Bond Market Insight

Weekly review: Quite stable week with positive news



TUESDAY, 20 MAY, 2014

Despite the successful placement of the US-backed Eurobond last week, sentiment toward Ukraine remained little changed as low demand for domestic offerings persisted. Quarterly tax payments pushed domestic liquidity to this month's low, as funds available for domestic bond purchases were limited. However, the US guaranteed issue was placed at a mere 28bp spread to the benchmark, marking improved conditions at the Eurobond market.

Domestic bond market. Ukraine was under the pressure of quarterly tax payments last week while the NBU, holding back from providing direct support to liquidity, absorbed a portion of funds via CDs. Without large NBU inflows to support demand at primary auctions, the MoF increased interest rates to refinance debt repayments.

Eurobond market. The IMF loan received at the beginning of May opened market viability for Ukraine to receive other support from the US and the EU. In accordance with an agreement signed last month, Ukraine issued a new US guaranteed Eurobond last week. While political risks still prevail, this successful placement improved investor sentiment toward Ukraine only slightly. Political developments should yield positive results.

RESEARCH INSIGHT



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Key market indicators (as of 19 May 2014)

	Last close	Weekly chg (%)	YTD chg (%)
Currencies			
USD/UAH (spot)	11.9500	0.93	45.02
USD/UAH (1Y NDF)	14.2500	1.06	51.27
Rates, yields & spreads	s (%)		
Kiev Prime ON	5.00	-25bp	-280bp
Kiev Prime 3M	18.10	-3bp	210bp
UAH NDF 1Y	19.88	15bp	490bp
Ukraine CDS 5Y	1bp	-89bp	247bp
Libor USD 1yr	0.53	0bp	-5bp
UST 2yr	0.34	-4bp	-4bp
UST 10yr	2.54	-6bp	-48bp
UKRAINE 17	11.03	-242bp	147bp
UKRAINE 23	9.40	-77bp	36bp
Money market data (UA	\Hbn)		
Accounts at NBU	29.46	1.82	-9.91
NBU CDs outstanding	6.65	-45.96	0.00
Local currency bond m	arket data	(UAHbn)	
Govt bond outstanding	289.99	0.63	16.41
Held by			
NBU	174.81	0.00	20.68
Banks	88.15	1.91	9.96
Other residents	10.72	-0.15	-13.53
Non-residents	16.30	1.09	39.37

Notes: chg – percentage change; bp – basis points. Sources: Ministry of Finance of Ukraine, National Bank of Ukraine, Bloomberg, Investment Capital Ukraine LLC.

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Market update and news

Domestic bond market

Liquidity declines due to tax payments

Liquidity was down due to tax payments...

While local currency liquidity was under the pressure of quarterly tax payments that began last week which conclude today, liquidity remains strained as month-end tax payments start tomorrow. As imminent significant debt repayments will require refinancing, the NBU will be unable to support banks to decrease pressure on the FX market.

...setting new low of this month...

Last week began with UAH40.40bn in broader banking sector liquidity which rose to UAH42.84bn on Wednesday, only to decline to the month's low of UAH39.16bn on Friday. These movements were partially due to changes in total debt repayments scheduled for the next 30 days. Following last Tuesday's scheduledUAH1.90bn payment, on Wednesday UAH1.64bn in principal and interest debt repayments was repaid.

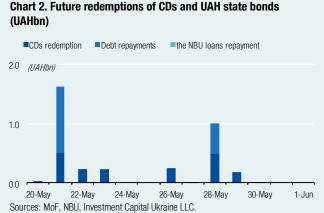
...with rare injections...

Banks' correspondent accounts, despite slightly increasing prior to the primary auction, declined last week. Started the week at UAH30.44bn, liquidity declined to UAH28.22bn last Friday, of which UAH0.70bn was absorbed by the NBU via CDs. Total CDs outstanding rose from UAH6.30bn to UAH7.68bn last Tuesday, only to decline to UAH7.02bn at the end of last week, resulted in a slight increase for the week.

...mostly via CD redemptions

CDs were the NBU's main instrument to regulate liquidity last week, as the NBU purchased no government bonds, although ON loans were refinanced. The MoF absorbed some funds via the primary market, as new proceeds did exceed debt repayments (see the comment below).





Liquidity could continue to decline this week

The NBU could slightly decrease total CDs outstanding this week, as it issued UAH0.37bn less in CDs less it redeemed on Friday. Although the NBU could provide new loans to banks, liquidity should continue to decline due to scheduled month-end tax payments. The MoF could slightly increase liquidity if its local currency debt repayments are not refinanced, as it is scheduled to repay UAH3.43bn, of which UAH2.31bn is in FX.



Last week's primary auction

The MoF refinanced debt repayments with new 2year local currency bonds As expected, last week the MoF sold UAH1.99bn (par value) of the 2-year bonds that were added to the schedule last Monday. Four bids for these bonds were all accepted at 17.00%, which is significantly higher than the 15.00% for 3-year bonds sold last week. Last week's interest rate increase could be the result of domestic QE tightening, whereby the MoF raised the cut-off interest rate to induce the banks to purchase these bonds. However, the MoF did reject a sole bid for UAH50.00m (par value) at 18.00%.

Of the UAH1.64bn in principal and interest debt repayments made last week, raised proceeds amounted to UAH2.00bn. The remainder of the received funds were spent on current budget needs.

Primary auction announcement for today

A 2-year bond similar to last week's offering could provide the MoF with local currency repayment refinancing The MoF is going to offer the same set of bonds tomorrow as those offered last week. The 2-year bond was added prior to the auction announcement, most likely after last week's successful auction. For details of this offering, please see below. This auction will be similar to the previous one and should provide the MoF with the necessary funds. We do not exclude the possibility of domestic QE support. As UAH3.43bn in repayments is scheduled, only UAH1.12bn will be repaid in local currency; thus, the refinancing could be limited to this amount or slightly more. FX-denominated repayments are unlikely to be refinanced.

Table 1. Details of the auction announced for 20 May 2014

ISIN	Type of placement	Bond type	Currency	Tenor (days)	Maturity	Coupon rate (%)	Volume outstanding (UAHm)
	Primary	Zero-coupon	UAH	91	20-Aug-14	N/M	0.00
	Primary	Coupon-bearing, bullet	UAH	728	18-May-16	N/A	0.00
UA4000180541	Re-opening	Coupon-bearing, bullet	UAH	1078	3-May-17	15.00	100.00
UA4000180426	Re-opening	Coupon-bearing, bullet	UAH	1785	10-Apr-19	14.30	74.73

Notes: N/A - not available; N/M not meaningful.

Sources: Ministry of Finance of Ukraine, Investment Capital Ukraine LLC.

Eurobond market

US-backed Eurobond issue

Ukraine issued USbacked bonds at low yield... Last week, Ukraine made its debut issue this year, realizing the US government guarantee agreement signed a month ago. The US\$1.0bn Eurobond with a 5-year maturity and 1.844% coupon rate was priced at a mere 28bp spread to benchmark last Thursday.

...solve financing problems and provide a new step in receiving support from abroad New Eurobonds are needed for Ukraine to receive financing not only from the EU or the IMF, but also from the market to show real support from the US. On the other hand, Ukraine needs significant financing to solve problems while avoiding new repayment peaks. 2019 has few scheduled debt repayments. Total principal repayments scheduled for 2019 are now UAH45.74bn, less than half of repayments scheduled this year or in 2015.

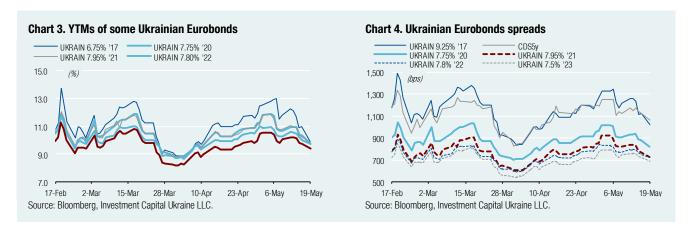


Some positive movements

The new bond issue caused Eurobond YTMs to decline last week...

Although the US-backed Eurobond issued last week had little impact on the yields of other bonds, it did provide proof that all offered financing or other support for Ukraine could be real and that Ukraine will meet all debt repayments. After the issue was announced, yields started to decline, mostly at the short end of the yield curve, causing it to flatten. As a result, the yield curve adjusted to the range of 9.74-13.60% last Friday as UKRAIN 6.875% '15 declined 123bp to 13.60%, UKRAIN 9.25% '17 rose 12bp to 12.03%, and UKRAIN 7.50% '23 slid 9bp to 9.74%, while UKRAIN 7.80% '22 and UKRAIN 7.95% '21 slid 16bp to 10.22% and 10.02%, respectively.

...which continued yesterday on other positive news Yesterday prices continued to increase, causing YTMs of five bonds with the longest maturities to move below 10.0% (see charts below), but other bond yields remained above this level appear to be closing the gap. These movements also occurred amidst reports that Moscow might recall troops that were encamped on the Ukrainian border.



DTEK increases coal output, reduces electricity production in 1Q14

DTEK increased its production of coal by 1.7% YoY to 10.4mt and reduced its electricity production by 3.1% YoY to 12.9TWh, according to its 1Q14 operating results released on Wednesday. The company transmitted 14.8TWh of electricity via grids (-4% YoY) and produced 165.9MMcm of natural gas. Management stated that although the company was expecting an economic recession in Ukraine in the near future, it remains committed to its strategic investment projects and modernization of production assets. DTEK increased its coal exports 68.1% YoY to 1.17mt amidst weak coal demand in Europe and China and benchmark energy coal prices that fell 9% YoY in 1Q14. At the same time, electricity exports declined 6.2% YoY to 2.1TWh as European electricity prices fell 12% YoY. Domestic sales of electricity declined 2.3% YoY to 12.7TWh due to lower industrial consumption. The company's domestic coal sales increased 9.2% to 0.31mt due to rising shipments of coking coal.

