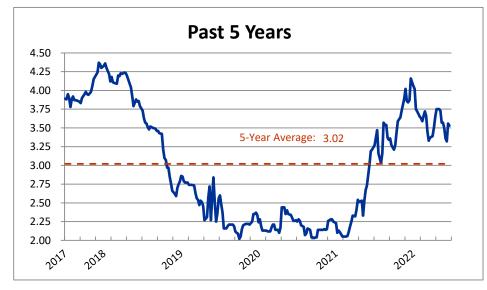
TEXAS BOND MARKET UPDATE - MAY 2023

BOND BUYER'S INDEX

(as detailed on reverse side)





REPRESENTATION OF RECENT TEXAS BOND SALES

(as reported to the Municipal Advisory Council of Texas)

	Issue	Sale	Bank	S&P	Credit	Call		Yield to Matu	rity for Bonds I	Maturing in:	
Issuer	Size (000's)	Date	Qualified?	Rating	Enhanced?	Date	2028	2033	2038	2043	2048
City of Abilene	\$ 7,255	4/27/2023	No	Aa2*	No	2/15/2033	2.770%	2.820%	4.000%	4.080%	n/a
City of Seguin	\$ 29,870	4/11/2023	No	AA	No	9/1/2032	2.360%	2.702%	n/a	n/a	n/a
City of Richardson	\$ 39,875	4/24/2023	No	AAA	No	2/15/2032	2.570%	2.854%	3.840%	4.207%	n/a
Denton County	\$ 114,665	4/27/2023	No	AAA	No	7/15/2032	2.610%	2.816%	3.804%	3.989%	4.160%
Point Isabel ISD	\$ 9,205	4/18/2023	Yes	AAA	PSF	2/1/2033	2.640%	2.760%	3.795%	4.050%	4.240%
Taylor ISD Frisco ISD	\$ 79,010 \$ 135,505	4/17/2023 4/18/2023	No No	AAA Aaa*	PSF PSF	2/15/2032 2/15/2033	2.320% 2.520%	2.651% 2.600%	3.736% 3.727%	3.978% 4.105%	4.210% 4.300%

*Moody's

	compliments of	
John Martin	- Michael Martin - HilltopSecurities	
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Investment Banking Solutions



Investment Banking Solutions Bond Buyer's Index of 20 Municipal Bonds

MONTH	WEEK	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
January	1	5.24	4.25	5.08	3.83	3.68	4.75	3.42	3.45	3.78	3.44	4.09	2.73	2.17	2.12	3.66
	2	5.02	4.31	5.39	3.62	3.60	4.68	3.29	3.45	3.72	3.54	4.20	2.63	2.21	2.19	3.45
	3	4.80	4.31	5.41	3.60	3.53	4.55	3.36	3.37	3.83	3.52	4.19	2.56	2.21	2.25	3.33
	4	5.13	4.30	5.25	3.68	3.54	4.50	3.36	3.38	3.87	3.59	4.23	2.54	2.14	2.33	3.37
	5	5.16	4.39			3.67	4.48					4.22	2.47			
February	1	4.96	4.36	5.25	3.60	3.68	4.46	3.49	3.30	3.87	3.72	4.23	2.53	2.14	2.32	3.39
	2	4.89	4.34	5.29	3.70	3.72	4.46	3.60	3.27	3.88	3.73	4.24	2.51	2.10	2.41	3.51
	3	4.89	4.38	5.10	3.65	3.74	4.44	3.62	3.27	3.94	3.84	4.23	2.46	2.17	2.54	3.65
	4	4.87	4.36	4.95	3.69	3.74	4.38	3.62	3.34	3.92	3.86	4.19	2.27	2.44	2.51	3.75
March	1	4.96	4.34	4.90	3.72	3.86	4.41	3.68	3.34	3.95	3.85	4.09	2.31	2.44	2.53	3.75
	2	5.03	4.33	4.91	3.84	4.00	4.47	3.62	3.42	4.02	3.88	4.04	2.57	2.35	2.33	3.73
	3	4.98	4.32	4.86	3.95	3.99	4.51	3.62	3.40	4.02	3.89	3.92	2.72	2.40	2.53	3.57
	4	5.00	4.44	4.91	4.01	3.99	4.43	3.52	3.38	3.91	3.90	3.79	2.27	2.35	2.67	3.57
	5				4.02				3.38	3.86	3.89				2.73	3.50
April	1	4.92	4.44	5.00	4.08	3.96	4.44	3.49	3.28	3.83	3.90	3.88	2.84	2.34	2.87	3.36
	2	4.92	4.45	5.04	3.97	3.93	4.32	3.49	3.30	3.77	3.85	3.85	2.49	2.30	3.01	3.32
	3	4.78	4.43	5.06	3.90	3.89	4.32	3.45	3.28	3.71	3.87	3.86	2.25	2.26	3.19	3.56
	4 5	4.57	4.37	4.98	3.86	3.90	4.33	3.52	3.32	3.82	3.97	3.79	2.36	2.26	3.21	3.53
May		4 70	4.07	4.86	2.04	0.77	4.00	3.62	2.22	2.02	2.00	0.70	2.56	2.27	2.07	
Мау	1 2	4.70 4.62	4.37 4.29	4.69 4.61	3.81 3.71	3.77 3.67	4.33 4.31	3.74 3.74	3.32 3.32	3.82 3.81	3.89 3.88	3.73 3.63	2.60 2.48	2.25 2.28	3.27 3.37	
	2 3	4.02 4.54	4.29	4.61	3.71	3.67	4.31	3.74	3.32 3.26	3.73	3.00 3.95	3.63 3.57	2.40	2.20	3.37 3.47	
	3 4	4.54	4.32	4.55	3.81	3.01	4.20	3.73	3.20 3.26	3.69	3.95 3.90	3.57	2.37	2.20	3.47	
	4 5	4.44	4.27	4.55	3.77	3.84	4.20	5.75	5.20	3.09	3.90	3.50	2.10	2.20	5.10	
June	1	4.71	4.28	4.51	3.92	3.93	4.37	3.81	3.26	3.61	3.88	3.48	2.16	2.18	3.03	
	2	4.86	4.37	4.49	3.95	4.16	4.37	3.87	3.03	3.53	3.92	3.52	2.19	2.07	3.16	
	3	4.86	4.40	4.49	3.95	4.37	4.36	3.79	2.99	3.53	3.87	3.51	2.21	2.09	3.57	
	4	4.79	4.40	4.46	3.95	4.63	4.29	3.80	2.90	3.53	3.87	3.50	2.21	2.16	3.54	
	5								2.85	3.58					3.54	
July	1	4.81	4.38	4.59	3.94	4.39	4.31	3.85	2.80	3.60	3.86	3.49	2.21	2.14	3.37	
	2	4.71	4.36	4.65	3.83	4.55	4.38	3.76	2.80	3.61	3.85	3.46	2.19	2.04	3.34	
	3	4.68	4.37	4.51	3.75	4.52	4.36	3.82	2.87	3.51	3.83	3.46	2.12	2.04	3.36	
	4	4.69	4.26	4.46	3.61	4.77	4.29	3.75	2.85	3.52	3.90	3.43	2.10	2.03	3.27	
	5	4.69	4.21	4.47			4.33	3.75					2.09	2.04		
August	1	4.65	4.16	4.19	3.66	4.70	4.31	3.75	2.85	3.50	3.95	3.42	2.02	2.04	3.21	
	2	4.65	4.06	3.97	3.75	4.73	4.24	3.69	2.85	3.52	3.98	3.22	2.05	2.14	3.27	
	3	4.58	4.03	3.83	3.80	4.80	4.21	3.73	2.84	3.57	3.95	3.10	2.15	2.14	3.44	
	4 5	4.53	3.88	4.09	3.76	4.91	4.17	3.79	2.84	3.53 3.51	3.94 3.96	3.07 2.97	2.20	2.14	3.59	
September	5 1	4.37	3.86	4.14	3.72 3.73	4.96 5.03	4.09	3.82	2.84	3.51	3.96	2.97	2.22	2.14	3.64	
September	2	4.37	3.92	4.14	3.79	4.93	4.09	3.82	2.83	3.49	4.06	2.87	2.22	2.14	3.73	
	3	4.20	3.89	4.07	3.72	4.66	4.17	3.78	2.96	3.60	4.15	2.76	2.22	2.13	3.81	
	4	4.04	3.83	3.85	3.67	4.53	4.11	3.71	2.98	3.64	4.18	2.66	2.21	2.15	3.89	
	5			3.93					3.06					2.26	4.02	
October	1	3.94	3.84	4.14	3.61	4.53	4.11	3.67	3.20	3.63	4.24	2.62	2.25	2.27	3.86	
	2	4.06	3.84	4.17	3.64	4.57	4.01	3.68	3.28	3.61	4.37	2.59	2.35	2.28	3.84	
	3	4.32	3.82	4.08	3.68	4.68	3.87	3.68	3.28	3.53	4.35	2.70	2.35	2.28	3.87	
	4	4.31	3.84	4.12	3.68	4.56	3.90	3.67	3.32	3.65	4.30	2.75	2.37	2.25	4.16	
	5	4.39	3.96			4.48	3.90	3.66				2.79	2.34			
November	1	4.41	4.02	4.02	3.67	4.56	3.98	3.69	3.27	3.67	4.33	2.86	2.24	2.23	4.06	
	2	4.40	4.24	4.02	3.55	4.64	3.98	3.74	3.52	3.49	4.36	2.85	2.28	2.10	4.02	
	3	4.35	4.72	4.09	3.41	4.60	3.93	3.65	3.75	3.52	4.30	2.79	2.19	2.13	3.75	
	4	4.33	4.60	4.07	3.37	4.61	3.94	3.65	3.80	3.51	4.26	2.77	2.13	2.11	3.72	
	5				3.29					3.59	4.22					
December	1	4.24	4.65	4.12	3.27	4.70	3.83	3.57	4.03	3.29	4.12	2.77	2.13	2.05	3.65	
	2	4.19	4.86	3.93	3.44	4.74	3.65	3.57	3.78	3.41	4.18	2.74	2.13	2.05	3.63	
	3	4.18	5.15	3.92	3.64	4.73	3.65	3.57	3.88	3.56	4.11	2.74	2.12	2.05	3.59	
	4	4.21	5.00	3.92	3.58	4.73	3.65	3.57	3.83	3.44	4.10	2.74	2.12	2.05	3.66	
The Bond B	5		4.95	3.88		ļ	3.56		3.78	ļ			2.12	2.06	3.72	

