2025 SFBTA

The Fixed Income Group at RJ O'Brien

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Fixed Income Group A Division of RJ O'Brien



Liquidity vs. Credit: Why Futures are the Universally Accessible Derivative Market

LIQUIDITY change Cleared

- → "Credit" in futures is neutralized by Initial Margin (same for all) and reset by 2-way, next biz day Variation Margin
- \rightarrow Abt 3 days to open an account

CREDIT

TC Counter-Party

- → ISDAs and significant credit evaluation. Still subject to threshold margin calls for variation- often NOT 2-way.
- → Account opening is measured in months or quarters



Market Extension: It's not just 10s and Bonds Anymore!

			# of Contracts Open			
1 month of Fed Funds		2 years	1.95mm Ol			
1 month of SOFR futures		1 year+	1.48mm Ol			
3 month of T-Bill futures		2 years	3.8K Ol			
3 month of SOFR futures		3 months - 7 years	10.14mm Ol			
Treasury		2 year, 3 year, 5 year	10.46mm Ol			
ERIS		1 - 5 years	240K Ol			
ERIS NOW WITH CROSS-MARGINING!						

Best Execution: OTC 2yr Swap vs 2yr Swap

ERIS SOFR Futures vs. OTC 2yr SWAP source: CME





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Eris SOFR Margin up to 64% lower than Cleared Interest Rate Swaps

						gin for \$1	00 million p	osition (1,000 futur	es contracts)
Tenor	Eris Ticker	Swap Start Date	Unadjusted Swap End Date	Coupon (%)	Eris SOFR	Clear (Recei	ed Swap ive Fixed)	Cleared Swap (Pay Fixed)	Eris Savings
1-year	YIAH25	2025-03-19	2026-03-19	4.25	\$325,000	\$8	92,382	\$793,507	59-64%
2-year	YITH25	2025-03-19	2027-03-19	3.00	\$625,000	\$1,5	557,572	\$1,557,084	60%
3-year	YICH25	2025-03-19	2028-03-19	3.00	\$825,000	\$1,9	49,296	\$2,143,142	58-62%
4-year	YIDH25	2025-03-19	2029-03-19	3.00	\$1,050,000	\$2,2	278,423	\$2,692,706	54-61%
5-year	YIWH25	2025-03-19	2030-03-19	3.00	\$1,200,000	\$2,6	522,375	\$3,131,683	54-62%
7-year	YIBH25	2025-03-19	2032-03-19	3.25	\$1,450,000	\$3,:	237,136	\$3,937,141	55-63%
10-year	YIYH25	2025-03-19	2035-03-19	3.25	\$1,800,000	\$4,3	355,594	\$4,742,390	59-62%
30-year	YIEH25	2025-03-19	2055-03-19	3.25	\$3,400,000	\$8,6	507,334	\$7,534,321	55-60%

Last updated January 13, 2025

*Eris data refers to Swap Start Date as "Effective Date" and Unadjusted Swap End Date as "Cash Flow Alignment Date."

Disclaimer: CME Clearing establishes margin levels for Eris SOFR Swap Futures and cleared interest rate swaps, and they are subject to change without notice. CME Clearing offers the CME Core interactive margin calculator



Two Relatively New Resi Mort Futures: Primary (Rate Lock) and Secondary (TBA)

RL Futures (ICE and CME): Good proxy for Premium TBA without squeeze risk

- Another basis to exploit
- Better product for portfolio, rel val or risk manager than trader
- Cash Settled on TBA SIFMA dates
- FIXED DV01!
- Option-convenient

TBA Futures

- Margin mitigation
- Opportunity to provide liquidity- outright and block
- Delivery Into TBA at 72hr

CME TBA Futures

Key Features:

- Transparent Price Discovery
- Expanded Trading Access
- Central Counterparty Clearing
- Inter-Commodity Spread Trading
- \$100k Contract Size
- TBA Market Access Via Futures Contract
- Margin Efficiencies/Margin Offsets

Product	CME Symbol	Bloomberg Ticker
30-Year UMBS TBA Futures - 2.0% Coupon	20U	JYAA Comdty
30-Year UMBS TBA Futures - 2.5% Coupon	25U	JYBA Comdty
30-Year UMBS TBA Futures - 3.0% Coupon	30U	JYCA Comdty
30-Year UMBS TBA Futures - 3.5% Coupon	35U	JYDA Comdty
30-Year UMBS TBA Futures - 4.0% Coupon	40U	JYEA Comdty
30-Year UMBS TBA Futures - 4.5% Coupon	45U	JYIA Comdty
30-Year UMBS TBA Futures - 5.0% Coupon	50U	JYPA Comdty
30-Year UMBS TBA Futures - 5.5% Coupon	55U	JYTA Comdty
30-Year UMBS TBA Futures - 6.0% Coupon	60U	JYWA Comdty
30-Year UMBS TBA Futures - 6.5% Coupon	65U	JYLA Comdty



