

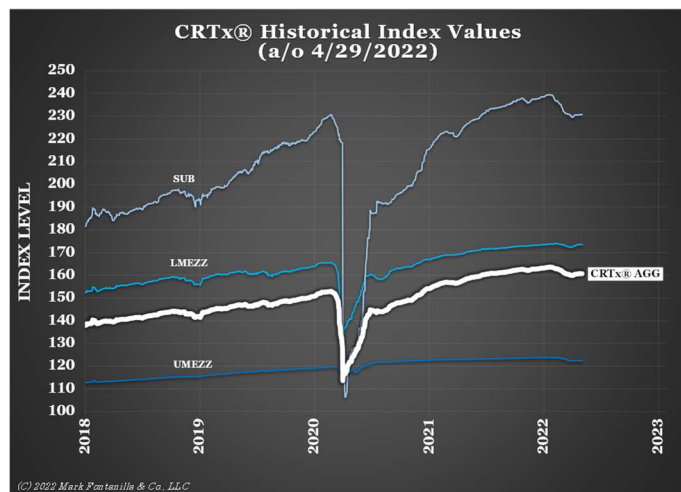
CRTx®

Credit Risk Transfer *Return Tracking Index*

www.markfontanilla.com/crtx-index

CRTx® Index Rebalancing Update

04/29/2022



Sector Musings..

Chart of the Month

2022 CRTx® AGG vs. CRTx® RNI™ AGG YTD

CRTx® Aggregate					
Year	Jan	Feb	Mar	Apr	YTD
2022	0.06%	-1.00%	-1.04%	0.44%	-1.54%

CRTx® RNI™ Aggregate					
Year	Jan	Feb	Mar	Apr	YTD
2022	-0.68%	-2.01%	-1.73%	0.28%	-4.09%

For most of benchmark GSE CRT's history, the strategy of rolling into the most recent issues (CRTx® RNI™) has outperformed holding the CRTx™ Aggregate Index's market-representative basket. A general long-term spread-tightening trend, as well as rolling down the CRT curve over time, has buoyed the rolling strategy.

Now, the tables have turned as seasoned paper has outperformed into higher vol and rates. This may persist as long as the risk-off environment continues, but newer issues may be "cheap enough" now.

Inside

CRTx® Index Summary Panels *Page 2*

- CRTx® AGG Index Rebalancing Stats
- CRTx® RNI™ AGG Index Rebalancing Stats

Return Roundup *Page 3*

The CRTx® Aggregate managed to gain 0.44% in April, ending a 2-month losing streak, as the Fed, inflation, and war continued to weigh on markets. Overall, CRT outperformed major fixed income sectors with the curve up 40-50bps and IG/HY spreads wider, while CRT coupon resets rose...

Index Rebalancing Metrics *Page 3*

The CRTx® Aggregate Index May basket starts at a record \$53.1B in UPB and a weighted avg. constituent market value close to par, growing the Index market value +4.3% MoM. The latest CAS and STACR deals add nearly \$3B in new bonds, for a total of 291 securities from 114 deals...

Latest Deal Performance *Page 4*

The story remains the same for now as pre-COVID pool credit performance metrics stay on trend, holding relatively steady to improving in the April investor statements. Total DQs declined (STACR experience), while 180+/forbearances continued to fall, fewer DQ tests fail, and CPRs edged up on day count. Newer issue DQs and speeds remained as expected...

Relative Value Thoughts *Page 5*

With spreads generally consolidating at the wider end of the range, and impending coupon resets likely moving higher, all while mortgage credit remains stable to improving and the housing market still supportive, current entry points across the CRT capital structure look to have value, albeit with differing appeal...

Additional Tables/Metrics *Pages 6-12*

- CRTx® Index Suite Total Return Performance: Month-End Matrix
- CRTx® Index Basket History: Select Metrics
- CRTx® RNI™ Index Basket History: Select Metrics
- Latest Deal Performance Metrics: CAS
- Latest Deal Performance Metrics: STACR

04/29/2022 Index Rebalancing Update (continued)

CRTx® Aggregate Index

Apr 2022 CRTx® AGG Tot Ret	+44 bps
Index Month-End Closing Value	160.67
Price Attribution	+13 bps
Paydown Attribution	-2 bps
Cpn Accr&Pmt Attribution	+34 bps
Writedown+Int Shortfall Attribution	-0.08 bps
Excess Return	+43 bps
Volatility (Annualized)	0.57%
UPB Paydown %	1.68%
QTD Total Return	0.44%
YTD Total Return	-1.53%

CRTx® AGG Rebalancing For May 2022
As of 4/29/2022

May 2022 Aggregate Basket (w/MoM Δ):

• Beg. UPB (\$B):	\$53.07	+4.2%
• Beg. Market Value (\$B):	\$53.05	+4.3%
• Constituents:	291	+6
• WAvg Constituent Value:	99.98	+0.11 pts
• WAvg Constituent Coupon:	4.34%	+19 bps

Index (+) Entries* & (-) Exits

(+) STACR 2022-DNA3 M1A-M1B-M2-B1-B2

(+) CAS 2022-R04 1M1-1M2-1B1-1B2

(-) CAS: 2015-C03 2M2, 2019-R04 2M2, 2019-R05 1M2
(paid off)

* 5.63% of Beg. Index Market Value

CRTx® Mkt Val Breakdown: 5/2022 Basket

Deal Yr	Aggregate	UMEZZ	LMEZZ	SUB
All	100%	15.5%	42.5%	42.0%
2022	22.1%	10.9%	5.4%	5.8%
2021	23.5%	4.6%	7.7%	11.2%
2020	11.4%	0.0%	3.5%	7.9%
2019	8.7%	0.0%	3.1%	5.6%
2018	10.6%	0.0%	6.3%	4.2%
2017	10.5%	0.0%	6.3%	4.2%
2016	6.4%	0.0%	4.6%	1.8%
2015	3.3%	0.0%	2.0%	1.3%
<=2014	3.5%	0.0%	3.5%	0.0%