The Bond Buyer's 20-Bond Index is determined by a poll taken of several investment banks each week of the 20 year yield of outstanding general obligation bonds from a select group of municipalities across the nation with an average credit rating of "AA".



HTS Commodities Energy Updates: April 21, 2023

Active Commodi [,]	ty Cor	ntracts	5		Sou	ırce: Bloomberg
	•				YoY Net	
	4/21/23	4/14/23	Net Chg	4/21/22	Chg	YoY %Chg
RBOB Gasoline NYMEX (\$/gal)	2.600	2.836	-0.236	3.339	-0.738	-22.11%
ULSD NYMEX (HO) (\$/gal)	2.493	2.639	-0.146	3.901	-1.408	-36.08%
Natural Gas NYMEX (\$/mmbtu)	2.210	2.114	0.096	6.957	-4.747	-68.23%
Crude Oil NYMEX (\$/barrel)	77.780	82.520	-4.740	103.790	-26.010	-25.06%

Fixed Price Projection¹

Fixed Price Proje	τιοη				Sourc	e: Bloomberg
_	3Q23	3Q23	4Q23	1Q24	2Q24	
RBOB Gasoline NYMEX (\$/gal)	2.406	2.208	2.251	2.251	2.216	
ULSD NYMEX (HO) (\$/gal)	2.486	2.486	2.463	2.463	2.406	
Natural Gas NYMEX (\$/mmbtu)	2.634	3.176	3.690	3.690	3.454	
Crude Oil NYMEX (\$/barrel)	76.510	74.980	73.700	73.700	71.610	

Commentary

On early Friday afternoon, the prompt contracts for listed NYMEX energy futures were trading mostly lower relative to previous week. The prompt natural gas futures contract was trading +4% WoW and was set to close higher for the second consecutive week. The last time that the prompt NYMEX natural gas contract closed positive over two consecutive weeks was the last week of February and the first week of March. NYMEX WTI crude oil and ULSD prompts were each trading -5% WoW while the prompt RBOB contract was -7% WoW.

After trading below and then bouncing around the \$2.00/mmBtu support level for most of April, the prompt NYMEX natural gas trade moved higher and was close to finishing the week above the \$2.20/mmBtu level. This would be the highest price level since the end of March. Despite the recent bout of warm weather and the gloomy supply and demand data, the recent shift to cooler than average temperatures across the northern US provided key support. On Friday, 4/21/2023, the lower-48 gas demand was estimated at 65.1 bcf, -0.4% YoY, but +2.5% WoW. Production was 100 bcf, +3.1% YoY.

Last week, European Union lawmakers were set to back tough requirements for fossil fuel producers to rein in menthane emissions. Part of this legislation proposal will target the emissions of upstream energy suppliers. It also lays out strict criteria for oil and gas companies to monitor and repair gas leaks, risking a ban from the EU market if they fail to comply. Specifically, the proposal would also make importers have to comply with the EU's strict leak monitoring and repair practices from 2026. After a committee vote takes place on April 26, the whole assembly will then vote on its position before final talks with the EU's 27 member states. The EU is among 150 signatories to the Global Methane Pledge, an agreement to cut emissions of methane by 30%, but is struggling to reach this level. This legislation has the ability to impact US LNG exports. If US firms do not meet the EU's criteria, it is plausible that LNG exports to the common area could slow.

With NYMEX futures prices hovering around the \$2/mmBtu mark and displaying little interest in moving structurally higher, we continue to like owning gas as a consumer-side hedge and as a speculative trade below \$2.

(1) Indications only, valuation as of 4/21/2023; includes \$0.00 in customary and transaction expenses; assumes equal monthly volumes.

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Park Cities (TX): St. Paul:

972-624-6373 612-439-6111



RBOB Gasoline NYMEX

	4/21/23	4/14/23	Net Chg	%Change
MAY 23	2.60	2.84	-0.24	-8.33%
JUN 23	2.57	2.79	-0.22	-7.72%
JUL 23	2.53	2.73	-0.20	-7.39%
AUG 23	2.49	2.68	-0.19	-7.03%
SEP 23	2.44	2.62	-0.17	-6.61%
OCT 23	2.28	2.43	-0.15	-6.02%
NOV 23	2.24	2.37	-0.13	-5.51%
DEC 23	2.20	2.33	-0.13	-5.42%
JAN 24	2.19	2.31	-0.12	-5.02%
FEB 24	2.19	2.31	-0.11	-4.83%
MAR 24	2.21	2.31	-0.11	-4.60%

ULSD NYMEX (formerly Heating Oil)

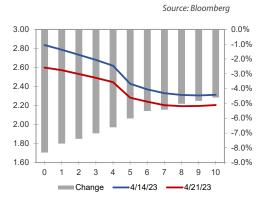
	4/21/23	4/14/23	Net Chg	%Change
MAY 23	2.49	2.64	-0.15	-5.62%
JUN 23	2.48	2.62	-0.14	-5.20%
JUL 23	2.48	2.61	-0.13	-5.02%
AUG 23	2.48	2.61	-0.13	-4.87%
SEP 23	2.48	2.61	-0.12	-4.75%
OCT 23	2.49	2.61	-0.12	-4.52%
NOV 23	2.49	2.60	-0.12	-4.46%
DEC 23	2.49	2.60	-0.11	-4.26%
JAN 24	2.48	2.59	-0.11	-4.12%
FEB 24	2.48	2.58	-0.10	-3.93%
MAR 24	2.46	2.56	-0.10	-3.75%