Contract Specs Identical to OTC TBA

Coupons from 2.0-6.5 increments every half coupon Initial margin requirements are 1.35% -1.6% of face for production coupons (In line with FICC requirements for primaries)

Up to 75% gross initial margin offset vs other CME rate futures (UST futures, primary rate mortgage futures, & Eris Swap futures)

Both primary and non-bank dealers No MFSTA required to trade



CME and CBO Credit FUTS

	INVESTMENT GRADE	HIGH YIELD	DURATION HEDGED			
PRODUCT CODE	Outright: IQB BTIC: IQBT	Outright: HYB BTIC: HYBT	DHB			
UNDERLYING INDEX	Bloomberg U.S. Corporate Investment Grade Index	Bloomberg U.S. Corporate High Yield Very Liquid Index	Bloomberg U.S. Corporate Investment Grade Duration Hedged Index			
CONTRACT UNIT	30 x Index Points	150 x Index Points	500 x Index Points			
MINIMUM PRICE FLUCTUATION	1/2 of 1 Index Points (0.50 = \$15.00)	1/10 of 1 Index Points (0.10 = \$15.00)	1/20 of 1 Index Points (0.05 = \$25.00)			
FINAL SETTLEMENT MINIMUM TICK	0.0001					
PRICE QUOTATION	Index Points					
LISTING SCHEDULE	Nearest 3 March Quarterly Months					



Yield Curve Change

What are the impacts? + A Discussion of Spread Relationships

Roll Up/Roll Down In Current Curve Environment aka "Carry"

Today Anticipated 30 Day Curve Roll Up/Down 5 Year 7 Year 2 Year 10 Year Tenor 30 Day Treasury Futures Roll UP/Down per unit of DV'01: (\$0.95) (\$0.08) \$0.40 \$0.31 30 Day Eris Swap Futures Roll UP/Down per unit of DV'01: (\$1.50) (\$0.79) (\$0.58) (\$0.45) **Carry Favors Long in:** Treasury Treasury Treasury Treasury

How about a year ago?

Tenor	2 Year	5 Year	7 Year	10 Year
30 Day Treasury Futures Carry per unit of DV'01:	(\$4.97)	(\$3.06)	(\$2.04)	(\$1.53)
30 day Eris Swap Futures Carry per unit of DV'01:	(\$12.38)	(\$4.59)	(\$3.25)	(\$2.22)



Roll Up/Roll Down In Current Curve Environment aka "Carry"





Index Level Analysis

Primary Rate = Rate Lock Yield (LRC30APR Index) Secondary Rate = Par TBA Yield (MTGE FNCL Index)

Yield Spread Above 160 bps, favors:

- BUY Primary (RL Futures)
- SELL Secondary (TBA)
- Room to improve pricing

Between 135-160bps, favors:

• Balanced

Below 135bps, favors:

- SELL Primary (RL Futures)
- BUY Secondary (TBA)
- Reduce aggressive pricing



Source: Bloomberg[™]

Rate Lock Futures offer insight into PRICING and a Hedge Alternative



Primary/Secondary Yield Spread



Methodology:

- Take the difference between the implied yield on the Rate Lock Future (Primary) and the YTM on the applicable TBA (Secondary) to give Primary: Secondary Yield Differential
- Using historical data, examine where, in percentile terms, today's level sits among the recent Low-High range
- Given strong tendency towards mean reversion of this Yield Differential (YD)...
 - When the YD level sits in the lower quartile (Orange on "The Meter"), it's likely Yield Differentials will widen and so "Longs" are better served buying TBA Futures (Vs Rate Lock Futures) and vice versa for "Shorts"
 - Conversely, when the YD level sits in the upper quartile (Green), it is likely Yield Differentials tighten and so "Longs" should buy Rate Lock Futures and "Shorts" sell TBA Futures
- Hedge Ratios in green and orange boxes calculated using DV01