DTEK's declining volumes of both electricity production and sales closely tracked the negative trend in domestic electricity consumption. The negative impact of Ukraine's weak demand on coal output was offset by the company's significant international marketing efforts, with the largest effect from expansion into India, Turkey and the UK. Ukraine's weak economy - exacerbated by political instability in the eastern oblasts - should pose higher risks for DTEK's production volumes in 2Q14.



Appendixes

The following pages contain tabular information on the local fixed-income market. There are tables that detail government debt repayments such as a weekly schedule for current year and quarterly schedule for next 5 years.



UAH bond market

Table 2. Ukrainian local-currency government bonds as of 19 May 2014

Ticker	Volume (UAHm)	Coupon rate (%)	Maturity	Price (% of par)	YTM (%)	Weekly price chg (bp)	Weekly yield chg (bp)	Duartion 1 ¹ (years)	W daily avg turnover (UAHm)	1W total turnover (UAHm)	Total turnover (UAHm)	Liquidity ratio*
157135	3,513.30	7.97	23-Jul-14	99.563	27.64	13	180	0.18	0.00	0.00	168.98	0.05
149231	1,458.95	8.32	19-Nov-14	99.250	19.80	38	-20	0.48	0.00	0.00	2,065.98	1.42
151278	1,757.75	8.5	7-Jan-15	99.125	15.74	63	-72	0.62	0.00	0.00	1,451.55	0.83
000999	229.98	9.6	14-Jan-15	99.750	15.90	63	-69	0.63	0.00	0.00	0.00	0.00
155485	2,611.08	8.09	11-Feb-15	98.625	13.67	63	-66	0.71	84.87	84.87	5,777.85	2.21
157143	597.50	8.02	18-Feb-15	98.500	13.39	63	-65	0.73	0.00	0.00	0.00	0.00
157127	590.52	8.02	25-Feb-15	98.500	13.02	63	-64	0.75	0.00	0.00	2,305.70	3.90
142699	3,725.65	9.45	22-Apr-15	99.375	11.27	75	-71	0.90	0.00	0.00	11,527.32	3.09
142681	655.29	4.8	6-May-15	102.750	-0.73	6	-15	0.47	0.00	0.00	0.00	0.00
141071	1,811.05	9.45	27-May-15	99.000	16.08	88	-77	0.95	0.00	0.00	6,570.62	3.63
142673	2,091.25	4.5	17-Jun-15	93.875	182.84	88	2,131	0.08	0.00	0.00	0.00	0.00
144083	26.65	9.45	8-Jul-15	98.750	14.50	100	-84	1.07	0.00	0.00	0.00	0.00
152441	3,846.71	8.25	27-Jan-16	96.000	13.03	144	-93	1.57	0.00	0.00	55.17	0.01
153282	106.47	8.25	3-Feb-16	95.938	12.91	144	-92	1.59	0.00	0.00	71.92	0.68
160923	3,585.00	7.5	16-Mar-16	94.375	33.07	163	-494	0.33	0.00	0.00	0.00	0.00
160907	342.79	8	23-Mar-16	95.125	12.10	163	-99	1.73	0.00	0.00	160.05	0.47
160915	3,585.00	8.25	22-Mar-17	91.500	12.81	238	-108	2.54	0.00	0.00	0.00	0.00
151286	6,333.50	7.5	20-Dec-17	86.438	13.93	269	-110	3.06	0.00	0.00	0.00	0.00

Notes: 1W - last 7-day period; turnover figures are trade volumes for a bond reported by PFTS; total turnover - total volume of trades with the bond at PFTS since issue date; [*] liquidity ratio - ratio of total turnover to bond's volume in outstanding.

Sources: Bloomberg, PFTS, Investment Capital Ukraine LLC.



Chart 5. Shape of the local-currency sovereign yield curve

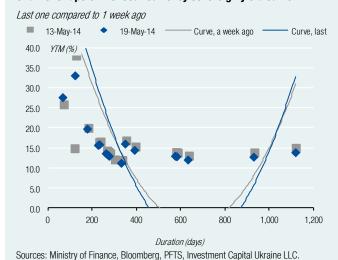
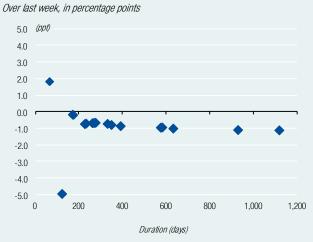
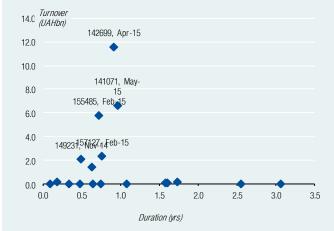


Chart 6. Movement of the local-currency sovereign yield curve



Sources: Ministry of Finance, Bloomberg, PFTS, Investment Capital Ukraine LLC.

Chart 7. Map of Ukraine's local-currency government bonds by total turnover plotted against their duration



Note: Total turnover and duration are taken from Table 2, page 6. The bonds with turnover of UAH2bn and more have labels, which consist of PFTS ticker and after a coma month and year of maturity.

Sources: Ministry of Finance, Bloomberg, PFTS, Investment Capital Ukraine LLC.

Chart 8. Map of Ukraine's local-currency government bonds by liquidity ratio plotted against their duration



Note: Total turnover and duration are taken from Table 2, page 6. The bonds with liquidity ratio of 1.1x and more have labels, which consist of PFTS ticker and after a coma month and year of maturity.

Sources: Ministry of Finance, Bloomberg, PFTS, Investment Capital Ukraine LLC.



Eurobond market

Table 3. Ukrainian Eurobonds as of 19 May 2014

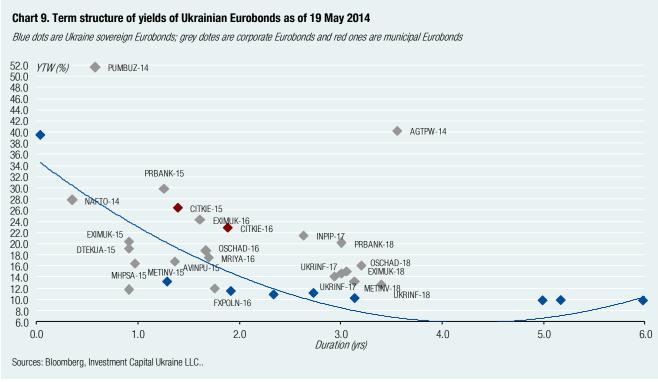
Ticker	Issuer	Ratings	Volume (million)			Maturity	Price (% of par)	YTM (%)	Weekly price chg (bp)	Weekly yield chg (bp)	Spread (bp)	Duration (years)
UKRAIN-14	Ministry of Finance	Caa3/CCC/CC	1,000.0	USD	7.95	4-Jun-14	100.000	7.66	150	-3,536	-2,370	0.03
UKRAIN-15	Ministry of Finance	Caa3/CCC/CC C	500.0	USD	6.875	23-Sep-15	93.384	12.39	390	-344	1,117	1.28
UKRAIN-15	Ministry of Finance	Caa3/CCC/CC C	600.0	EUR	4.95	13-0ct-15	92.430	11.06	323	-282	991	1.34
UKRAIN-16	Ministry of Finance	Caa3/CCC/CC C	1,250.0	USD	6.25	17-Jun-16	91.315	11.06	567	-343	1,020	1.91
UKRAIN-16	Ministry of Finance	Caa3/CCC/CC C	1,000.0	USD	6.58	21-Nov-16	91.545	10.52	627	-320	975	2.33
UKRAIN-17	Ministry of Finance	Caa3/CCC/CC C	2,600.0	USD	9.25	24-Jul-17	95.317	11.03	595	-242	1,004	2.72
UKRAIN-17	Ministry of Finance	Caa3/CCC/CC C	700.0	USD	6.75	14-Nov-17	90.842	9.93	570	-217	877	3.13
UKRAIN-20	Ministry of Finance	Caa3/CCC/CC C	1,500.0	USD	7.75	23-Sep-20	90.775	9.73	505	-119	802	4.98
UKRAIN-21	Ministry of Finance	Caa3/CCC/CC C	1,500.0	USD	7.95	23-Feb-21	90.938	9.81	516	-117	714	5.16
UKRAIN-22	Ministry of Finance	Caa3/CCC/CC C	2,250.0	USD	7.8	28-Nov-22	88.962	9.74	411	-80	706	5.97
UKRAIN-23	Ministry of Finance	Caa3/CCC/CC C	1,250.0	USD	7.5	17-Apr-23	88.683	9.40	414	-77	673	6.44
CITKIE-15	Kyiv	Caa3/CCC/CC C	250.0	USD	8	6-Nov-15	79.688	25.60	238	-232	2,443	1.39
CITKIE-16	Kyiv	Caa3/CCC/CC C	300.0	USD	9.375	11-Jul-16	79.313	22.01	263	-184	2,083	1.88
AGTPW-14	Agroton	NR/NR/WD	50.0	USD	12.5	14-Jul-14	31.875	38.09	25	-13	3,454	3.55
NAFTO-14	Naftogaz of Ukraine	NR/NR/CCC	1,595.0	USD	9.5	30-Sep-14	94.375	26.57	188	-554	2,528	0.35
PUMBUZ-14	4 FUIB	Caa3/NR/NR	252.5	USD	11	31-Dec-14	81.125	48.95	-94	283	4,895	0.58
EXIMUK-15	Ukreximbank	Caa3/NR/CCC	750.0	USD	8.375	27-Apr-15	90.938	19.49	531	-715	1,824	0.91
DTEKUA-15	DTEK	Caa2/NR/CCC	500.0	USD	9.5	28-Apr-15	92.625	18.45	144	-176	1,747	0.91
MHPSA-15	MHP	Caa2/NR/CCC	584.8	USD	10.25	29-Apr-15	99.313	11.03	75	-86	1,003	0.91
METINV-15	Metinvest Holding	Caa2/NR/CCC	500.0	USD	10.25	20-May-15	95.063	15.82	113	-126	1,482	0.97
PRBANK-15	5 Pryvatbank	Caa3u/NR/CC C	200.0	USD	9.375	23-Sep-15	79.938	28.42	281	-304	2,663	1.26
AVINPU-15	Avangard	NR/NR/CCC	200.0	USD	10	29-0ct-15	93.688	15.04	144	-117	1,299	1.36
EXIMUK-16	Ukreximbank	Ca/NR/C	125.0	USD	8.4	9-Feb-16	76.688	23.01	488	-435	2,141	1.61
OSCHAD-16	3 Oshchadbank	Caa3/NR/CCC	500.0	USD	8.25	10-Mar-16	85.563	17.97	563	-432	1,693	1.67
MRIYA-16	Mriya Agroholding	NR/CCC/CCC	250.0	USD	10.95	30-Mar-16	90.688	16.99	-150	106	1,617	1.69
FXPOLN-16	Ferrexpo PLC	Caa2/CCC+/C CC	500.0	USD	7.875	7-Apr-16	94.125	11.44	306	-195	1,054	1.76
INPIP-17	Interpipe	NR/NR/C	200.0	USD	10.25	2-Aug-17	76.188	20.80	-6	6	1,932	2.63
UKRINF-17	Infrastructure Projects Fin	Caa3/NR/NR	538.0	USD	8.375	3-Nov-17	84.500	14.22	-1,103	428	1,301	3.01
UKRINF-17	Infrastructure Projects Fin	(P)Caa3/NR/N R	550.0	USD	9	7-Dec-17	86.777	13.85	321	-130	1,277	2.93
EXIMUK-18	Ukreximbank	Caa3/NR/CCC	500.0	USD	8.75	22-Jan-18	83.438	14.75	569	-239	1,293	3.06
METINV-18	Metinvest Holding	Caa2/NR/CCC	750.0	USD	8.75	14-Feb-18	87.438	13.11	94	-34	1,149	3.14
PRBANK-18	3 Pryvatbank	Caa3u/NR/CC C	175.0	USD	10.875	28-Feb-18	77.250	19.69	300	-139	1,775	3.00
OSCHAD-18	3 Oshchadbank	Caa3/NR/CCC	500.0	USD	8.875	20-Mar-18	80.688	15.78	631	-270	1,395	3.20