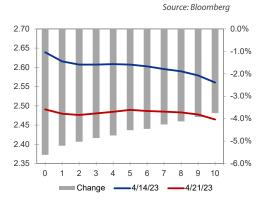
Natural Gas NYMEX

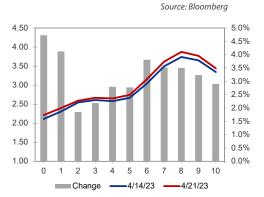
	4/21/23	4/14/23	Net Chg	%Change
MAY 23	2.21	2.11	0.10	+4.73%
JUN 23	2.40	2.31	0.09	+4.12%
JUL 23	2.59	2.55	0.05	+1.85%
AUG 23	2.67	2.61	0.06	+2.18%
SEP 23	2.65	2.58	0.07	+2.79%
OCT 23	2.74	2.67	0.07	+2.77%
NOV 23	3.16	3.04	0.12	+3.81%
DEC 23	3.62	3.50	0.12	+3.52%
JAN 24	3.87	3.74	0.13	+3.50%
FEB 24	3.77	3.65	0.12	+3.23%
MAR 24	3.44	3.34	0.10	+2.90%

Crude Oil NYMEX

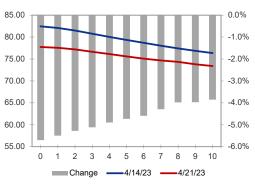
	4/21/23	4/14/23	Net Chg	%Change
JUN 23	77.73	82.43	-4.70	-5.70%
JUL 23	77.55	82.06	-4.51	-5.50%
AUG 23	77.17	81.47	-4.30	-5.28%
SEP 23	76.64	80.77	-4.13	-5.11%
OCT 23	76.12	80.04	-3.92	-4.90%
NOV 23	75.58	79.33	-3.75	-4.73%
DEC 23	75.05	78.66	-3.61	-4.59%
JAN 24	74.66	78.01	-3.35	-4.29%
FEB 24	74.32	77.40	-3.08	-3.98%
MAR 24	73.80	76.85	-3.05	-3.97%
APR 24	73.38	76.32	-2.94	-3.85%











(1) Indications only, valuation as of 4/21/2023; includes \$0.00 in customary and transaction expenses; assumes equal monthly volumes.



Trading on regulated commodity exchanges inherently involves risk of loss and is not suitable for everyone. The leverage created by trading on margin can work against you just as much as it can benefit you, and losses could exceed the entire investment as well as additional cash deposits. You may be required to immediately provide capital upon notice to maintain any or all open positions, and failure to do so in a timely manner could result in penalties, liquidating debit balances, unforeseen financial obligation and the loss of opportunity sought by participating in the commodity futures and options marketplace. Only risk capital should be considered for alternative investment or speculation. Before opening an account you should seek advice from related associations, regulators, certified public accountants, industry professionals and other trusted advisors. Be certain that you understand the risks and can withstand the potential losses associated with SWAPS, futures, options on futures or any other derivatives or cash commodity transactions in which you intend to participate. HTSCommodities may not represent, guarantee or warrant that you will profit from any trading activity nor that realized losses will be limited whatsoever.

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Weekly Rate Summary: April 21, 2023

Weekly Summary and Highlights

(1) Reminder: USD LIBOR will be discontinued after June 30 of THIS YEAR. Our desk can help you understand ISDA IBOR Fallbacks Protocol and alternatives.

(2) Guaranteed Investment Contracts (GICs) continue to offer attractive rates for project funds, Cap-I funds and reserve funds.

Source: Bloomberg

Source: Bloomberg

Source: Bloomberg

6.00%

5.00%

4.00%

3.00%

2.00%

1.00%

0.00%

WoW Chg

(bps)

-78.1

8.1

5.3

0.1

8.9

6.2

5.7

6.1

5.7

(3) Fed's quiet period starts on April 22, and upcoming economic data includes GDP and initial jobless claims.

Short-Term Interest Rates

			WoW Chg		YoY Chg
	4/21/23	4/14/23	(bps)	4/21/22	(bps)
SIFMA	2.810%	2.170%	64.0	0.460%	235
SOFR	4.800%	4.800%	0.0	0.260%	454
BSBY (O/N)	4.887%	4.894%	-0.7	0.329%	456
Ameribor (O/N)	5.122%	5.053%	6.8	0.408%	471
Fed Funds Effec.	4.830%	4.830%	0.0	0.330%	450
Prime	8.000%	8.000%	0.0	3.500%	450

Variable Rate Term Structure

4/21/23

3.268%

5.067%

5.028%

4.746%

4.188%

3.893%

3.663%

3.614%

3.570%

			WoW Chg		YoY Chg
	4/21/23	4/14/23	(bps)	4/21/22	(bps)
1MO Term SOFR	4.971%	4.893%	7.7	0.624%	435
3MO Term SOFR	5.068%	4.982%	8.6	0.949%	412
1MO BSBY	4.957%	4.913%	4.4	0.486%	447
3MO BSBY	5.207%	5.182%	2.5	1.040%	417
1MO LIBOR	5.020%	4.959%	6.1	0.668%	435
3MO LIBOR	5.255%	5.262%	-0.7	1.184%	407

4/14/23

4.049%

4.986%

4.975%

4.745%

4.099%

3.831%

3.606%

3.553%

3.513%

Interest Rate Forecast Survey

	Current	Q223	Q323	Q423	Q124
Target Fed Funds	5.000%	5.25%	5.20%	5.10%	4.70%
3MO Term SOFR	5.068%	5.16%	5.11%	4.86%	4.46%
2YR T-Note	4.188%	4.19%	4.01%	3.75%	3.55%
10YR T-Note	3.570%	3.59%	3.54%	3.44%	3.41%
30YR T-Note	3.775%	3.88%	3.89%	3.82%	3.73%

SOFR Forward Swap Rates

20

0

-20

-40

-60

-80

-100

—4/21/23 **—**4/14/23

Tenor	Current	3Mo Fwd	6Mo Fwd	1Yr Fwd	2Yr Fwd
5YR	3.455%	3.338%	3.223%	3.050%	2.955%
7YR	3.333%	3.250%	3.169%	3.047%	2.998%
10YR	3.285%	3.228%	3.175%	3.097%	3.075%
20YR	3.269%	3.230%	3.193%	3.135%	3.095%
30YR	3.086%	3.051%	3.017%	2.964%	2.913%

WoW Chg 4/21/23 4/14/23 (bps) 1MO 4.91% 4.98% 7 2MO 5.11% 5.03% 8 3MO 5.23% 5.12% 11 4MO 5.30% 10 5.20% 5MO 10 5.35% 5.25% 6MO 5.37% 5.28% 9 7MO 5.37% 5.28% 9 8MO 5.34% 5.24% 10

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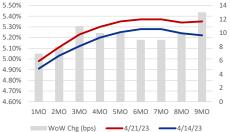
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13

Source: Bloomberg

Source: Bloomberg



SOFR Swap Rates

U.S. Treasury Yields

1MO

3MO

6MO

1YR

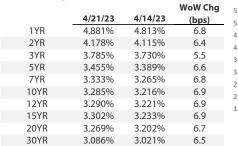
2YR

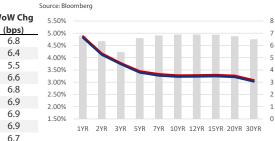
3YR

5YR

7YR

10YR





WoW Chg (bps)

1MO 3MO 6MO 1YR 2YR 3YR 5YR 7YR 10YR

WoW Chg (bps) 4/21/23 4/14/23

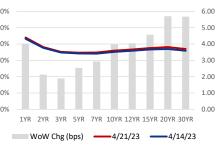
Tax Exempt Swap Rates

5.35%

9MO

Exempt	Source: Bloomberg			
			WoW Chg	4.009
	4/21/23	4/14/23	(bps)	
1YR	3.204%	3.164%	4.0	3.50%
2YR	2.905%	2.884%	2.1	3.00%
3YR	2.757%	2.738%	1.9	2.50%
5YR	2.735%	2.710%	2.5	
7YR	2.737%	2.708%	2.9	2.009
10YR	2.799%	2.759%	4.0	1.50%
12YR	2.832%	2.792%	4.0	1.00%
15YR	2.876%	2.830%	4.6	2.007
20YR	2.904%	2.847%	5.7	
30YR	2.849%	2.792%	5.7	

5.22%



Data as of April 21, 2023 2:23 PM Central Time

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Weekly Rate Summary: April 27, 2023

Weekly Summary and Highlights

(1) Reminder: USD LIBOR will be discontinued after June 30 of THIS YEAR. Our desk can help you understand ISDA IBOR Fallbacks Protocol and alternatives. (2) Guaranteed Investment Contracts (GICs) continue to offer attractive rates for project funds, Cap-I funds and reserve funds. (3) Upcoming FOMC rate decision: May 3.

