draining - reconstruction requires significant funding; social and political instability - aggravated social tensions and political instability; obstructed long-term planning and investing. At the same time country ought to search for prospects such as: after war resilient demand for goods/services, stimulating production and job creation; using latest advances in construction, technology, and infrastructure development; rebuilding ties with international community for financial and technical assistance; insure market growth that attracts foreign and local investments including debt financing.

Key words: Group of Creditors of Ukraine (GCU), Global law firm White & Case, Extended Fund Facility (EFF), Debt financing, GDP (Gross Domestic Product), Gross External Debt (GED), Foreign Exchange Reserves (GER), GDP per capita, Debt Per Capita, Ukraine GDP per capita PPP (Purchasing Power Parity), Ukrainian human capital, National Academy of Science, WB (World Bank), IMF (International Monetary Fund), Fitch Rating Agency, S&P Rating Agency BlackRock, JPMorgan, Ukravtodor.

Introduction. Undertaken study is dedicated to future of Ukraine subject – using debt to build new national economy as a result received damages and losses during Russian war against Ukraine and present rationality for economic expansion, as well as range of direct agents responsible for further economic growth. Research structured in four consecutive and logically detected each other blocks aimed to define state of Ukrainian debt, clarify current cumulative war damage; explicate who is crediting debt, who is in charge with funds distribution among recipients, and who are recipients; outline who is responsible for paying accrued debt obligations, collecting and disseminating funds, current state of county budget; determine responsibilities of public and private sector' for postwar economic growth; detail one of the possible investment strategies for high risk business environment and coverages of those risks.

BASIC THEORETICAL AND PRACTICAL PROVISION

Purpose of the Article. To perform qualified research on mentioned subject (using debt for country economic growth) with respect to a fit object (Ukraine). Having a sense of that purpose, develop comprehensive professional as well as scholar knowledge, based on existed and personal judgements for that matter, provide gathered information, and sources of works. Methodology statement. Set of allied intellectual enquiry methods for quantitative research, data gathering with use of data extraction, data analysis, case studies; qualitative & factual research - historical analogies, comparative dynamic, ethnographical, cultural absolute and relative business advances. Literature review and output conditions. Criterions for accuracy, reliability, authority, objectivity, fairness and coverage for evaluating information from given information sources part "references".

RESEARCH RESULTS AND THEIR EVALUATION

1. appraisal of Ukrainian debt

That's true to say contemporary turn point for Ukrainian State was summer'24 when Group of Creditors of Ukraine (GCU) welcomed the agreement in principle reached between Ukraine and its bondholders on Eurobond Debt Restructuring Terms (1 U.S. Department of the Treasury, Press

Releases, Statement of the Group of Creditors of Ukraine 08.09. 2024) and following successful restructuring of US$20.5 billion of international bonds legally supported by Global law firm White & Case (adviser) (2 White & Case, Press Releases, White & Case advises Ukraine on successful restructuring of US$20.5 billion of international bonds, 06.06.2024). Shortly terms of the restructuring can be viewed as following:

– existing bonds of Ukraine and Ukravtodor were exchanged for four series of Step Up A bonds and four series of Step Up B bonds

– the Step-Up A bonds pay interest at rate of 1.75% beginning in February 2025, which gradually increases to 7.75% after 2034

– the Step Up B bonds pay interest at 3% starting in August 2027, which gradually increases to 7.75% after 2034

– the terms of two series of the Step Up B bonds, due 2035 and 2036, also include a feature providing for upward adjustments to the principal amount of each series on 1 February 2030, upon the satisfaction of certain conditions linked to the performance of Ukraine's nominal gross domestic product in 2028, measured against the IMF projected nominal gross domestic product for 2028 and with a further control variable relating to the performance of Ukraine's gross domestic product at constant prices for 2028

– upward adjustment, which would be triggered if Ukraine's economy outperforms IMF expectations, would permit bondholders to recoup up to 12% of the principal haircut they provided in the restructuring.

So, bondholders reimbursement postponed structurally at the end of new agreement policy terms been coordinated and supported all stakeholders with further confirmation (3 White & Case, Ukraine concludes historic restructuring of US$20.5 billion of international bonds, 09.10.2024)

– by the IMF compatible with the debt sustainability objectives of Ukraine's $15.6 billion Extended Fund Facility (EFF).

– also endorsed by Ukraine's international partners in the Group of Creditors of Ukraine (Group of Creditors of Ukraine includes Canada, France, Germany, Japan, United Kingdom, and the United States of America. Observers to the Group include Australia, Austria, Belgium, Brazil, Denmark, Finland, Ireland, Israel, Italy, Korea, Netherlands, Norway, Spain, Sweden, and Switzerland), who will be providing their own debt relief not later than the end of the EFF programme period in 2027

– more than 97% of holders of Ukraine's and Ukravtodor's existing bonds participated in the exchange offer and consent solicitation, indicating the strong support of the private sector for Ukraine's efforts to restore macroeconomic stability

Scale of Ukrainian debt

Public and publicly guaranteed debt of Ukraine from 2009 to 2024 (US$ million)

At first glance three important assumptions can made from table 1 data : over 16 past consecutive years external debt significantly exceeded the size of domestic public borrowing evidently showing that state' preferable source to finance country needs allocated mostly outside the borders of farmland; the second one is about very high average arithmetic mean of total debt growth outdid 18% that's much over the country GDP growth ratio showing unbalanced aggressive national capital structure policy practice formation heavily relying on growing liabilities ignoring process adequate strategy of countrywide equity formation; the third on underlines how fragile, unsustainable and no resilient country' economy whereas harsh externalities come up - 36.8% total debt growth on the background of world financial crisis 2008 and 13.7%/30.5% in 2022/2023 respectively with start of Russian massive military aggression against Ukraine, so basically underlines the absents of internal sufficient capital to resist economic and financial stress. Nevertheless, over previous research also been revealed that we ought to consider all complicity of national debt landscape determined such factors as war has damaged the country's economy, leading to higher defense spending, amplified welfare programs, and a drop in tax revenues.

External public and publicly guaranteed debt of Ukraine from 2011 to 2024 (US$ million)

Table 1

Public and publicly guaranteed debt of Ukraine from 2009 to 2024 (US$ million) (4 Minfin, Public and publicly guaranteed debt of Ukraine from 2009 to 2025, 02.05.2025)

date	total debt	%Y/Y	external debt	domestic debt
31.12.2009	39 685,0		26 518,7	13 166,3
31.12.2010	54 289,3	36.8%	34 759,6	19 529,7
31.12.2011	59 215,7	9.1%	37 474,5	21 741,2
31.12.2012	64 495,3	8.9%	38 658,8	25 836,4
31.12.2013	73 078,2	13.3%	37 536,0	35 542,2
31.12.2014	69 794,8	-4.5%	38 792,2	31 002,6
31.12.2015	65 505,7	-6.1%	43 445,4	22 060,2
31.12.2016	70 970,9	8.3%	45 604,6	25 366,2
31.12.2017	76 305,2	7.5%	48 989,4	27 315,8
31.12.2018	78 323,0	2.6%	50 462,5	27 860,5
31.12.2019	84 364,5	7.7%	48 940,8	35 423,7
31.12.2020	90 255,4	7.0%	53 720,8	36 534,6
31.12.2021	97 947,4	8.5%	57 197,0	40 750,4
31.12.2022	111 343,7	13.7%	71 398,6	39 945,1
31.12.2023	145 316,9	30.5%	101 704,7	43 612,2
31.08.2024	154 689,8	6.4%	112 192,4	42 497,4

Table 2

External public and publicly guaranteed debt of Ukraine from 2011 to 2024 (US$ million) (5 Minfin, External public and publicly guaranteed debt of Ukraine from 2011 to 2025, 02.05.2025)

Date	external debt	%Y/Y	government debt	%Y/Y	guaranteed debt	%Y/Y
on 31.12.2011	37 474,5		24 507,1		12 967,5	
on 31.12.2012	38 658,8	3.16%	26 137,7	6.65%	12 521,1	-3.44%
on 31.12.2013	37 536,0	-2.90%	27 901,4	6.75%	9 634,6	-23.05%
on 31.12.2014	38 792,2	3.35%	30 809,1	10.42%	7 983,1	-17.14%
on 31.12.2015	43 445,4	12.00%	34 427,0	11.74%	9 018,5	12.97%
on 31.12.2016	45 604,6	4.97%	36 048,3	4.71%	9 556,3	5.96%
on 31.12.2017	48 989,4	7.42%	38 490,1	6.77%	10 499,3	9.87%
on 31.12.2018	50 462,5	3.01%	39 706,6	3.16%	10 755,8	2.44%
on 31.12.2019	48 940,8	-3.02%	39 342,5	-0.92%	9 598,3	-10.76%
on 31.12.2020	53 720,8	9.77%	44 510,7	13.14%	9 210,1	-4.04%
on 31.12.2021	57 197,0	6.47%	47 654,7	7.06%	942,3	3.61%
on 31.12.2022	71 398,6	24.83%	63 590,9	33.44%	7 807,7	-18.18%
on 31.12.2023	101 704,7	42.45%	94 790,5	49.06%	6 914,2	-11.44%
on 31.08.2024	112 192,4	10.31%	106 783,6	12.65%	5 408,7	-21.77%

Breaking down external debt reviles some thought-provoking signs: first of all, out of US$ 112,192.4 millions more then 95% (US$106 783,6 millions) falls on government debt and only 5% sets as guaranteed one, and the last one is in steady declining portion over past 13 years from almost 35% (on 31.12.2011) down to 5% (on 31.08.2024); the next one is immensely double digitally outpacing governmental borrowings over external bases 22.16% cumulatively on Y/Y basis 2014 and 2015 and 95.15% cumulatively on Y/Y basis over 2022, 2023 and 2024 showing undiversified systematic risk spread on state régime, which is crucial for adequate understanding impending capital structure, investors risks personable responsibilities for covering risks and level of required return on corresponding investments.