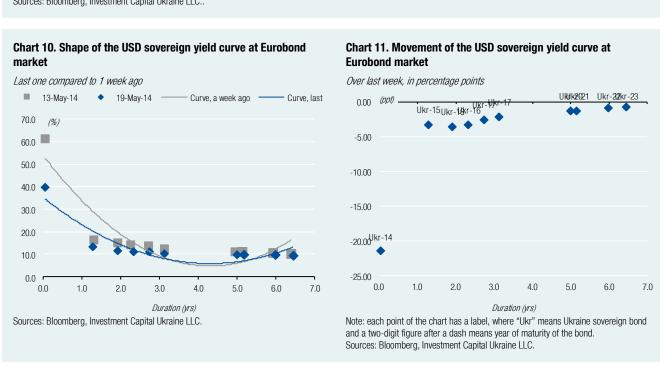


UKRINF-18 Infrastructure Projects Fin	Caa3/NR/NR	690.0	USD	7.4 20-Apr-18	85.250	12.26	-905	310	1,026	3.40
VABANK-14 VAB Bank	Caa1 /*- /NR/WD	112.5	USD	10.5 14-Jun-14	90.100	38.87	0	0	4,071	0.38
PRBANK-16 Pryvatbank	Cau/NR/NR	150.0	USD	8.75 9-Feb-16	64.741	34.75	-43	75	3,088	1.60
OSCHAD-16 Oshchadbank	NR/NR/B	200.0	USD	8.25 10-Mar-16	0.000	0.00	0	0	0	0.00
NADRA-17 Nadra Bank	WR/NR/WD	59.7	USD	8 22-Jun-17	82.180	23.81	0	0	1,949	1.28

Sources: Bloomberg, Investment Capital Ukraine LLC.









Primary market for UAH state bonds

Table 4. Primary market for local-currency government bonds: results of recent auctions

Date	Qty of bonds offered/ sold	Proceeds (UAHm)	bonds	Volume of bids submitted (UAHm)	Qty of bids sub- mitted	Lowest yield asked** (%)	Highest yield asked** (%)	MoF cutt- off yield (%)	Qty of bids accepted	Average yield (%)	WA yield (%)	Average duration (years)	WA duration (years)
13-May-14	4 1	2,000.00	1,987.48	1.99	4	17.00	17.00	17.00	4	17.74	17.74	1.74	1.74
6-May-14	2	246.60	100.00	320.00	4	9.95	20.00	12.48	2	15.15	14.96	1.40	1.17
29-Apr-14	2	1,636.78	20.00	1,620.00	7	9.95	16.00	12.48	3	15.11	15.60	1.38	2.42
24-Apr-14	1	74.96	74.73	74.73	1	14.30	14.30	14.30	1	14.85	14.85	3.70	3.70
22-Apr-14	1	4,000.00	4,000.00	4,000.00	4	15.00	15.00	15.00	4	15.59	15.59	2.52	2.52
15-Apr-14	1	587.66	600.00	600.00	1	9.95	9.95	9.95	1	10.21	10.21	0.21	0.21
9-Apr-14	1	391.04	400.00	400.00	1	9.95	9.95	9.95	1	10.34	10.34	0.23	0.23
8-Apr-14	1	103.66	110.00	110.00	2	12.75	12.75	12.75	2	13.09	13.09	0.48	0.48
1-Apr-14	1	282.07	300.00	330.00	4	12.75	23.50	12.75	1	13.08	13.08	0.50	0.50
31-Mar-14	1 1	1,155.23	1,150.00	1,150.00	3	14.25	14.25	14.25	3	14.80	14.80	2.50	2.50
12-Mar-14	1 2	684.52	712.08	712.08	3	14.00	14.00	14.00	3	14.71	14.71	0.29	0.29
6-Mar-14	1	1,100.34	1,100.00	1,100.00	1	11.50	11.50	11.50	1	11.86	11.86	3.92	3.92
4-Mar-14	1	1,000.00	1,000.00	1,000.00	1	11.50	11.50	11.50	1	11.86	11.86	3.93	3.93
27-Feb-14	1	1,503.69	1,500.00	1,500.00	1	11.50	11.50	11.50	1	11.86	11.86	3.91	3.91
26-Feb-14	1	1,500.00	1,500.00	1,500.00	1	11.50	11.50	11.50	1	11.86	11.86	3.93	3.93
18-Feb-14	1	600.00	600.00	600.00	1	14.25	14.25	14.25	1	14.84	14.84	3.73	3.73
13-Feb-14	1	1,655.00	1,650.00	1,650.00	1	14.25	14.25	14.25	1	14.80	14.80	3.71	3.71
11-Feb-14	1	1,151.08	1,145.00	1,145.00	2	14.25	14.25	14.25	2	14.79	14.79	3.69	3.69
4-Feb-14	1	209.27	208.71	208.71	2	14.25	14.25	14.25	2	14.79	14.79	3.71	3.71
29-Jan-14	1	273.01	273.01	0.00	2	14.25	14.25	14.25	2	14.80	14.80	3.73	3.73
28-Jan-14	. 1	10.11	10.00	10.00	1	14.30	14.30	14.30	1	14.85	14.85	4.56	4.56
23-Jan-14	3	1,881.79	688.05	1,958.05	11	8.25	14.25	10.67	10	14.03	14.13	1.48	1.59
21-Jan-14	3	537.93	340.00	540.28	10	5.00	14.25	9.17	7	14.15	14.48	1.41	1.83
14-Jan-14	2	1,150.73	1,152.26	1,152.26	19	8.75	14.25	11.50	6	13.85	14.76	2.35	3.68
31-Dec-13		544.86	550.00	550.00	1	8.00	8.00	8.00	1	8.29	8.29	0.12	0.12
30-Dec-13		2,695.11	2,374.81	2,645.12	6	5.00	14.30	9.64	6	14.67	14.81	2.09	3.81
24-Dec-13		99.96	99.83	99.83	1	7.75	7.75	7.75	1	7.92	7.92	2.71	2.71
19-Dec-13	3 2	234.96	184.00	234.00	4	4.80	5.00	4.90	4	5.00	5.06	0.02	0.02
17-Dec-13		837.39	123.30	823.30	2	7.75	14.25	11.00	2	12.14	14.09	3.07	3.49
10-Dec-13		405.47	47.49	397.49	2	7.75	14.30	11.03	2	12.53	14.40	3.59	4.31
9-Dec-13	2			2,200.00	2	14.25	14.30	14.28	2	14.83	14.84	4.14	4.31
3-Dec-13		1,480.13		1,454.93	5	7.75	14.30	12.10	5	13.04	14.66	3.60	3.96
26-Nov-13		1,083.86			13	4.00	14.30	9.56	13	12.39	11.66	2.63	1.82
19-Nov-13		1,542.65	761.35	1,536.85	9	4.00	14.25	9.10	9	10.87	10.94	3.11	2.68
12-Nov-13		906.07	654.81	900.81	15	4.00	14.25	8.65	14	11.93	10.63	1.43	0.58
6-Nov-13	1	458.93	460.00	565.00	11	4.00	10.00	4.25	4	4.12	4.12	0.06	0.06
5-Nov-13	1	49.89	48.65		1	8.25	8.25	8.25	1	8.41	8.41	1.58	1.58
29-0ct-13		614.19	625.55	665.55	7	7.75	14.25	11.13	5	14.03	14.02	2.19	2.18
22-0ct-13		739.96	738.00		3	14.25	14.25	14.25	3	14.79	14.79	3.71	3.71
15-0ct-13		1,128.68			3	14.25	14.30	14.28	3	14.73	14.82	4.17	4.12

Notes: the tables depicts the history of last 40 auctions; [*] - volume of bonds sold at the auction at par value; [**] - lowest and highest yields that are indicated in the bid orders submitted to the auction in order to buy all bonds offered by MoF.

Sources: Ministry of Finance, Investment Capital Ukraine LLC.