Source: Bloomberg

Source: Bloomberg

Source: Bloomberg

6.00%

5.00%

4.00%

3.00%

2.00%

1.00%

0.00%

WoW Chg

(bps)

93.0

8.1

0.8

4.3

-5.3

-3.9

-3.0

-0.8

-0.6

Short-Term Interest Rates

	WoW Chg				YoY Chg
	4/27/23	4/20/23	(bps)	4/27/22	(bps)
SIFMA	3.860%	2.810%	105.0	0.440%	342
SOFR	4.800%	4.800%	0.0	0.280%	452
BSBY (O/N)	4.890%	4.887%	0.4	0.329%	456
Ameribor (O/N)	5.122%	5.122%	0.0	0.423%	470
Fed Funds Effec.	4.830%	4.830%	0.0	0.330%	450
Prime	8.000%	8.000%	0.0	3.500%	450

Variable Rate Term Structure

4/27/23

4.143%

5.139%

5.033%

4.758%

4.089%

3.817%

3.596%

3.571%

3.526%

			WoW Chg		YoY Chg
	4/27/23	4/20/23	(bps)	4/27/22	(bps)
1MO Term SOFR	4.993%	4.964%	2.9	0.700%	429
3MO Term SOFR	5.043%	5.071%	-2.7	1.025%	402
1MO BSBY	5.019%	4.942%	7.7	0.609%	441
3MO BSBY	5.224%	5.203%	2.1	1.135%	409
1MO LIBOR	5.034%	5.010%	2.4	0.764%	427
3MO LIBOR	5.299%	5.273%	2.6	1.239%	406

4/20/23

3.213%

5.058%

5.025%

4.715%

4.142%

3.856%

3.626%

3.579%

3.532%

Interest Rate Forecast Survey

	Current	Q223	Q323	Q423	Q124
Target Fed Funds	5.000%	5.25%	5.20%	5.10%	4.70%
3MO Term SOFR	5.043%	5.16%	5.11%	4.86%	4.46%
2YR T-Note	4.091%	4.19%	4.01%	3.75%	3.55%
10YR T-Note	3.526%	3.59%	3.54%	3.44%	3.41%
30YR T-Note	3.762%	3.88%	3.89%	3.82%	3.73%

Source: Bloomberg

Source: Bloomberg

SOFR Forward Swap Rates

100

80

60

40

20

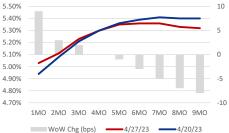
-20

Tenor	Current	3Mo Fwd	6Mo Fwd	1Yr Fwd	2Yr Fwd
5YR	3.391%	3.271%	3.157%	2.993%	2.919%
7YR	3.282%	3.197%	3.116%	3.001%	2.968%
10YR	3.242%	3.185%	3.131%	3.057%	3.045%
20YR	3.237%	3.198%	3.160%	3.105%	3.072%
30YR	3.059%	3.025%	2.991%	2.940%	2.896%

CP (A1/P1) Indicative Rates Source: Bloomberg WoW Chg 4/27/23 4/20/23



10



SOFR Swap Rates

U.S. Treasury Yields

1MO

3MO

6MO

1YR

2YR

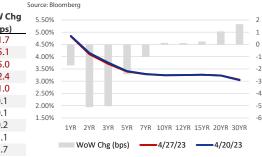
3YR

5YR

7YR

10YR

			WoW
	4/27/23	4/20/23	(bp
1YR	4.837%	4.854%	-1.
2YR	4.097%	4.148%	-5.
3YR	3.706%	3.756%	-5.
5YR	3.391%	3.415%	-2.
7YR	3.282%	3.292%	-1.
10YR	3.242%	3.241%	0.
12YR	3.247%	3.246%	0.
15YR	3.262%	3.260%	0.
20YR	3.237%	3.226%	1.
30YR	3.059%	3.042%	1.
	2YR 3YR 5YR 7YR 10YR 12YR 15YR 20YR	1YR 4.837% 2YR 4.097% 3YR 3.706% 5YR 3.391% 7YR 3.282% 10YR 3.242% 12YR 3.247% 15YR 3.262% 20YR 3.237%	1YR 4.837% 4.854% 2YR 4.097% 4.148% 3YR 3.706% 3.756% 5YR 3.391% 3.415% 7YR 3.282% 3.292% 10YR 3.241% 3.241% 12YR 3.247% 3.246% 15YR 3.262% 3.260% 20YR 3.237% 3.226%

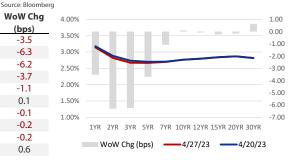


1MO 3MO 6MO 1YR 2YR 3YR 5YR 7YR 10YR

WoW Chg (bps) 4/27/23 4/20/23

Tax Exempt Swap Rates





Data as of April 27, 2023 1:27 PM Central Time

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HTS Commodities Energy Updates: April 28, 2023

Active Commodity Contracts					Source: Bloomberg	
	-				YoY Net	
	4/28/23	4/21/23	Net Chg	4/28/22	Chg	YoY %Chg
RBOB Gasoline NYMEX (\$/gal)	2.578	2.602	-0.024	3.503	-0.925	-26.41%
ULSD NYMEX (HO) (\$/gal)	2.379	2.489	-0.110	5.135	-2.757	-53.68%
Natural Gas NYMEX (\$/mmbtu)	2.400	2.233	0.167	6.888	-4.488	-65.16%
Crude Oil NYMEX (\$/barrel)	76.750	77.870	-1.120	105.360	-28.610	-27.15%
Fixed Price Projection ¹						ce: Bloomberg

Fixed Price Projection' 3Q23 3Q23 4Q23 1Q24 RBOB Gasoline NYMEX (\$/gal) 2.357 2.158 2.203 2.203 ULI SD NYMEX (\$/gal) 2.404 2.414 2.402 2.402

ULSD NYMEX (HO) (\$/gal)	2.404	2.414	2.402	2.402	2.359
Natural Gas NYMEX (\$/mmbtu)	2.611	3.173	3.699	3.699	3.473
Crude Oil NYMEX (\$/barrel)	75.480	73.950	72.710	72.710	70.770

Commentary

Despite the bullish supply construct, NYMEX distillate futures prices continue to experience unrelenting pressure as domestic demand continues to soften as the macroeconomic climate weakens. At \$2.3488/gallon, the spot ULSD futures contract fell to the lowest value since December 2021. The spot diesel crack has been in free fall and declined by 20% during April. Despite the negative performance of the diesel futures contracts, the supply side possesses bullish tendencies. Total reported domestic distillate stocks are seasonally +5.3% YoY but 2022 was the lowest level of stocks in 20 years. While 2023 distillate stocks are above 2022, they remain at the bottom of the 10 and 15-year ranges as the country approaches peak driving season. Agricultural demand for distillate headed into the planting season is robust, and despite an overwhelming volume of Chinese diesel making its way into the global export market, US exports to Mexico and Latin America remain encouraging. At 91% percent capacity utilization, US refineries are operating at the second highest seasonal level in 15 years which leaves little margin for errors.