CRTx® RNI™ (Rolling New Issues) Agg. Index

Apr 2022 CRTx® RNI™ AGG Tot Ret	+28 bps
Index Month-End Closing Value	170.82
Price Attribution	-1 bps
Paydown Attribution	+0 bps
Cpn Accr&Pmt Attribution	+29 bps
Writedown+Int Shortfall Attribution	+0 bps
Excess Return	+27 bps
Volatility (Annualized)	1.09%
UPB Paydown %	0.77%
QTD Total Return	0.28%
YTD Total Return	-4.10%

CRTx® RNI™ AGG Rebalancing For May 2022
As of 4/29/2022

May 2022 Aggregate Basket (w/MoM Δ):

• Beg. UPB (\$B):	\$21.07	+10.1%
• Beg. Market Value (\$B):	\$20.52	+10.6%
• Constituents:	72	+5
• WAvg Constituent Value:	97.38	+0.41 pts
• WAvg Constituent Coupon:	3.64%	+26 bps

Index (+) Entries* & (-) Exits

(+) STACR 2022-DNA3 M1A-M1B-M2-B1-B2

(+) CAS 2022-R04 1M1-1M2-1B1-1B2

(-) STACR 2021-DNA3 M1/M2/B1/B2

* 14.55% of Beg. Index Market Value

CRTx® RNI™ Mkt Val Breakdown: 5/2022 Basket

Deal Yr	Aggregate	UMEZZ	LMEZZ	SUB
All	100%	38.3%	26.3%	35.4%
2022	57.0%	28.2%	13.9%	14.9%
2021	43.0%	10.1%	12.4%	20.4%
2020	0.0%	0.0%	0.0%	0.0%
2019	0.0%	0.0%	0.0%	0.0%
2018	0.0%	0.0%	0.0%	0.0%
2017	0.0%	0.0%	0.0%	0.0%
2016	0.0%	0.0%	0.0%	0.0%
2015	0.0%	0.0%	0.0%	0.0%
<=2014	0.0%	0.0%	0.0%	0.0%

04/29/2022 Index Rebalancing Update (continued)

Return Roundup

The CRTx® Aggregate managed to gain 0.44% in April, ending a 2-month losing streak, as the Fed, inflation, and war continued to weigh on markets. Overall, CRT outperformed major fixed income sectors with the curve up 40-50bps and IG/HY spreads wider, while CRT coupon resets rose. Intra-complex, performance improved from last month's declines as CRT steadied somewhat on firmer new issue spreads vs. the March wides, and net supply remained high.

Intra-Complex Highlights

April's MoM CRTx® AGG Index gain came from mixed contributions across the CRT complex:

04/29/2022		M/E RETURN ATTRIBUTION							Index Total Return
CRTx®	Price Return	Cpn Accrual Return	CPN Pmt Return	Pay-down Return	Write-down Return	Int Shortfall Return			
AGG	0.13%	-0.02%	0.36%	-0.02%	-0.0005%	-0.0003%		0.44%	
UMEZZ	-0.17%	-0.01%	0.14%	0.01%	0.0000%	0.0000%		-0.03%	
LMEZZ	0.34%	-0.02%	0.29%	-0.05%	0.0000%	0.0000%		0.56%	
SUB	-0.01%	-0.03%	0.50%	0.00%	-0.0012%	-0.0007%		0.46%	

- LMEZZ/M2s led the complex, returning 0.56% in April, well in excess of carry, as tighter CAS/STACR pricings and favorable supply technical buoyed the middle of the capital structure.** Seasoned LMEZZ continued to benefit from the widening LIBOR/ SOFR basis, while newer M2s were boosted by markedly tighter April new issue margins.
- The CRTx® RNI™ AGG lagged the standard CRTx® AGG again in April, but intra-RNI™ performance was mixed as UMEZZ and SUBs lagged the standard AGG versions, while RNI™ LMEZZ outperformed:**

 - The RNI™ AGG returned 0.28% for April, with LMEZZ contributing the most to overall gains with a +0.83% gain for the month.
- UMEZZ (Mostly M1s) again underperformed in aggregate, as the newest 2021/2022 front-pay M1s (the majority of UMEZZ) lagged carry.**
- SUBs overall returned a blended 0.46%, essentially at carry, with newer vintages faring better than seasoned issues for a change.**

Index Rebalancing Metrics

The CRTx® Aggregate Index May basket starts at a record \$53.1B in UPB and a weighted avg. constituent market value close to par, growing the Index market value +4.3% MoM. The latest CAS and STACR deals add nearly \$3B in new bonds, for a total of 291 securities from 114 deals.

Index Composition

The latest deals from FNMA (CAS 2022-R04 LLTV) and FHLMC (STACR 2022-DNA3 LLTV) add ~\$3.0B and 9 new constituents to the AGG, representing 5.6% of April's basket, while 3 classes paid off.

Stabilized to marginally improved spreads nudged WAvg starting cash-settle market values up to \$99.98. Higher LIBOR and SOFR resets pushed the WAvg Index coupon up 19 bps to 4.34%.