Dynamics of External Public Debt and Gross External Debt (GED) of Ukraine from 2009 to 2024 (million US dollars)

Table 3

Dynamics of external public debt and gross external debt (GED) of Ukraine from 2009 to 2024 (million US dollars) (6 Minfin, Dynamics of external public debt and gross external debt (GED) of Ukraine from 2009 to 2025, 02.05.2025)

date	External Public Debt (EPD)	$Y/Y	%Y/Y	Gross External Debt (GED)	$Y/Y	%Y/Y	External Public Debt / GED
on 31.12.2009	26 519			103 396			25.6%
on 31.12.2010	34 760	8241	31.1%	117 343	13947	13.5%	29.6%
on 31.12.2011	37 475	2715	7.8%	126 236	8893	7.6%	29.7%
on 31.12.2012	38 659	1184	3.2%	135 065	8829	7.0%	28.6%
on 31.12.2013	37 536	-1123	-2.9%	142 079	7014	5.2%	26.4%
on 31.12.2014	38 792	1256	3.3%	126 308	-15771	-11.1%	30.7%
on 31.12.2015	43 445	4653	12.0%	118 729	-7579	-6.0%	36.6%
on 31.12.2016	45 605	2159	5.0%	113 518	-5211	-4.4%	40.2%
on 31.12.2017	48 989	3385	7.4%	116 578	3060	2.7%	42.0%
on 31.12.2018	50 462	1473	3.0%	114 710	-1868	-1.6%	44.0%
on 31.12.2019	48 941	-1522	-3.0%	121 739	7029	6.1%	40.2%
on 31.12.2020	53 721	4780	9.8%	125 690	3951	3.2%	42.7%
on 31.12.2021	57 197	3476	6.5%	129 711	4021	3.2%	44.1%
on 31.12.2022	71 399	14202	24.8%	131 998	2287	1.8%	54.1%
on 31.12.2023	101 705	30306	42.4%	161 533	29535	22.4%	63.0%
on 31.08.2024	112 192	10488	10.3%				

Ones we defined the scope and tendencies in External Public Debt logical question is about how External Public Debt correlates to Gross External Debt (GED) (table 3). Notable fact that External Public Debt (EPD) has grown 3.23 times since 2009, while Gross External Debt (GED) has grown by 0.56 times, as a result of such disproportionate growth specific weight of EPD in GED has increased from 26% (2009) up to 63% (2023) and 1/3 of that extension falls on the last three years. Obviously, the structure of sources to finance national needs has changed drastically by placing state government as sole monopolistic player on the external financial marketplace. Reasonably to accept that risk of defaulting state government debt supposed to be hedged for investors by at least directly controlled assets such as gold and Foreign Exchange Reserves (GER) (table 4).

Nevertheless the size of International reserves (IR) has increased by million US dollars 12,020.00 since 2009 reaching record high for the Ukraine (million US dollars 40,514.00 in 2024) the ratio of international reserves to government debt has decreased by almost 60%, in other words, only 40 cents out of one borrowed US dollar technically covered by gold and foreign exchange reserves. Also, from investors standpoint ought to be taken into account another two factors - structure of international reserves of Ukraine and what currency of current debt nominated (tables 5 and 6 respectively).

Table 4

Dynamics of external public debt and gold and foreign exchange reserves (GFR) of Ukraine from 2009 to 2024 (million US dollars) (7 Minfin, Dynamics of external public debt and gold and foreign exchange reserves (GFR) of Ukraine from 2009 to 2025, 02.05.2025)

Date	External public debt			International reserves (IR)			International reserves / government debt
on 31.12.2009	26 519			26 505			99.9%
on 31.12.2010	34 760	8241	31.1%	34 576	8071	30.5%	99.5%
on 31.12.2011	37 475	2715	7.8%	31 795	-2781	-8.0%	84.8%
on 31.12.2012	38 659	1184	3.2%	24 546	-7248	-22.8%	63.5%
on 31.12.2013	37 536	-1123	-2.9%	20 416	-4130	-16.8%	54.4%
on 31.12.2014	38 792	1256	3.3%	7 533	-12882	-63.1%	19.4%
on 31.12.2015	43 445	4653	12.0%	13 300	5767	76.5%	30.6%
on 31.12.2016	45 605	2159	5.0%	15 539	2239	16.8%	34.1%
on 31.12.2017	48 989	3385	7.4%	18 808	3269	21.0%	38.4%
on 31.12.2018	50 462	1473	3.0%	20 820	2012	10.7%	41.3%
on 31.12.2019	48 941	-1522	-3.0%	25 302	4482	21.5%	51.7%
on 31.12.2020	53 721	4780	9.8%	29 133	3831	15.1%	54.2%
on 31.12.2021	57 197	3476	6.5%	30 941	1808	6.2%	54.1%
on 31.12.2022	71 399	14202	24.8%	28 494	-2446	-7.9%	39.9%
on 31.12.2023	101 705	30306	42.4%	40 514	12020	42.2%	39.8%
on 31.08.2024	112 192	10488	10.3%				

Table 5

International reserves of Ukraine as of August 31, 2024 (US$ million)
(8 Minfin, International reserves of Ukraine as of August 31, 2024)

1.	Foreign currency assets	40080,69	94.67%
	a. Securities	32476,86	76.71%
	b. Currency and deposits	7603.83	17.96%
2.	Reserve position in the IMF	0.32	0.00%
3.	SPZ	35.63	0.08%
4.	Monetary gold	2220,75	5.25%
5.	Others	-	
Reserve assets (total)	42337,39	100.00%	

SDR – IMF Special Drawing Rights

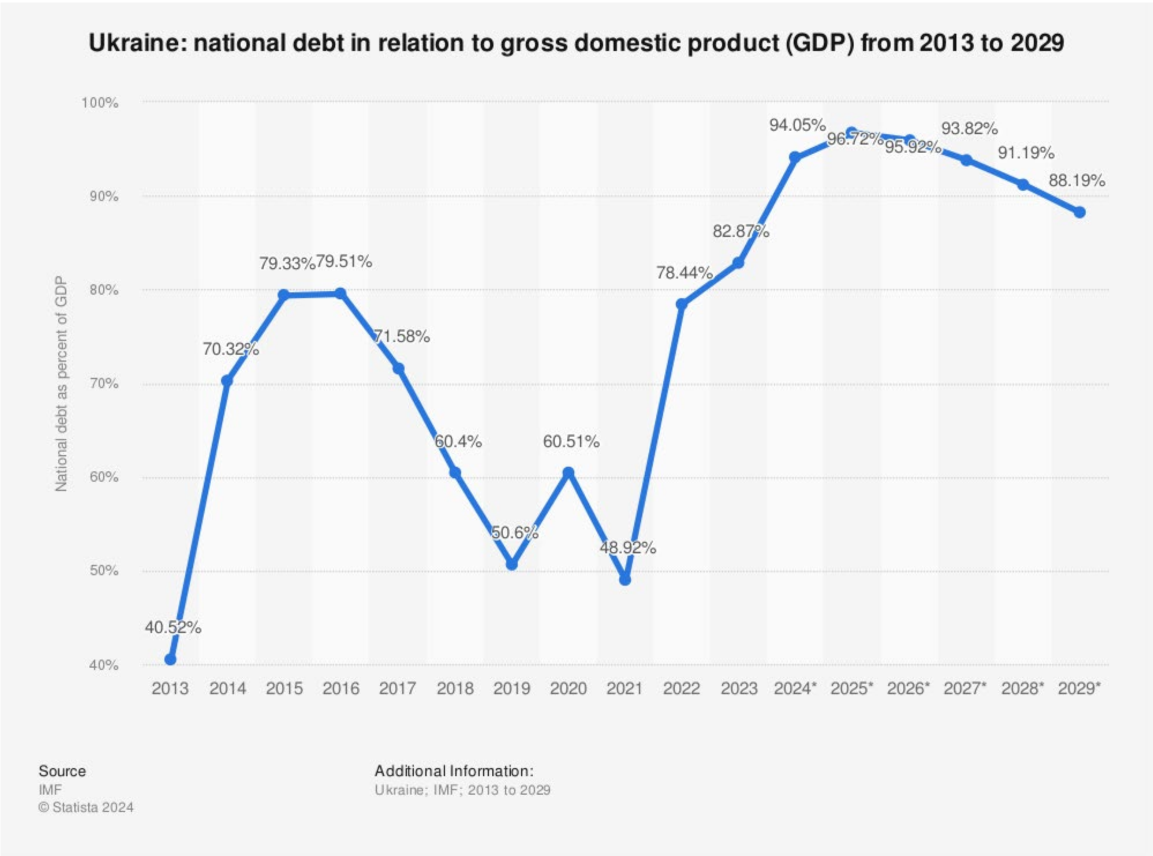
So, further breakdown of country international reserves in term of tangibility and obtainability (in real legal terms) of all assets more or less reachable can be observed as monetary gold & currency and deposits what drops covered portion from 40 cents out of one borrowed US dollar down to 23 cents and in almost 86% cases debtholders ought to be aware that all procedures are going to take place in two jurisdictions where located banks with corresponding accounts for particular nominated currency of debt (table 6).