Mortgage: Treasury Yield Spread



Yield Differential on FNCL Index and Blend of 5/10Y UST

Methodology

- Using INDEX level yields compare Mortgage Treasury Spreads over different time frames
- We expect mean reversion as with Primary-Secondary Spreads.
- When Mortgage Treasury Spreads are TIGHT: Longs prefer to BUY TREASURIES and Shorts prefer to SELL TBAs
- When Mortgage Treasury Spreads are WIDE: Longs prefer to BUY TBAs and Shorts prefer to SELL TREASURIES



Show me when this worked...2H24



Source: Bloomberg[™]

- From first week Jul-Mid Sep
- Mid-Sep to first week of Nov
- Mean reverted until year end



Show me how to trade it

Example: Widening event from first day of short zone until first day of the long zone (9/11 to 10/22) using closing prices

- Short current coupon CME NOV '24 FN5 TBA future (JYPX4) 2X
- Long on-the-run CME DEC '24 10yr UST future (TYZ4) 1X
- Hedge ratio at onset of trade is 2:1
- Net mort-basis spread P&L over the range on \$10mm = +<u>\$57k</u>
- Trade is off-balance sheet

Total initial margin required: **\$93,833!!!! (0.93% of notional)**

Performance of hedge 9/11-10/22

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MOVE Index vs VIX vs CDX HY

Relationship between vol & credit spreads.... As vol goes high, spreads widen

Source: Bloomberg[™]

Menu of Options Offered

SOFR Options	Treasury Options (Highly Liquid)	Т	reasury Options (Liquid)
 Highly liquid Monthly options out 4 years Short Dated/Mid-curve Weekly Short Dated/Mid-curve 1mo & 3mo SOFR options listed 	 FV, TY, US ATM strikes regularly 100k+ Bid/Offer size Weekly options, with M, W, and F expiries Below example shows expiry tomorrow 01/31, prices as of Tuesday 01/28 	o TU, o ATM Bid∕ o Wee expi	UXY I strikes regularly 10k+ ⁄offer size ekly options, with M, W, F ires
Open Int Vo	lume Last QS + C Qty C Bid C Ofr	C Qty Strike]
– 10-Year T-No			
10-Year U.S. T			

Open In	t Volume	Last	Q	S +	C Qty	C Bid	C Ofr	C Qty	Strike
- 10-Year T-Note Week5 Opt Jan25, 3.22 days, F: 108'270 ATM									
10-Year l	J.S. Treasury	y Note Fu	ture Mar	25					
1,24	10		Q	S 🕂	56	1'07	1'09	59	107.75
3,54	13 50	1	.' 00 Q	S +	437	0'56	0'58	670	108.00
11,11	.3 16	C)' 46 🛛 🔾	S 🕂	891	0'42	0'44	651	108.25
15,89	2 212	C)'37 Q	S 🕂	4,704	0'30	0'32	2,951	108.50
20,10	1,363	+ ()' 22 🛛 🖓	S 🕂	25	0'21	0'22	18,686	108.75
23,75	6,026	+ () '15 Q	S 🕨	320,920	0'13	0'14	1,189	109.00
27,25	57 11,287	+ ()'08 Q	S 🕂	273,155	80'0	0'09	414,388	109.25
27,62	.3 12,005	+ ()'08 Q	S 🕂	516,102	0'04	0'05	238	109.50
19,49	9 4,790	- 0)'03 Q	S 🗜	573,834	0'02	0'03	305,438	109.75
21,85	9,226	- 0)'02 Q	S 🕂	603,639	0'01	0'02	544,392	110.00

First a Generic, Then Some Specific Mortgage Hedge Examples...

Hedging UMBS (\$10mm FNCL 6.5 02/25)

FNCL 6.5 vs Long FV Put Options

POSI Mode: <mark>A</mark> Cash,Hedge "MACRO" Portfolic Inflation = 0.0	AGGREG.	DURATIO Settle 1/2 Recompute F	N MANAG 7/25 ut/Opt Hedge	Buy Sel -	T Page : 10 301 631.94 Source: Bloo	1 of 3 mberg™
Tkr Cpn Mty <key> FNCL 6¹/₂ 2/25</key>	Price 102-17+	EqvYld ModDur 5.6595 3.20	Cvx Val01 .20 .0330 Sel	MM Par	1mlnMV -10	BPV -3.3M
Futures/Options FVH5 FVH5P 106.75	Price 106-17 '36+	Proxy Issue <mark>4¹₂ 5/29</mark> 4.08%IV57	Nu .0417 del .0238Long	um Contr 50	n/a n/a	-1.19M

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ADMT 2024-NQM4 A1 MTGE –Hedge w ERIS