CRTx® AGG composition (May 2022 basket):

- 15.5%↑ (vs 13.2% in Apr) - UMEZZ (M1/old M2s)
- 42.5%↓ (vs 44.2% in Apr) - LMEZZ (M2/old M3s)
- 42.2%↓ (vs 42.6% in Apr) - SUBs (B/B1/B2s)

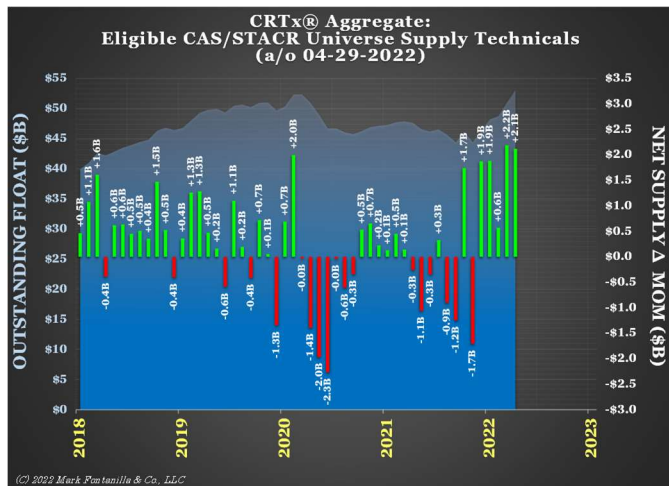
Select Benchmark GSE CRT New Issue Pricing Margins:							
Period	Close Dt.	Deal	Index	Pricing Margins			
				M1	M2	B1	B2
Mid-COVID	04/18/22	STACR 22-DNA3	SOFR	A 200 B 290	435	565	975
	04/08/22	CAS 22-R04	SOFR	200	310	525	950
	03/30/22	CAS 22-R03	SOFR	210	350	625	985
	03/18/22	STACR 22-HQA1	SOFR	A 210 B 350	525	700	1,100
	02/11/22	STACR 22-DNA2	SOFR	A 130 B 240	375	475	850
	02/09/22	CAS 22-R02	SOFR	120	300	450	765
	01/21/22	STACR 22-DNA1	SOFR	A 100 B 185	250	340	710
	01/20/22	CAS 22-R01	SOFR	100	190	315	600
	12/29/21	CAS 21-R03	SOFR	85	165	275	550
	12/10/21	STACR 21-HQA4	SOFR	95	235	375	700
	12/01/21	CAS 21-R02	SOFR	90	200	330	620
	11/12/21	STACR 21-DNA7	SOFR	85	180	365	780
	10/29/21	STACR 21-DNA6	SOFR	80	150	340	750
	10/27/21	CAS 21-R01	SOFR	75	155	310	600
	09/30/21	STACR 21-HQA3	SOFR	85	210	335	625
	07/23/21	STACR 21-DNA5	SOFR	65	165	305	550
	06/25/21	STACR 21-HQA2	SOFR	70	205	315	545
	04/23/21	STACR 21-DNA3	SOFR	75	210	350	625
	03/09/21	STACR 21-DNA2	SOFR	80	230	340	600
	02/23/21	STACR 21-HQA1	SOFR	70	225	300	500
	01/29/21	STACR 21-DNA1	SOFR	65	180	265	475
	12/18/20	STACR 20-DNA6	SOFR	90	200	300	565
	11/20/20	STACR 20-HQA5	SOFR	110	260	400	740
	10/20/20	STACR 20-DNA5	SOFR	130	280	480	1,150
	09/29/20	STACR 20-HQA4	1mL	130	315	525	940
	08/25/20	STACR 20-DNA4	1mL	150	375	600	1,000
07/28/20	STACR 20-HQA3	1mL	155	360	575	1,000	
07/08/20	STACR 20-DNA3	1mL	150	300	510	935	

04/29/2022 Index Rebalancing Update (continued)

Sector Supply

Benchmark GSE CRT total market float eligible for inclusion in the CRTx® AGG, as of April month-end, grew to an all-time record of over \$53B in UPB, the highest since pre-COVID March 2020.

April's +\$2.12B net supply gain (2nd-most single-month gain since Feb. 2015) boosted sector outstandings by 4.2% MoM vs. March, staying on the high-end of the sector's historical net supply range.



- ~\$3.0B in CAS/STACR April gross issuance was well in excess of the \$855M in paydowns plus \$182M in coupon payments from the April payment date.
- April Index-eligible net supply breakdown:
 - UMEZZ +1.533 B (+22.62% MoM)
 - LMEZZ +0.006 B (+ 0.02% MoM)
 - SUB +0.580 B (+ 2.66% MoM)
- With FHLMC/STACR beginning M1A/M1B investment-grade issuance further up the capital structure and FNMA/CAS issuing larger-sized M1s in 2022, net supply of UMEZZ has been increasing this year at a monthly pace of about 20%-30%. Further down the capital structure:
 - New issue M2 supply has not quite been sufficient to offset has seasoned front-pay M2/M3 paydowns.
 - SUB float (B1s/B2s) has been steadily increasing 3% to 4% MoM since the middle of 2020.

CRTx® AGG (eligible universe as of 4/29/22)

