



Bond Market Insight

Weekly review: Low liquidity and yields volatility

MONDAY, 10 FEBRUARY, 2014

RESEARCH INSIGHT

Last week was quite difficult for Ukraine. Large debt repayments were made at the domestic bond market and to external creditors as the IMF put significant pressure on the state budget. Additional pressure was from the FX market after the local currency depreciated nearly 10% as significant domestic liquidity converted into FX until the NBU announced a new regulation which decreased this pressure. The ongoing unresolved political crisis increased market anticipation of a severance of relations with Russia, a move which could cause budget financing problems.

Domestic bond market. Banking sector liquidity significantly declined as the result of FX market pressure, low inflows from the NBU, and minimal inflows from the MoF. Under these conditions, the MoF's primary auction met minimal demand and a consequent unscheduled auction attracted no bids. The structure of bondholders changed last week after a significant redemption and an increase in the official UAH/USD exchange rate.

Eurobond market. The Eurobond market was volatile. While US Treasuries, the benchmark for Ukrainian Eurobonds, slightly rose during the week, YTM of Ukrainian Eurobonds were quite stable as YTM and spreads fluctuated in tandem. News of the Ukrainian political crisis and potential support from the US (to replace Russian financing which could discontinue if the opposition wins control of the Ukrainian government) also affected yields.

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Key market indicators (as of 7 Feb 2014)

	Last close	Weekly chg (%)	YTD chg (%)
Currencies			
USD/UAH (spot)	8.5450	-0.84	3.70
USD/UAH (1Y NDF)	10.1525	2.55	7.78
Rates, yields & spreads (%)			
Kiev Prime ON	21.23	1,048bp	1,343bp
Kiev Prime 3M	17.03	378bp	103bp
UAH NDF 1Y	19.48	394bp	449bp
Ukraine CDS 5Y	1bp	15bp	252bp
Libor USD 1yr	0.56	-1bp	-2bp
UST 2yr	0.30	-2bp	-8bp
UST 10yr	2.68	4bp	-35bp
UKRAINE 17	11.72	131bp	216bp
UKRAINE 23	10.01	15bp	97bp
Money market data (UAHbn)			
Accounts at NBU	21.09	-9.49	-35.50
NBU CDs outstanding	1.23	-55.81	-18.88
Local currency bond market data (UAHbn)			
Govt bond outstanding	254.79	0.68	2.28
Held by			
NBU	147.70	-0.73	1.97
Banks	81.19	2.62	1.28
Other residents	12.75	-1.66	2.85
Non-residents	13.15	7.69	12.40

Notes: chg – percentage change; bp – basis points.

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

Research team

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Market update and news

Domestic bond market

Liquidity high with reallocation of funds

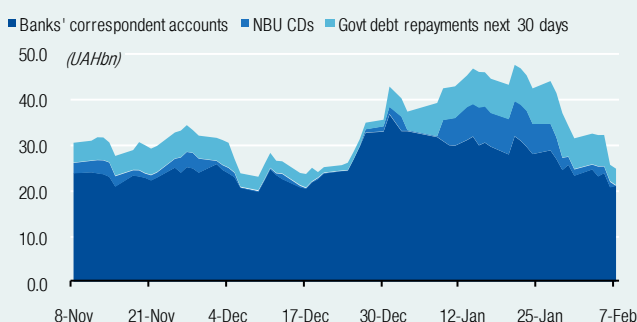
Liquidity fell UAH7.74bn last week

Last week began with UAH32.47bn in broader banking sector liquidity and ended the week UAH7.74bn lower. The MoF's UAH3.24bn local currency debt principal and interest repayments followed by the NBU's redemption of UAH1.03bn of CDs, UAH0.20bn of 13-day loans and UAH0.60bn of repos. This had a negative impact on banks' correspondent accounts with the NBU, which declined UAH3.57bn last week.

Real liquidity declined nearly UAH5.0bn

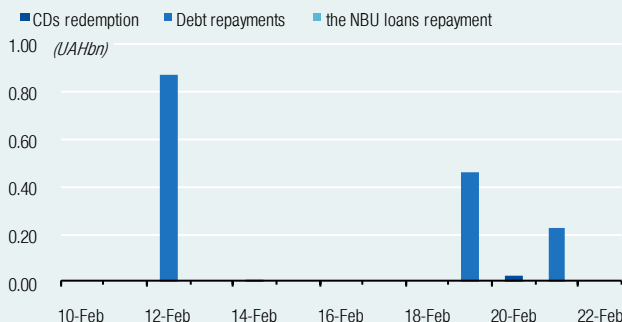
Part of the MoF's UAH1.85bn inflow received by the NBU caused its portfolio to decline by this volume after last Wednesday's debt repayment (see comment below). Real liquidity fell about UAH5.00bn while banks also repaid UAH0.60bn of ON loans to the NBU during the week.

Chart 1. Banking sector liquidity (UAHbn) (last 3 months)



Sources: MoF, NBU, Investment Capital Ukraine LLC.

Chart 2. Future redemptions of CDs and UAH state bonds (UAHbn)



Sources: MoF, NBU, Investment Capital Ukraine LLC.

Liquidity should be unstable due to many reasons

After two weeks of low proceeds from the primary market amid sizeable debt repayments, the MoF will try to refinance its debt repayments this week. Most likely, these attempts will be concentrated on a USD-denominated bond redemption, while less significant local currency repayments might not be refinanced. Quarterly tax payments begin this week, which should put additional pressure on liquidity. We predict unstable liquidity this week.

Insufficient demand was seen last week...

Last week's primary auctions

Despite the significant volume of repayments, the unstable FX market and record low banking sector liquidity, refinancing debt repayments could not be achieved after two primary auctions were held last week. The MoF received only insignificant proceeds from the first scheduled auction held last Tuesday. Of six bonds offered last Tuesday, only one 5-year bond received two bids, one of which was non-competitive. Demand for the 5-year bond amounted to UAH208.71m at the standard 14.25% rate, most likely supported by domestic QE. The MoF refinanced only 7.6% of last week's principal repayments, receiving just UAH209.27m.

...the market ignored last week's auctions

The market ignored last Tuesday's offerings of short-term zero-coupon bonds as well as the 3-year USD-denominated bond, as it ignored last Thursday's offering of a 2.5-month zero-coupon bond and a 5-year ordinary bond offering.

Significant liquidity outflows last Wednesday caused an increase in money market and bond market interest rates

On Wednesday, banks' correspondent accounts with the NBU fell UAH3.07bn to the lowest level of this year to UAH20.79bn. The MoF repaid UAH3.24bn in local currency in debt principal and interest repayments. While the NBU had in its portfolio bonds which were redeemed on Wednesday, the liquidity outflow was about UAH4.0bn, part of which was compensated by the MoF. The significant outflow of liquidity was reflected in the secondary bond market as yields increased and money market fund rates rose. The MoF attracted no demand despite the availability of support from domestic QE.

The failure of the unscheduled auction could indicate that budget performance is not good

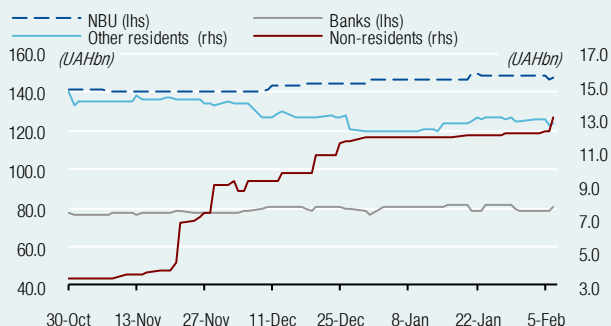
Last Thursday's unscheduled primary auctions could indicate significant problems with the budget's performance even though the MoF is currently able to meet budget expenditures despite failed auctions. Ahead of this week's scheduled quarterly tax payments, we could see another attempt to attract financing at the auction.