Table 6

Currency structure of gross external debt of Ukraine as of June 30, 2024
(9 Minfin, Currency structure of gross external debt of Ukraine as of December 31, 2024)

currency	%	Amount equiv. mln. USD
USD US dollar	46.5	78,612.5
EUR Euro	39.2	66,271.1
XDR SPZ	9.4	15,891.5
other	3.5	5,917.1
UAH Ukrainian hryvnia	1,2	2,028.7
RUB Russian ruble	0.2	338.1
Total		169,059.0

Another critical issue for all range of Ukrainian debt creditors – addressed to the debt burden, and Ukraine has been relying on several strategies: international financial assistance, organizations like the International Monetary Fund (IMF) and the World Bank, as well as from individual countries; but are those actors' ready write-off any liabilities including accurized ones. Practice of last year's evidently shows that all creditors are willing get own interest as well as principal with possible restructuring extensions like the last one in summer 2024, and all creditors link Ukrainian playability of debt ultimately to internal GDP. Thus, next turning point is about how public debt is covered by current country income, hypothetically assuming that all investors can exercise their right for collateral debt exposure, knowingly setting beyond the mathematical brackets' deficit state budget.



1. Chart 1. Total national debt and GDP of Ukraine (10 Statista Research Department, Total national debt and GDP of Ukraine, 2024)

Let’s clarify that the ratio of national debt to gross domestic product (GDP) in Ukraine was forecast to continuously decrease between 2024 and 2029 by in total 5.9 percentage points. According to this forecast in 2029, the ratio will have decreased for the fourth consecutive year to 88.19 percent. So far total value of goods and services produced during a year in Ukraine didn’t get a hundred percent of total debt but next reasonable question might be on the agenda what the portion of current GDP could be allocated for next period supporting economic extension. By the way, Ukraine with current level of 85% is not in the basket of countries with the highest debt/GDP ratio, looks that condition is allowable for countries with advanced economies such as USA, Japan, Singapore etc. or for countries with no hope for bright future economies like Eritrea, Cape Verde and so on (table 7).

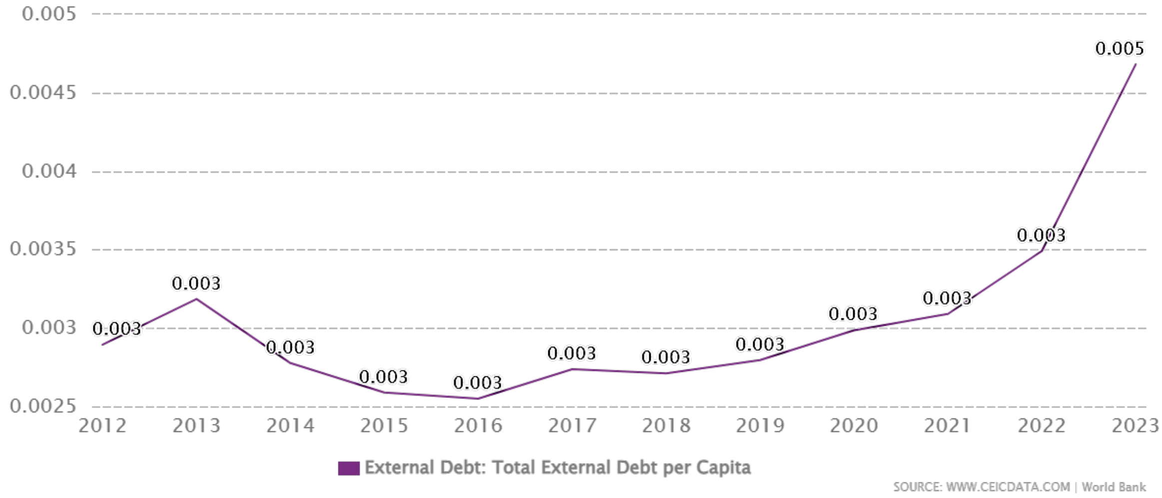
Table 7

Top 10 Countries with the Highest Debt-to-GDP Ratios (%) (11 World Population Review Top 10 Countries with the Lowest Debt-to-GDP Ratios (%), 2025)

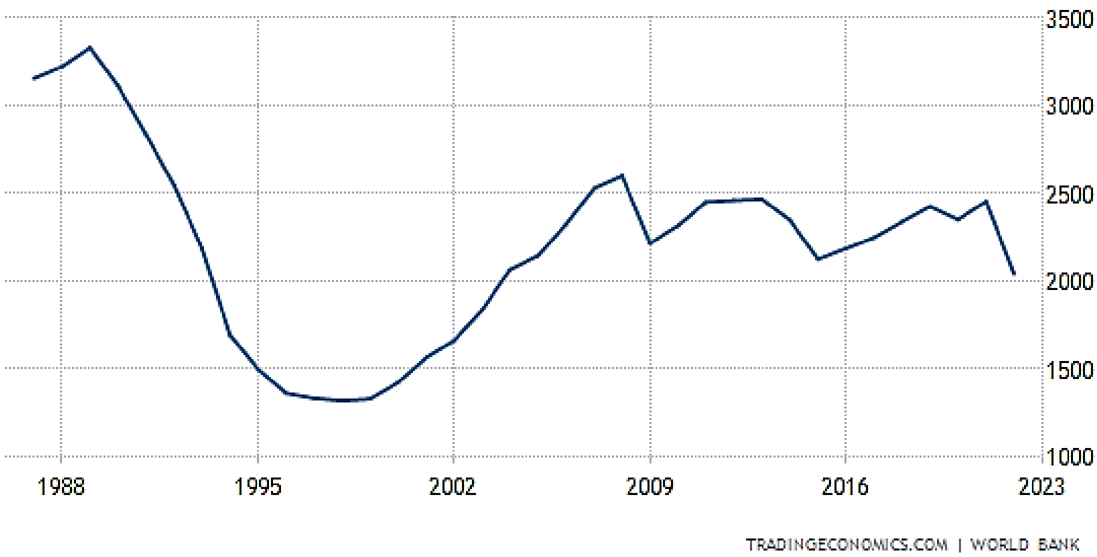
Lebanon	283%
Sudan	256%
Japan	255%
Singapore	168%
Eritrea	164%
Greece	162%
Argentina	155%
Venezuela	146%
Italy	135%
Bhutan	123%

Let’s clarify position on high Debt-to-GDP Ratios as an economic metric that compares a country's government debt to its gross domestic product (GDP) (which represents the value of all goods and services produced by the country), merely it determines the stability and health of a nation's economy, expresses country's ability to pay back its current debts, and evaluates related metrics such as GDP per capita, GDP growth, GNP, and GNI per capita. Thus, nations with a low debt-to-GDP ratio are more likely to be able to repay their debts with relative ease, on other hands, countries whose economies struggle to produce income or which have an oversized debt tend to have a high debt-to-GDP ratio. Also, widely accepted among scholars’ opinion directly above debt to GDP ratios further 75% can delay economic growth and set country at risk of defaulting on its debts, which in own turn harms internal financial market and economy as it is. Also, detailed analysis debt history with high ration country by country reviles very different scenarios of debt accumulation, for instants Japan, with the world's highest debt-to-GDP ratio, got its debt surge due to government bailouts and stimulus initiatives following the stock market crash of 1992, the United States, despite having the world's largest GDP, debt-to-GDP ratio determined by high military spending, tax cuts, and underfunded programs. Venezuela's GDP has plummeted in recent years and at the same time government has taken massive loans, adding to its debt burden, and government made questionable moves to slow the country's rampant inflation.

Total picture will be incomplete without understanding how debt correspondent per capita meaning that national workforce as part of the most productive portion of national capital and income generates per capita (chart 2 and chart 3 respectively).



1. Chart 2. Ukraine External Debt: Total External Debt per Capita from 1992 to 2023 (12 CEIC, Ukraine External Debt: Total External Debt per Capita, 2025)



1. Chart 3. Ukraine GDP per capita (13 Trading Economics, World Bank, Ukraine GDP per capita, 2025)

The Gross Domestic Product per capita in Ukraine was last recorded at USD 2,207.01 in 2023. The GDP per Capita in Ukraine is equivalent to 17% of the world's average. GDP per Capita in Ukraine averaged USD 2,207.37 from 1987 until 2023, reaching an all-time high of 3330.48 USD in 1989 and a record low of USD 1,317.75 in 1998. Debt per capita is a measure that indicates the average amount of debt for each person in a given population, basically used in the context of government or national debt. It’s calculated by dividing the total debt of a government by its population size. Importance of Debt Per Capita: it provides insight into the financial health of a government (higher debt per capita may indicate potential economic strain), allows comparisons between different countries or regions, helping to assess relative economic burdens, investors consider debt per capita when evaluating a country’s creditworthiness. On other hand, GDP per capita is a measure of a country's economic output that accounts for its number of residents. It’s calculated by dividing the Gross Domestic Product (GDP) of a country by its population. This gives an average economic output per person and is often used to compare living standards between different countries or regions. Interpretation: higher GDP per capita typically indicates a higher standard of living and greater economic prosperity; however, it's important to remember that this figure can be influenced by factors such as income inequality and cost of living, meaning it doesn't always reflect the economic reality experienced by all residents (for Ukraine is actual income inequality between so called "oligarchs" who control and use waste majority of national assets and the rest of population). What's alarming when we compare debt per capita and income per capita in Ukraine: inverse relationship between those two highly valuable for investors parameters with long term tendency of nongrowing nominal income per capita and at the same time tendency of growing debt per capita with almost 100% discrepancy in two ratios, in other words on average person with official annual income of USD2,210.00 set financial liabilities of almost USD4,448.00 and that tendency progresses on the background of steadily melting population.