2Q24

2 173

While the bullish variables are known, the distillate bears have been getting paid to be short. During April, seasonal implied distillate demand fell to the lowest level in 5 years and the second lowest level in 10 years. This week's domestic macroeconomic data reinforces the bear argument. Consumer confidence is waning, as reported business conditions and manufacturing activity are precipitously declining. The Dallas, Philadelphia, and Richmond Federal Reserve branches all reported steep slides in manufacturing activity which reduces the demand structure. First Quarter US GDP was +1.1% YoY but the number showed what the market energy already knows. Aggressive monetary policy is slowing demand for crude oil and crude products.

The natural gas futures market dealt with another round of cooler air in the northern population areas, which combined with thoughts about the growing probability of above average El Nino driven temperatures and short covering into the end of April, helped propel the prompt NYMEX natural gas futures contract higher by 6% WoW as of Friday morning. US gas stocks remain accommodating and production for the week averaged above the 100 bcf mark. The domestic gas storage numbers and the east-west regional differences will continue to drive and impact basis in the summer. In particular EIA storage data shows storage in the Pacific and Rockies regions to be a deficit relative to the 5-year norm.

(1) Indications only, valuation as of 4/28/2023; includes \$0.00 in customary and transaction expenses; assumes equal monthly volumes.

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TX): 972-624-6373 612-439-6111



Source: Bloomberg

RBOB Gasoline NYMEX

	4/28/23	4/21/23	Net Chg	%Change
MAY 23	2.58	2.60	-0.02	-0.91%
JUN 23	2.53	2.58	-0.05	-1.83%
JUL 23	2.49	2.54	-0.05	-2.00%
AUG 23	2.44	2.50	-0.05	-2.12%
SEP 23	2.40	2.45	-0.05	-2.18%
OCT 23	2.23	2.29	-0.06	-2.42%
NOV 23	2.18	2.24	-0.06	-2.50%
DEC 23	2.15	2.21	-0.06	-2.64%
JAN 24	2.14	2.19	-0.05	-2.48%
FEB 24	2.14	2.19	-0.05	-2.32%
MAR 24	2.15	2.21	-0.05	-2.31%

ULSD NYMEX (formerly Heating Oil)

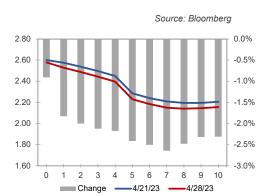
	4/28/23	4/21/23	Net Chg	%Change
MAY 23	2.38	2.49	-0.11	-4.42%
JUN 23	2.38	2.48	-0.10	-4.09%
JUL 23	2.38	2.48	-0.09	-3.80%
AUG 23	2.39	2.48	-0.09	-3.60%
SEP 23	2.40	2.49	-0.08	-3.37%
OCT 23	2.41	2.49	-0.08	-3.11%
NOV 23	2.41	2.49	-0.07	-2.95%
DEC 23	2.41	2.48	-0.07	-2.87%
JAN 24	2.41	2.48	-0.07	-2.83%
FEB 24	2.41	2.48	-0.06	-2.60%
MAR 24	2.40	2.46	-0.06	-2.43%

Natural Gas NYMEX

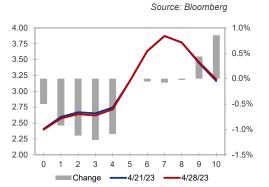
	4/28/23	4/21/23	Net Chg	%Change
JUN 23	2.40	2.41	-0.01	-0.50%
JUL 23	2.57	2.60	-0.02	-0.92%
AUG 23	2.64	2.67	-0.03	-1.12%
SEP 23	2.62	2.65	-0.03	-1.21%
OCT 23	2.72	2.75	-0.03	-1.09%
NOV 23	3.17	3.17	0.00	0.00%
DEC 23	3.63	3.64	0.00	-0.06%
JAN 24	3.87	3.87	0.00	-0.08%
FEB 24	3.77	3.77	0.00	-0.03%
MAR 24	3.46	3.45	0.02	+0.44%
APR 24	3.19	3.16	0.03	+0.85%

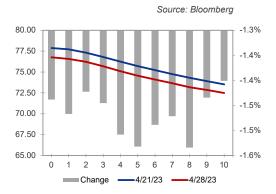
Crude Oil NYMEX

	4/28/23	4/21/23	Net Chg	%Change
JUN 23	76.75	77.87	-1.12	-1.44%
JUL 23	76.57	77.71	-1.14	-1.47%
AUG 23	76.22	77.32	-1.10	-1.42%
SEP 23	75.69	76.80	-1.11	-1.45%
OCT 23	75.09	76.24	-1.15	-1.51%
NOV 23	74.55	75.71	-1.16	-1.53%
DEC 23	74.10	75.22	-1.12	-1.49%
JAN 24	73.65	74.75	-1.10	-1.47%
FEB 24	73.17	74.31	-1.14	-1.53%
MAR 24	72.84	73.90	-1.06	-1.43%
APR 24	72.49	73.52	-1.03	-1.40%



2.50 0.0% -0.5% 2.48 -1.0% 2.46 -1.5% 2.44 -2.0% 2.42 -2.5% 2.40 -3.0% 2.38 -3.5% 2.36 -4.0% 2.34 -4.5% 2.32 -5.0% 2 4 5 6 7 8 9 10 0 1 3 -4/21/23 -4/28/23 Change _





(1) Indications only, valuation as of 4/28/2023; includes \$0.00 in customary and transaction expenses; assumes equal monthly volumes.



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HTS Commodities Energy Updates: May 5, 2023

ŀ	Active Commodity Contracts						Source: Bloomberg	
						YoY Net		
		5/5/23	4/28/23	Net Chg	5/5/22	Chg	YoY %Chg	
	RBOB Gasoline NYMEX (\$/gal)	2.379	2.578	-0.199	3.659	-1.280	-34.98%	
	ULSD NYMEX (HO) (\$/gal)	2.315	2.379	-0.064	4.041	-1.727	-42.72%	
	Natural Gas NYMEX (\$/mmbtu)	2.137	2.410	-0.273	8.783	-6.646	-75.67%	
	Crude Oil NYMEX (\$/barrel)	71.340	76.780	-5.440	108.260	-36.920	-34.10%	

Fixed Price Projection¹

_	3Q23	3Q23	4Q23	1Q24	2Q24
RBOB Gasoline NYMEX (\$/gal)	2.231	2.041	2.084	2.084	2.075
ULSD NYMEX (HO) (\$/gal)	2.341	2.347	2.334	2.334	2.289
Natural Gas NYMEX (\$/mmbtu)	2.350	2.971	3.550	3.550	3.345
Crude Oil NYMEX (\$/barrel)	70.470	69.250	68.210	68.210	66.590

Commentary

Despite the short covering or the risk-on mentality on Friday, the prompt NYMEX WTI crude, crude products (RBOB and ULSD) and natural gas closed lower on the week. Of the four futures trades, the prompt natural gas declined the most, 12% WoW. Sloppy demand related fundamentals in the crude and product markets along with concerns about a slowing domestic economy and plunging open interest have helped pushed volatility higher and prices lower.

Source: Bloombera

Last week the WTI and refined product futures prices continued to tumble as turmoil in the US banking sector along with a highly anticipated 25 bps rise in the Fed Funds target and data suggesting that the US labor market is still running hot jumped back to the top of the revolving list of recession fear related headlines. These domestic macro variables are leading the US energy trades lower and represent a bearish counterweight to the broad supply concerns that stem from April's OPEC+ decision to cut production. Domestic crude inventories fell for a third straight week, aided by another sell-off from the Strategic Petroleum Reserve (SPR). SPR inventories are at the lowest level since 1983. Refilling is not the priority of the Biden Administration who has mentioned that purchases to restock will start either at or around \$70/bbl.

