

KU  
Debt Analysis

KU - 2018 Callable Bonds  
Comparison: Bonds Remain Outstanding vs. Refinancing With Tax-Exempt  
Impact on Cash Flow  
KU Carroll County 2007 Series A 17875000

BONDS REMAIN OUTSTANDING										PROPOSED FINANCING							PRESENT VALUE ANALYSIS			
Comparison: Bonds Remain Outstanding vs. Refinancing With Tax-Exempt										Comparison: Bonds Remain Outstanding vs. Refinancing With Tax-Exempt							Comparison: Bonds Remain Outstanding vs. Refinancing With Tax-Exempt			
Date	Principal Outstanding	Interest @ 5.750%	Amortization	Issue Expenses	Taxes	Total Cash Outlay	Present Value	Interest @ 5.625%	45 Days Till Redemption 5.750%	Debt Expense Amortization (1)	Issue Expenses	Taxes (2)	Total Cash Outlay	Present Value	Periodic (Cost) or SAVINGS from Refunding	Present Value Factor	Present Value SAVINGS			
01-Jun-18	17,875,000			0	(56,140)	0	0				0	0	0	0	0	1.00000	0			
01-Sep-18	17,875,000	256,953	0		(198,419)	190,813	189,593	256,953	128,477	0	440,029	(99,210)	726,249	721,605	(535,435)	0.99961	(532,012)			
01-Jun-19	17,875,000	770,859	0		(182,279)	572,440	557,939	485,977		43,519		(136,292)	349,684	340,826	222,756	0.97467	217,113			
01-Dec-19	17,875,000	513,906	0		(182,279)	381,627	367,218	323,984		29,013		(90,861)	233,123	224,321	148,504	0.96224	142,897			
01-Jun-20	17,875,000	513,906	0		(182,279)	381,627	362,537	323,984		29,013		(90,861)	233,123	221,461	148,504	0.94998	141,075			
01-Dec-20	17,875,000	513,906	0		(182,279)	381,627	357,915	323,984		29,013		(90,861)	233,123	218,638	148,504	0.93787	139,277			
01-Jun-21	17,875,000	513,906	0		(182,279)	381,627	353,353	323,984		29,013		(90,861)	233,123	215,851	148,504	0.92591	137,501			
01-Dec-21	17,875,000	513,906	0		(182,279)	381,627	348,848	323,984		29,013		(90,861)	233,123	213,100	148,504	0.91411	135,749			
01-Jun-22	17,875,000	513,906	0		(182,279)	381,627	344,401	323,984		29,013		(90,861)	233,123	210,383	148,504	0.90246	134,018			
01-Dec-22	17,875,000	513,906	0		(182,279)	381,627	340,011	323,984		29,013		(90,861)	233,123	207,701	148,504	0.89095	132,310			
01-Jun-23	17,875,000	513,906	0		(182,279)	381,627	335,677	323,984		29,013		(90,861)	233,123	205,053	148,504	0.87959	130,623			
01-Dec-23	17,875,000	513,906	0		(182,279)	381,627	331,398	323,984		29,013		(90,861)	233,123	202,440	148,504	0.86838	128,958			
01-Jun-24	17,875,000	513,906	0		(182,279)	381,627	327,173	323,984		29,013		(90,861)	233,123	199,859	148,504	0.85731	127,314			
01-Dec-24	17,875,000	513,906	0		(182,279)	381,627	323,002	323,984		29,013		(90,861)	233,123	197,311	148,504	0.84638	125,691			
01-Jun-25	17,875,000	513,906	0		(182,279)	381,627	318,885	323,984		29,013		(90,861)	233,123	194,796	148,504	0.83559	124,089			
01-Dec-25	17,875,000	513,906	0		(182,279)	381,627	314,820	323,984		29,013		(90,861)	233,123	192,313	148,504	0.82494	122,507			
01-Feb-26	0	171,302	0		(44,093)	127,209	103,602	107,995		4,835		(29,043)	78,952	64,301	48,257	0.81443	39,301			
TOTAL		7,879,836	0	0	(2,028,285)	5,851,611		5,062,721	128,477	425,522	440,029	(1,445,744)	4,185,483	3,829,959	1,666,128		1,446,412			
NPV																				

(1) Debt Amortization Expense includes issuing costs of new series.  
(2) Tax calculation based on interest expense and the amortization of new issue debt expense.