Chart 12. Effective yield of debt raised by MoF and total volume of proceeds at the government bond auctions

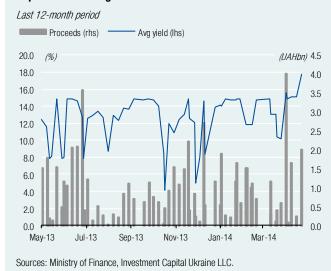


Chart 13. Yield-to-maturity of government bonds sold at auctions, breakdown by duration of bonds sold

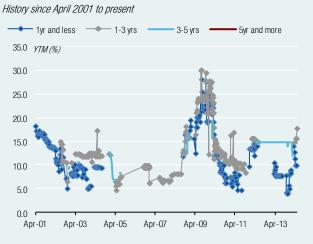


Sources: Ministry of Finance, Investment Capital Ukraine LLC.

Chart 14. Effective yield of debt raised by MoF and total volume of proceeds at the government bond auctions



Chart 15. Yield-to-maturity of government bonds sold at auctions, breakdown by duration of bonds sold



Sources: Ministry of Finance, Investment Capital Ukraine LLC.



UAH state bonds outstanding

Table 5. Outstanding of local-currency government bonds

ISIN	Bond type	Outstanding volume (UAH)	Coupon rate (%)	Payment frequency	Amortisation option	Put option	Next put	Maturity date
Government UAH	bonds							
UA4000179048	Zero-coupon bonds	610,000,000.00		Upon maturity	No	No		21-May-2014
UA4000179865	Zero-coupon bonds	712,080,000.00	14.00	Upon maturity	No	No		25-Jun-2014
UA4000180319	Zero-coupon bonds	1,000,000,000.00		Upon maturity	No	No		2-Jul-2014
UA4000123863	Coupon bonds	752,000,000.00	10.10	Semi-annually	No	No		9-Jul-2014
UA4000180442	Zero-coupon bonds	170,000,000.00		Upon maturity	No	No		30-Jul-2014
UA4000180210	Zero-coupon bonds	410,000,000.00		Upon maturity	No	No		1-0ct-2014
UA4000178883	Zero-coupon bonds	25,000,000.00		Upon maturity	No	No		15-0ct-2014
UA4000064026	Coupon bonds	1,000,000.00	18.50	Semi-annually	No	No		21-Jan-2015
UA4000064166	Coupon bonds	451,875,000.00	15.00	Semi-annually	No	No		28-Jan-2015
UA4000141592	Coupon bonds	250,000,000.00	14.30	Semi-annually	No	No		20-May-2015
UA4000180582	Coupon bonds	1,987,478,000.00	17.00	Semi-annually	No	No		27-Apr-2016
UA4000106181	Coupon bonds	80,002,000.00	9.50	Quarterly	Yes	Yes	13-Jul-2016	13-Jul-2016
UA4000107528	Coupon bonds	7,087,500.00	12.50	Quarterly	Yes	No	10 001 2010	20-Jul-2016
UA4000180202	Coupon bonds	1,150,000,000.00	14.25	Semi-annually	No	No		15-Mar-2017
UA4000180459	Coupon bonds	1,600,000,000.00	15.00	Semi-annually	No	No		29-Mar-2017
UA4000138853	Coupon bonds	1,928,720,000.00	14.30	Semi-annually	No	No		5-Apr-2017
UA4000180400	Coupon bonds	4,000,000,000.00	15.00	Semi-annually	No	No		19-Apr-2017
UA4000180541	Coupon bonds	100,000,000.00	15.00	Semi-annually	No	No		3-May-2017
UA4000180541 UA4000142665	Coupon bonds	1,759,740,000.00	14.30	Semi-annually	No	No		24-May-2017
UA4000142003 UA4000145973	•	1,810,000,000.00	14.30		No	No		24-May-2017 2-Aug-2017
	Coupon bonds			Semi-annually				
UA4000148027	Coupon bonds	1,824,455,000.00	14.30	Semi-annually	No	No		11-0ct-2017
UA4000148571	Coupon bonds	1,890,000,000.00	14.30	Semi-annually	No No	No		18-0ct-2017
UA4000177745	Coupon bonds	5,000,000.00	12.10	Semi-annually	No	No		15-Nov-2017
UA4000151203	Coupon bonds	1,493,409,000.00	14.30	Semi-annually	No	No		13-Dec-2017
UA4000157119	Coupon bonds	2,500,330,000.00	14.30	Semi-annually	No	No		7-Feb-2018
UA4000160626	Coupon bonds	1,818,593,000.00	14.30	Semi-annually	No	No		7-Mar-2018
UA4000162127	Coupon bonds	2,751,160,000.00	14.30	Semi-annually	No	No		4-Apr-2018
UA4000165765	Coupon bonds	1,585,600,000.00	14.25	Semi-annually	No	No		11-Apr-2018
UA4000166219	Coupon bonds	400,000,000.00	14.25	Semi-annually	No	No		18-Apr-2018
UA4000166201	Coupon bonds	2,254,507,000.00	14.25	Semi-annually	No	No		2-May-2018
UA4000168082	Coupon bonds	3,050,250,000.00	14.25	Semi-annually	No	No		16-May-2018
UA4000171391	Coupon bonds	1,803,816,000.00	14.25	Semi-annually	No	No		27-Jun-2018
UA4000170732	Coupon bonds	3,853,400,000.00	14.25	Semi-annually	No	No		4-Jul-2018
UA4000174239	Coupon bonds	1,247,936,000.00	14.25	Semi-annually	No	No		5-Sep-2018
UA4000175467	Coupon bonds	1,364,010,000.00	14.25	Semi-annually	No	No		10-0ct-2018
UA4000176093	Coupon bonds	1,644,780,000.00	14.25	Semi-annually	No	No		24-0ct-2018
UA4000177919	Coupon bonds	2,100,000,000.00	14.25	Semi-annually	No	No		14-Nov-2018
UA4000178891	Coupon bonds	2,077,263,000.00	14.25	Semi-annually	No	No		9-Jan-2019
UA4000179196	Coupon bonds	1,626,723,000.00	14.25	Semi-annually	No	No		23-Jan-2019
UA4000179519	Coupon bonds	1,650,000,000.00	14.25	Semi-annually	No	No		30-Jan-2019
UA4000179691	Coupon bonds	600,000,000.00	14.30	Semi-annually	No	No		13-Feb-2019
UA4000179766	Coupon bonds	1,500,000,000.00	11.50	Semi-annually	No	No		13-Feb-2019
UA4000179741	Coupon bonds	1,500,000,000.00	11.50	Semi-annually	No	No		20-Feb-2019
UA4000179824	Coupon bonds	2,100,000,000.00	11.50	Semi-annually	No	No		27-Feb-2019
UA4000180426	Coupon bonds	74,733,000.00	14.30	Semi-annually	No	No		10-Apr-2019
UA4000138861	Coupon bonds	2,160,000,000.00	14.00	Semi-annually	No	No		17-Apr-2019
UA4000142137	Coupon bonds	1,900,000,000.00	14.13	Semi-annually	No	No		22-May-2019
UA4000146997	Coupon bonds	1,996,041,000.00	14.30	Semi-annually	No	No		18-Sep-2019