This week's EIA data showed that seasonal demand across the "big three" refined products – gasoline, diesel, and jet fuel, appears to be stagnating at a time where they typically see growth. After last week's surge in implied gasoline demand, the figure returned to earth and plunged nearly 900,000 barrels a day, sending the four-week average downward for only the second time since January and below 2021 levels for the first time this year. Refineries' utilization slipped slightly, although it remains firmly above the 90% mark for a third straight week. Implied distillate demand continues to decline and is at 2022 levels but domestic and regional stocks remain perilously low.

Natural gas story remains the same. Big LNG exports, big weekly production runs over 99 bcf, and increasing seasonal demand. The EIA gas storage report lowered the surplus to the 5-year average to 341 Bcf, but this failed to reverse the continued sell off in natural gas prices. US gas production increased to a record 5.98 tcf during the first two months of 2023, up from 5.60 tfc during the same period in 2022, +7% YoY.

The number of rigs drilling for gas has remained steady at around 150-160 since September, after climbing steadily from just over 100 at the start of 2022. The static rig count should slow production growth from the third quarter of 2023, and the restart of Freeport LNG's export operations should help reduce some of the surplus inventory. But the accumulated surplus is so large that some reduction in drilling and completions will probably be needed to push production and consumption back into balance and eliminate excess stocks.

We believe that the current price level of the natural gas and distillate curves is providing hedgers opportunities to buy volatility or purchase future demand.

(1) Indications only, valuation as of 5/5/2023; includes \$0.00 in customary and transaction expenses; assumes equal monthly volumes.

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	5/5/23	4/28/23	Net Chg	%Change
JUN 23	2.38	2.53	-0.15	-5.97%
JUL 23	2.35	2.49	-0.14	-5.75%
AUG 23	2.31	2.44	-0.14	-5.62%
SEP 23	2.27	2.40	-0.13	-5.52%
OCT 23	2.11	2.23	-0.12	-5.39%
NOV 23	2.06	2.18	-0.12	-5.42%
DEC 23	2.03	2.15	-0.12	-5.45%
JAN 24	2.02	2.14	-0.12	-5.46%
FEB 24	2.02	2.14	-0.12	-5.53%
MAR 24	2.03	2.15	-0.12	-5.66%
APR 24	2.19	2.31	-0.12	-5.14%

ULSD NYMEX (formerly Heating Oil)

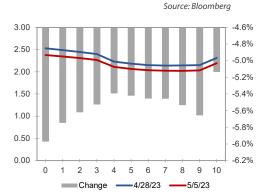
	5/5/23	4/28/23	Net Chg	%Change
JUN 23	2.31	2.38	-0.06	-2.63%
JUL 23	2.32	2.38	-0.06	-2.64%
AUG 23	2.33	2.39	-0.07	-2.76%
SEP 23	2.33	2.40	-0.07	-2.86%
OCT 23	2.34	2.41	-0.07	-2.91%
NOV 23	2.34	2.41	-0.07	-2.92%
DEC 23	2.34	2.41	-0.07	-2.94%
JAN 24	2.34	2.41	-0.07	-2.98%
FEB 24	2.34	2.41	-0.07	-2.94%
MAR 24	2.33	2.40	-0.07	-2.86%
APR 24	2.32	2.38	-0.07	-2.77%

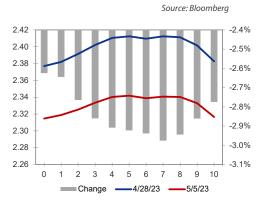
Natural Gas NYMEX

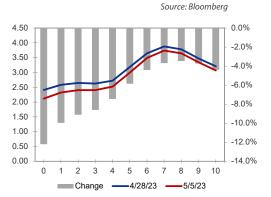
	5/5/23	4/28/23	Net Chg	%Change
JUN 23	2.12	2.41	-0.29	-12.20%
JUL 23	2.32	2.58	-0.26	-9.97%
AUG 23	2.40	2.65	-0.24	-9.11%
SEP 23	2.40	2.63	-0.23	-8.61%
OCT 23	2.52	2.72	-0.20	-7.46%
NOV 23	2.99	3.18	-0.19	-5.85%
DEC 23	3.49	3.65	-0.16	-4.41%
JAN 24	3.73	3.88	-0.14	-3.69%
FEB 24	3.65	3.78	-0.13	-3.47%
MAR 24	3.34	3.47	-0.13	-3.74%
APR 24	3.06	3.21	-0.14	-4.40%

Crude Oil NYMEX

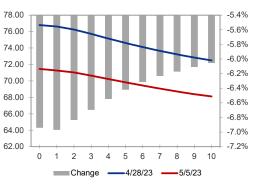
	5/5/23	4/28/23	Net Chg	%Change
JUN 23	71.45	76.78	-5.33	-6.94%
JUL 23	71.27	76.61	-5.34	-6.97%
AUG 23	71.03	76.24	-5.21	-6.83%
SEP 23	70.65	75.72	-5.07	-6.70%
OCT 23	70.23	75.15	-4.92	-6.55%
NOV 23	69.82	74.61	-4.79	-6.42%
DEC 23	69.43	74.11	-4.68	-6.31%
JAN 24	69.06	73.65	-4.59	-6.23%
FEB 24	68.71	73.23	-4.52	-6.17%
MAR 24	68.39	72.84	-4.45	-6.11%
APR 24	68.10	72.49	-4.39	-6.06%











(1) Indications only, valuation as of 5/5/2023; includes \$0.00 in customary and transaction expenses; assumes equal monthly volumes.



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Weekly Rate Summary: May 05, 2023

Weekly Summary and Highlights

(1) Reminder: USD LIBOR will be discontinued after **June 30 of THIS YEAR**. Our desk can help you understand ISDA IBOR Fallbacks Protocol and alternatives. (2) Guaranteed Investment Contracts (GICs) continue to offer attractive rates for **project funds**, **Cap-I funds** and **reserve funds**.

YoY Chg

(bps)

Source: Bloomberg

Source: Bloomberg

8.00%

7.00%

6.00%

5.00%

4.00%

3.00%

2.00%

1.00%

0.00%

WoW Chg

(bps)

48.1

18.7

5.8

-2.7

-9.2

-8.3

-6.6

-3.6

2.3

Short-Term Interest Rates

			WoW Chg		YoY Chg
	5/5/23	4/28/23	(bps)	5/5/22	(bps)
SIFMA	3.450%	3.860%	-41.0	0.600%	285
SOFR	5.060%	4.810%	25.0	0.790%	427
BSBY (O/N)	4.952%	4.890%	6.2	0.317%	463
Ameribor (O/N)	5.392%	5.099%	29.3	0.925%	447
Fed Funds Effec.	5.080%	4.830%	25.0	0.830%	425
Prime	8.250%	8.000%	25.0	4.000%	425

Variable Rate Term Structure Source: Bloomberg WoW Chg 5/5/23 4/28/23 (bps) 5/5/22 1MO Term SOFR 5 050% 5 019% 3 2 0 798%

1MO Term SOFR	5.050%	5.019%	3.2	0.798%	425
3MO Term SOFR	5.039%	5.081%	-4.3	1.201%	384
1MO BSBY	5.084%	5.045%	4.0	0.798%	429
3MO BSBY	5.272%	5.222%	5.0	1.323%	395
1MO LIBOR	5.104%	5.062%	4.2	0.845%	426
3MO LIBOR	5.337%	5.302%	3.4	1.371%	397

4/28/23

4.785%

5.030%

5.001%

4.740%

4.006%

3.716%

3.483%

3.457%

3.422%

Interest Rate Forecast Survey

	Current	Q223	Q323	Q423	Q124
Target Fed Funds	5.250%	5.25%	5.20%	5.10%	4.70%
3MO Term SOFR	5.039%	5.16%	5.11%	4.86%	4.46%
2YR T-Note	3.914%	4.19%	4.01%	3.75%	3.55%
10YR T-Note	3.445%	3.59%	3.54%	3.44%	3.41%
30YR T-Note	3.762%	3.88%	3.89%	3.82%	3.73%