2. Motives for Ukrainian debt accruing

Ukraine's debt has grown significantly due to a combination of factors collectively could be ordered as next:

– Historical accruing debt - country inherited a significant amount of debt from one to another following governments & economic/financial criseses

– military spending, war has necessitated a substantial increase in defense spending to support the Ukrainian military and acquire necessary equipment, government also has had to allocate significant resources for humanitarian aid to displaced persons expenditures for reconstruction, disrupted economic activity, leading to a decline in tax revenues and increased government spending

– budget deficits - ongoing budget deficits, resulting from high expenditures and lower-than-expected revenues, have led the government to finance its shortfalls through debt

Historically each government has made more or less significant contribution along with respective political force that brought the government to the performance of its duties and as we can see some governments made extraordinary efforts to attract debt capital into the country along with annual distribution of collected debt (table 9 & table 10 respectively).

Table 8

National debt and the Presidents of Ukraine (14 Wikipedia, Public debt and the Presidents of Ukraine, 2025)

President			**state debt (million USD)**
Leonid Makarovych Kravchuk	24-Aug-91	19.07.1994	2,406.69
Leonid Danylovich Kuchma	19.07.1994	23.01.2005	▲ 13,727.68
Viktor Andriyovych Yushchenko	23.01.2005	25.02.2010	▲ 21,809.77
Viktor Yanukovych	25.02.2010	22.02.2014	▲ 35,282.24
Oleksandr Valentinovych Turchynov	22.02.2014	07.06.2014	▼ -3,127.63
Petro Oleksiiovych Poroshenko	07.06.2014	5/20/2019	8,312.35
Volodymyr Zelenskyi (until 24.02.22)	5/20/2019	2/24/2022	14,909.20
Volodymyr Zelenskyi (after 24.02.22)	2/24/2022	31.03.2024	▲ 57,726.16

For sure, the biggest increase has happened under current war circumstances and trough budget mechanism of capital reallocation which is understandable as increasing government role to finance war and related expenses. As a result of outpacing expenses current budget income, deficit on august 2024 reached billion UAH676,426.10 (with exchange rate 40.7 UAH/ASD equivalent to billion USD16,620.69); a worrying factor for investors is that budget gap is unparalleled with annual country needs to finance from 50 to 70 USD billions annually, shrinking domestic tax base and the reluctance of external creditors to provide debt financing in already high-risk area.

Table 9

State debt and state-guaranteed debt by years (14 Wikipedia, Dynamics of public debt and state-guaranteed debt of Ukraine, 2025)

date	ammoun (mln USD)	difference per year
31.12. 1991	0	-/-
31.12. 1992	11.47	11.47
31.12. 1993	388.22	376.75
31.12. 1994	3,848.46	3,460.24
31.12. 1995	12,610.41	8,761.95
31.12. 1996	10,894.09	▼ -1,716.32
31.12. 1997	15,034.95	4,140.86
31.12. 1998	14,410.73	▼ -624.22
31.12. 1999	15,249.42	838.69
31.12. 2000	14,172.92	▼ -1,076.50
31.12. 2001	14,084.87	-88.05
31.12. 2002	14,201.30	116.43
31.12. 2003	14,542.53	341.23
31.12. 2004	16,096.25	1,553.72
31.12. 2005	15,474.41	▼ -621.84
31.12.2006		
15,949.90	475.49	
31.12. 2007	17,573.22	1,623.32
31.12. 2008	24,598.75	7,025.53
31.12. 2009	39,684.99	▲ 15,086.24
31.12. 2010	54,289.34	▲ 14,604.35
31.12. 2011	59,215.70	4,926.36
31.12. 2012	64,500.00	5,284.30
31.12. 2013	73,110.18	8,610.18
31.12. 2014	69,811.89	▼ -3,298.29
31.12. 2015	65,488.41	▼ -4,323.48
31.12. 2016	70,970.86	5,482.45
31.12. 2017	76,305.18	5,334.32
31.12. 2018	78,322.97	2,017.79
31.12. 2019	84,364.54	6,041.57
31.12. 2020	90,253.51	5,888.97
31.12. 2021	97,954.31	7,700.80
31.12.2022	111,375.51	13,421.20
31.12.2023	145,317.46	33,941.95

3. Fundamental characteristics of Ukrainian debt, solving risk-return dilemma

Ukrainian debt features ought to be assigned specific structure of the debt, sporadic maturity of the debt, fluctuating interest on specific debt face value, assembly of creditors, vulnerability to external shocks or geopolitical risks.

Structure: correlation between domestic and external debt is approximately 27% and 73% and is a mix of domestic and external obligations with high public debt level and country is experiencing substantial increase in public debt, particularly since the war with Russia began in 2014; domestic debt is owed to domestic lenders, while external debt is owed by foreign creditors with significant portions owed to international financial institutions, bilateral lenders, and private creditors. Currency composition – major portion of Ukraine's debt is nominated in foreign currencies, primarily US dollars and Euros, what determines national currency exposure toward the exchange rate risks so making it susceptible to exchange rate fluctuations, especially with the Ukrainian hryvnia's volatility.

Maturity - Ukraine's debt portfolio includes a mix of short, mid and long-term commitments; first on mature within a year, the second one are due in up to five years, and last one mature over 5 years (table 11 & 12 respectively).

Table 10

State domestic debt split by maturity as of end of period (15 Ukraine Ministry of Finance, Medium-Term State Debt Management Strategy for 2024-2026, 10,2023)

	2021	**2022**	**2023**
	% of total	**% of total**	**% of total**
< 3 years	43%	30%	37%
3-5 years	12%	7%	8%
5-7 years	6%	7%	4%
7-10 years	14%	12%	13%
> 10 years	24%	44%	38%
Total domestic debt	100%	100%	100%

Table 11

State external debt split by maturity as of end of period (15 Ukraine Ministry of Finance, Medium-Term State Debt Management Strategy for 2024-2026, 10,2023)

	2021	**2022**	**2023**
	% of total	**% of total**	**% of total**
< 3 years	0%	2%	8%
3-5 years	16%	13%	8%
5-7 years	9%	12%	8%
7-10 years	28%	21%	24%
> 10 years	47%	52%	51%
Total domestic debt	100%	100%	100%

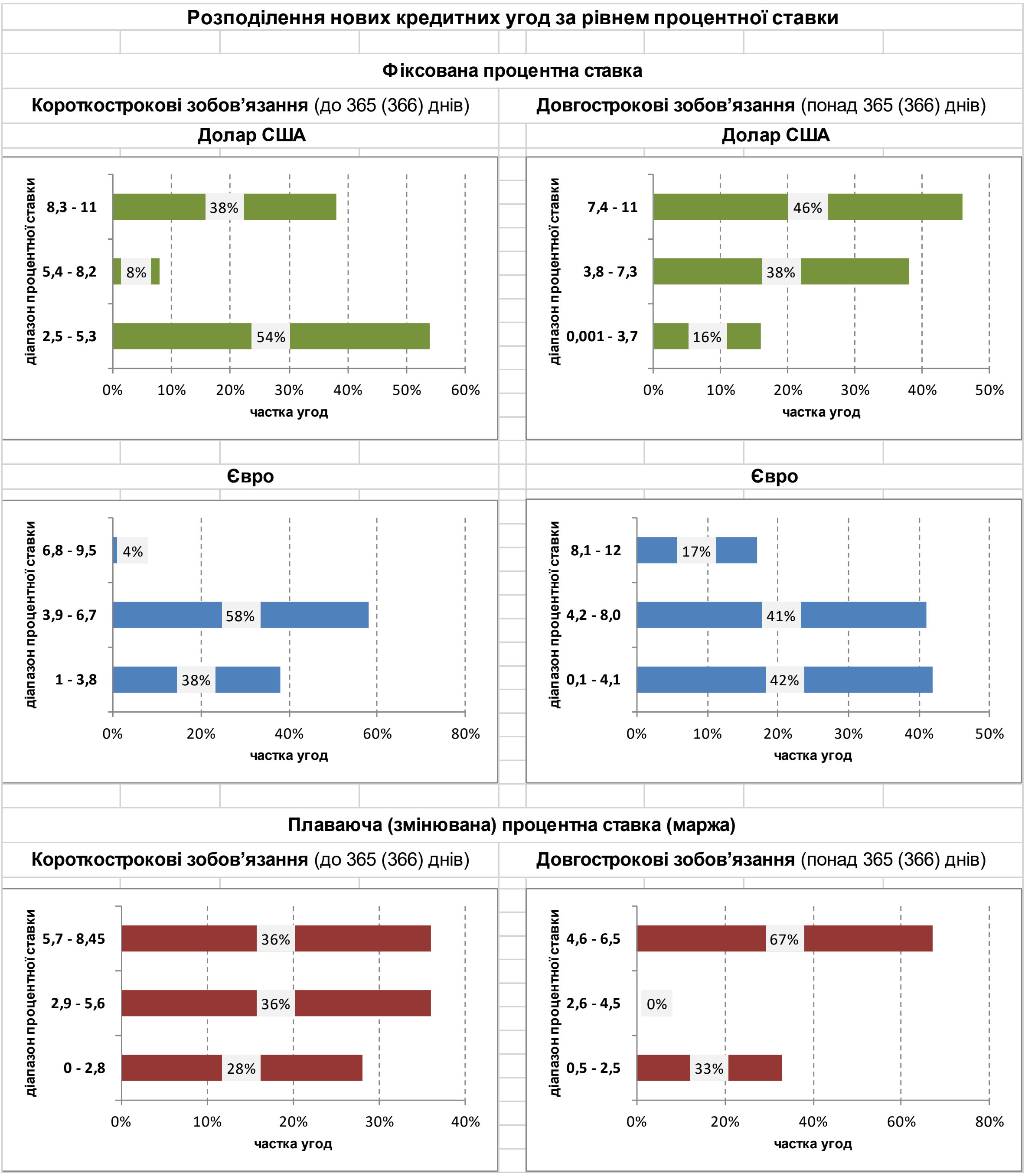
What attracts attention is that relatively high portion (in both layers of borrowings) so called long-term obligations, on background economic and financial instability. For instance, in neighboring Poland less intention to relay on long-term liabilities in external as well as internal borrowings (table 12).