MT 2024-NQM4 A1 Mtge Send	age 1/5
	uge 1/5
US RMBS RMBSNC 8,437(355)0 CUSIP 002939AC0 Loan Level 90 Buy 90 Sell	
Issuer A&D Mortgage Trust A Pro L DSCO » 7 Docs L DSCO » 10 Servicer A&D Mortgage LLC (100	0
Series 24-N0M4 Class A1 Mtv 08/25/206914 ISIN US0029394008 17/Lead Mar Joint	0
10 Class Description EXCH. SEO FIGI BBG01PDT27Z9 18 Trustee Wilmington Savings Fun	d
Private Placement	
Current Original Payment Details Rating Curr Orig	
Bal USD 214,371,651 Bal USD 220,642,000 Next Pay 02/25/2025 S&P AAA AAA	
Fct (Jan 25) 0.971581345 WAL 2.05Yrs@ 25 CPR Rcd Date 01/31/2025 KBRA AAA AAAP	
Cpn (Jan 25) 5.46400% 1st Coupon 5.46400% Pay Day 25th	
Class/Grp Pct 59.26% Class/Grp Pct 59.75% Frequency Monthly	
Beg Accrue 01/01/2025 1st Pay 09/25/2024 Pay Delay 24 Days	
End Accrue 01/31/2025 1st Settle 08/29/2024 Day Count 30/360 Additional Information	
Dated Date 08/01/2024 Calendar GT DTC Book Entry, DTC Sam	9
Priced 100.00 08/2//2024 Call 30.00% Collat Call Day, ERISA, IRACE, 144A,	
II) Cr Supp 40.49% PX IC +145 Call Date 08/25/2027 E0/0K SK Art o	000
See all calls Fill Size 100,	1
increment	1
Feb25 Jan Dec Nov Oct Sep Aug24 13) Cpn Details FCG »	
Fctr 0.97 0.98 0.99 0.99 1.00 1.00	
Cpn 5.46 5.46 5.46 5.46 5.46 5.46	
VPR 9.30 4.16 4.69 2.72 Source: Bloomb	erg™
CDR 0.00 0.00 0.00 0.00	0
SEV	
D60+ 0.2 0.1 0.0 0.0 0.0	

ADMT 2024-NQM4 A1 MTGE –Hedge

Pull Thru Adj Face:	\$ 10,000,000
Gross WAC	5.7000%
Servicing	0.2500%
NET WAC (passthru)	5.4500%
Remaining WAM	360
Active IMM Date	03/19/25
Balloon	36
CPR or PSA	cpr
Speed	9

ERIS SOFR Swap Futures						
OUTRIGHT/Bullet Hedge (1 curve pnt)						
2yr SELL 123 YITH25						
	OR					
3yr	SELL 84	YICH25				
	OR					
5yr	SELL 53	YIWH25				
	OR					
10yr	SELL 30	YIYH25				

ER	IS SOFR Swap F	utures	EXISTING]
Amo	rtizing Swap (trade all)	HEDGE	Total IM For Hedge Position
1yEris	SELL 41	YIAH25	-41	\$13,325
2yEris	SELL 15	YITH25	-15	\$9,375
3yEris	SELL 59	YICH25	-59	\$48,675
4yEris	SELL 0	YIDH25		\$0
5yEris	SELL 0	YIWH25		\$0
7yEris	SELL 0	YIBH25		\$0
10yEris	SELL 0	YIYH25		\$0
				\$71,375