Source: Bloomberg

Source: Bloomberg

SOFR Forward Swap Rates

60

50

40

30

20

10

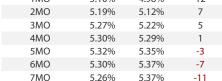
-10

-20

0

Tenor	Current	3Mo Fwd	6Mo Fwd	1Yr Fwd	2Yr Fwd
5YR	3.234%	3.120%	3.014%	2.878%	2.866%
7YR	3.175%	3.097%	3.024%	2.933%	2.946%
10YR	3.183%	3.132%	3.083%	3.027%	3.049%
20YR	3.224%	3.188%	3.153%	3.108%	3.094%
30YR	3.064%	3.032%	3.001%	2.958%	2.929%

CP (A1/P1) Indicative Rates Source: Bloomberg WOW Chg 5/5/23 4/28/23 (bps) 1MO 5.10% 4.98% 12 2MO 5.19% 5.12% 7



5.18%

5.16%

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10

-5

-10

-15

-20

5.40% 5.30% 5.20% 5.10% 5.00% 4.90% 4.80% 4.80%

1MO 2MO 3MO 4MO 5MO 6MO 7MO 8MO 9MO WoW Chg (bps) ____5/5/23 ___4/28/23



U.S. Treasury Yields

1MO

3MO

6MO

1YR

2YR

3YR

5YR

7YR

10YR

5/5/23

5.266%

5.217%

5.059%

4.713%

3.914%

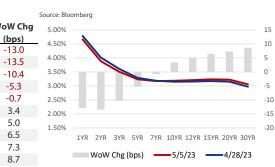
3.633%

3.417%

3.421%

3.445%

				We
		5/5/23	4/28/23	
	1YR	4.661%	4.790%	
	2YR	3.880%	4.015%	
	3YR	3.505%	3.609%	
	5YR	3.234%	3.287%	
	7YR	3.175%	3.183%	
	10YR	3.183%	3.149%	
	12YR	3.207%	3.157%	
	15YR	3.239%	3.174%	
	20YR	3.224%	3.151%	
	30YR	3.064%	2.977%	



WoW Chg (bps)

1MO 3MO 6MO 1YR 2YR 3YR 5YR 7YR 10YR

Tax Exempt Swap Rates

8MO

9MO



5.34%

5.34%

-16

-18



Data as of May 05, 2023 2:03 PM Central Time.

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HTS Commodities Energy Updates: May 12, 2023

F	Active Commodi [®]	Source: Bloomberg					
·					YoY Net		
		5/12/23	5/5/23	Net Chg	5/12/22	Chg	YoY %Chg
	RBOB Gasoline NYMEX (\$/gal)	2.427	2.379	0.048	3.792	-1.365	-36.00%
	ULSD NYMEX (HO) (\$/gal)	2.304	2.315	-0.011	3.916	-1.612	-41.17%
	Natural Gas NYMEX (\$/mmbtu)	2.268	2.137	0.131	7.739	-5.471	-70.69%
	Crude Oil NYMEX (\$/barrel)	70.050	71.340	-1.290	106.130	-36.080	-34.00%

Fixed Price Projection¹

FIXed Price Projection Source: Bloom								
_	3Q23	4Q23	1Q24	2Q24	3Q24			
RBOB Gasoline NYMEX (\$/gal)	2.240	2.034	2.077	2.077	2.050			
ULSD NYMEX (HO) (\$/gal)	2.306	2.314	2.300	2.300	2.267			
Natural Gas NYMEX (\$/mmbtu)	2.497	3.088	3.661	3.661	3.323			
Crude Oil NYMEX (\$/barrel)	69.370	68.270	67.360	67.360	65.990			

Commentary

On mid-Friday morning the prompt WTI futures contract along with the crude products and natural gas contracts were all trading slightly higher for the week. The NYMEX prompt natural gas contract was leading the way and was +4% WoW at \$2.221/mmBtu while the WTI contract was unchanged at \$71.12/bbl.

The EIA released their Short-Term Energy Outlook (STEO) on Tuesday, 5/9. The EIA forecasts that natural gas consumed during the summer of 2023 will average 38 Bcf/d. This would be the second highest demand on record following last summer's 39 Bcf/d. The EIA sees the high generation resulting from a decline in coal-fired electricity generation and higherthan-average forecasted temperatures. According to the NOAA's Climate Prediction Center (CPC), the transition to the El Nino climate pattern is underway and will occur between May and June 2023. On Thursday, 5/11, NOAA forecasted a 90% probability of El Nino in the northern hemisphere by winter of 2023, an 80% probability of a moderate pattern, and a 55% chance of a strong El Nino. Acknowledging these climate developments, the EIA decreased their heating degree day (HDD) forecast in 2023 by +1% YoY and +4% YoY in 2024. Cooling degree day (CDD) changes are forecast at +8% YoY in 2023 and +12% YoY in 2024.

During the summer of 2024, the EIA forecasts a 2% YoY decline in consumption to an average of 37 Bcf/d. The drop in gas usage is mainly due to the increasing generation from renewable sources. The EIA estimates a gas inventory level of 3,762 Bcf this October, 4% higher than the five-year average.

The EIA estimates that gas storage for all regions (East, Midwest, South Central, Pacific, and Mountain) should remain above the five-year averages through October 2023. Compared to the April STEO, the EIA left US production forecast relatively unchanged through 2023.

With NOAA forecasting above average temperatures for the east coast population centers (PADD-1), Texas (areas of PADD-3) and California/the PNW (PADD-5), we expect to see increased residential demand which can support local gas basis and future prices. Despite production running above 98 Bfc/d, we see the transition to the summer demand period, Europe's restocking, and the large structural managed money short as potential bullish inputs for the futures trade. While it has been easy to press the short position in US gas futures, we like owning call spreads over the July-September 2023 time period.

(1) Indications only, valuation as of 5/12/2023; includes \$0.00 in customary and transaction expenses; assumes equal monthly volumes.

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Park Cities (TX): St. Paul:

972-624-6373 612-439-6111





	5/12/23	5/5/23	Net Chg	%Change
JUN 23	2.43	2.38	0.05	+2.01%
JUL 23	2.38	2.35	0.03	+1.44%
AUG 23	2.33	2.31	0.02	+1.00%
SEP 23	2.28	2.27	0.01	+0.64%
OCT 23	2.11	2.11	0.00	-0.02%
NOV 23	2.06	2.06	0.00	-0.15%
DEC 23	2.03	2.03	-0.01	-0.25%
JAN 24	2.02	2.02	0.00	-0.20%
FEB 24	2.02	2.02	0.00	-0.08%
MAR 24	2.03	2.03	0.00	+0.07%
APR 24	2.22	2.19	0.03	+1.36%

ULSD NYMEX (formerly Heating Oil)

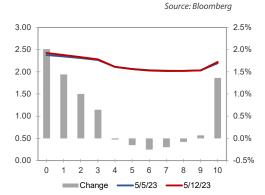
	5/12/23	5/5/23	Net Chg	%Change
JUN 23	2.30	2.31	-0.01	-0.45%
JUL 23	2.30	2.32	-0.02	-0.96%
AUG 23	2.30	2.33	-0.03	-1.12%
SEP 23	2.31	2.33	-0.03	-1.16%
OCT 23	2.31	2.34	-0.03	-1.16%
NOV 23	2.32	2.34	-0.03	-1.09%
DEC 23	2.31	2.34	-0.03	-1.09%
JAN 24	2.32	2.34	-0.03	-1.10%
FEB 24	2.31	2.34	-0.03	-1.18%
MAR 24	2.30	2.33	-0.03	-1.23%
APR 24	2.29	2.32	-0.03	-1.36%