Table 5. Outstanding of local-currency government bonds

ISIN	Bond type	Outstanding volume (UAH)	Coupon rate (%)	Payment frequency	Amortisation option	Put option	Next put	Maturity date
UA4000148589	Coupon bonds	2,000,000,000.00	14.30	Semi-annually	No	No		23-0ct-2019
UA4000148944	Coupon bonds	500,000,000.00	14.30	Semi-annually	No	No		30-0ct-2019
UA4000157671	Coupon bonds	1,760,800,000.00	14.30	Semi-annually	No	No		12-Feb-2020
UA4000165773	Coupon bonds	1,820,000,000.00	14.30	Semi-annually	No	No		8-Apr-2020
UA4000166805	Coupon bonds	1,944,904,000.00	14.30	Semi-annually	No	No		6-May-2020
UA4000171094	Coupon bonds	2,403,338,000.00	14.30	Semi-annually	No	No		8-Jul-2020
UA4000175459	Coupon bonds	1,195,000,000.00	14.30	Semi-annually	No	No		23-Sep-2020
UA4000178024	Coupon bonds	2,024,807,000.00	14.30	Semi-annually	No	No		21-0ct-2020
UA4000177927	Coupon bonds	1,500,000,000.00	14.30	Semi-annually	No	No		18-Nov-2020
UA4000179170	Coupon bonds	10,000,000.00	14.30	Semi-annually	No	No		23-Dec-2020
UA4000173371	Coupon bonds	330,000,000.00	10.00	Semi-annually	No	No		23-Aug-2023
Total		83,065,837,500.00						
Government recap'ı	n bonds							
UA4000063200	Coupon bonds	1,598,269,000.00	9.75	Semi-annually	No	No		11-Jun-2014
UA4000136436	Coupon bonds	1,500,000,000.00	9.65	Semi-annually	No	No		30-Jul-2014
UA4000136451	Coupon bonds	1,500,000,000.00	9.75	Semi-annually	No	No		8-0ct-2014
UA4000063218	Coupon bonds	1,598,270,000.00	9.75	Semi-annually	No	No		12-Nov-2014
UA4000063226	Coupon bonds	1,598,270,000.00	9.75	Semi-annually	No	No		17-Dec-2014
UA4000136469	Coupon bonds	1,500,000,000.00	9.95	Semi-annually	No	No		4-Feb-2015
UA4000092100	Coupon bonds	500,000,000.00	9.50	Semi-annually	No	No		18-Mar-2015
UA4000146393	Coupon bonds	1,000,000,000.00	9.95	Semi-annually	No	No		2-Sep-2015
UA4000048789	Coupon bonds	2,000,000,000.00	9.50	Semi-annually	No	No		18-Nov-2015
UA4000050090	Coupon bonds	4,000,000,000.00	9.50	Semi-annually	No	No		16-Dec-2015
UA4000092118	Coupon bonds	1,500,000,000.00	9.50	Semi-annually	No	No		17-Feb-2016
UA4000115190	Coupon bonds	1,250,000,000.00	9.50	Semi-annually	No	No		9-Mar-2016
UA4000050199	Coupon bonds	3,885,000,000.00	9.50	Semi-annually	No	No		13-Apr-2016
UA4000050017	Coupon bonds	3,700,000,000.00	9.50	Semi-annually	No	No		10-May-2016
UA4000092126	Coupon bonds	1,500,000,000.00	9.50	Semi-annually	No	No		29-Jun-2016
UA4000092134	Coupon bonds	1,500,000,000.00	9.50	Semi-annually	No	No		13-Jul-2016
UA4000119945	Coupon bonds	1,750,000,000.00	9.50	Semi-annually	No	No		24-Aug-2016
UA4000050207	Coupon bonds	3,885,000,000.00	9.50	Semi-annually	No	No		14-Sep-2016
UA4000115208	Coupon bonds	1,250,000,000.00	9.50	Semi-annually	No	No		15-Feb-2017
UA4000092142	Coupon bonds	1,200,000,000.00	9.50	Semi-annually	No	No		12-Apr-2017
UA4000057111	Coupon bonds	1,033,333,000.00	9.50	Semi-annually	No	No		31-May-2017
UA4000057277	Coupon bonds	1,188,431,000.00	9.50	Semi-annually	No	No		7-Jun-2017
UA4000057301	Coupon bonds	936,171,000.00	9.50	Semi-annually	No	No		14-Jun-2017
UA4000156863	Coupon bonds	2,000,000,000.00	14.30	Semi-annually	No	No		28-Jun-2017
UA4000058606	Coupon bonds	3,100,000,000.00	9.50	Semi-annually	No	No		19-Jul-2017
UA4000158315	Coupon bonds	1,000,000,000.00	14.30	Semi-annually	No	No		16-Aug-2017
UA4000092167	Coupon bonds	1,200,000,000.00	9.50	Semi-annually	No	No		23-Aug-2017
UA4000115216	Coupon bonds	1,250,000,000.00	9.50	Semi-annually	No	No		13-Sep-2017
UA4000058614	Coupon bonds	1,658,263,000.00	9.50	Semi-annually	No	No		4-0ct-2017
UA4000153340	Coupon bonds	1,500,000,000.00	14.30	Semi-annually	No	No		8-Nov-2017
UA4000151476	Coupon bonds	2,000,000,000.00	14.30	Semi-annually	No	No		29-Nov-2017
UA4000153126	Coupon bonds	500,000,000.00	14.30	Semi-annually	No	No		13-Dec-2017
UA4000130082	Coupon bonds	2,000,000,000.00	9.50	Semi-annually	No	No		27-Dec-2017
UA4000130002	Coupon bonds	2,000,000,000.00	9.50	Semi-annually	No	No		17-Jan-2018
UA4000136638	Coupon bonds	1,975,000,000.00	9.50	Semi-annually	No	No		21-Feb-2018
UA4000113030	Coupon bonds	1,000,000,000.00	14.30	Semi-annually	No	No		14-Mar-2018
UA4000160730	Coupon bonds	1,400,000,000.00	9.50	Semi-annually	No	No		28-Mar-2018
UA400011790	Coupon bonds	1,750,000,000.00	9.50	Semi-annually	No	No		25-Mai-2018
0/1400011330Z	Coupon bonds	1,730,000,000.00	9.50	Jenn-annually	INU	INU		20-Mp1-2010



Table 5. Outstanding of local-currency government bonds

ISIN	Bond type	Outstanding volume (UAH)	Coupon rate (%)	Payment frequency	Amortisation option	Put option	Next put	Maturity date
UA4000055586	Coupon bonds	1,000,000,000.00	9.50	Semi-annually	No	No		9-May-2018
UA4000057319	Coupon bonds	936,172,000.00	9.50	Semi-annually	No	No		30-May-2018
UA4000057129	Coupon bonds	1,033,333,000.00	9.50	Semi-annually	No	No		6-Jun-2018
UA4000057285	Coupon bonds	1,188,431,000.00	9.50	Semi-annually	No	No		13-Jun-2018
UA4000173314	Coupon bonds	1,250,000,000.00	14.25	Semi-annually	No	No		20-Jun-2018
UA4000058622	Coupon bonds	1,916,119,000.00	9.50	Semi-annually	No	No		18-Jul-2018
UA4000173306	Coupon bonds	1,250,000,000.00	14.25	Semi-annually	No	No		25-Jul-2018
UA4000173298	Coupon bonds	1,250,000,000.00	14.25	Semi-annually	No	No		1-Aug-2018
UA4000120877	Coupon bonds	604,000,000.00	9.50	Semi-annually	No	No		8-Aug-2018
UA4000173280	Coupon bonds	1,250,000,000.00	14.25	Semi-annually	No	No		15-Aug-2018
UA4000115224	Coupon bonds	1,250,000,000.00	9.50	Semi-annually	No	No		22-Aug-2018
UA4000062525	Coupon bonds	650,000,000.00	9.50	Semi-annually	No	No		12-Sep-2018
UA4000115646	Coupon bonds	1,975,001,000.00	9.50	Semi-annually	No	No		19-Sep-2018
UA4000058630	Coupon bonds	1,355,345,000.00	9.50	Semi-annually	No	No		3-0ct-2018
UA4000059323	Coupon bonds	1,000,000,000.00	9.50	Semi-annually	No	No		31-0ct-2018
UA4000121495	Coupon bonds	1,000,000,000.00	9.50	Semi-annually	No	No		7-Nov-2018
UA4000064307	Coupon bonds	1,000,000,000.00	9.50	Semi-annually	No	No		21-Nov-2018
UA4000177943	Coupon bonds	300,000,000.00	9.50	Semi-annually	No	No		28-Nov-2018
UA4000061808	Coupon bonds	1,400,000,000.00	9.50	Semi-annually	No	No		6-Feb-2019
UA4000064315	Coupon bonds	1,294,999,000.00	9.50	Semi-annually	No	No		13-Mar-2019
UA4000058648	Coupon bonds	1,933,060,000.00	9.50	Semi-annually	No	No		3-Apr-2019
UA4000121503	Coupon bonds	1,100,000,000.00	9.50	Semi-annually	No	No		15-May-2019
UA4000057293	Coupon bonds	1,188,432,000.00	9.50	Semi-annually	No	No		29-May-2019
UA4000057327	Coupon bonds	936,172,000.00	9.50	Semi-annually	No	No		5-Jun-2019
UA4000057137	Coupon bonds	1,033,334,000.00	9.50	Semi-annually	No	No		12-Jun-2019
UA4000064323	Coupon bonds	1,000,000,000.00	9.50	Semi-annually	No	No		17-Jul-2019
UA4000063119	Coupon bonds	1,276,191,000.00	9.50	Semi-annually	No	No		21-Aug-2019
UA4000064349	Coupon bonds	1,295,000,000.00	9.50	Semi-annually	No	No		25-Sep-2019
UA4000064117	Coupon bonds	900,000,000.00	9.50	Semi-annually	No	No		16-0ct-2019
UA4000064117		900,000,000.00	9.50	Semi-annually	No	No		20-Nov-2019
	Coupon bonds			,				11-Mar-2020
UA4000063010	Coupon bonds	950,000,000.00	9.50	Semi-annually	No	No No		
UA4000061816	Coupon bonds	1,400,000,000.00	9.50	Semi-annually	No	No No		15-Apr-2020
UA4000121511	Coupon bonds	1,100,000,000.00	9.50	Semi-annually	No	No No		20-May-2020
UA4000063127	Coupon bonds	1,500,000,000.00	9.50	Semi-annually	No	No		17-Jun-2020
UA4000063028	Coupon bonds	949,981,000.00	9.50	Semi-annually	No	No		12-Aug-2020
UA4000061824	Coupon bonds	1,400,000,000.00	9.50	Semi-annually	No	No		4-Nov-2020
UA4000177950	Coupon bonds	1,400,000,000.00	9.50	Semi-annually	No	No		25-Nov-2020
UA4000063135	Coupon bonds	1,500,000,000.00	9.50	Semi-annually	No	No		9-Jun-2021
UA4000121529	Coupon bonds	1,100,000,000.00	9.50	Semi-annually	No	No		22-Sep-2021
UA4000063143 Total	Coupon bonds	1,500,000,000.00 112,971,577,000.00	9.50	Semi-annually	No	No		1-Jun-2022
Government VAT bo		, , ,						
UA4000078141	Coupon bonds	14,532,000.00	5.50	Semi-annually	Yes	No		27-Jul-2015
UA4000076141	Coupon bonds	614,344,500.00	5.50	Semi-annually	Yes	No		21-Aug-2015
UA4000082531	Coupon bonds	2,491,461,900.00	5.50	Semi-annually	Yes	No		24-Aug-2015
UA4000083059	Coupon bonds	1,810,435,500.00	5.50	Semi-annually	Yes	No		25-Aug-2015
Total	Coupon bonds	4,930,773,900.00	3.30	36IIII-aIIIIuaiiy	165	NO		25-Aug-2013
Government indexed	d bonds							
UA4000129100	Coupon bonds	1,610,000,000.00	8.22	Semi-annually	No	No		24-Sep-2014
UA4000129902	Coupon bonds	175,000,000.00	8.22	Semi-annually	No	No		22-0ct-2014
UA4000130595	Coupon bonds	200,000,000.00	8.25	Semi-annually	No	No		29-0ct-2014