Bondholders' structure: Impact of exchange rate change

Changes in portfolios began last Thursday when NBU statistics included the debt redemption

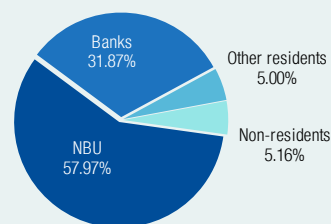
The bondholders' structure changed slightly last week. While last Wednesday's redemption decreased the NBU's portfolio UAH1.85bn to UAH146.93bn, total bonds outstanding declined UAH2.54bn. The rest of the funds from redemptions were sent to banks and other residents, of about UAH0.33bn and UAH0.36bn, respectively. This redemption caused the NBU's share to decline 14bp to 58.64% and the other residents' share slid 9bp to 5.05%. At the same time, the banks' portfolio share rose 18bp to 31.40% and the non-residents' share rose 5bp to 4.91%.

Chart 3. UAH state bondholders' portfolios (last 3 months)



Notes: other residents' and non-residents' data is plotted against the right-side axis, all other groups of bondholders are plotted against the left-side axis.
Sources: National Bank of Ukraine, Investment Capital Ukraine LLC.

Chart 4. Breakdown of government bondholders (03 January, 2014)



Sources: National Bank of Ukraine, Investment Capital Ukraine LLC.

A significant increase in portfolios last Friday shows that the non-residents' portfolio consists mostly of FX-denominated bonds

But the most significant changes took place last Friday after the NBU increased the official UAH/USD exchange rate to UAH8.7080/USD. With this change, all portfolios reflected where USD-denominated bonds are and that these bonds share in portfolios of any size.

Total bonds outstanding rose UAH4.23bn last Friday as each group of bondholders increased. The NBU's portfolio rose UAH0.77bn, up 67bp to 57.97%, while UAH0.25bn was purchased from the banks' portfolio. Despite banks' selling some bonds to the NBU, their portfolio rose UAH2.52bn to UAH81.19bn, causing shares to increase 47bp to 31.87%. Changes in the other residents' portfolio were insignificant, consisting of a UAH0.10bn donation and 5bp decline in share to 5.00%. At the same time, the non-residents' portfolio rose UAH0.85bn to UAH13.15bn, or 6.91%, compared with last Thursday's volume, showing that they hold mostly FX-denominated bonds.

Eurobond market

Yields high and volatile

News about Ukraine had a significant impact last week...

...caused yields to remain steady with spreads to tighten slightly

The market saw no improvements in the Ukrainian situation last week. On the one hand, the political crisis remained unresolved, while on the other hand, increased anticipations of discontinued Russian financing despite a new government being installed. Last Friday, US officials announced possible financial support of Ukraine if real reforms are implemented.

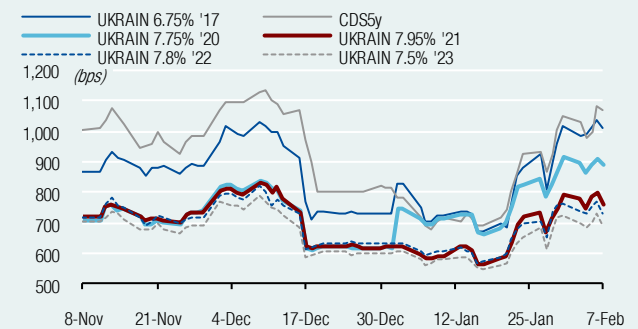
On the news above, YTM of Ukrainian Eurobonds moved sideways and finally rose just slightly, mostly at the short-end of yield curve. Last week, spreads did not move significantly and tightened for the most part.

Chart 5. YTM of some Ukrainian Eurobonds



Source: Bloomberg, Investment Capital Ukraine LLC.

Chart 6. Ukrainian Eurobonds spreads and 5-year CDS



Source: Bloomberg, Investment Capital Ukraine LLC.

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 1. Ukrainian local-currency government bonds as of 7 Feb 2014

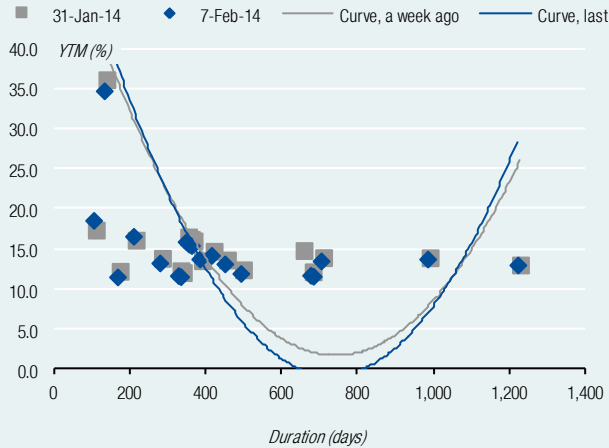
Ticker	Volume (UAHm)	Coupon rate (%)	Maturity	Price (% of par)	YTM (%)	Weekly price chg (bp)	Weekly yield chg (bp)	Duortion (years)	1W daily avg turnover (UAHm)	1W total turnover (UAHm)	Total turnover (UAHm)	Liquidity ratio*
140362	1,459.71	9.2	21-May-14	99.684	18.60	2	121	0.28	5.49	21.95	1,753.45	1.20
157135	2,512.23	7.97	23-Jul-14	98.938	11.56	50	-70	0.45	0.00	0.00	168.98	0.07
158794	1,294.57	7.5	10-Sep-14	98.466	16.62	5	48	0.57	0.00	0.00	1,644.02	1.27
149231	1,043.24	8.32	19-Nov-14	98.500	13.30	63	-58	0.76	0.00	0.00	1,639.88	1.57
151278	1,256.90	8.5	7-Jan-15	98.250	11.73	69	-60	0.89	0.00	0.00	998.61	0.79
000999	164.45	9.6	14-Jan-15	99.125	11.59	63	-51	0.91	0.00	0.00	0.00	0.00
155485	1,867.08	8.09	11-Feb-15	97.375	15.95	75	-59	0.95	0.00	0.00	5,350.09	2.87
157143	427.25	8.02	18-Feb-15	97.250	15.64	75	-58	0.97	0.00	0.00	0.00	0.00
157127	422.26	8.02	25-Feb-15	97.125	15.47	75	-57	0.99	0.00	0.00	2,053.39	4.86
160642	1,725.47	7.75	18-Mar-15	97.435	13.79	4	22	1.05	17.42	87.08	5,764.56	3.34
142699	2,664.07	9.45	22-Apr-15	98.125	14.24	75	-51	1.13	0.00	0.00	10,417.37	3.91
142681	466.04	4.8	6-May-15	103.313	-3.57	-19	41	0.24	0.00	0.00	0.00	0.00
141071	1,295.01	9.45	27-May-15	98.000	13.18	75	-48	1.23	9.65	48.27	6,138.37	4.74
142673	1,495.38	4.5	17-Jun-15	91.875	34.73	88	-138	0.36	0.00	0.00	0.00	0.00
144083	19.06	9.45	8-Jul-15	98.000	11.99	75	-45	1.35	0.00	0.00	0.00	0.00
152441	2,750.64	8.25	27-Jan-16	94.750	11.77	88	-43	1.85	0.00	0.00	55.17	0.02
153282	76.14	8.25	3-Feb-16	94.750	11.64	100	-320	1.87	0.00	0.00	71.92	0.94
160923	2,563.50	7.5	16-Mar-16	92.875	174.67	88	2,035	0.11	0.00	0.00	0.00	0.00
160907	245.11	8	23-Mar-16	93.750	13.55	88	-41	1.93	0.00	0.00	151.96	0.62
160915	2,563.50	8.25	22-Mar-17	90.438	13.78	56	-16	2.70	0.00	0.00	0.00	0.00
151286	4,528.85	7.5	20-Dec-17	85.563	13.05	19	1	3.35	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 7. Shape of the local-currency sovereign yield curve