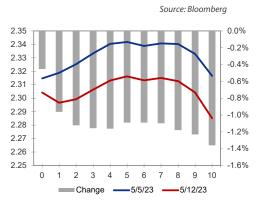
Natural Gas NYMEX

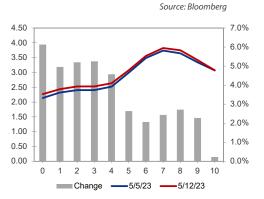
	5/12/23	5/5/23	Net Chg	%Change
JUN 23	2.27	2.14	0.13	+6.13%
JUL 23	2.44	2.32	0.12	+4.95%
AUG 23	2.53	2.40	0.13	+5.20%
SEP 23	2.53	2.40	0.13	+5.25%
OCT 23	2.63	2.52	0.12	+4.57%
NOV 23	3.07	2.99	0.08	+2.64%
DEC 23	3.56	3.49	0.07	+2.07%
JAN 24	3.83	3.73	0.09	+2.44%
FEB 24	3.75	3.65	0.10	+2.71%
MAR 24	3.42	3.34	0.08	+2.27%
APR 24	3.07	3.06	0.01	+0.23%

Crude Oil NYMEX

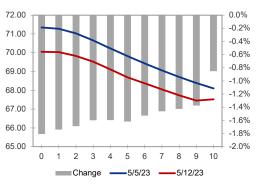
	5/12/23	5/5/23	Net Chg	%Change
JUN 23	70.05	71.34	-1.29	-1.81%
JUL 23	70.03	71.27	-1.24	-1.74%
AUG 23	69.83	71.03	-1.20	-1.69%
SEP 23	69.52	70.65	-1.13	-1.60%
OCT 23	69.11	70.23	-1.12	-1.59%
NOV 23	68.69	69.82	-1.13	-1.62%
DEC 23	68.37	69.43	-1.06	-1.53%
JAN 24	68.05	69.06	-1.01	-1.46%
FEB 24	67.73	68.71	-0.98	-1.43%
MAR 24	67.45	68.39	-0.94	-1.37%
APR 24	67.52	68.10	-0.58	-0.85%







Source: Bloomberg



(1) Indications only, valuation as of 5/12/2023; includes \$0.00 in customary and transaction expenses; assumes equal monthly volumes.



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Weekly Rate Summary: May 12, 2023

Weekly Summary and Highlights

(1) Reminder: USD LIBOR will be discontinued after **June 30 of THIS YEAR**. Our desk can help you understand ISDA IBOR Fallbacks Protocol and alternatives. (2) Guaranteed Investment Contracts (GICs) continue to offer attractive rates for **project funds**, **Cap-I funds** and **reserve funds**.

Source: Bloomberg

Source: Bloomberg

Source: Bloomberg

6.00%

5.00%

4.00%

3.00%

2.00%

1.00%

0.00%

WoW Chg

(bps)

8.9

-8.1

4.8

3.2

7.7

1.9

3.4

4.0

2.6

Short-Term Interest Rates

			WoW Chg		YoY Chg
	5/12/23	5/5/23	(bps)	5/12/22	(bps)
SIFMA	3.040%	3.450%	-41.0	0.760%	228
SOFR	5.050%	5.060%	-1.0	0.790%	426
BSBY (O/N)	5.148%	4.952%	19.6	0.833%	432
Ameribor (O/N)	5.282%	5.317%	-3.4	0.927%	435
Fed Funds Effec.	5.080%	5.080%	0.0	0.830%	425
Prime	8.250%	8.250%	0.0	4.000%	425

Variable Rate Term Structure

5/12/23

5.422%

5.121%

5.092%

4.756%

3.991%

3.661%

3.444%

3.451%

3.463%

			WoW Chg		YoY Chg
	5/12/23	5/5/23	(bps)	5/12/22	(bps)
1MO Term SOFR	5.057%	5.050%	0.7	0.782%	428
3MO Term SOFR	5.067%	5.039%	2.8	1.252%	381
1MO BSBY	5.107%	5.084%	2.2	0.832%	427
3MO BSBY	5.289%	5.272%	1.7	1.363%	393
1MO LIBOR	5.105%	5.104%	0.1	0.875%	423
3MO LIBOR	5.318%	5.337%	-1.9	1.411%	391

5/5/23

5.333%

5.202%

5.044%

4.724%

3.914%

3.642%

3.410%

3.411%

3.437%

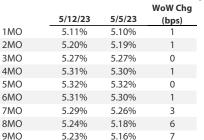
Interest Rate Forecast Survey

	Current	Q223	Q323	Q423	Q124
Target Fed Funds	5.250%	5.25%	5.20%	5.10%	4.70%
3MO Term SOFR	5.067%	5.16%	5.11%	4.86%	4.46%
2YR T-Note	3.991%	4.15%	3.98%	3.71%	3.52%
10YR T-Note	3.463%	3.57%	3.50%	3.41%	3.38%
30YR T-Note	3.784%	3.88%	3.89%	3.82%	3.73%

SOFR Forward Swap Rates

Tenor	Current	3Mo Fwd	6Mo Fwd	1Yr Fwd	2Yr Fwd
5YR	3.240%	3.114%	3.005%	2.862%	2.841%
7YR	3.173%	3.084%	3.009%	2.914%	2.923%
10YR	3.177%	3.116%	3.066%	3.006%	3.022%
20YR	3.211%	3.168%	3.133%	3.087%	3.073%
30YR	3.062%	3.024%	2.993%	2.948%	2.918%

CP (A1/P1) Indicative Rates Source: Bloomberg



5.35% 5.30% 5.25% 5.25% 5.15% 5.15% 5.10% 5.05%

1MO 2MO 3MO 4MO 5MO 6MO 7MO 8MO 9MO

WoW Chg (bps) ____5/12/23 ____5/5/23



SOFR Swap Rates

U.S. Treasury Yields

1MO

3MO

6MO

1YR

2YR

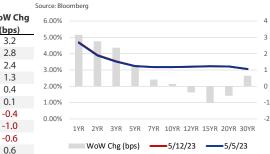
3YR

5YR

7YR

10YR

			WoW
	5/12/23	5/5/23	(bps
1YR	4.694%	4.662%	3.2
2YR	3.909%	3.881%	2.8
3YR	3.526%	3.502%	2.4
5YR	3.240%	3.227%	1.3
7YR	3.173%	3.169%	0.4
10YR	3.177%	3.176%	0.1
12YR	3.197%	3.200%	-0.4
15YR	3.221%	3.231%	-1.0
20YR	3.211%	3.217%	-0.6
30YR	3.062%	3.056%	0.6
	2YR 3YR 5YR 7YR 10YR 12YR 15YR 20YR	1YR 4.694% 2YR 3.909% 3YR 3.526% 5YR 3.240% 7YR 3.173% 10YR 3.177% 12YR 3.197% 15YR 3.221% 20YR 3.211%	1YR 4.694% 4.662% 2YR 3.909% 3.881% 3YR 3.526% 3.502% 5YR 3.240% 3.227% 7YR 3.173% 3.169% 10YR 3.177% 3.176% 12YR 3.197% 3.200% 15YR 3.221% 3.231% 20YR 3.211% 3.217%



1MO 3MO 6MO 1YR 2YR 3YR 5YR 7YR 10YR

WoW Chg (bps) ____5/12/23 ____5/5/23

Tax Exempt Swap Rates

WoW Chg 5/12/23 5/5/23 (bps) 1YR 3.084% 3.060% 2.4 2YR 2.722% 2.700% 2.2 3YR 2.574% 2.554% 2.0 5YR 2.556% 2.561% -0.5 7YR 2.599% 2.609% -0.9 10YR 2.700% 2.706% -0.6 12YR 2.735% 2.754% -1.9 15YR 2.787% 2.816% -3.0 20YR 2.836% 2.856% -2.0 30YR 2.820% 2.811% -0.9

Data as of May 12, 2023 3:11 PM Central Time.

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Source: Bloomberg

4.95%

Source: Bloomberg