Table 12

Sales of TSs in the domestic market by maturity (16 Poland Ministry of Finance, THE PUBLIC FINANCE SECTOR DEBT MANAGEMENT STRATEGY in the years 2024-2027, 09,2023)

Instruments	**2021**	**2022**	**January-june 2023**
Marketable TSs	100%	100%	100%
T-bills	0.0%	0.0%	0.0%
T-bonds with maturities up to 4 years	12.6%	10.4%	9.9%
T-bonds with maturities over 4 years up to 6 years (incl.)	46.1%	55.2%	69.3%
T-bonds with maturities over 6 years	41.3%	34.4%	20.9%
Savings bonds	100%	100%	100%
T-bonds with maturities up to 2 years	59.1%	44.4%	29.1%
T-bonds with maturities over 2 years up to 4 years (incl.)	33.2%	44.3%	56.0%
T-bonds with maturities over 4 years	7.7%	11.2%	14.9%

Cost of borrowings - some of Ukraine's debt carries floating interest rates, which can fluctuate based on market conditions, the other debt has fixed interest rates, which remain constant throughout the life of the loan, so debt often carries high-interest rates, particularly on domestic bonds, reflecting the country's risk profile. Information about the contribution of foreign investors to the real sector in the first quarter of 2019 and in first quarter of 2022 (table 13 & 14 respectively) shows increase in floating interest rates in the beginning of massive military intervention. Basically, using floating interest rates refers to borrowers with long solid and stable credit history and adversely fixed interest rates more suitable for debtors with fluctuating credit history.



1. Table 13. contribution of foreign investors to the real sector in the first quarter of 2019 (17 National Bank of Ukraine, Financial Stability Report, 12,2025)

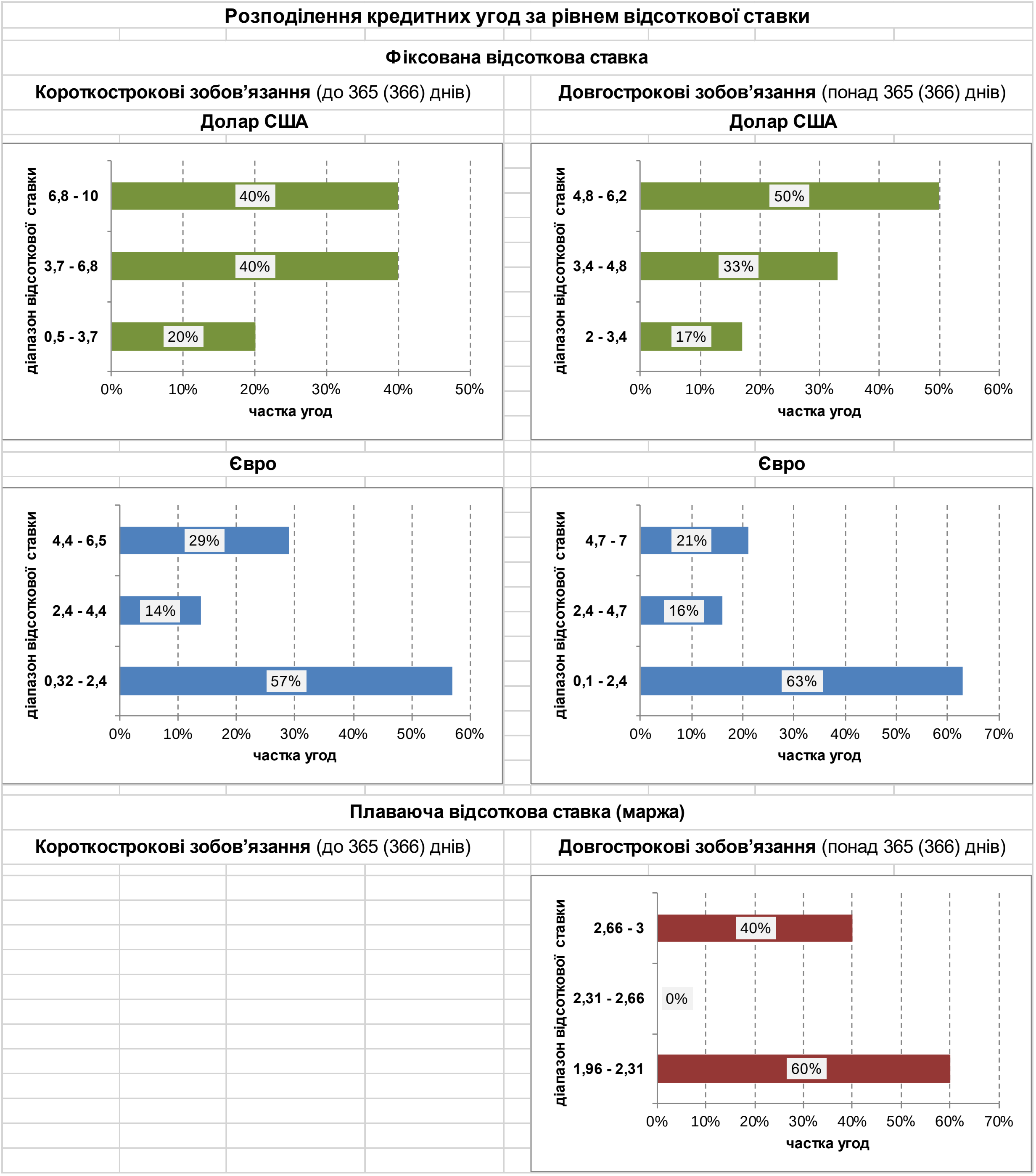


Table 14. contribution of foreign investors to the real sector in the first quarter of 2022 (17 National Bank of Ukraine, Financial Stability Report, 12,2025)

According government declaration, from the beginning of 2024 the cost of the sovereign and the sovereign-guaranteed debt (USD nominated) of Ukraine decreased by 10.3% - from 6.24% to 5.6%.

With a broad stroke of a financial brush on the record among public debt creditors are USA and EU, Asian countries governments, respective international financial institutions, and private investment companies; however, the geographic structure of loans to the private sector in Ukraine is somewhat different according data of National Bank of Ukraine (table 15) where Cyprus keeps the lion portion in supporting financial debt market with 54% in short-term and 48% in long-term financing.

Chart 4. weighted average cost of government debt (18 Ukraine Ministry of Finance, Ukraine's state and state-guaranteed debt has become cheaper by more than 10% since the beginning of 2024, 12,08,2025)

Table 15

Geographic structure of loans to the private sector in Ukraine (17 National Bank of Ukraine, Geographic structure of arrears of External Debt for real sector, 03, 2024)

countries			
	total	**short-term**	**long-term**
total	42,602.0	1,178.0	41,424.0
Cyprus	20,549.7	636.2	19,913.5
The Kingdom of Great Britain and Northern Ireland	4,612.7	103.9	4,508.8
Netherlands	3,504.9	15.2	3,489.7
USA	1,335.0	9.9	1,325.2
Germany	1,310.9	68.6	1,242.3
Virgin Islands	995.6	5.1	990.5
Austria	989.6	2.1	987.5
Luxembourg	943.4	0.0	943.4
Switzerland	864.1	150.7	713.4
Malta	643.6	1.3	642.3
United Arab Emirates	447.1	5.8	441.3
France	400.4	29.3	371.1
Panama	396.2	9.4	386.8
Poland	371.0	7.0	364.0
Estonia	338.1	2.9	335.2
Hong Kong	314.5	5.3	309.2
Turkey	299.7	3.2	296.5
Hungary	292.9	2.1	290.8
Sweden	208.6	25.4	183.2
Greece	196.2	1.0	195.2
Other countries	*3,587.8*	*93.7*	*3,494.1*

Reasonable question might be asked – what attracts investors in debt market if according state officials cost of debt is on the level of 5.6%, with widely accepted among investors criteria's such as Adjusted Default Spread, Equity Risk Premium, Country Risk Premium, Corporate Tax Rate, Moody's rating, and Sovereign CDS Spread (table 16) and neither of mentioned parameters directly incorporated real inflation rate which recently declared by regulator on the level of 7.5% on the y/y base (September 2024).