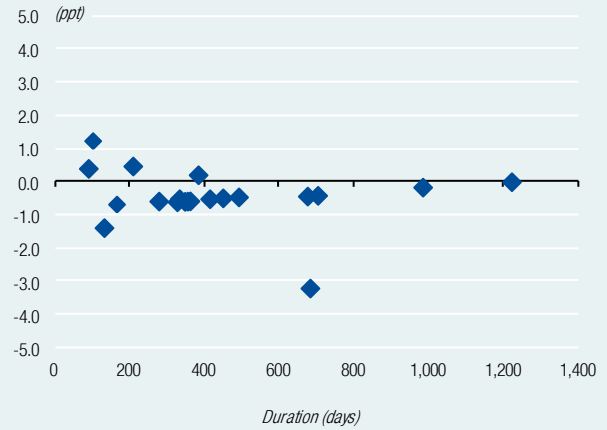
Last one compared to 1 week ago



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

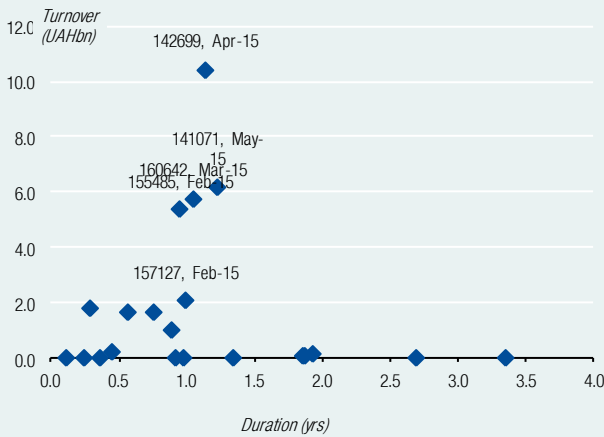
Chart 8. Movement of the local-currency sovereign yield curve

Over last week, in percentage points



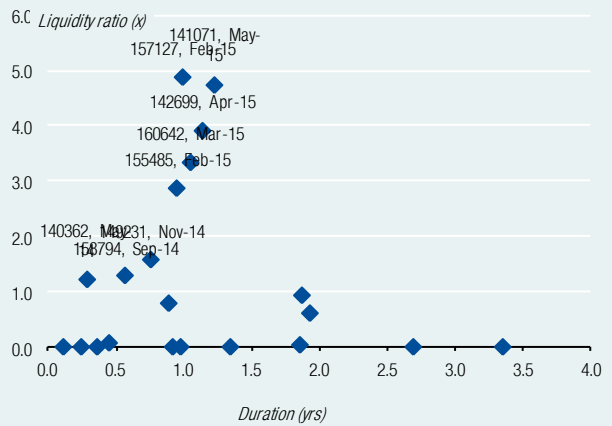
Sources: Ministry of Finance, Bloomberg, PFTS, Investment Capital Ukraine LLC.

Chart 9. Map of Ukraine's local-currency government bonds by total turnover plotted against their duration



Note: Total turnover and duration are taken from Table 1, 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 10. Map of Ukraine's local-currency government bonds by liquidity ratio plotted against their duration



Note: Total turnover and duration are taken from Table 1, 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 2. Ukrainian Eurobonds as of 7 Feb 2014