Month End	Float ¹	BENCHMARK GSE CRT SUPPLY TECHNICALS (\$MM)				Net Supply ¹	% Δ MoM
		Gross Supply ²	Pay-downs ¹	Write-downs ¹	Tenders ¹		
2018-Jan	39,939.51	900.00	434.89	.40	.00	+464.71	+1.18%
2018-Feb	41,017.07	1,494.06	416.25	.25	.00	+1,077.56	+2.70%
2018-Mar	42,628.56	1,992.02	380.11	.42	.00	+1,611.49	+3.93%
2018-Apr	42,241.57	.00	386.48	.51	.00	-386.99	-0.91%
2018-May	42,864.97	1,050.03	426.17	.45	.00	+623.40	+1.48%
2018-Jun	43,499.75	1,050.00	414.55	.67	.00	+634.78	+1.48%
2018-Jul	43,951.18	939.46	487.56	.47	.00	+451.43	+1.04%
2018-Aug	44,461.53	982.68	471.84	.49	.00	+510.35	+1.16%
2018-Sep	44,818.31	820.00	463.05	.18	.00	+356.78	+0.80%
2018-Oct	46,292.11	1,918.19	443.93	.46	.00	+1,473.80	+3.29%
2018-Nov	46,818.17	921.89	395.46	.36	.00	+526.06	+1.14%
2018-Dec	46,413.76	.00	404.16	.25	.00	-404.41	-0.86%
2019-Jan	46,772.85	714.00	354.36	.55	.00	+359.09	+0.77%
2019-Feb	48,032.92	1,600.30	339.91	.32	.00	+1,260.07	+2.69%
2019-Mar	49,316.49	1,610.43	326.50	.36	.00	+1,283.57	+2.67%
2019-Apr	49,790.89	857.33	382.45	.48	.00	+474.40	+0.96%
2019-May	49,953.47	615.00	451.76	.67	.00	+162.58	+0.33%
2019-Jun	49,366.80	.00	585.65	1.02	.00	-586.67	-1.17%
2019-Jul	50,468.73	1,786.82	684.96	-.08	.00	+1,101.93	+2.23%
2019-Aug	50,665.72	993.16	795.69	.48	.00	+196.99	+0.39%
2019-Sep	50,254.38	626.00	1,036.70	.64	.00	-411.34	-0.81%
2019-Oct	50,975.91	1,882.85	1,160.69	.63	.00	+721.53	+1.44%
2019-Nov	51,029.16	1,430.31	1,376.63	.42	.00	+53.25	+0.10%
2019-Dec	49,686.84	.00	1,341.71	.61	.00	-1,342.32	-2.63%
2020-Jan	50,375.85	1,827.24	1,137.97	.27	.00	+689.01	+1.39%
2020-Feb	52,372.79	3,041.29	1,043.58	.78	.00	+1,996.94	+3.96%
2020-Mar	52,342.28	1,006.00	1,035.91	.60	.00	-30.51	-0.06%
2020-Apr	50,951.32	.00	1,390.53	.43	.00	-1,390.96	-2.66%
2020-May	48,983.31	.00	1,967.51	.50	.00	-1,968.01	-3.86%
2020-Jun	46,718.91	.00	2,263.91	.49	.00	-2,264.40	-4.62%
2020-Jul	46,681.77	1,941.00	1,977.70	.44	.00	-37.14	-0.08%
2020-Aug	46,076.35	1,088.00	1,693.03	.39	.00	-605.42	-1.30%
2020-Sep	45,735.37	680.00	1,020.66	.31	.00	-340.98	-0.74%
2020-Oct	46,269.82	1,086.00	551.37	.18	.00	+534.45	+1.17%
2020-Nov	46,924.62	1,080.00	425.03	.16	.00	+654.80	+1.42%
2020-Dec	47,148.36	790.00	565.97	.30	.00	+223.74	+0.48%
2021-Jan	47,277.42	970.00	840.51	.43	.00	+129.06	+0.27%
2021-Feb	47,729.91	1,386.00	933.14	.38	.00	+452.49	+0.96%
2021-Mar	47,872.55	1,188.00	1,045.16	.20	.00	+142.64	+0.30%
2021-Apr	47,615.04	950.00	1,207.50	.02	.00	-257.51	-0.54%
2021-May	46,556.67	.00	1,058.11	.25	.00	-1,058.37	-2.22%
2021-Jun	46,213.56	550.00	892.87	.23	.00	-343.11	-0.74%
2021-Jul	46,542.26	1,186.00	857.10	.20	.00	+328.70	+0.71%
2021-Aug	45,645.02	.00	896.92	.32	.00	-897.24	-1.93%
2021-Sep	44,395.83	1,071.00	977.13	.08	1,342.98	-1,249.19	-2.74%
2021-Oct	46,136.81	2,686.01	944.99	.04	.00	+1,740.98	+3.92%
2021-Nov	44,428.70	1,276.00	893.50	.37	2,090.24	-1,708.11	-3.70%
2021-Dec	46,303.37	2,855.84	978.99	2.18	.00	+1,874.67	+4.22%
2022-Jan	48,187.25	2,859.26	974.26	1.13	.00	+1,883.88	+4.07%
2022-Feb	48,758.20	3,159.89	879.88	.58	1,708.47	+570.95	+1.18%
2022-Mar	50,947.78	3,057.61	867.66	.37	.00	+2,189.58	+4.49%
2022-Apr	53,065.96	2,984.38	865.97	.24	.00	+2,118.18	+4.16%

1-Current Face
2-Original face issued based on CAS/STACR deal closing dates
Sources: FNMA, FHLMC, MF&Co

Latest Deal Performance

The story remains the same for now as pre-COVID pool credit performance metrics stay on trend, holding relatively steady to improving in the April investor statements. Total DQs declined (STACR experience), while 180+/forbearances continued to fall, fewer DQ tests fail, and CPRs edged up on day count. Newer issue DQs and speeds remained as expected.

04/29/2022 Index Rebalancing Update *(continued)*

Latest Deal Performance *(continued)*

Credit

- Pre-COVID total DQ %s held steady to improving, with 180+ bucket DQ #s/\$s dropping double-digits again MoM on average:
 - Pre-COVID actual-loss deal DQs hovered in the 0.5%-8.0% range, with the average now below 4.50%.
 - Fixed Severity reference pool total DQs held between 0.50% and 2.75%, with the average around 1.40%, still in context with pre-COVID levels.
- CRTx® 1st Loss Sub-Index (1st loss Bs) April writedowns/int. shortfalls:
 - **-2.4 bps hit to 1st Loss Sub-Index:**
 - **-5.5 bps Fxd. Sev. Sub-Index component** (vs. -17 bps in Mar.)
 - **-2.0 bps ACT LOSS Sub-Index component** (vs. -1.7 bps in Mar.)