Table 5. Outstanding of local-currency government bonds

ISIN	Bond type	Outstanding volume (UAH)	Coupon rate (%)	Payment frequency	Amortisation option	Put option	Next put	Maturity date
UA4000130603	Coupon bonds	1,200,100,000.00	8.22	Semi-annually	No	No		5-Nov-2014
UA4000132278	Coupon bonds	250,000,000.00	9.75	Semi-annually	No	No		3-Dec-2014
UA4000137822	Coupon bonds	700,000,000.00	9.30	Semi-annually	No	No		4-Mar-2015
UA4000138242	Coupon bonds	470,000,000.00	9.30	Semi-annually	No	No		8-Apr-2015
UA4000139513	Coupon bonds	900,000,000.00	9.30	Semi-annually	No	No		13-May-2015
UA4000141600	Coupon bonds	100,000,000.00	9.30	Semi-annually	No	No		3-Jun-2015
UA4000144075	Coupon bonds	600,000,000.00	9.30	Semi-annually	No	No		15-Jul-2015
UA4000146070	Coupon bonds	200,000,000.00	9.30	Semi-annually	No	No		12-Aug-2015
UA4000146500	Coupon bonds	525,000,000.00	9.30	Semi-annually	No	No		9-Sep-2015
UA4000148217	Coupon bonds	329,000,000.00	9.30	Semi-annually	No	No		28-0ct-2015
UA4000149082	Coupon bonds	580,000,000.00	9.30	Semi-annually	No	No		11-Nov-2015
UA4000151500	Coupon bonds	557,000,000.00	9.19	Semi-annually	No	No		13-Jan-2016
UA4000160634	Coupon bonds	60,000,000.00	9.10	Semi-annually	No	No		16-Mar-2016
UA4000129233	Coupon bonds	850,000,000.00	8.75	Semi-annually	No	No		10-Aug-2016
UA4000129118	Coupon bonds	1,940,000,000.00	8.75	Semi-annually	No	No		28-Sep-2016
UA4000177406	Coupon bonds	477,000,000.00	9.50	Semi-annually	No	No		16-Nov-2016
UA4000129241	Coupon bonds	1,000,000,000.00	9.25	Semi-annually	No	No		15-Sep-2021
Total	ocupon sonuc	12,723,100,000.00	0.20	com amaan				10 00p 202.
Government foreign	-currency bonds							
UA4000140362	Coupon bonds	2,041,370,700.00	9.20	Semi-annually	No	No		21-May-2014
UA4000157135	Coupon bonds	3,513,300,000.00	7.97	Semi-annually	No	No		23-Jul-2014
UA4000158794	Coupon bonds	1,810,425,000.00	7.50	Semi-annually	No	No		10-Sep-2014
UA4000174247	Coupon bonds	982,935,300.00	4.80	Semi-annually	No	Yes	29-0ct-2014	29-0ct-2014
UA4000149231	Coupon bonds	1,458,951,600.00	8.32	Semi-annually	No	No		19-Nov-2014
UA4000173058	Coupon bonds	1,195,000,000.00	7.75	Semi-annually	No	No		26-Nov-2014
UA4000177133	Coupon bonds	2,688,750,000.00	7.88	Semi-annually	No	No		10-Dec-2014
UA4000171649	Coupon bonds	1,185,858,250.00	8.25	Semi-annually	No	No		24-Dec-2014
UA4000151278	Coupon bonds	1,757,749,400.00	8.50	Semi-annually	No	No		7-Jan-2015
UA4000133771	Coupon bonds	229,977,750.00	9.60	Semi-annually	No	No		14-Jan-2015
UA4000155485	Coupon bonds	2,611,075,000.00	8.09	Semi-annually	No	No		11-Feb-2015
UA4000157143	Coupon bonds	597,500,000.00	8.02	Semi-annually	No	No		18-Feb-2015
UA4000157127	Coupon bonds	590,521,200.00	8.02	Semi-annually	No	No		25-Feb-2015
UA4000160642	Coupon bonds	2,413,027,650.00	7.75	Semi-annually	No	No		18-Mar-2015
UA4000142699	Coupon bonds	3,725,651,500.00	9.45	Semi-annually	No	No		22-Apr-2015
UA4000166821	Coupon bonds	3,185,870,000.00	7.75	Semi-annually	No	No		6-May-2015
UA4000142681	Coupon bonds	655,290,200.00	4.80	Semi-annually	No	Yes	6-May-2015	6-May-2015
UA4000142001	Coupon bonds	1,811,046,400.00	9.45	Semi-annually	No	No	O Way 2013	27-May-2015
UA4000141071 UA4000167837	Coupon bonds	2,075,834,500.00	7.75	Semi-annually	No	No		3-Jun-2015
UA4000107037 UA4000142673	Coupon bonds	2,091,250,000.00	4.50	Semi-annually	No	Yes	17-Jun-2015	17-Jun-2015
UA4000142073	Coupon bonds	26,648,500.00		Semi-annually			17-3011-2013	
UA4000144065 UA4000171409	Coupon bonds	1,247,317,100.00	9.45 8.25	Semi-annually	No No	No No		8-Jul-2015 15-Jul-2015
UA4000171409 UA4000152441	Coupon bonds		8.25	Semi-annually	No No	No		
	•	3,846,705,000.00		,		No		27-Jan-2016
UA4000153282	Coupon bonds	106,474,500.00	8.25	Semi-annually	No No	No	16 Mar 2010	3-Feb-2016
UA4000160923	Coupon bonds	3,585,000,000.00	7.50	Semi-annually	No No	Yes	16-Mar-2016	16-Mar-2016
UA4000160907	Coupon bonds	342,785,750.00	8.00	Semi-annually	No No	No		23-Mar-2016
UA4000166847	Coupon bonds	889,677,500.00	8.00	Semi-annually	No	No		25-May-2016
UA4000172506	Coupon bonds	2,698,154,650.00	8.75	Semi-annually	No	No	00.0 : 00.1	10-Aug-2016
UA4000177414	Coupon bonds	3,567,075,000.00	7.75	Semi-annually	No	Yes	26-0ct-2016	26-0ct-2016
UA4000177752	Coupon bonds	596,615,700.00	7.75	Semi-annually	No	Yes	30-Nov-2016	30-Nov-2016
UA4000178305	Coupon bonds	1,192,992,400.00	7.75	Semi-annually	No	No		14-Dec-2016
UA4000160915	Coupon bonds	3,585,000,000.00	8.25	Semi-annually	No	No		22-Mar-2017



Table 5. Outstanding of local-currency government bonds

ISIN	Bond type	Outstanding volume (UAH)	Coupon rate (%)	Payment frequency	Amortisation option	Put option	Next put	Maturity date
UA4000166854	Coupon bonds	3,883,750,000.00	7.45	Semi-annually	No	Yes	17-May-2017	17-May-2017
UA4000151286	Coupon bonds	6,333,500,000.00	7.50	Semi-annually	No	No		20-Dec-2017
UA4000177554	Coupon bonds	2,389,008,150.00	7.50	Semi-annually	No	Yes	21-Nov-2018	21-Nov-2018
Total		70,912,088,700.00						
Grand total	:	284,603,377,100.00						

Note: the list of local-currency government bonds may not be complete as it reflects ICU knowledge regarding the outstanding stock of the government bonds, which is published by Ministry of Finance of Ukraine as its website (http://minfin.gov.ua/control/publish/article/main?art_id=274776&cat_id=234036).

Sources: Ministry of Finance, Investment Capital Ukraine LLC.



2014 weekly state debt payback

Table 6. Weekly schedule of state bond auctions and volume of state debt* to be repaid within a 7-day period since auction date (UAH)

Month	Auction details	1st Tuesday	2nd Tuesday	3rd Tuesday	4th Tuesday	5th Tuesday
January	Auction date	1-Jan-13	8-Jan-13	15-Jan-13	22-Jan-13	29-Jan-13
	Local debt repayment ¹	0.00	0.00	0.00	0.00	0.00
	External debt repayment ²	0.00	0.00	0.00	0.00	0.00
	Total	0.00	0.00	0.00	0.00	0.00
February	Auction date	5-Feb-13	12-Feb-13	19-Feb-13	26-Feb-13	
	Local debt repayment ¹	0.00	0.00	0.00	0.00	
	External debt repayment ²	0.00	0.00	0.00	0.00	
	Total	0.00	0.00	0.00	0.00	
March	Auction date	5-Mar-13	12-Mar-13	19-Mar-13	26-Mar-13	
	Local debt repayment ¹	0.00	0.00	0.00	0.00	
	External debt repayment ²	0.00	0.00	0.00	0.00	
	Total	0.00	0.00	0.00	0.00	
April	Auction date	2-Apr-13	9-Apr-13	16-Apr-13	23-Apr-13	30-Apr-13
	Local debt repayment ¹	0.00	0.00	0.00	0.00	0.00
	External debt repayment ²	0.00	0.00	0.00	0.00	0.00
	Total	0.00	0.00	0.00	0.00	0.00
May	Auction date	30-Apr-13	7-May-13	14-May-13	21-May-13	28-May-13
	Local debt repayment ¹	0.00	0.00	0.00	0.00	0.00
	External debt repayment ²	0.00	0.00	0.00	0.00	0.00
	Total	0.00	0.00	0.00	0.00	0.00
June	Auction date	4-Jun-13	11-Jun-13	18-Jun-13	25-Jun-13	
	Local debt repayment ¹	0.00	0.00	0.00	0.00	
	External debt repayment ²	0.00	0.00	0.00	0.00	
	Total	0.00	0.00	0.00	0.00	
July	Auction date	2-Jul-13	9-Jul-13	16-Jul-13	23-Jul-13	30-Jul-13
-	Local debt repayment ¹	0.00	0.00	0.00	0.00	0.00
	External debt repayment ²	0.00	0.00	0.00	0.00	0.00
	Total	0.00	0.00	0.00	0.00	0.00
August	Auction date	6-Aug-13	13-Aug-13	20-Aug-13	27-Aug-13	
	Local debt repayment ¹	0.00	0.00	0.00	0.00	
July August September	External debt repayment ²	0.00	0.00	0.00	0.00	
	Total	0.00	0.00	0.00	0.00	
September	Auction date	3-Sep-13	10-Sep-13	17-Sep-13	24-Sep-13	
	Local debt repayment ¹	0.00	0.00	0.00	0.00	
	External debt repayment ²	0.00	0.00	0.00	0.00	
	Total	0.00	0.00	0.00	0.00	
October	Auction date	1-0ct-13	8-0ct-13	15-0ct-13	22-0ct-13	29-0ct-13
	Local debt repayment ¹	0.00	0.00	0.00	0.00	0.00
	External debt repayment ²	0.00	0.00	0.00	0.00	0.00
	Total	0.00	0.00	0.00	0.00	0.00
November	Auction date	5-Nov-13	12-Nov-13	19-Nov-13	26-Nov-13	
	Local debt repayment ¹	0.00	0.00	0.00	0.00	
	External debt repayment ²	0.00	0.00	0.00	0.00	
	Total	0.00	0.00	0.00	0.00	
December	Auction date	3-Dec-13	10-Dec-13	17-Dec-13	24-Dec-13	31-Dec-13
_ 500111501						0.00
						0.00
						0.00
	Local debt repayme External debt repayr Total			ment ² 0.00 0.00	ment ² 0.00 0.00 0.00	ment ² 0.00 0.00 0.00 0.00

Notes: highlighted data — above UAH1bn in bold font, above UAH4bn shaded in blue; [*] interest and principal; [1] — government bonds (ordinary bonds, VAT bonds and recapitalisation bonds; [2] — external debt means Eurobonds and loans denominated in local currency by most recent FX rates. Sources: Ministry of Finance of Ukraine, Investment Capital Ukraine LLC.