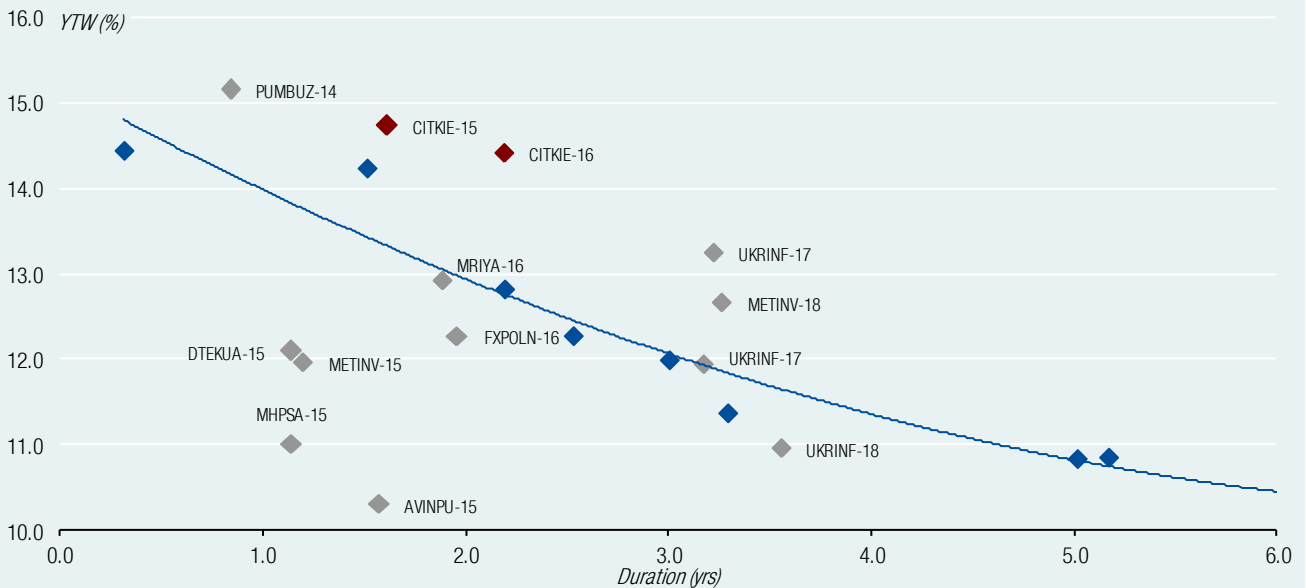
Ticker	Issuer	Ratings	Volume (million)	Curr-ency	Coupon rate (%)	Maturity	Price (% of par)	YTM (%)	Weekly price chg (bp)	Weekly yield chg (bp)	Spread (bp)	Duration (years)
UKRAIN-15	Ministry of Finance	Caa2/CCC+/C CC	600.0	EUR	4.95	13-Oct-15	90.500	11.51	-225	171	1,069	1.61
CITKIE-15	Kyiv	Caa2/CCC+/B -	250.0	USD	8	6-Nov-15	91.000	14.01	-150	111	1,300	1.61
CITKIE-16	Kyiv	Caa2/CCC+/B -	300.0	USD	9.375	11-Jul-16	90.750	14.02	-156	85	1,331	2.18
AGTPW-14	Agroton	NR/NR/WD	50.0	USD	12.5	14-Jul-14	52.188	246.98	0	1,094	22,737	0.42
NAFTO-14	Naftogaz of Ukraine	NR/NR/B-	1,595.0	USD	9.5	30-Sep-14	93.625	20.72	-119	247	2,013	0.61
PUMBZ-14	FUIB	Caa2/NR/NR	252.5	USD	11	31-Dec-14	97.188	14.44	-13	22	1,386	0.84
EXIMUK-15	Ukreximbank	Caa2/NR/B-	750.0	USD	8.375	27-Apr-15	86.688	21.43	-350	385	2,052	1.14
DTEKUA-15	DTEK	Caa1/NR/B-	500.0	USD	9.5	28-Apr-15	97.375	11.87	-206	189	1,133	1.14
MHPSA-15	MHP	Caa1/NR/B-	584.8	USD	10.25	29-Apr-15	99.625	10.56	-63	56	981	1.14
METINV-15	Metinvest Holding	Caa1/NR/B-	500.0	USD	10.25	20-May-15	98.688	11.36	-88	76	1,046	1.20
PRBANK-15	Pryvatbank	Caa1/NR/B-	200.0	USD	9.375	23-Sep-15	85.750	20.14	-213	186	1,921	1.47
AVINPU-15	Avangard	NR/NR/B-	200.0	USD	10	29-Oct-15	99.625	10.22	-119	76	984	1.57
EXIMUK-16	Ukreximbank	Caa3/NR/CC	125.0	USD	8.4	9-Feb-16	76.375	20.91	-500	377	2,023	1.89
PRBANK-16	Pryvatbank	Caa2/NR/NR	150.0	USD	8.75	9-Feb-16	75.261	21.78	-75	74	1,976	1.89
OSCHAD-16	Oshchadbank	Caa2/NR/B-	500.0	USD	8.25	10-Mar-16	81.063	19.80	-356	251	1,893	1.86
MRIYA-16	Mriya Agroholding	NR/B-/B-	250.0	USD	10.95	30-Mar-16	97.125	12.51	-194	107	1,179	1.88
FXPOLN-16	Ferrexpo PLC	Caa1/B-/B-	500.0	USD	7.875	7-Apr-16	92.250	12.06	-100	60	1,154	1.96
INPIP-17	Interpipe	NR/NR/C	200.0	USD	10.25	2-Aug-17	82.313	17.23	50	-19	1,554	2.94
UKRINF-17	Infrastructure Projects Fin	(P)Caa2/NR/N R	550.0	USD	9	7-Dec-17	88.460	12.91	-38	15	1,196	3.22
EXIMUK-18	Ukreximbank	Caa2/NR/B-	500.0	USD	8.75	22-Jan-18	77.563	16.75	-406	167	1,500	3.31
METINV-18	Metinvest Holding	Caa1/NR/B-	750.0	USD	8.75	14-Feb-18	88.188	12.60	-406	140	1,107	3.26
PRBANK-18	Pryvatbank	Caa1/NR/B-	175.0	USD	10.875	28-Feb-18	78.625	18.63	-706	285	1,680	3.08
OSCHAD-18	Oshchadbank	Caa2/NR/B-	500.0	USD	8.875	20-Mar-18	75.500	17.48	-419	173	1,581	3.27
UKRAIN-14	Ministry of Finance	Caa2/CCC+/B -	1,000.0	USD	7.95	4-Jun-14	98.500	12.77	-75	261	1,105	0.31
UKRAIN-15	Ministry of Finance	Caa2/CCC+/B -	500.0	USD	6.875	23-Sep-15	91.177	13.10	-240	182	1,166	1.51
UKRAIN-16	Ministry of Finance	Caa2/CCC+/B -	1,250.0	USD	6.25	17-Jun-16	88.000	12.28	-486	259	1,141	2.19
UKRAIN-16	Ministry of Finance	Caa2/CCC+/B -	1,000.0	USD	6.58	21-Nov-16	87.901	11.81	-457	209	1,102	2.53
UKRAIN-17	Ministry of Finance	Caa2/CCC+/B -	2,600.0	USD	9.25	24-Jul-17	93.153	11.72	-355	131	1,077	3.00
UKRAIN-17	Ministry of Finance	Caa2/CCC+/B -	700.0	USD	6.75	14-Nov-17	87.143	11.01	-196	71	999	3.29
UKRAIN-20	Ministry of Finance	Caa2/CCC+/B -	1,500.0	USD	7.75	23-Sep-20	86.643	10.61	-160	38	885	5.01
UKRAIN-21	Ministry of Finance	Caa2/CCC+/B -	1,500.0	USD	7.95	23-Feb-21	86.688	10.69	-242	54	782	5.17
UKRAIN-22	Ministry of Finance	Caa2/CCC+/B -	2,250.0	USD	7.8	28-Nov-22	85.295	10.39	-75	15	749	6.20
UKRAIN-23	Ministry of Finance	Caa2/CCC+/B -	1,250.0	USD	7.5	17-Apr-23	85.122	10.01	-80	15	712	6.39
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

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	85.579	19.69	0	0	1,394	1.38
UKRINF-17	Infrastructure Projects Fin	Caa2/NR/NR	538.0	USD	8.375	3-Nov-17	90.750	11.49	-200	72	1,038	3.17
UKRINF-18	Infrastructure Projects Fin	Caa2/NR/NR	690.0	USD	7.4	20-Apr-18	89.125	10.68	-44	15	888	3.55

Sources: Bloomberg, Investment Capital Ukraine LLC.

Chart 11. Term structure of yields of Ukrainian Eurobonds as of 7 Feb 2014

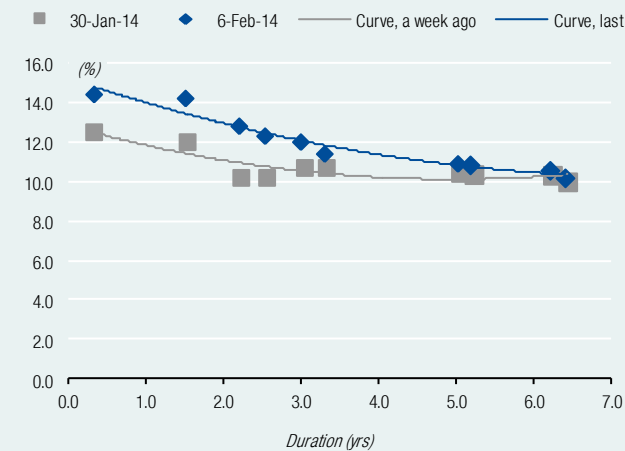
Blue dots are Ukraine sovereign Eurobonds; grey dots are corporate Eurobonds and red ones are municipal Eurobonds



Sources: Bloomberg, Investment Capital Ukraine LLC..

Chart 12. Shape of the USD sovereign yield curve at Eurobond market

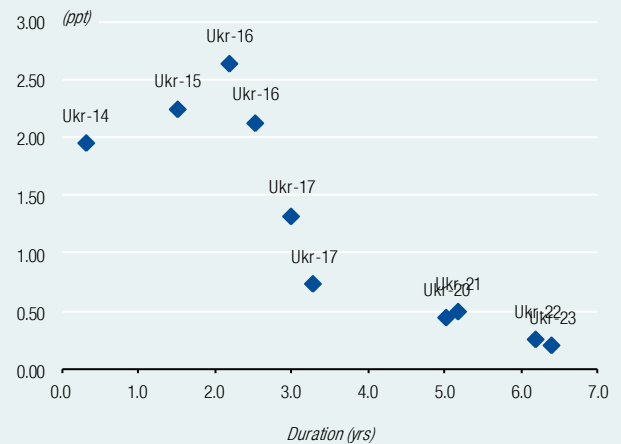
Last one compared to 1 week ago



Sources: Bloomberg, Investment Capital Ukraine LLC.

Chart 13. Movement of the USD sovereign yield curve at Eurobond market

Over last week, in percentage points



Note: each point of the chart has a label, where "Ukr" means Ukraine sovereign bond and a two-digit figure after a dash means year of maturity of the bond.
Sources: Bloomberg, Investment Capital Ukraine LLC.