Paydowns

- **April factor speeds (STACR) edged up ~1 CPR on average** vs. March as day count was higher. Seasoned pre-COVID reference pool CPRs were in the mid-teens/30ish CPR area:
 - **MTD CRTx® AGG return attribution from paydowns: -1.9 bps**
- **The CRTx® AGG's 1.68% April paydown percentage was slightly lower vs. March's 1.78%:**

April Index UPB Paydowns	\$855M
○ UMEZZ (Mostly M1s):	\$195M
○ LMEZZ (M2s/old M3s):	\$646M
○ SUB (Bs/B1s/B2s):	\$ 15M

Structure

- Class C/Es were steady to slightly improved MoM.
- April LIBOR resets +21bps, SOFR resets +19bps MoM. **YTD, LIBOR & SOFR resets are up 56bps & 24bps, respectively.**
- **25 reference pool groups continued to fail their DQ Test in March, down 5 vs. the 30 failing in March.**

Relative Value Thoughts

Ideas

With spreads generally consolidating at the wider end of the range, and impending coupon resets likely moving higher, all while mortgage credit remains stable to improving and the housing market still supportive, current entry points across the CRT capital structure look to have value, albeit with differing appeal:

❖ **Newest Issues:**

- M1/M1A/M1Bs:
 - Carry/yield per unit-spread duration favorable vs. longer duration rating-equivalent IG.
 - Rising resets=coupon upside.
 - Earn a spread vs short duration alternatives (CP, MBS/TBA rolls, etc.) without needing active rolling/reinvestment.
 - Growing issuance/float: supply pressure or reinvestment liquidity?
- M2s:
 - Positive supply technicals; many M2s are front-pay now, while net supply has been trending persistently negative, especially given tender activity.
 - Carry in context with IG at shorter duration & close to par.
- B1/B2s:
 - Blended carry relatively cheaper vs. HY, with a 5yr issuer call.
 - U.S. mortgage credit and housing outlook still supportive.

❖ **Seasoned (M2/M3s & B/B1/B2s):**

- Significant HPA, large CEs (3x or more than original CEs), big coupons, and relatively shorter terms to call/mtly offer compelling risk/reward.
- Net-current carry still better than newer vintage alternatives, usually at shorter durations.
- For now, widening LIBOR/SOFR basis provides coupon advantage.
- A third of CRT float is 4+ years seasoned, with still \$10B+ in <=early-2017 vintage float across fixed sev./act. loss M2/M3/Bs.

CRTx® Index Suite Total Return Performance: Month-End Matrix 04/29/2022

CRTx® (Credit Risk Transfer Return Tracking Index) Return Summary							
RETURNS							
	Index Level	Period			Annualized		As of Date
		MTD	QTD	YTD	1-YR	3-YR	
Aggregate	160.67	0.44%	0.44%	-1.53%	1.40%	3.08%	4/29/22
Upper Mezzanine	122.39	-0.03%	-0.03%	-1.08%	-0.52%	1.50%	4/29/22
Lower Mezzanine	173.52	0.56%	0.56%	0.05%	1.89%	2.42%	4/29/22
Subordinate	230.68	0.46%	0.46%	-3.32%	1.87%	4.10%	4/29/22
Upper/Lower Mezz.	153.73	0.42%	0.42%	-0.18%	1.58%	2.52%	4/29/22
Lower Mezz./Sub.	182.00	0.51%	0.51%	-1.55%	1.48%	2.91%	4/29/22
CAS	157.86	0.36%	0.36%	-0.81%	1.85%	3.14%	4/29/22
STACR	160.29	0.50%	0.50%	-2.00%	1.12%	3.10%	4/29/22
LLTV	159.52	0.45%	0.45%	-1.68%	1.20%	2.89%	4/29/22
HLTV	143.82	0.43%	0.43%	-1.25%	1.76%	3.37%	4/29/22
Upper Mezzanine	2022	98.43	0.21%	0.21%	-1.57%	-	4/29/22
	2021	99.79	-0.41%	-0.41%	-0.89%	-0.34%	4/29/22
	2020	102.80	0.08%	0.08%	0.28%	0.80%	4/29/22
	2019	-	-	-	-	-	4/29/22
	2018	108.88	-0.01%	-0.01%	0.28%	1.00%	4/29/22
	2017	-	-	-	-	-	4/29/22
	2016	-	-	-	-	-	4/29/22
	2015	-	-	-	-	-	4/29/22
	<=2014	-	-	-	-	-	4/29/22
Lower Mezzanine	2022	97.42	1.10%	1.10%	-2.58%	-	4/29/22
	2021	100.89	0.74%	0.74%	-2.44%	-0.44%	4/29/22
	2020	101.33	0.23%	0.23%	0.33%	1.41%	4/29/22
	2019	113.29	0.23%	0.23%	0.31%	1.49%	4/29/22
	2018	115.75	0.38%	0.38%	0.18%	2.31%	4/29/22
	2017	131.52	0.59%	0.59%	0.66%	2.75%	4/29/22
	2016	151.01	0.29%	0.29%	1.83%	3.48%	4/29/22
	2015	139.33	-0.15%	-0.15%	0.93%	2.86%	4/29/22
	<=2014	169.05	1.25%	1.25%	0.69%	3.75%	4/29/22
Subordinate	2022	94.55	0.00%	0.00%	-5.45%	-	4/29/22
	2021	99.10	0.67%	0.67%	-7.51%	2.07%	4/29/22
	2020	94.15	0.55%	0.55%	-2.66%	2.74%	4/29/22
	2019	131.36	0.42%	0.42%	-0.21%	2.83%	4/29/22
	2018	125.24	0.35%	0.35%	-1.75%	2.73%	4/29/22
	2017	157.28	0.49%	0.49%	-0.39%	4.48%	4/29/22
	2016	199.09	0.13%	0.13%	0.78%	5.96%	4/29/22
	2015	213.79	0.72%	0.72%	2.36%	7.02%	4/29/22
	<=2014	-	-	-	-	-	4/29/22