Table 16

Country Default Spreads and Risk Premiums (19 Stern, NYU, Country Default Spreads and Risk Premiums, 01.09.2025)

Country	Adj/ Default S pread	Equity Risk Premium	Country Risk Premium	Corporate Tax Rate	Moody's rating	S overeign CDS Spread
Ukraine	13.07%	22.15%	17.55%	18.00%	Ca	NA
Poland	0.92%	5.84%	1.24%	19.00%	A2	1.06%
Cyprus	2.07%	7.38%	2.78%	12.50%	Baa2	1.11%

By the way, if to continue comparison of yields, following table demonstrates closest geographical investor acceptancy criteria (table 17)

Table 17

Issues of bonds in foreign markets in 2022 and in the first half of 2023 (16 Poland Ministry of Finance, THE PUBLIC FINANCE SECTOR DEBT MANAGEMENT STRATEGY in the years 2024-2027, 09,2023)

Period	Maturity (years)	Currency	Face value of issue (million)	Yield
2022	10	EUR	2 000	2.850%
2022	5	USD	1 500	5.619%
2022	10	USD	1 500	5.890%
January – June 2023	20	EUR	1 250	4.272%
January – June 2023	10	USD	2 500	4.968%
January – June 2023	30	USD	2 500	5.585%

Risk-return dilemma for Ukrainian debtholders possible to solve using advanced bond concept for coupon debt instruments affecting duration or opening position on the base of discounted price that ought to satisfy investor acceptancy criteria; a showpiece deal was informed by Ukrainian press in summer 2013, reported that Serhiy Arbuzov, Ukraine's first deputy prime minister, and Yuriy Kolobov, the finance minister, made an unofficial visit to Franklin Templeton's San Mateo headquarters to reassure the country's biggest creditor at that time (20 CNBC, Emerging Europe, Franklin Templeton in $5 billion Ukraine debt gamble, 11.11.2013); thus, Franklin Templeton became Ukraine's biggest private creditor in 2013, with an investment of about $7 billion across funds, the year before a revolution toppled the country's former president, prompting a separatist insurgency in its eastern regions, the fighting crippled Ukraine's finances, forcing it to seek a sovereign-debt restructuring in 2015 (21 Bloomberg, Business, Templeton's Hasenstab Winds Down $7 Billion Ukraine Bond Bet, 04.21.2017).

4. Awareness in the future - trade-off between risk and potential return.

Investors must prudently consider these specific risk factors when making their decision such as interest rate risk (in the case interest rates rise, the value of existing bonds with fixed interest rates falls); credit risk (risk that the debtors may well default on their debt payments, and this probability is truly high for borrowers with scrawny financial position); inflation risk (as a rule, inflation increases faster than the interest rate on a bond, the so reinvestment supremacy of the bond's future outflows will decline) ; liquidity risk (nearly all of such bonds difficult to sell, especially in times of financial disorders, thus price of bonds are going down and bondholders loss value of their portfolios). Basically, we identify all mentioned risks practically in all Ukrainian debt instruments with overall declining sovereign credit ratings from S&P and Moodies (table 18 & 19 respectively).

Table 18

Dynamic of Ukraine's sovereign credit ratings as of 2004-2024 (22 Ukraine Ministry of Finance, Credit Rating, 03.2024)

Rating agency	Foreign currency rating				Local currency rating				National scale rating on the country		Outlook		Assignment date/ Confirmation date
	Long-term debt		Short-term debt		Long-term debt		Short-term debt						
"Standard and Poor's" (S&P)	B +	↑	B		B +	↑	B				Stable		**20 July 2004**
									uaAA				**14 Apr 2005**
	BB-	↑	B		BB		B		uaAA		Stable		**11 May 2005**
	BB-		B		BB		B				Stable		**3 Oct 2005**
	BB-		B		BB		B				Stable		**30 Aug 2006**
	BB-		B		BB		B				Negative	↓	**5 Apr 2007**
	BB-		B		BB		B		uaAA		Negative		**2 Aug 2007**
	B +	↓	B		BB-	↓	B				Stable	↑	**12 June 2008**
	B +		B		BB-		B		uaAA		CreditWatch*		**15 Oct 2008**
	B	↓	B		B +	↓	B		uaA+	↓	Negative		**24 Oct 2008**
	B		B		B +		B				CreditWatch		**16 Feb 2009**
	CCC+	↓	C	↓	B-	↓	C	↓	uaBBB		Negative		**25 Feb 2009**
	CCC+		C		B-		C				Positive	↑	**31 July 2009**
	CCC+		C		B-		C		uaBBB		Stable	↓	**30 Oct 2009**
	B-	↑	C		B	↑	B	↑			Positive	↑	**11 Mar 2010**
									uaA	↑			**17 Mar 2010**
	B	↑	B	↑	B+	↑	B		uaA+	↑	Stable	↑	**17 May 2010**
	B		B		B+		B		uaA+		CreditWatch		**22 July 2010**
	B+	↑	B		BB-	↑	B		uaAA-	↑	Stable		**29 July 2010**
	B+		B		B+	↓	B		uaAA-		Stable		**13 Sep 2011**
	B+		B		B+		B		uaA+	↓	Negative	↓	**15 Mar 2012**
	B	↓	B		B	↓	B		uaA-	↓	Negative		**7 Dec 2012**
	B		B		B		B		uaA-		Negative		**16 May 2013**
	B-	↓	B		B-	↓	B		uaBBB-	↓	Negative		**1 Nov 2013**
	B-		B		B-		B		uaBBB-		Stable	↑	**26 Dec 2013**
	CCC+	↓	C	↓	B-		B		uaBB+	↓	Negative		**28 Jan 2014**
	CCC	↓	C		B-		B		uaBB+		Negative		**21 Feb 2014**
	CCC		C		B-		B		uaBB+		Stable	↑	**11 July 2014**
	CCC-	↓	C		CCC+	↓	C	↓	uaB+	↓	Negative	↓	**19 Dec 2014**
	CC	↓	C		CCC+		C		uaB+		Negative		**10 Apr 2015**
	CC		C		CCC+		C		uaB+		Negative		**28 Aug 2015**

Continuation of table 18

“Standard and Poor's” (S&P)	SD	↓	SD	↓	CCC+		C		uaB+				**25 Sep 2015**
	B-/D	↑	B	↑	B-	↑	B	↑	uaB+		Stable	↑	**19 Oct 2015**
	B-/D		B		B-		B		uaBBB-	↑	Stable		**11 Dec 2015**
	B-		B		B-		B		uaBBB-		Stable		**10 June 2016**
	B-		B		B-		B		uaBBB-		Stable		**9 Dec 2016**
	B-		B		B-		B		uaBBB-		Stable		**12 May 2017**
	B-		B		B-		B		uaBBB-		Stable		**10 Nov 2017**
	B-		B		B-		B		uaBBB-		Stable		**20 Apr 2018**
									uaBBB	↑			**27 June 2018**
	B-		B		B-		B		uaBBB		Stable		**19 Oct 2018**
	B-		B		B-		B		uaBBB		Stable		**12 Apr 2019**
	B	↑	B		B	↑	B		uaA	↑	Stable		**27 Sep 2019**
	B		B		B		B		uaA		Stable		**13 Mar 2020**
	B		B		B		B		uaA		Stable		**11 Sep 2020**
	B		B		B		B		uaA		Stable		**12 Mar 2021**
	B		B		B		B		uaA		Stable		**10 Sep 2021**
	B-	↓	B		B-	↓	B		uaBBB-	↓	CreditWatch Negative	↓	**25 Feb 2022**
	B-		B		B-		B		uaBBB-		CreditWatch Negative		**11 Mar 2022**
	CCC+	↓	C	↓	B-		B		uaBBB-		Negative	↓	**27 May 2022**
	CC	↓	C		B-		B		uaBBB-		Negative		**29 Jul 2022**
	SD	↓	SD	↓	CCC+	↓	C	↓	uaBB-	↓			**12 Aug 2022**
	CCC+	↑	C	↑	CCC+		C		uaBB	↑	Stable	↑	**19 Aug 2022**
	CCC+		C		CCC+		C		uaBB		Stable		**10 Mar 2023**
	CCC	↓	C		CCC+		C		uaBB		Negative	↓	**6 Apr 2023**
	CCC		C		CCC+		C		uaBB		Negative		**8 Sep 2023**
	CC	↓	C		CCC+		C		uaBB		Negative		**8 Mar 2024**

On return factors in bonds investors ought to rely on interest rates (or coupon rates if such provision declared in prospectus) Higher interest rates generally lead to higher bond yields; credit quality (bonds issued by with higher credit ratings typically offer lower interest rates because lower risk of default); maturity (usually bonds with longer maturities offer higher interest rates if to compare with short and midterm rate bonds and logic over heir is straight forward – compensation of risk associated with prolonged holding period); call risk (if call option is assigned to specific instrument – not applicable at up-to-date point of time for Ukrainian government bonds) Some bonds can be called by the issuer before their maturity date. With respect to credit quality and interest rate newly restructured international bonds Fitch Agency rated them as CCC Ratings agency Fitch gave Ukraine's newly-restructured international bonds a deep-into-junk 'CCC' rating on and kept the war-torn country's overall foreign currency score in "selective default", reflecting "still substantial credit risk given the protracted nature of the war" and its expectations that Kyiv will have huge fiscal deficits of 17.5% of

Table 19

Dynamic of Ukraine's sovereign credit ratings as of 2004-2024 (22 Ukraine Ministry of Finance, Credit Rating, 03.2024)