Primary market for UAH state bonds

Table 3. Primary market for local-currency government bonds: results of recent auctions

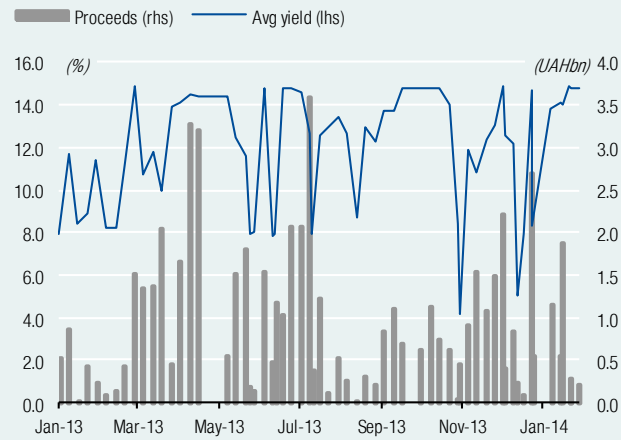
Date	Qty of bonds offered/sold	Proceeds (UAHm)	Volume of bonds sold* (UAHm)	Volume of bids submitted (UAHm)	Qty of bids submitted	Lowest yield asked** (%)	Highest yield asked** (%)	MoF cut-off yield (%)	Qty of bids accepted	Average yield (%)	WA yield (%)	Average duration (years)	WA duration (years)
4-Feb-14	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	1	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	4	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	1	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	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	2	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	2	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	2,211.89	2,200.00	2,200.00	2	14.25	14.30	14.28	2	14.83	14.84	4.14	4.31
3-Dec-13	4	1,480.13	1,405.00	1,454.93	5	7.75	14.30	12.10	5	13.04	14.66	3.60	3.96
26-Nov-13	5	1,083.86	862.07	1,082.98	13	4.00	14.30	9.56	13	12.39	11.66	2.63	1.82
19-Nov-13	5	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	5	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	48.65	1	8.25	8.25	8.25	1	8.41	8.41	1.58	1.58
29-Oct-13	2	614.19	625.55	665.55	7	7.75	14.25	11.13	5	14.03	14.02	2.19	2.18
22-Oct-13	1	739.96	738.00	738.00	3	14.25	14.25	14.25	3	14.79	14.79	3.71	3.71
15-Oct-13	2	1,128.68	1,126.01	1,126.01	3	14.25	14.30	14.28	3	14.82	14.82	4.17	4.12
8-Oct-13	1	613.39	606.94	606.94	3	14.25	14.25	14.25	3	14.79	14.79	3.66	3.66
24-Sep-13	3 / 2	694.79	677.00	678.61	6	8.25	14.30	9.52	4	14.82	14.84	4.07	4.42
17-Sep-13	3	1,093.44	1,021.00	1,081.01	6	4.80	14.30	11.12	5	13.68	14.66	3.20	3.87
10-Sep-13	4 / 3	840.87	794.63	820.02	10	8.25	14.30	9.20	9	13.73	14.70	3.34	3.52
3-Sep-13	5 / 2	207.13	207.00	282.10	11	0.00	16.00	4.86	3	12.29	10.40	5.37	6.44
27-Aug-13	4	302.20	166.64	319.64	14	7.75	14.30	11.26	12	12.91	13.24	3.09	2.79
20-Aug-13	2	20.07	20.00	20.00	3	8.25	8.75	8.50	3	8.74	8.85	2.23	2.46
13-Aug-13	5	250.03	228.63	249.60	8	7.75	14.30	10.66	8	12.70	13.99	2.68	2.06
6-Aug-13	2	513.53	496.03	530.43	9	8.25	14.30	11.28	4	13.44	14.80	3.08	4.50
30-Jul-13	3	120.84	85.84	149.34	12	7.75	14.25	10.08	7	12.92	10.47	1.82	1.50
23-Jul-13	3	1,214.05	1,209.77	1,214.82	16	7.70	14.25	10.08	16	12.57	14.55	1.99	2.39
18-Jul-13	1	388.81	395.00	395.00	5	7.75	7.75	7.75	5	7.89	7.89	0.21	0.21
16-Jul-13	5	3,582.50	3,375.00	3,581.70	20	7.75	14.30	10.66	19	12.63	14.57	2.69	3.52
9-Jul-13	3	2,076.42	2,068.40	2,168.40	11	7.75	14.30	12.10	10	14.63	14.79	2.87	3.81
2-Jul-13	2	2,057.20	2,024.50	2,024.50	6	14.25	14.30	14.28	6	14.82	14.79	4.06	3.66
25-Jun-13	2	1,039.05	1,023.50	1,023.50	3	14.25	14.30	14.28	3	14.82	14.83	4.08	4.24
20-Jun-13	1	1,164.57	1,197.21	1,197.21	5	7.75	7.75	7.75	5	7.94	7.94	0.36	0.36
18-Jun-13	1	476.54	490.00	490.00	7	7.75	7.75	7.75	7	7.88	7.88	0.37	0.37

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

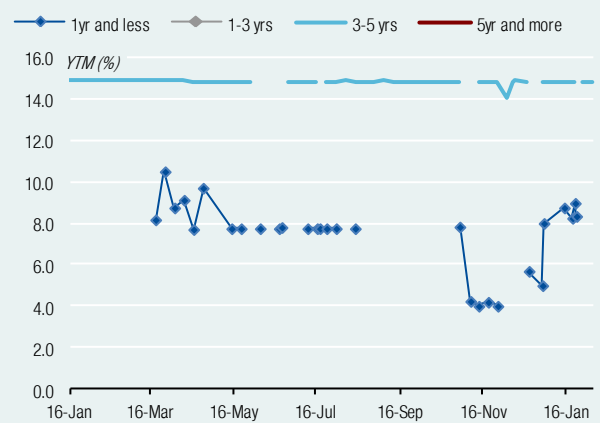
Last 12-month period



Sources: Ministry of Finance, Investment Capital Ukraine LLC.

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

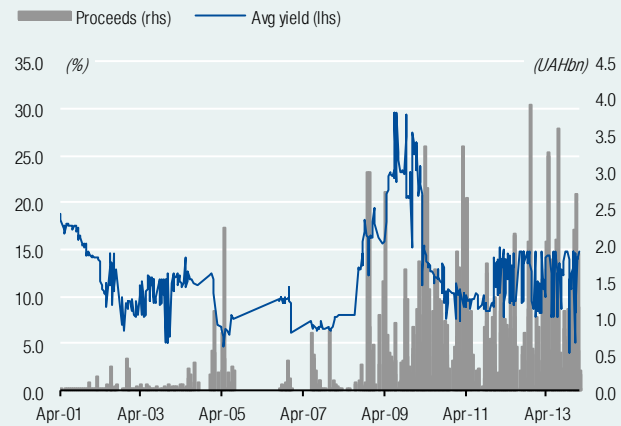
Last 12-month period



Sources: Ministry of Finance, Investment Capital Ukraine LLC.

Chart 16. Effective yield of debt raised by MoF and total volume of proceeds at the government bond auctions

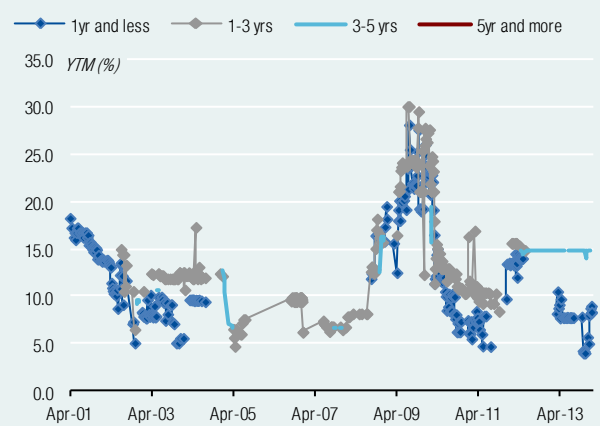
History since April 2001 to present



Sources: Ministry of Finance, Investment Capital Ukraine LLC.