5yr sovereign local debt payback

Table 7. Local-currency bonds repayments for the upcoming 5-year period

		Repayments (UAHm)								Repayments, US dollar equivalent (US\$m)							
	I	nterest		Principal		Total		Interest			Principal			Total			
Period	Ordin- aries	VATs	Recaps	Ordin- aries	VATs	Recaps	Inte- rest	Prin- cipal	Ordin- aries	VATs	Recaps	Ordin- aries	VATs	Recaps	Inte- rest	Prin- cipal	
BY QUA	RTERS																
2Q14	859.2		1,821.0	1,322.1		1,598.3	3,865.2	4,961.7	72.1		152.9	111.0		134.2	324.5	416.6	
3Q14	2,275.8	135.6	2,551.4	1,922.8	1,643.6	1,500.0	6,405.1	12,000.1	191.1	11.4	214.2	161.4	138.0	125.9	537.8	1,007.6	
4Q14	3,552.6		3,371.4	435.8		4,696.5	8,747.8	14,468.9	298.3		283.1	36.6		394.3	734.5	1,214.9	
1Q15	2,108.5	90.4	2,169.8	453.7	1,643.6	2,000.0	5,536.9	12,997.1	177.0	7.6	182.2	38.1	138.0	167.9	464.9	1,091.3	
2Q15	3,423.3		2,833.2	250.8			7,717.9	15,265.7	287.4		237.9	21.1			648.0	1,281.8	
3Q15	2,409.2	45.2	2,560.9	0.8	1,643.6	1,000.0	5,903.4	5,243.3	202.3	3.8	215.0	0.1	138.0	84.0	495.7	440.2	
4Q15	3,329.2		2,961.1	0.8		6,000.0	7,070.2	6,909.8	279.5		248.6	0.1		503.8	593.6	580.2	
1Q16	2,279.9		2,201.9	0.8		2,750.0	5,255.6	11,248.8	191.4		184.9	0.1		230.9	441.3	944.5	
2Q16	3,329.2		2,642.4	1,988.3		9,085.0	6,709.1	11,962.9	279.5		221.9	166.9		762.8	563.3	1,004.4	
3Q16	2,279.8		2,071.3	80.8		7,135.0	4,785.4	12,703.9	191.4		173.9	6.8		599.1	401.8	1,066.7	
4Q16	3,144.0		2,245.7				6,091.7	5,833.7	264.0		188.6				511.5	489.8	
1Q17	2,263.6		1,732.4	2,750.0		1,250.0	4,190.2	7,585.0	190.1		145.5	230.9		105.0	351.8	636.9	
2Q17	3,144.0		2,245.7	7,788.5		6,357.9	5,861.4	18,030.1	264.0		188.6	653.9		533.8	492.1	1,513.9	
3Q17	2,061.7		1,673.0	1,810.0		6,550.0	3,781.0	8,360.0	173.1		140.5	152.0		550.0	317.5	701.9	
4Q17	2,572.8		1,895.7	5,212.9		7,658.3	4,795.5	19,204.6	216.0		159.2	437.7		643.0	402.6	1,612.5	
1Q18	1,932.3		1,337.9	4,318.9		6,375.0	3,316.5	10,693.9	162.2		112.3	362.6		535.3	278.5	897.9	
2Q18	2,200.1		1,435.9	11,845.3		7,157.9	3,725.6	19,003.3	184.7		120.6	994.6		601.0	312.8	1,595.6	
3Q18	1,623.5		1,011.1	5,101.3		10,145.1	2,680.8	15,246.5	136.3		84.9	428.3		851.8	225.1	1,280.1	
4Q18	1,355.5		1,066.2	5,108.8		4,655.3	2,511.2	12,153.1	113.8		89.5	428.9		390.9	210.9	1,020.4	
BY YEA	RS																
2014	6,687.6	135.6	7,743.8	3,680.7	1,643.6	7,794.8	19,018.1	31,430.7	561.5	11.4	650.2	309.0	138.0	654.5	1,596.8	2,639.0	
2015	11,270.2	135.6	10,525.1	706.0	3,287.2	9,000.0	26,228.4	40,416.0	946.3	11.4	883.7	59.3	276.0	755.7	2,202.2	3,393.4	
2016	11,032.9		9,161.4	2,069.8		18,970.0	22,841.8	41,749.3	926.4		769.2	173.8		1,592.8	1,917.9	3,505.4	
2017	10,042.2		7,546.8	17,561.3		21,816.2	18,628.2	53,179.8	843.2		633.6	1,474.5		1,831.8	1,564.1	4,465.1	
2018	7,111.4		4,851.1	26,374.4		28,333.4	12,234.1	57,096.8	597.1		407.3	2,214.5		2,379.0	1,027.2	4,794.0	

Notes: Ordinaries - the government bonds sold via auctions; VATs - VAT bonds; Recaps - recapitalisation bonds.

Sources: Ministry of Finance, Investment Capital Ukraine LLC.



5yr sovereign external debt payback

Table 8. Foreign-currency debt* (Eurobonds and loans) repayments for the upcoming 5-year period

		Repaym	ents, hryvnia	equivalent	(UAHm)	Repayments, US dollar equivalent (US\$m)							
	Intere	est	Princ	ipal	Tot	al	Intere	st	Principal		Total		
Period	Eurobond	Loan	Eurobond	Loan	Interest	Principal	Eurobond	Loan	Eurobond	Loan	Interest	Principal	
BY QUART	ERS												
2Q14	3,048.2	1,154.1	11,106.2	3,911.0	4,202.4	15,017.2	274.5	103.9	1,000.0	352.1	378.4	1,352.1	
3Q14	2,834.2	1,137.1	0.0	10,174.9	3,971.3	10,174.9	255.2	102.4	0.0	916.1	357.6	916.1	
4Q14	3,644.6	1,534.3	0.0	10,918.7	5,179.0	10,918.7	328.2	138.2	0.0	983.1	466.3	983.1	
1Q15	2,834.2	916.8	0.0	9,634.6	3,750.9	9,634.6	255.2	82.5	0.0	867.5	337.7	867.5	
2Q15	3,644.6	1,165.6	0.0	14,404.0	4,810.2	14,404.0	328.2	105.0	0.0	1,296.9	433.1	1,296.9	
3Q15	2,834.2	592.8	5,553.1	2,174.7	3,426.9	7,727.8	255.2	53.4	500.0	195.8	308.6	695.8	
4Q15	3,644.6	668.2	39,479.8	990.7	4,312.8	40,470.4	328.2	60.2	3,554.7	89.2	388.3	3,644.0	
1Q16	2,643.3	536.4	0.0	7,324.5	3,179.7	7,324.5	238.0	48.3	0.0	659.5	286.3	659.5	
2Q16	2,659.2	664.4	13,882.8	826.9	3,323.6	14,709.6	239.4	59.8	1,250.0	74.5	299.3	1,324.5	
3Q16	2,643.3	247.1	0.0	2,507.6	2,890.4	2,507.6	238.0	22.3	0.0	225.8	260.3	225.8	
4Q16	2,225.3	631.4	11,106.2	4,978.4	2,856.7	16,084.6	200.4	56.8	1,000.0	448.3	257.2	1,448.3	
1Q17	2,643.3	137.4	0.0	3,331.9	2,780.7	3,331.9	238.0	12.4	0.0	300.0	250.4	300.0	
2Q17	1,860.0	438.5	0.0	3,609.5	2,298.4	3,609.5	167.5	39.5	0.0	325.0	206.9	325.0	
3Q17	2,643.3	0.0	28,876.1	0.0	2,643.3	28,876.1	238.0	0.0	2,600.0	0.0	238.0	2,600.0	
4Q17	1,860.0	304.0	7,774.3	5,886.3	2,164.0	13,660.6	167.5	27.4	700.0	530.0	194.8	1,230.0	
1Q18	1,307.8	0.0	0.0	0.0	1,307.8	0.0	117.8	0.0	0.0	0.0	117.8	0.0	
2Q18	1,597.6	83.3	0.0	0.0	1,680.8	0.0	143.8	7.5	0.0	0.0	151.3	0.0	
3Q18	1,307.8	0.0	0.0	0.0	1,307.8	0.0	117.8	0.0	0.0	0.0	117.8	0.0	
4Q18	1,597.6	83.3	0.0	2,220.3	1,680.8	2,220.3	143.8	7.5	0.0	199.9	151.3	199.9	
BY YEARS													
2014	9,527.0	3,825.6	11,106.2	25,004.6	13,352.6	36,110.8	857.8	344.5	1,000.0	2,251.4	1,202.3	3,251.4	
2015	12,957.6	3,343.3	45,032.9	27,204.1	16,300.9	72,236.9	1,166.7	301.0	4,054.7	2,449.4	1,467.7	6,504.2	
2016	10,171.1	2,079.3	24,989.0	15,637.4	12,250.4	40,626.4	915.8	187.2	2,250.0	1,408.0	1,103.0	3,658.0	
2017	9,006.5	879.9	36,650.5	12,827.7	9,886.4	49,478.1	810.9	79.2	3,300.0	1,155.0	890.2	4,455.0	
2018	5,810.7	166.5	0.0	2,220.3	5,977.2	2,220.3	523.2	15.0	0.0	199.9	538.2	199.9	

Notes: [*] debt redemptions include also interest payments; debt comprises Eurobonds, IMF and VTB loans; IMF loan is meant all tranches received in 2008-10; [1] redemption of US\$2bn loan to VTB is a worst-case scenario within this loan agreement, it may be prolonged 2 times and this in effect may shift the redemption to 4Q11 or 2Q12. Sources: Ministry of Finance, IMF, Bloomberg, Reuters, Investment Capital Ukraine LLC.