Assumptions

KU - 2018 Callable Bonds  
Comparison: Bonds Remain Outstanding vs. Refinancing With Tax-Exempt

Indicative Rate 3.400%  
90% of 25bps June Increase 3.242%  
Tax-Exempt Rate 3.625%

Principal	Maturity Date	# of Months	Amort./Month	Amort/6 Months	Issuance Cost	Monthly Amort.	6 Months
\$ 17,875,000	2/1/2026	91	4,835	29,013	440,029	4,835	29,013

Bond Issue Costs	0.50%	\$89,375	LGR&E \$60MM I:	\$ 657,373.66
Underwriting	0.500%		Less Underwrit:	\$ (306,719.89)
				\$ 350,653.77
			Underwriter	\$ 89,375.00
				\$ 440,028.77

MISCELLANEOUS

Tax rate	25.740%
Pre Tax Cost of Debt	3.50%
Discount rate	2.60%

KU  
Debt Analysis

KU - 2018 Callable Bonds  
Comparison: Bonds Remain Outstanding vs. Refinancing  
Impact on Cash Flow  
KU Trimble County 2007 S: 8927000

BONDS REMAIN OUTSTANDING

Date	Principal Outstanding	Interest @ 5.000%	Amortization	Issue Expenses	Taxes	Total Cash Outlay	Present Value
01-Jun-18	8,927,000			0		0	0
01-Sep-18	8,927,000	133,905	0		(34,467)	99,438	98,673
01-Jun-19	8,927,000	401,715	0		(103,401)	298,314	289,239
01-Dec-19	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Jun-20	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Dec-20	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Jun-21	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Dec-21	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Jun-22	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Dec-22	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Jun-23	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Dec-23	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Jun-24	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Dec-24	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Jun-25	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Dec-25	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Jun-26	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Dec-26	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Jun-27	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Dec-27	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Jun-28	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Dec-28	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Jun-29	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Dec-29	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Jun-30	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Dec-30	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Jun-31	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Dec-31	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Jun-32	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Dec-32	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Jun-33	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Dec-33	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Jun-34	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Dec-34	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Jun-35	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Dec-35	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Jun-36	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Dec-36	8,927,000	267,810	0		(68,934)	198,876	188,583
01-Mar-37	0	133,905	0		(34,467)	99,438	55,718
TOTAL	10,042,876	0	0	0	(2,585,036)	7,457,839	7,111,471
NPV							5,616,792