Chart 17. Yield-to-maturity of government bonds sold at auctions, breakdown by duration of bonds sold

History since April 2001 to present



Sources: Ministry of Finance, Investment Capital Ukraine LLC.

UAH state bonds outstanding

Table 4. 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								
UA4000178479	Zero-coupon bonds	550,000,000.00		Upon maturity	No	No		12-Feb-2014
UA4000137277	Coupon bonds	1,750,000,000.00	15.00	Semi-annually	No	No		12-Mar-2014
UA4000160899	Zero-coupon bonds	497,000,000.00		Upon maturity	No	No		19-Mar-2014
UA4000115117	Coupon bonds	1,525,000,000.00	10.75	Semi-annually	No	No		26-Mar-2014
UA4000176085	Zero-coupon bonds	1,002,052,000.00		Upon maturity	No	No		23-Apr-2014
UA4000118871	Coupon bonds	1,437,350,000.00	10.13	Semi-annually	No	No		30-Apr-2014
UA4000051403	Coupon bonds	1,000,000,000.00	15.60	Semi-annually	No	No		14-May-2014
UA4000179048	Zero-coupon bonds	610,000,000.00		Upon maturity	No	No		21-May-2014
UA4000123863	Coupon bonds	752,000,000.00	10.10	Semi-annually	No	No		9-Jul-2014
UA4000178883	Zero-coupon bonds	25,000,000.00		Upon maturity	No	No		15-Oct-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
UA4000106181	Coupon bonds	80,002,000.00	9.50	Quarterly	Yes	Yes	13-Jul-2016	13-Jul-2016
UA4000107528	Coupon bonds	7,875,000.00	12.50	Quarterly	Yes	No		20-Jul-2016
UA4000138853	Coupon bonds	1,928,720,000.00	14.30	Semi-annually	No	No		5-Apr-2017
UA4000142665	Coupon bonds	1,759,740,000.00	14.30	Semi-annually	No	No		24-May-2017
UA4000145973	Coupon bonds	1,810,000,000.00	14.30	Semi-annually	No	No		2-Aug-2017
UA4000148027	Coupon bonds	1,824,455,000.00	14.30	Semi-annually	No	No		11-Oct-2017
UA4000148571	Coupon bonds	1,890,000,000.00	14.30	Semi-annually	No	No		18-Oct-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-Oct-2018
UA4000176093	Coupon bonds	1,644,780,000.00	14.25	Semi-annually	No	No		24-Oct-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	481,723,000.00	14.25	Semi-annually	No	No		23-Jan-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
UA4000148589	Coupon bonds	2,000,000,000.00	14.30	Semi-annually	No	No		23-Oct-2019
UA4000148944	Coupon bonds	500,000,000.00	14.30	Semi-annually	No	No		30-Oct-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-Oct-2020

Table 4. Outstanding of local-currency government bonds

ISIN	Bond type	Outstanding volume (UAH)	Coupon rate (%)	Payment frequency	Amortisation option	Put option	Next put	Maturity date
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		71,128,736,000.00						
Government recap'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-Oct-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-Oct-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
UA4000130090	Coupon bonds	2,000,000,000.00	9.50	Semi-annually	No	No		17-Jan-2018
UA4000115638	Coupon bonds	1,975,000,000.00	9.50	Semi-annually	No	No		21-Feb-2018
UA4000160758	Coupon bonds	1,000,000,000.00	14.30	Semi-annually	No	No		14-Mar-2018
UA4000061790	Coupon bonds	1,400,000,000.00	9.50	Semi-annually	No	No		28-Mar-2018
UA4000119952	Coupon bonds	1,750,000,000.00	9.50	Semi-annually	No	No		25-Apr-2018
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

Table 4. Outstanding of local-currency government bonds

ISIN	Bond type	Outstanding volume (UAH)	Coupon rate (%)	Payment frequency	Amortisation option	Put option	Next put	Maturity date
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-Oct-2018
UA4000059323	Coupon bonds	1,000,000,000.00	9.50	Semi-annually	No	No		31-Oct-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-Oct-2019
UA4000064125	Coupon bonds	900,000,000.00	9.50	Semi-annually	No	No		20-Nov-2019
UA4000063010	Coupon bonds	950,000,000.00	9.50	Semi-annually	No	No		11-Mar-2020
UA4000061816	Coupon bonds	1,400,000,000.00	9.50	Semi-annually	No	No		15-Apr-2020
UA4000121511	Coupon bonds	1,100,000,000.00	9.50	Semi-annually	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	Coupon bonds	1,500,000,000.00	9.50	Semi-annually	No	No		1-Jun-2022
Total		112,971,577,000.00						
Government VAT bonds 2010								
UA4000078141	Coupon bonds	14,532,000.00	5.50	Semi-annually	Yes	No		27-Jul-2015
UA4000082531	Coupon bonds	819,126,000.00	5.50	Semi-annually	Yes	No		21-Aug-2015
UA4000082622	Coupon bonds	3,321,949,200.00	5.50	Semi-annually	Yes	No		24-Aug-2015
UA4000083059	Coupon bonds	2,413,914,000.00	5.50	Semi-annually	Yes	No		25-Aug-2015
Total		6,569,521,200.00						
Government indexed 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-Oct-2014
UA4000130595	Coupon bonds	200,000,000.00	8.25	Semi-annually	No	No		29-Oct-2014
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