CRTx® Index Suite Total Return Performance: Month-End Matrix 04/29/2022 (Continued)

CRTx® RNI™ (Rolling New Issues*) Return Summary							
	Index Level	RETURNS					
		Period			Annualized		As of Date
		MTD	QTD	YTD	1-YR	3-YR	
Aggregate	170.82	0.28%	0.28%	-4.10%	0.26%	3.71%	4/29/22
Upper Mezzanine	123.09	-0.03%	-0.03%	-1.14%	-0.59%	1.39%	4/29/22
Lower Mezzanine	187.72	0.83%	0.83%	-2.29%	-0.50%	2.72%	4/29/22
Subordinate	239.98	0.17%	0.17%	-6.93%	0.39%	4.87%	4/29/22
LLTV	169.45	0.37%	0.37%	-4.59%	0.06%	3.48%	4/29/22
HLTV	153.82	0.11%	0.11%	-2.95%	0.77%	4.36%	4/29/22

* Most recently issued securities within a "rolling" 12-month window

CRTx® (Credit Risk Transfer Return Tracking Index) Return Summary							
	Index Level	RETURNS					
		Period			Annualized		As of Date
		MTD	QTD	YTD	1-YR	3-YR	
Special Sub-Indexes:							
Fxd Severity - Type I*	Custom Client Access Only	1.36%	1.36%	0.43%	4.00%	3.38%	4/29/22
Fxd Severity - Type II*		0.62%	0.62%	1.05%	4.05%	2.33%	4/29/22
Actual Loss		0.41%	0.41%	-1.65%	1.26%	3.24%	4/29/22
CAS Fxd Severity - Type I*		2.00%	2.00%	0.48%	3.28%	3.06%	4/29/22
STACR Fxd Severity - Type I*		0.89%	0.89%	0.41%	4.63%	3.67%	4/29/22
CAS Fxd Severity - Type II*		0.71%	0.71%	0.89%	3.18%	2.29%	4/29/22
STACR Fxd Severity - Type II*		0.42%	0.42%	1.44%	5.93%	2.41%	4/29/22
CAS Act. Loss		0.30%	0.30%	-0.93%	1.76%	3.30%	4/29/22
STACR Act. Loss		0.49%	0.49%	-2.11%	0.95%	3.26%	4/29/22

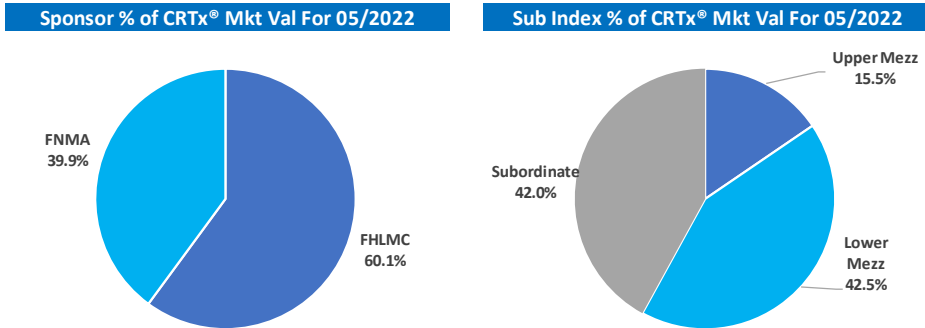
* Type I - No Credit Event Relief Provisions For Natural Disaster/Casualty Events

Type II - Some Credit Event Relief Provisions For Natural Disaster/Casualty Events

* CRTx® Aggregate Index and Sub Index Constituency

Aggregate	Upper Mezzanine	Lower Mezzanine	Subordinate	LLTV	HLTV
All Index-Eligible FNMA CAS shelf and FHLMC STACR shelf At-Issuance Classes	FNMA CAS Shelf: M1 Classes	FNMA CAS Shelf: M2 Classes	FNMA CAS Shelf: All B Classes	All Index-Eligible FNMA CAS shelf and FHLMC STACR shelf At-Issuance Classes from deals referencing Low Loan to Value (LLTV) loans	All Index-Eligible FNMA CAS shelf and FHLMC STACR shelf At-Issuance Classes from deals referencing High Loan to Value (HLTV) loans
	FHLMC STACR Shelf: M1 Classes (in M1/M2 structures) M1/M2 Classes (in M1/M2/M3 structures)	FHLMC STACR Shelf: M2 Classes (in M1/M2 structures) M3 Classes (in M1/M2/M3 structures)	FHLMC STACR Shelf: All B Classes		
	Vintage Sub Index constituency determined by deal/security closing year (except 2013/2014 which are grouped as "2014").				
RNI™ (Rolling New Issues) versions of the standard CRTx® Aggregate and Sub-Indexes have dynamic constituent baskets made up exclusively of the most recently issued securities within a "rolling" 12-month look-back window.					