PROPOSED FINANCING

Comparison: Bonds Remain Outstanding vs. Refinancing

Interest @ 4.225%	45 Days Till Redemption 5.000%	Debt Expense Amortization (1)	Issue Expenses	Taxes (2)	Total Cash Outlay	Present Value
133,905	66,953	0	395,289	0	0	0
282,874		39,094		(51,701)	544,446	540,257
188,583		26,063		(82,875)	200,000	193,915
188,583		26,063		(55,250)	133,333	127,295
188,583		26,063		(55,250)	133,333	125,944
188,583		26,063		(55,250)	133,333	123,423
188,583		26,063		(55,250)	133,333	121,531
188,583		26,063		(55,250)	133,333	119,669
188,583		26,063		(55,250)	133,333	117,834
188,583		26,063		(55,250)	133,333	116,028
188,583		26,063		(55,250)	133,333	114,250
188,583		26,063		(55,250)	133,333	112,499
188,583		26,063		(55,250)	133,333	110,774
188,583		26,063		(55,250)	133,333	109,076
188,583		26,063		(55,250)	133,333	107,404
188,583		26,063		(55,250)	133,333	105,758
188,583		26,063		(55,250)	133,333	104,137
188,583		26,063		(55,250)	133,333	102,541
188,583		26,063		(55,250)	133,333	100,969
188,583		26,063		(55,250)	133,333	99,422
188,583		26,063		(55,250)	133,333	97,898
188,583		26,063		(55,250)	133,333	96,397
188,583		26,063		(55,250)	133,333	94,920
188,583		26,063		(55,250)	133,333	93,465
188,583		26,063		(55,250)	133,333	92,032
188,583		26,063		(55,250)	133,333	90,621
188,583		26,063		(55,250)	133,333	89,232
188,583		26,063		(55,250)	133,333	87,865
188,583		26,063		(55,250)	133,333	86,518
188,583		26,063		(55,250)	133,333	85,192
188,583		26,063		(55,250)	133,333	83,886
188,583		26,063		(55,250)	133,333	82,600
188,583		26,063		(55,250)	133,333	81,334
188,583		26,063		(55,250)	133,333	80,088
188,583		26,063		(55,250)	133,333	78,860
188,583		26,063		(55,250)	133,333	77,651
188,583		26,063		(55,250)	133,333	76,461
188,583		26,063		(55,250)	133,333	75,289
94,291		6,516		(25,948)	68,344	38,295
TOTAL	7,111,471	66,953	957,815	395,289	(2,094,268)	5,479,445
NPV						4,240,731

PRESENT VALUE ANALYSIS

Periodic (Cost) or SAVINGS from Refunding	Present Value Factor	Present Value SAVINGS
0	1.00000	0
(445,008)	0.99231	(441,584)
98,314	0.96958	95,323
65,543	0.95472	62,575
65,543	0.94008	61,616
65,543	0.92568	60,671
65,543	0.91149	59,741
65,543	0.89752	58,826
65,543	0.88376	57,924
65,543	0.87021	57,036
65,543	0.85687	56,162
65,543	0.84374	55,301
65,543	0.83081	54,453
65,543	0.81807	53,619
65,543	0.80553	52,797
65,543	0.79319	51,988
65,543	0.78103	51,191
65,543	0.76906	50,406
65,543	0.75727	49,634
65,543	0.74566	48,879
65,543	0.73423	48,124
65,543	0.72298	47,386
65,543	0.71190	46,660
65,543	0.70099	45,945
65,543	0.69024	45,240
65,543	0.67966	44,547
65,543	0.66924	43,864
65,543	0.65899	43,192
65,543	0.64889	42,530
65,543	0.63894	41,878
65,543	0.62915	41,236
65,543	0.61950	40,604
65,543	0.61001	39,982
65,543	0.60066	39,369
65,543	0.59145	38,765
65,543	0.58239	38,171
65,543	0.57346	37,586
65,543	0.56467	37,010
31,094	0.56032	17,423
TOTAL		1,376,061

(1) Debt Amortization Expense includes issuing costs of new series.  
(2) Tax calculation based on interest expense and the amortization of new issue debt expense.

Assumptions

KU - 2018 Callable Bonds  
Comparison: Bonds Remain Outstanding vs. Refinancing  
Indicative Rate 4.000%  
90% of 25bps June Inceas 0.225%  
Tax-Exempt Rate 4.225%

Principal	Maturity Date	# of Months	Issuance Cost	Monthly Amort.	6 Months
\$ 8,927,000	2/1/2026	91	395,289	4,344	26,063

Bond Issue Costs	0.50%	\$44,635	LG&E \$60MM Issuan	\$ 657,373.66
Underwriting			Less Underwriting	\$ (306,719.89)
				\$ 350,653.77
			Underwriter	\$ 44,635.00
				\$ 395,288.77

MISCELLANEOUS

Tax rate	25.740%
Pre Tax Cost of Debt	4.23%
Discount rate	3.14%