Table 4. Outstanding of local-currency government bonds

ISIN	Bond type	Outstanding volume (UAH)	Coupon rate (%)	Payment frequency	Amortisation option	Put option	Next put	Maturity date
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-Oct-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		12,723,100,000.00						
Government foreign-currency bonds								
UA4000179055	Zero-coupon bonds	1,711,341,330.00		Upon maturity	No	No		12-Feb-2014
UA4000177125	Zero-coupon bonds	256,350,000.00		Upon maturity	No	No		23-Apr-2014
UA4000140362	Coupon bonds	1,459,708,170.00	9.20	Semi-annually	No	No		21-May-2014
UA4000157135	Coupon bonds	2,512,230,000.00	7.97	Semi-annually	No	No		23-Jul-2014
UA4000158794	Coupon bonds	1,294,567,500.00	7.50	Semi-annually	No	No		10-Sep-2014
UA4000174247	Coupon bonds	699,066,450.00	4.80	Semi-annually	No	Yes	29-Oct-2014	29-Oct-2014
UA4000149231	Coupon bonds	1,043,241,960.00	8.32	Semi-annually	No	No		19-Nov-2014
UA4000173058	Coupon bonds	854,500,000.00	7.75	Semi-annually	No	No		26-Nov-2014
UA4000177133	Coupon bonds	1,922,625,000.00	7.88	Semi-annually	No	No		10-Dec-2014
UA4000171649	Coupon bonds	847,963,075.00	8.25	Semi-annually	No	No		24-Dec-2014
UA4000151278	Coupon bonds	1,256,901,140.00	8.50	Semi-annually	No	No		7-Jan-2015
UA4000133771	Coupon bonds	164,448,525.00	9.60	Semi-annually	No	No		14-Jan-2015
UA4000155485	Coupon bonds	1,867,082,500.00	8.09	Semi-annually	No	No		11-Feb-2015
UA4000157143	Coupon bonds	427,250,000.00	8.02	Semi-annually	No	No		18-Feb-2015
UA4000157127	Coupon bonds	422,259,720.00	8.02	Semi-annually	No	No		25-Feb-2015
UA4000160642	Coupon bonds	1,725,466,215.00	7.75	Semi-annually	No	No		18-Mar-2015
UA4000142699	Coupon bonds	2,664,074,650.00	9.45	Semi-annually	No	No		22-Apr-2015
UA4000142681	Coupon bonds	466,044,300.00	4.80	Semi-annually	No	Yes	6-May-2015	6-May-2015
UA4000166821	Coupon bonds	2,278,097,000.00	7.75	Semi-annually	No	No		6-May-2015
UA4000141071	Coupon bonds	1,295,011,840.00	9.45	Semi-annually	No	No		27-May-2015
UA4000167837	Coupon bonds	1,484,351,950.00	7.75	Semi-annually	No	No		3-Jun-2015
UA4000142673	Coupon bonds	1,495,375,000.00	4.50	Semi-annually	No	Yes	17-Jun-2015	17-Jun-2015
UA4000144083	Coupon bonds	19,055,350.00	9.45	Semi-annually	No	No		8-Jul-2015
UA4000171409	Coupon bonds	891,910,010.00	8.25	Semi-annually	No	No		15-Jul-2015
UA4000152441	Coupon bonds	2,750,635,500.00	8.25	Semi-annually	No	No		27-Jan-2016
UA4000153282	Coupon bonds	76,135,950.00	8.25	Semi-annually	No	No		3-Feb-2016
UA4000160923	Coupon bonds	2,563,500,000.00	7.50	Semi-annually	No	Yes	16-Mar-2016	16-Mar-2016
UA4000160907	Coupon bonds	245,113,325.00	8.00	Semi-annually	No	No		23-Mar-2016
UA4000166847	Coupon bonds	636,175,250.00	8.00	Semi-annually	No	No		25-May-2016
UA4000172506	Coupon bonds	1,929,349,915.00	8.75	Semi-annually	No	No		10-Aug-2016
UA4000177414	Coupon bonds	2,550,682,500.00	7.75	Semi-annually	No	Yes	26-Oct-2016	26-Oct-2016
UA4000177752	Coupon bonds	426,617,670.00	7.75	Semi-annually	No	Yes	30-Nov-2016	30-Nov-2016
UA4000178305	Coupon bonds	853,064,440.00	7.75	Semi-annually	No	No		14-Dec-2016
UA4000160915	Coupon bonds	2,563,500,000.00	8.25	Semi-annually	No	No		22-Mar-2017
UA4000166854	Coupon bonds	2,777,125,000.00	7.45	Semi-annually	No	Yes	17-May-2017	17-May-2017
UA4000151286	Coupon bonds	4,528,850,000.00	7.50	Semi-annually	No	No		20-Dec-2017
UA4000177554	Coupon bonds	1,708,290,765.00	7.50	Semi-annually	No	Yes	21-Nov-2018	21-Nov-2018
Total		52,667,962,000.00						
Grand total		256,060,896,200.00						

Table 4. Outstanding of local-currency government bonds

ISIN	Bond type	Outstanding volume (UAH)	Coupon rate (%)	Payment frequency	Amortisation option	Put option	Next put	Maturity date
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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 5. 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	
	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-Oct-13	8-Oct-13	15-Oct-13	22-Oct-13	29-Oct-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
	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

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

Period	Repayments (UAHm)									Repayments, US dollar equivalent (US\$m)								
	Interest			Principal			Total			Interest			Principal			Total		
	Ordin- aries	VATs	Recaps	Ordin- aries	VATs	Recaps	Inter- est	Prin- cipal		Ordin- aries	VATs	Recaps	Ordin- aries	VATs	Recaps	Inter- est	Prin- cipal	
BY QUARTERS																		
1Q14	896.1	180.3	1,458.7	4,322.0	1,638.7		3,274.7	7,672.1		105.0	21.1	171.0	506.7	192.1		383.9	899.4	
2Q14	2,972.5		3,137.4	4,050.2		1,598.3	7,553.6	7,364.5		348.5		367.8	474.8		187.4	885.5	863.4	
3Q14	1,658.5	135.6	2,551.4	752.8	1,643.6	1,500.0	5,454.4	9,313.2		194.4	15.9	299.1	88.3	192.7	175.8	639.4	1,091.8	
4Q14	2,950.8		3,371.4	25.8		4,696.5	7,710.3	11,914.8		345.9		395.2	3.0		550.6	903.9	1,396.8	
1Q15	1,491.3	90.4	2,169.8	453.7	1,643.6	2,000.0	4,645.5	10,660.7		174.8	10.6	254.4	53.2	192.7	234.5	544.6	1,249.8	
2Q15	2,821.6		2,833.2	250.8			6,761.8	11,403.7		330.8		332.1	29.4		792.7	1,336.9		
3Q15	1,671.9	45.2	2,560.9	0.8	1,643.6	1,000.0	4,986.7	4,880.3		196.0	5.3	300.2	0.1	192.7	117.2	584.6	572.1	
4Q15	2,847.4		2,961.1	0.8		6,000.0	6,384.7	6,909.8		333.8		347.1	0.1		703.4	748.5	810.1	
1Q16	1,542.6		2,201.9	0.8		2,750.0	4,353.9	9,003.2		180.8		258.1	0.1		322.4	510.4	1,055.5	
2Q16	2,847.4		2,642.4	0.8		9,085.0	6,023.7	9,722.0		333.8		309.8	0.1		1,065.1	706.2	1,139.7	
3Q16	1,542.6		2,071.3	80.8		7,135.0	3,972.4	11,935.1		180.8		242.8	9.5		836.5	465.7	1,399.2	
4Q16	2,831.2		2,245.7				5,585.3	4,307.4		331.9		263.3			654.8	505.0		
1Q17	1,526.4		1,732.4			1,250.0	3,410.8	3,813.5		178.9		203.1			146.5	399.9	447.1	
2Q17	2,831.2		2,245.7	3,688.5		6,357.9	5,414.2	12,823.5		331.9		263.3	432.4		745.4	634.7	1,503.3	
3Q17	1,526.4		1,673.0	1,810.0		6,550.0	3,245.7	8,360.0		178.9		196.1	212.2		767.9	380.5	980.1	
4Q17	2,567.4		1,895.7	5,212.9		7,658.3	4,697.0	17,400.0		301.0		222.2	611.1		897.8	550.6	2,039.9	
1Q18	1,397.0		1,337.9	4,318.9		6,375.0	2,781.2	10,693.9		163.8		156.8	506.3		747.4	326.0	1,253.7	
2Q18	2,194.8		1,435.9	11,845.3		7,157.9	3,694.7	19,003.3		257.3		168.3	1,388.7		839.1	433.1	2,227.8	
3Q18	1,088.2		1,011.1	5,101.3		10,145.1	2,145.5	15,246.5		127.6		118.5	598.0		1,189.3	251.5	1,787.4	
4Q18	1,350.1		1,066.2	5,108.8		4,655.3	2,480.4	11,472.4		158.3		125.0	598.9		545.8	290.8	1,345.0	
BY YEARS																		
2014	8,477.9	315.9	10,518.9	9,150.8	3,282.3	7,794.8	23,993.0	36,264.6		993.9	37.0	1,233.2	1,072.8	384.8	913.8	2,812.8	4,251.4	
2015	8,832.2	135.6	10,525.1	706.0	3,287.2	9,000.0	22,778.7	33,854.5		1,035.4	15.9	1,233.9	82.8	385.4	1,055.1	2,670.4	3,968.9	
2016	8,763.8		9,161.4	82.4		18,970.0	19,935.2	34,967.6		1,027.4		1,074.0	9.7		2,223.9	2,337.1	4,099.4	
2017	8,451.4		7,546.8	10,711.3		21,816.2	16,767.7	42,397.0		990.8		884.7	1,255.7		2,557.6	1,965.7	4,970.3	
2018	6,030.1		4,851.1	26,374.4		28,333.4	11,101.8	56,416.1		706.9		568.7	3,092.0		3,321.6	1,301.5	6,613.8	