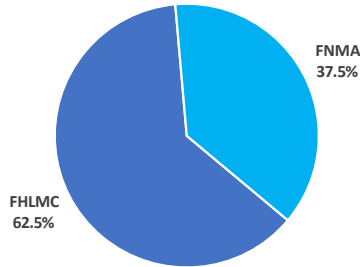
CRTx® Index Basket History: Select Metrics As of 04/29/2022 Rebalancing



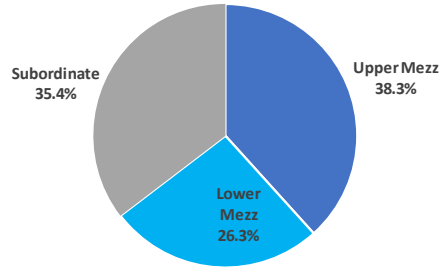
CRTx® AGG									
MONTH END CLOSINGS			BEGINNING MONTH BASKET						
Calculation	INDEX VALUE	Month to Date Total Return	# of Constituents	Beg Month UPB	Beg Month Total \$ Market Value	W Avg Adj Beg Month Security Mkt Value	WTD Avg Current Coupon	WTD Avg Cpn Margin	
Jun-2019	146.96	0.27%	213	49,953,468,597	52,833,120,553	105.77	5.92	349	
Jul-2019	147.90	0.64%	209	49,366,797,803	52,160,276,911	105.66	5.91	350	
Aug-2019	147.57	-0.22%	216	50,468,731,712	53,381,992,659	105.77	5.76	349	
Sep-2019	148.53	0.65%	219	50,665,720,866	53,218,677,450	105.04	5.63	349	
Oct-2019	149.04	0.34%	222	50,254,380,617	52,920,221,300	105.31	5.53	351	
Nov-2019	149.76	0.48%	228	50,975,909,280	53,606,190,708	105.16	5.33	351	
Dec-2019	150.73	0.65%	233	51,029,160,871	53,690,414,024	105.22	5.23	352	
Jan-2020	152.55	1.21%	228	49,686,844,416	52,466,578,192	105.60	5.35	356	
Feb-2020	152.31	-0.16%	232	50,375,851,983	53,580,028,930	106.36	5.20	354	
Mar-2020	113.64	-25.39%	240	52,372,791,379	55,277,944,042	105.55	5.11	348	
Apr-2020	123.83	8.97%	234	52,342,281,038	40,769,683,770	77.89	4.45	351	
May-2020	132.53	7.03%	229	50,951,320,646	42,820,320,693	84.04	4.03	355	
Jun-2020	144.50	9.04%	218	48,983,309,963	43,695,592,838	89.21	3.77	360	
Jul-2020	143.94	-0.39%	214	46,718,914,995	45,227,362,482	96.81	3.83	365	
Aug-2020	146.37	1.69%	217	46,681,772,649	44,843,108,762	96.06	3.87	370	
Sep-2020	147.99	1.11%	217	46,076,349,850	44,862,684,449	97.37	3.92	374	
Oct-2020	148.99	0.68%	220	45,735,370,315	44,865,412,741	98.10	3.90	375	
Nov-2020	151.26	1.52%	224	46,269,817,211	45,566,172,083	98.48	3.93	378	
Dec-2020	154.14	1.91%	228	46,924,624,650	46,772,793,230	99.68	3.93	378	
Jan-2021	155.99	1.20%	230	47,148,362,895	47,722,154,982	101.22	3.92	377	
Feb-2021	156.91	0.59%	232	47,277,423,099	48,281,726,799	102.12	3.90	377	
Mar-2021	156.58	-0.21%	235	47,729,907,668	48,857,887,219	102.36	3.87	376	
Apr-2021	158.53	1.25%	236	47,872,554,649	48,747,702,476	101.83	3.87	378	
May-2021	159.34	0.51%	238	47,615,037,767	48,936,401,435	102.78	3.89	380	
Jun-2021	160.42	0.68%	235	46,556,670,751	47,976,744,707	103.05	3.90	382	
Jul-2021	160.88	0.29%	239	46,213,562,998	47,807,083,563	103.45	3.91	383	
Aug-2021	161.28	0.25%	242	46,542,264,071	48,139,580,923	103.43	3.91	383	
Sep-2021	162.16	0.55%	240	45,645,024,894	47,210,049,253	103.43	3.93	385	
Oct-2021	162.45	0.18%	243	44,395,832,151	46,008,939,674	103.63	3.93	385	
Nov-2021	162.69	0.15%	250	46,136,808,535	47,705,750,833	103.40	3.92	384	
Dec-2021	163.17	0.30%	253	44,428,702,439	45,850,865,730	103.20	3.97	389	
Jan-2022	163.27	0.06%	264	46,303,372,955	47,721,518,712	103.06	3.92	383	
Feb-2022	161.64	-1.00%	272	48,187,246,457	49,476,212,584	102.68	3.86	378	
Mar-2022	159.97	-1.04%	280	48,758,202,585	49,320,610,808	101.15	3.93	380	
Apr-2022	160.67	0.44%	285	50,947,780,611	50,882,869,681	99.87	4.14	386	
May-2022			291	53,065,956,573	53,054,131,960	99.98	4.34	386	