Ukraine issuers' credit metrics

Table 9. Ukrainian corporate bond issuers and their key financial figures and ratios* (US\$m)

Issuer	Ticker	Filing	Reve- nues	EBITDA	Int exp	Cash	ST debt	LT debt	Debt	Net debt	EBITDA mrg (%)	Debt/ EBITDA (x)	Net debt/ EBITDA (x)	EBITDA int cov (x)
Naftogaz of Ukraine	NAFT0	4Q10	11,673.6	502.2	-613.5	333.2	685.2	4,824.9	5,510.1	5,176.9	4.3	11.0	10.3	Neg.
DTEK	DTEKUA	4Q11	4,965.0	1,294.6	60.9	1,304.1	429.4	1,878.3	2,307.7	1,003.6	26.1	1.8	0.8	21.2
MHP	MHPSA	1Q12	1,279.9	416.4	77.2	111.0	210.5	755.3	965.8	854.8	32.5	2.3	2.1	5.4
Metinvest Holding	METINV	4Q11	14,189.0	3,533.0	220.0	792.0	1,147.0	2,834.0	3,981.0	3,189.0	24.9	1.1	0.9	16.1
Avangard	AVINPU	4Q11	553.3	222.1	12.3	237.8	122.5	210.0	332.6	94.8	40.1	1.5	0.4	18.1
Interpipe	INPIP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concern Galnaftogaz	GLNGUZ	1Q12	1,647.2	96.8	26.3	13.9	136.9	203.9	340.8	326.9	5.9	3.5	3.4	3.7
Boryspil Int'l Airport	BORYS	1Q12	431.4	277.8	2.3	33.8	108.0	212.5	320.5	286.8	64.4	1.2	1.0	122.0
Ukrtelecom	UTLMUZ	2Q12	2,091.2	470.0	103.5	22.3	177.7	194.3	372.1	349.8	22.5	0.8	0.7	4.5
Mriya Agro Holding	MRIYA	3Q11	344.8	42.6	40.1	192.0	96.0	282.2	378.3	186.3	12.4	8.9	4.4	1.1
Ferrexpo	FXPOLN	4Q11	1,788.0	798.0	43.3	890.2	18.9	951.4	970.4	80.2	44.6	1.2	0.1	18.4
Agroton	AGTPW	2Q11	102.1	10.4	0.3	4.2	19.3	1.0	20.3	16.1	10.2	2.0	1.6	31.0
Agromat	AGROM	2Q11	149.7	28.3	16.0	3.3	23.5	30.1	53.5	50.2	18.9	1.9	1.8	1.8
KSG Agro	KSGPW	3Q11	3.2	1.7	-0.7	5.5	5.6	10.7	16.4	10.9	52.8	9.5	6.4	Neg.
IMC	IMCPW	3Q11	5.6	-2.3	0.2	13.4	4.0	18.1	22.1	8.7	Neg.	Neg.	Neg.	Neg.

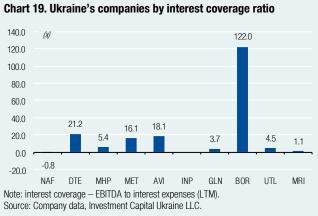
Notes: [*] financial figures and appropriate ratios are calculated using LTM data; LTM - last 12-month period; Int exp - interest expenses; ST debt - short-term debt; LT debt - long-term debt; int cov - interest coverage.

Sources: Company data, Investment Capital Ukraine LLC.













Glossary

The following is the list of terms, phrases and abbreviations that are frequently used in this report's weekly publications.

Average duration, or interchangeably, **bond auction average duration**: Duration calculated from all cash flows obtained from the bonds sold at the auction. Yield-to-maturity, price, and each cash flow (coupons and principal) are calculated on a per-bond basis.

Average yield, or interchangeably, **bond auction average yield**: A yield-to-maturity calculated from all cash flows obtained from the bonds sold at the auction and versus the total price paid per bond to acquire them. Price and each cash flow (coupons and principal) are calculated on a per-bond basis.

Basis point, or interchangeably, bp: One-hundredth of a percentage point, or 0.01%.

BoP: Balance of payments.

Certificate(s) of **Deposit**, or interchangeably, **CD(s):** Short-term money market instruments that allow the NBU, the central bank, to absorb excess liquidity from the local banks. Their durations are 2, 3, or up to 5 days; two weeks; one month; 1.5 months; two months; and up to three months.

CDS: A Credit default swap; a contract that references the performance of a loan or a bond (sovereign, corporate, or municipal). A CDS is normally quoted in basis points, or hundredths of a percent.

CRA: Credit rating agency. These include international industry majors Moody's, Standard & Poor's, and Fitch. It could refer also to other credit rating agencies, including Credit-Rating of Ukraine.

EFSF: European Financial Stability Facility (http://www.efsf.europa.eu), created on 9 May, 2010 by the euro area member states, as a Luxembourg-registered company owned by Euro Area Member States (EAMS), which has a mandate to lend to the EAMS in times of difficulty, e.g., in bail-outs. For the purpose of its operations, the EFSF is able to issue bonds EAMS-guaranteed for up to €440bn. Thanks to its structure of credit enhancements, including a cash reserve and a loan-specific cash buffer¹, the EFSF has top credit ratings from major CRAs: 'Aaa' by Moody's, 'AAA' by S&P, and 'AAA' by Fitch.

MoE: Ministry of Economy of Ukraine (http://www.me.gov.ua).

MoF: Ministry of Finance of Ukraine (http://www.minfin.gov.ua).

NBU: National Bank of Ukraine, the central bank of Ukraine (http://www.bank.gov.ua).

Party of Regions, or interchangeably, **PoR:** The *de facto* ruling political party in Ukraine currently. It won the presidency in the February 2010 presidential elections with a slim margin over Yulia Tymoshenko's Bloc, then consolidated power in the parliament, where it has a majority over minor loyal factions, while incapable of forming a majority itself. The next elections for Parliament and the president's office are expected to take place in 2012 and 2015, respectively.

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¹ For instance, in order to lend €17.7bn to Ireland, the EFSF has to raise around €26.5bn from the financial market.



Percentage point, or interchangeably, ppt: one percent, 1%.

Recaps, or interchangeably, **recapitalisation bonds:** Local-currency bond(s), representing a general financial obligation by the government on par with other government's financial obligations, which was/were issued with the purpose of recapitalising state-owned entities like Naftogaz of Ukraine, commercial banks from Ukreximbank to Oschadbank, and the State Mortgage Institution (SMI).

UAH: Ukrainian national currency, the hryvnia.

UAH TWI, or interchangeably, **hryvnia trade-weighted index**: Index of the local currency calculated by Investment Capital Ukraine (ICU), which is calculated upon nominal exchanges rates to the US dollar and headline consumer price inflation indices of Ukraine and its 26 trading partners, which as a whole, comprise a 76% share of merchandise trade turnover. Please refer to *ICU Quarterly Report* "Ukraine's See-saw Puzzle" published on 14 July, 2009 for more details on the methodology of the index. There are nominal and real UAH TWIs, the former based on exchange rates, and the latter based on both exchange rates and inflation. There are monthly and daily UAH TWIs, which are tracked by ICU. Monthly TWI calculation is based on the monthly data for inflation and trade statistics as well as monthly average exchange rates. Daily TWI calculation is based on the monthly data for inflation and trade statistics; however, its core substance is to reflect daily movements of the exchange rates of Ukraine's currency as well as of its key trading partners.

UAS: Ukrainian accounting standards.

VATs, or interchangeably, **VAT bonds:** Local-currency bond(s), representing a general financial obligation by the government on par with other government's financial obligations, which was/were issued in accordance with the government's initiative to offload the government's accumulated arrears on VAT refunds to domestic exporters.

Weighted-average duration, or interchangeably, bond auction weighted-average duration: Duration calculated from all cash flows obtained from the bonds sold at the auction. Yield-to-maturity, price, and each cash flow (coupons and principal) are calculated for the total number of bonds sold at the auction.

Weighted-average yield, or interchangeably, **bond auction weighted-average yield:** A yield-to-maturity calculated from all cash flows obtained from the bonds sold at the auction and against the total price paid to acquire them. Price and each cash flow (coupons and principal) are calculated for the total number of bonds sold at the auction.

YTM, or interchangeably, yield-to-maturity: The interest rate that creates the present value of cash flows obtained from holding a bond equal to the price of the bond. The YTM factors in coupon income and any capital gain (loss) the investor will realise by holding the bond to maturity. It also takes into consideration the timing of coupon payments and principal repayment, which can be done at the maturity date (for a bullet bond) or in accordance with an amortisation schedule (amortisation bond). The YTM uses an interest-on-interest principle, assuming that coupon income can be reinvested at an interest rate equal to the YTM, and is calculated in accordance with the Ukraine's domestic bond market standard, which is represented by the following formula:

$$Price + AI = \sum_{i=1}^{n} \frac{CF_i}{(1+YTM)^{\frac{t_i}{365}}}$$

where Price and AI are clean price and accrued interest of the bond, respectively, as of the date of purchase; n is the number of cash flows to be obtained by a bond holder; CF_i is the



cash flow (coupon income, principal repayment) obtained from a bond; t_i is the number of days between a purchase date and i-th cash flow date, and YTM is yield-to-maturity.

YTW, or interchangeably, **yield-to-worst:** The same as yield-to-maturity (YTM); however, it is calculated assuming the worst-case scenario under the terms of a bond issue, e.g., the cash flow is trimmed to the earliest possible bond redemption such as due to a call or a put option, embedded into the bond.



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