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

Period	Repayments, hryvnia equivalent (UAHm)						Repayments, US dollar equivalent (US\$m)					
	Interest		Principal		Total		Interest		Principal		Total	
	Eurobond	Loan	Eurobond	Loan	Interest	Principal	Eurobond	Loan	Eurobond	Loan	Interest	Principal
BY QUARTERS												
1Q14	1,078.6	540.0	0.0	3,614.6	1,618.5	3,614.6	134.9	67.6	0.0	452.2	202.5	452.2
2Q14	2,909.8	1,216.1	7,993.0	8,272.2	4,125.9	16,265.2	364.0	152.1	1,000.0	1,034.9	516.2	2,034.9
3Q14	2,039.7	832.3	0.0	8,788.0	2,872.0	8,788.0	255.2	104.1	0.0	1,099.5	359.3	1,099.5
4Q14	2,592.1	1,119.6	0.0	8,595.3	3,711.6	8,595.3	324.3	140.1	0.0	1,075.3	464.4	1,075.3
1Q15	2,039.7	666.1	0.0	7,498.4	2,705.8	7,498.4	255.2	83.3	0.0	938.1	338.5	938.1
2Q15	2,592.1	845.8	0.0	11,046.0	3,437.9	11,046.0	324.3	105.8	0.0	1,382.0	430.1	1,382.0
3Q15	2,039.7	428.7	3,996.5	1,842.8	2,468.4	5,839.3	255.2	53.6	500.0	230.6	308.8	730.6
4Q15	2,592.1	481.9	30,140.2	990.7	3,074.0	31,130.8	324.3	60.3	3,770.8	123.9	384.6	3,894.8
1Q16	1,902.3	386.0	0.0	5,271.3	2,288.4	5,271.3	238.0	48.3	0.0	659.5	286.3	659.5
2Q16	1,840.1	478.2	9,991.3	595.1	2,318.3	10,586.3	230.2	59.8	1,250.0	74.5	290.0	1,324.5
3Q16	1,902.3	177.9	0.0	1,804.7	2,080.2	1,804.7	238.0	22.3	0.0	225.8	260.3	225.8
4Q16	1,527.9	454.4	7,993.0	3,582.9	1,982.2	11,575.9	191.2	56.8	1,000.0	448.3	248.0	1,448.3
1Q17	1,902.3	98.9	0.0	2,397.9	2,001.2	2,397.9	238.0	12.4	0.0	300.0	250.4	300.0
2Q17	1,264.9	315.5	0.0	2,597.7	1,580.4	2,597.7	158.3	39.5	0.0	325.0	197.7	325.0
3Q17	1,902.3	0.0	20,781.8	0.0	1,902.3	20,781.8	238.0	0.0	2,600.0	0.0	238.0	2,600.0
4Q17	1,264.9	218.8	5,595.1	4,236.3	1,483.7	9,831.4	158.3	27.4	700.0	530.0	185.6	1,230.0
1Q18	941.2	0.0	0.0	0.0	941.2	0.0	117.8	0.0	0.0	0.0	117.8	0.0
2Q18	1,076.1	59.9	0.0	0.0	1,136.0	0.0	134.6	7.5	0.0	0.0	142.1	0.0
3Q18	941.2	0.0	0.0	0.0	941.2	0.0	117.8	0.0	0.0	0.0	117.8	0.0
4Q18	1,076.1	59.9	0.0	1,597.9	1,136.0	1,597.9	134.6	7.5	0.0	199.9	142.1	199.9
BY YEARS												
2014	8,620.1	3,707.9	7,993.0	29,270.0	12,328.0	37,263.0	1,078.5	463.9	1,000.0	3,662.0	1,542.4	4,662.0
2015	9,263.5	2,422.5	34,136.7	21,378.0	11,686.0	55,514.6	1,159.0	303.1	4,270.8	2,674.6	1,462.0	6,945.4
2016	7,172.6	1,496.5	17,984.3	11,254.1	8,669.1	29,238.3	897.4	187.2	2,250.0	1,408.0	1,084.6	3,658.0
2017	6,334.5	633.2	26,376.9	9,231.9	6,967.7	35,608.8	792.5	79.2	3,300.0	1,155.0	871.7	4,455.0
2018	4,034.5	119.8	0.0	1,597.9	4,154.3	1,597.9	504.8	15.0	0.0	199.9	519.7	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

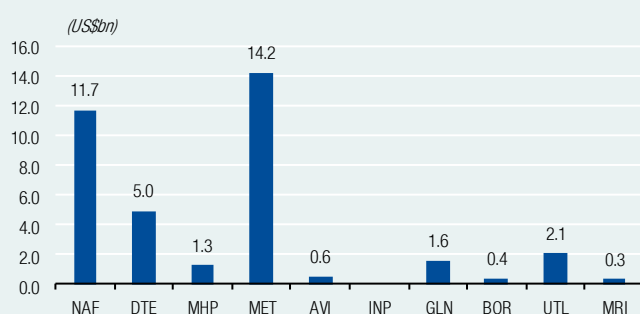
Table 8. Ukrainian corporate bond issuers and their key financial figures and ratios* (US\$m)

Issuer	Ticker	Filing	Revenues	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	NAFTO	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.

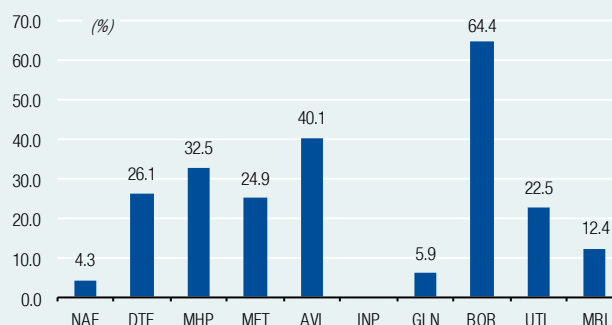
Sources: Company data, Investment Capital Ukraine LLC.

Chart 18. Ukraine's companies by sales (LTM)



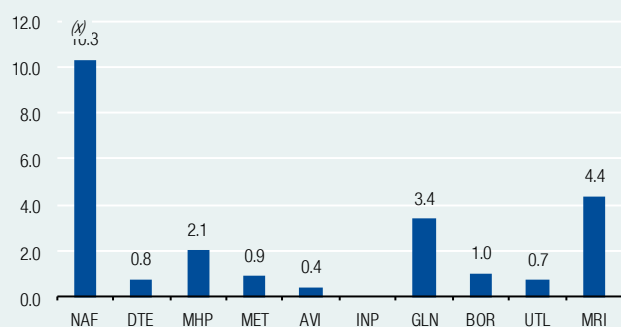
Source: Company data, Investment Capital Ukraine LLC.

Chart 19. Ukraine's companies by EBITDA margin (LTM)



Source: Company data, Investment Capital Ukraine LLC.

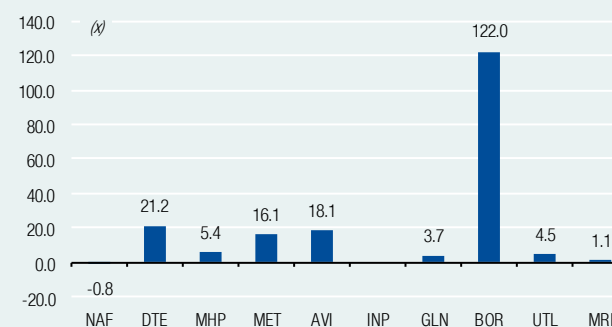
Chart 20. Ukraine's companies by leverage ratio



Note: leverage – net debt to EBITDA (LTM).

Source: Company data, Investment Capital Ukraine LLC.

Chart 21. Ukraine's companies by interest coverage ratio



Note: interest coverage – EBITDA to interest expenses (LTM).

Source: 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.

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 exchange 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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