Asset DV'01 \$ 2,286 Asset DV'01 per \$1mm \$ 228.63

3140NUDR7 Mtge – Hedge with TREAS FUTS

FN BZ0111 101-05 ¹ 8 101-02 ¹ 4	/101-0778 Yie	ld 4.703/4.6	553 Coupo	n 4.990	0% BV	AL							
As of 27 Jan Prepay OCPY Fann	nie Mae Pool												
FN BZ0111 Mtge Export	(
	US POOL		6.230(47)13	CUS	SIP 3140	NUDR7	Pool Leve	l - 95)	Buy 96	i) Sell			
	Summary	Comments	Notes			ana anti-article in the second se							
	Pool FN	BZ0111									As Of		01/2025
	Type (H)	Type (HX) Actual / 360 Balloon Conv 7 year										12/	01/2023
	Traits Partial IO, Balloon, ACT/360 NOM, Yield Maint.										Maturity Date	12/	01/2028
	11) Seller An	11) Seller Arbor Commercial F Issuer FNMA											
	12) Pool Info	12) Pool Information PDI									Balance		
	Coupon	4.	990 WAC*			6.230	Orig WA	C	6.2	230	Factor	1.0	0000000
			WARM			47	Orig WA	М		60	Orig Amt	44.	,095,000
			WALA			13					Curr Amt	44.	,095,000
	13) Collatera	Information	CLC								Delinquency		Percent
	WAOLS		Orig Amor	t* 36	50	Prop Name	Flagler	Pointe			30D		0.0
Source: Bloomberg'	WALS	44,095,000	Rem IO*	11		Prop Addr	2540 R	dy hanna	DR SOU		60D		0.0
	Orig Date		Tier	2		City	SAINT F	PETERSBU	RG, FL		90+D		0.0
			DSCR (Cur	r) 1.	32	Prop Subty	pe Multifar	nily			Defeased		
	LO End Date		DSCR (Orig	g) 1.	32	Num Units	416						
	Orig Pen*	YM(54),1(3).	. NCF (Orig)	\$4	I.3MM	Units <60%					18) States		%UPB
	Rem Pen*	YM(41),1(3).	. Orig LTV*	65	5.0%						Florida		100.0
			Occ. (Orig) 94	1.78	Addl Info							
	14) # Loans*	1	Delay		54 (2	24)	*Value ca	Iculated I	by Bloon	nberg			
	15) Paydown	Info PDI PL	RF TRACE I	ligible	0.1	■ osso	100 A 100	- 1			10.000		E 1 34
	Performance	Hist Jan25	Dec	Nov	Oct	Sep	Aug	Jul	Jun	May	Apr	Mar	Feb24
	1 Month CPR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	3 Month CPR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6 Month CPR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				*

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3140NUDR7 Mtge - \$10mm Original Amount

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Treasury Futures

Amortizing Swap (trade all)

TUH5

3YH5

FVH5

TYH5

UXYH5

3,468

346.77

x

SELL 24

SELL 0

SELL 40

SELL 0

SELL 0

Asset DV'01 per \$1mm \$

Asset DV'01 \$

2yTreas

3yTreas

5yTreas

7yTreas

10vTreas

Eris & US Treasury Future Markets

Ticker	Net	Bid	Ask	BidSz	AskSz	100-Price	Volume	Open Int	Settlement Price
				Source:	Bloomberg™				
▶ TUH5	+ 00 ³ ₄	102-23	102-23 ¹ 8	1383	947		347682	4167563	102-22 ³ 8
► FVH5	- 01 ³ 4	106-01+	106-01 ³ 4	971	796		590859	6191266	106-03+
► TYH5	- 06	108-11+	108-12	1375	1231		944105	4754573	108-18
UXYH5	- 10+	110-23	110-23+	939	52		314183	2265932	111-02
▶ USH5	- 18	112-28	112-29	299	738		232266	1917096	113-14

\$9Bn Notional in TY calls traded in one clip \$6.1Bn Notional in ERIS 5yr traded in one clip

				Tota	Bid Bid						TotalAsk	Last
Tenor	Ticker	Swap Maturity	Coupon (%)	Qt	y Qty	Bid%	Bid	Ask	Ask%	AskQty	Qty	Updated
1	YIAH25	19 Mar 2026	3.250	40	11 3010	4.080	99.2075	99.2150	4.072	1510	4011	08:24:05
2	YITH25	19 Mar 2027	3.000	31)1 850	4.009	98.1100	98.1175	4.005	750	3101	08:24:06
3	YICH25	19 Mar 2028	3.000	22	01 850	4.009	97.2150	97.2300	4.003	1450	2201	08:24:05
4	YIDH25	19 Mar 2029	3.000	15	01 750	4.017	96.3300	96.3600	4.009	1350	1501	08:24:05
5	YIWH25	19 Mar 2030	3.000	29	35 525	4.026	95.4600	95.4800	4.022	250	2635	08:24:06
7	YIBH25	19 Mar 2032	3.250	13	11 1000	4.051	95.2200	95.2800	4.041	800	1386	08:23:47
10	YIYH25	19 Mar 2035	3.250	12	75 1200	4.080	93.3200	93.3800	4.073	1100	1636	08:24:05

Expected in the coming year

- HY spread futures CME
- ICE/Ameribor (LIBOR PART II)?
- ERIS Options?
- Cash Treasury Clearing

THANK YOU!! Any Questions?

A copy of this presentation can be downloaded from our website:

www.FixedIncomeGroup.com

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