Rating agency	Foreign currency rating				Local currency rating				National scale rating on the country		Outlook		Assignment date/ Confirmation date
	Long-term debt		Short-term debt		Long-term debt		Short-term debt						
Fitch Ratings" (Fitch)	BB-	↑	B		BB-	↑	-				Stable		**21 Jan 2005**
	BB-		B		BB-		-				Positive	↑	**8 June 2005**
	BB-		B		BB-		-				Stable	↓	**12 Jan 2006**
									AA+(ukr)		Stable		**26 June 2006**
	BB-		B		BB-		-				Positive	↑	**25 Oct 2006**
	BB-		B		BB-		-				Positive		**18 Mar 2008**
	BB-		B		BB-		-				Stable	↓	**14 Mar 2008**
	BB-		B		BB-		-				Negative	↓	**25 Sep 2008**
	B +	↓	B		B +	↓	-				Negative		**17 Oct 2008**
	B	↓	B		B	↓	-				Negative		**12 Feb 2009**
									AA(ukr)	↓	Stable		**13 Feb 2009**
	B		B		B		-				Negative		**14 Oct 2009**
	B-	↓	B		B-	↓	-				Negative		**12 Nov 2009**
									AA-(ukr)		Stable		**13 Nov 2009**
	B-		B		B-		-				Stable	↑	**17 Mar 2010**
	B	↑	B		B	↑	-				Stable		**6 July 2010**
									AA(ukr)	↑	Stable		**7 July 2010**
	B		B		B		-				Stable		**15 Sep 2010**
	B		B		B		-				Positive	↑	**21 July 2011**
									***				**2 Sep 2011**
	B		B		B		-				Stable	↓	**19 Oct 2011**
	B		B		B		-				Stable		**10 July 2012**
	B		B		B		-				Negative	↓	**28 June 2013**
	B-	↓	B		B-	↓	-				Negative		**8 Nov 2013**
	CCC	↓	C	↓	B-		-				Negative		**7 Feb 2014**
	CCC		C		B-		-				Negative		**28 Feb 2014**
	CCC		C		CCC	↓	-						**22 Aug 2014**
	CC	↓	C		CCC		-						**13 Feb 2015**
	CC		C		CCC		-						**7 Aug 2015**
	C	↓	C		CCC								**27 Aug 2015**
	RD	↓	RD	↓	CCC								**6 Oct 2015**
	CCC	↑	C	↑	CCC								**18 Nov 2015**

Continuation of table 19

Fitch Ratings" (Fitch)	CCC		C		CCC								**13 May 2016**
			C		CCC		C						**22 July 2016**
	B-	↑	B	↑	B-	↑	B	↑			Stable	↑	**11 Nov 2016**
	B-		B		B-		B				Stable		**28 Apr 2017**
	B-		B		B-		B				Stable		**27 Oct 2017**
	B-		B		B-		B				Stable		**27 Apr 2018**
	B-		B		B-		B				Stable		**26 Oct 2018**
	B-		B		B-		B				Stable		**8 Mar 2019**
	B	↑	B		B	↑	B				Positive	↑	**6 Sep 2019**
	B		B		B		B				Positive		**6 Mar 2020**
	B		B		B		B				Stable	↓	**22 Apr 2020**
	B		B		B		B				Stable		**4 Sep 2020**
	B		B		B		B				Stable		**26 Feb 2021**
	B		B		B		B				Positive	↑	**6 Aug 2021**
	B		B		B		B				Stable	↓	**4 Feb 2022**
	CCC	↓	C	↓	CCC	↓	C	↓					**25 Feb 2022**
	C	↓	C		CCC-	↓	C						**22 Jul 2022**
	RD	↓	C		CCC-		C						**12 Aug 2022**
	CC	↑	C		CCC-		C						**17 Aug 2022**
	CC		C		CCC-		C						**20 Jan 2023**
	CC		C		CCC-		C						**23 Jun 2023**
	CC		C		CCC-		C						**8 Dec 2023**

gross domestic product this year and 15.3% in 2025 (24 National Bank of Ukraine, Domestic government bonds market, Domestic government bonds issues, Domestic government bonds: primary market, Domestic government bonds: secondary market, 2025).

Concerning to balancing risk and return – basically balance between risk and return be contingent and relies on investor's individual risk tolerance. As of nowadays Ukrainian debt instruments try to sell investors following yield (charts 5, 6, and 7 in UAH, USD, and EURO).

Combination of rational investment strategy with stressed above parameters will definitely require specific strategies such as extended diversification - investing in a variety of bonds with different maturities, credit ratings, and desirably scratched or maturity shifted portfolio combining bonds with different maturity dates under professional management.

Conclusion

Defined how Ukrainian makes efforts to overcome war time economic consequences such as massive economic damage, huge losses of human capital, land, infrastructure, using debt; Appraised of Ukrainian debt; Cleared motives for Ukrainian debt accruing; Explained who is funding debt borrowings, and who are recipients; Spell out who is ultimately responsible for debt paying back, current state of county budget; Determined fundamental characteristics of Ukrainian debt, and how to solve risk-return dilemma; Awareness in the future for investors and visible alternates to debt financing.

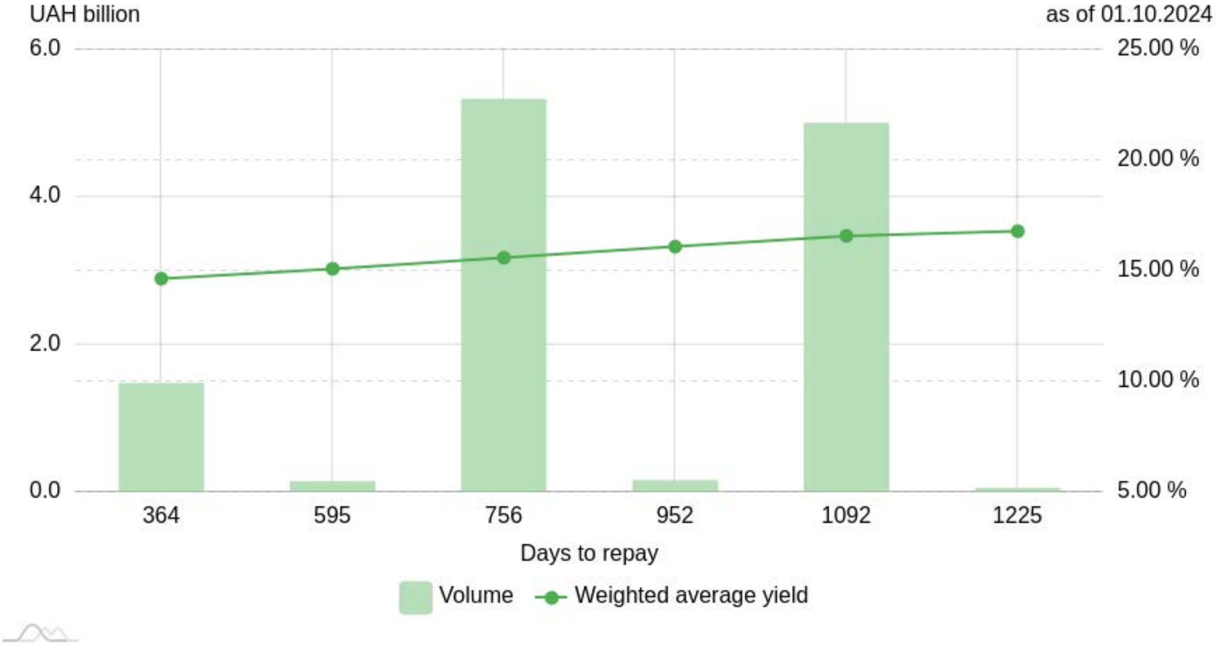


Chart 5. Domestic government bonds: primary market UAH (24 National Bank of Ukraine, Domestic government bonds market, Domestic government bonds issues, Domestic government bonds: primary market, Domestic government bonds: secondary market, 2025)

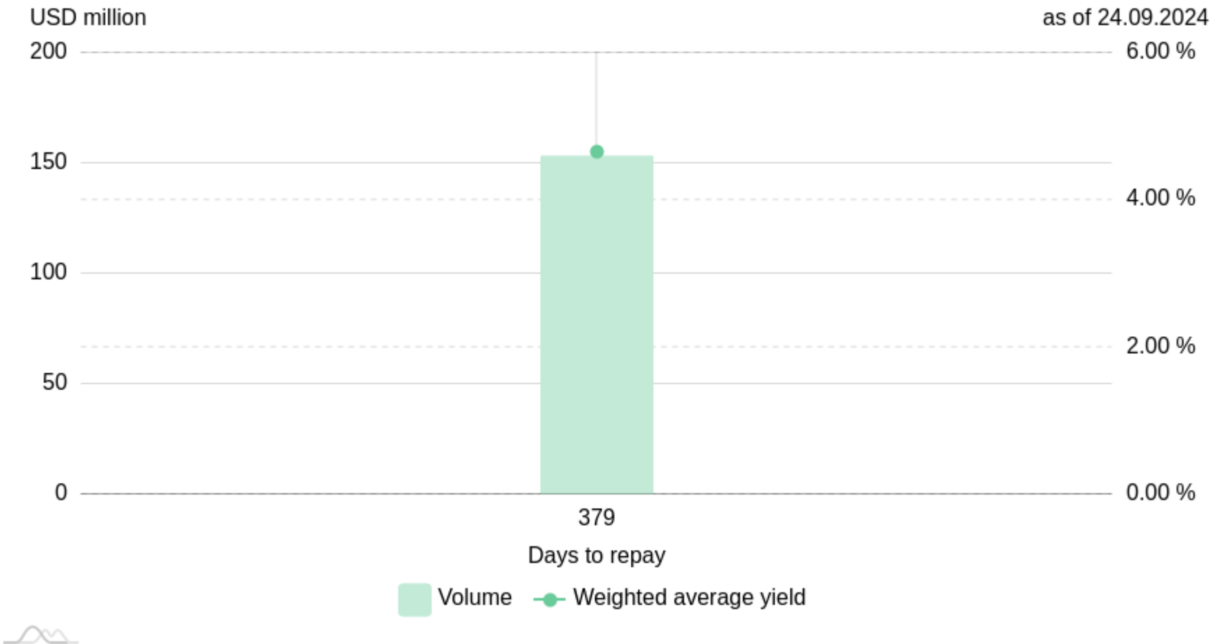


Chart 6. Domestic government bonds: primary market USD (24 National Bank of Ukraine, Domestic government bonds market, Domestic government bonds issues, Domestic government bonds: primary market, Domestic government bonds: secondary market, 2025)

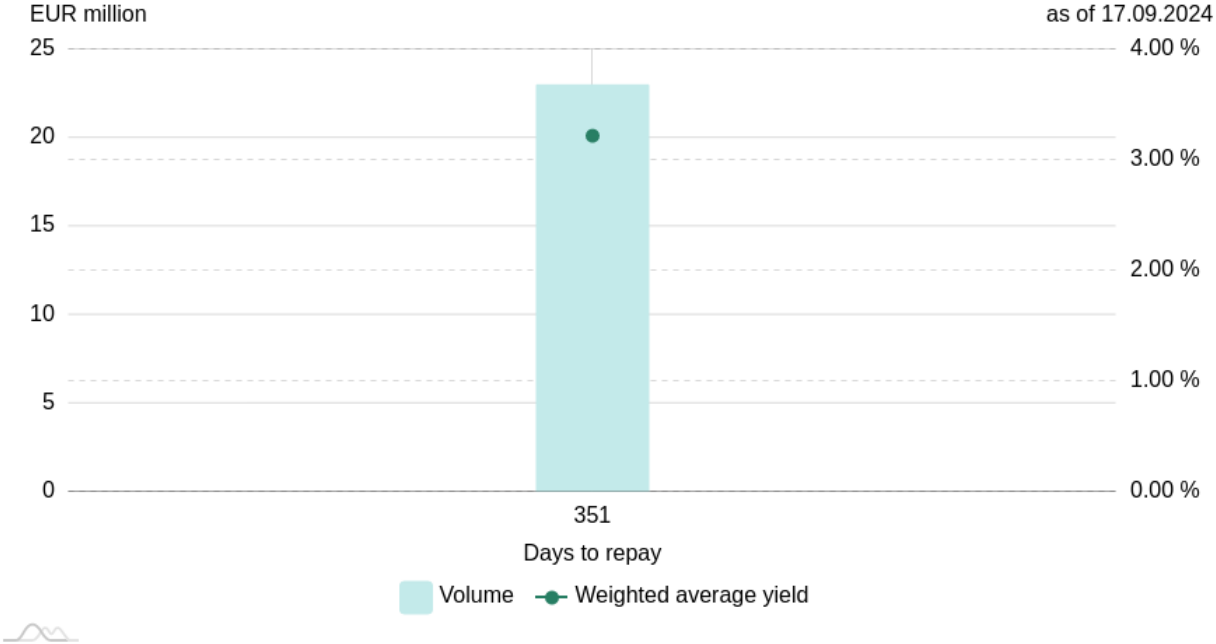


Chart 7. Domestic government bonds: primary market EUR (24 National Bank of Ukraine, Domestic government bonds market, Domestic government bonds issues, Domestic government bonds: primary market, Domestic government bonds: secondary market, 2025)

References:

1. U.S. Department of the Treasury, Press Releases, Statement of the Group of Creditors of Ukraine, 08.09.2024. https://home.treasury.gov/news/press-releases/jy2535#:~:text=Background%20note%3A%20The%20Group%20of,Spain%2C%20Sweden%2C%20and%20Switzerland
2. White & Case, Press Releases, White & Case advises Ukraine on successful restructuring of US$20.5 billion of international bonds, 06.06.2024. https://www.whitecase.com/news/press-release/white-case-advises-ukraine-successful-restructuring-us205-billion-international
3. White & Case, Ukraine concludes historic restructuring of US$20.5 billion of international bonds, 09.10.2024. https://www.whitecase.com/insight-alert/ukraine-concludes-historic-restructuring-us205-billion-international-bonds
4. Minfin, Public and publicly guaranteed debt of Ukraine from 2009 to 2025, 02.05.2025. https://index.minfin.com.ua/finance/debtgov/
5. Minfin, External public and publicly guaranteed debt of Ukraine from 2011 to 2025, 02.05.2025. https://index.minfin.com.ua/finance/debtgov/foreign/
6. Minfin, Dynamics of external public debt and gross external debt (GED) of Ukraine from 2009 to 2025, 02.05.2025. https://index.minfin.com.ua/finance/debtgov/foreign/
7. Minfin, Dynamics of external public debt and gold and foreign exchange reserves (GFR) of Ukraine from 2009 to 2025, 02.05.2025. https://index.minfin.com.ua/finance/debtgov/foreign/
8. Minfin, International reserves of Ukraine as of August 31, 2024. https://index.minfin.com.ua/finance/assets/
9. Minfin, Currency structure of gross external debt of Ukraine as of December 31, 2024. https://index.minfin.com.ua/economy/foreigndebt/
10. Statista Research Department, Total national debt and GDP of Ukraine, 2024. https://www.statista.com/statistics/427246/national-debt-of-ukraine-in-relation-to-gross-domestic-product-gdp/

11. World Population Review Top 10 Countries with the Lowest Debt-to-GDP Ratios (%), 2025. https://worldpopulationreview.com/country-rankings/debt-to-gdp-ratio-by-country
12. CEIC, Ukraine External Debt: Total External Debt per Capita, 2025. https://www.ceicdata.com/en/ukraine/external-debt-debt-outstanding-debt-ratio-and-debt-service-annual/external-debt-total-external-debt-per-capita
13. Trading Economics, World Bank, Ukraine GDP per capita, 2025. https://tradingeconomics.com/ukraine/gdp-per-capita
14. Wikipedia, Public debt and the Presidents of Ukraine, Dynamics of public debt and state-guaranteed debt of Ukraine, 2025. https://uk.wikipedia.org/wiki/%D0%94%D0%B5%D1%80%D0%B6%D0%B0%D0%B2%D0%BD%D0%B8%D0%B9_%D0%B1%D0%BE%D1%80%D0%B3_%D0%A3%D0%BA%D1%80%D0%B0%D1%97%D0%BD%D0%B8
15. Ukraine Ministry of Finance, Medium-Term State Debt Management Strategy for 2024-2026, 10, 2023. https://mof.gov.ua/storage/files/MTDS_2024-26_EN__v30102023.pdf
16. Poland Ministry of Finance, THE PUBLIC FINANCE SECTOR DEBT MANAGEMENT STRATEGY in the years 2024-2027, 09,2023. file:///C:/Users/device/Desktop/The_Public_Finance_Sector_Debt_Management_Strategy_in_the_years_2024-2027.pdf
17. National Bank of Ukraine, Financial Stability Report, 12,2025. https://bank.gov.ua/admin_uploads/article/FSR_2024-H2.pdf
18. National Bank of Ukraine, Geographic structure of External Debt for private sector loans. 6, 1.5 Geographic structure of arrears of External Debt for real sector, 03, 2024. https://bank.gov.ua/files/ES/ZB_y_en.xlsx
19. Ukraine Ministry of Finance, Ukraine's state and state-guaranteed debt has become cheaper by more than 10% since the beginning of 2024, 12,08,2025. https://www.kmu.gov.ua/news/derzhavnyi-ta-harantovanyi-derzhavoiu-borh-ukrainy-z-pochatku-2024-roku-stav-deshevshym-na-ponad-10#:~:text=%D0%A1%D1%82%D0%B0%D0%BD%D0%BE%D0%BC%20%D0%BD%D0%B0%20 30%20%D1%87%D0%B5%D1%80%D0%B2%D0%BD%D1%8F%20 2024,%D0%B0%D0%B1%D0%BE%2010 9%2C9%20 %D0%BC%D0%BB%D1%80%D0%B4%20%D0%B4%D0%BE%D0%BB.
20. Stern, NYU, Country Default Spreads and Risk Premiums, 01.09.2025. https://bank.gov.ua/ua/statistic/sector-external https://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ctryprem.html
21. CNBC, Emerging Europe, Franklin Templeton in $5 billion Ukraine debt gamble, 11.11.2013. https://www.cnbc.com/2013/11/11/franklin-templeton-takes-5-billion-ukraine-debt-gamble.html
22. Bloomberg, Business, Templeton's Hasenstab Winds Down $7 Billion Ukraine Bond Bet, 04.21.2017. https://www.bloomberg.com/news/articles/2017-04-21/templeton-pares-ukraine-holding-in-40-billion-global-bond-fund
23. Ukraine Ministry of Finance, Credit Rating, 03.2024. https://mof.gov.ua/en/kreditnij-rejting-potochni-rejtingi-zagalna-informacija-istorichni-zmini
24. Reuters, Fitch cuts Ukraine's rating to 'Restricted Default', 08.14.2025. https://www.reuters.com/markets/currencies/fitch-upgrades-ukraines-local-currency-rating-ccc-2024-09-05/
25. National Bank of Ukraine, Domestic government bonds market, Domestic government bonds issues, Domestic government bonds: primary market, Domestic government bonds: secondary market, 2025. https://bank.gov.ua/en/markets/ovdp#810-uah