CRTx® RNI™ Index Basket History: Select Metrics As of 04/29/2022 Rebalancing

Sponsor % of CRTx® RNI™ Mkt Val For 05/2022



Sub Index % of CRTx® RNI™ Mkt Val For 05/2022



CRTx® RNI™ AGG									
MONTH END CLOSINGS			BEGINNING MONTH BASKET						
Calculation	INDEX VALUE	Month to Date Total Return	# of Constituents	Beg Month UPB	Beg Month Total \$ Market Value	W Avg Adj Beg Month Security Mkt Value	WTD Avg Current Coupon	WTD Avg Cpn Margin	
Jun-2019	154.99	1.10%	51	11,881,379,851	12,033,434,980	101.28	5.11	268	
Jul-2019	156.84	1.19%	48	10,813,358,090	11,041,172,540	102.11	5.15	275	
Aug-2019	157.60	0.49%	52	11,648,252,778	11,964,569,893	102.72	5.02	275	
Sep-2019	158.58	0.62%	52	11,555,452,802	11,866,682,740	102.69	4.90	275	
Oct-2019	158.98	0.25%	52	11,145,361,078	11,471,457,452	102.93	4.81	278	
Nov-2019	159.70	0.45%	49	10,957,162,877	11,213,504,874	102.34	4.55	273	
Dec-2019	161.24	0.96%	53	11,183,706,619	11,434,402,160	102.24	4.43	272	
Jan-2020	163.27	1.26%	52	10,810,525,676	11,128,255,837	102.94	4.58	279	
Feb-2020	163.04	-0.14%	54	11,750,620,247	12,144,811,071	103.36	4.32	266	
Mar-2020	123.73	-24.11%	57	13,219,029,124	13,479,658,957	101.97	4.09	246	
Apr-2020	120.70	-2.45%	55	12,793,770,386	9,865,262,294	77.11	3.43	249	
May-2020	134.53	11.46%	51	11,841,276,956	8,721,408,098	73.65	3.01	252	
Jun-2020	151.62	12.71%	46	10,917,819,539	8,842,509,887	80.99	2.69	253	
Jul-2020	153.41	1.17%	45	10,409,152,540	9,432,905,082	90.62	2.78	259	
Aug-2020	154.49	0.71%	46	10,724,189,826	9,890,825,093	92.23	2.99	282	
Sep-2020	157.58	2.00%	47	10,980,427,286	10,237,992,004	93.24	3.19	301	
Oct-2020	158.61	0.66%	48	11,105,630,257	10,559,393,889	95.08	3.25	310	
Nov-2020	161.83	2.03%	47	10,696,965,880	10,283,123,737	96.13	3.47	333	
Dec-2020	166.71	3.02%	46	10,736,337,604	10,542,306,038	98.19	3.53	339	
Jan-2021	168.67	1.18%	50	11,324,184,451	11,415,597,441	100.81	3.50	337	
Feb-2021	169.49	0.48%	47	10,504,416,039	10,712,665,142	101.98	3.61	350	
Mar-2021	167.93	-0.92%	39	9,048,558,462	9,296,466,342	102.74	3.84	377	
Apr-2021	170.69	1.64%	38	8,978,749,172	9,107,517,591	101.43	3.81	376	
May-2021	172.19	0.88%	41	9,588,703,205	9,840,125,130	102.62	3.79	375	
Jun-2021	174.63	1.42%	40	9,373,273,707	9,681,506,748	103.29	3.81	378	
Jul-2021	175.45	0.47%	44	9,738,420,034	10,156,250,987	104.29	3.78	374	
Aug-2021	175.78	0.19%	42	9,659,687,165	10,041,577,171	103.95	3.55	349	
Sep-2021	177.19	0.80%	39	8,836,801,107	9,156,649,664	103.62	3.40	335	
Oct-2021	177.37	0.10%	39	9,275,157,362	9,611,457,885	103.63	3.25	320	
Nov-2021	177.29	-0.05%	44	11,029,258,671	11,264,989,273	102.14	3.12	307	
Dec-2021	178.13	0.47%	44	11,364,521,191	11,523,394,460	101.40	3.14	309	
Jan-2022	176.91	-0.69%	52	13,499,939,498	13,679,507,404	101.33	3.06	301	
Feb-2022	173.35	-2.01%	57	15,396,876,140	15,433,974,963	100.24	3.01	296	
Mar-2022	170.35	-1.73%	62	17,234,456,472	16,913,526,465	98.14	3.12	307	
Apr-2022	170.82	0.28%	67	19,128,995,434	18,549,644,816	96.97	3.38	329	
May-2022			72	21,068,208,560	20,517,088,834	97.38	3.64	336	

Latest Deal Performance Metrics: April 2022 Monthly Statements – STACR (continued)

CRTx® AGG Index Constituent Performance Data (Apr-2022 Monthly Statements)																						
Deal	Loss	Pool	Form	Structure	Early Redemption Option (Yrs)	Maturity (Yrs)	Rem. Early Redemp. Option (Yrs)	Rem. Maturity (Yrs)	Delinquency Pipeline								CPR	1mth	Net Credit Event Test	Min CE Test	Cum Net Loss Test	DQ Test
									30d	60d	90d	120d	150d	180d+	Total DO%	MoM % Chg						
									Pass	Pass	Pass	Pass										
STACR 2021-DNA7	ACT	LLTV	REMIC	M1-M2-B1-B2	5.0	20.0	4.6	19.6	0.29	0.05	0.04	0.02	0.02	0.01	0.44	-13%	9%	NA	NO	YES	YES	
STACR 2021-HQA1	ACT	HLTV	REMIC	M1-M2-B1-B2		12.5		11.3	0.36	0.10	0.08	0.06	0.05	0.33	0.98	-12%	11%	NA	YES	YES	YES	
STACR 2021-HQA2	ACT	HLTV	REMIC	M1-M2-B1-B2		12.5		11.7	0.31	0.10	0.07	0.10	0.15	0.73	-11%	9%	NA	YES	YES	YES		
STACR 2021-HQA3	ACT	HLTV	REMIC	M1-M2-B1-B2	5.0	20.0	4.4	19.4	0.35	0.09	0.07	0.09	0.05	0.65	-12%	9%	NA	NO	YES	YES		
STACR 2021-HQA4	ACT	HLTV	REMIC	M1-M2-B1-B2	5.0	20.1	4.7	19.7	0.27	0.09	0.06	0.08	-	0.50	-6%	7%	NA	NO	YES	YES		
STACR 2022-DNA1	ACT	LLTV	REMIC	M1A-M1B-M2-B1-B2	5.0	20.0	4.8	19.8	0.34	0.08	0.04	0.02	-	0.48	-38%	8%	NA	NO	YES	YES		
STACR 2022-DNA2	ACT	LLTV	REMIC	M1A-M1B-M2-B1-B2	5.0	20.1	4.8	19.9	0.34	0.08	0.03	0.00	-	0.45	-51%	9%	NA	YES	YES	YES		
STACR 2022-DNA3	ACT	LLTV	REMIC	M1A-M1B-M2-B1-B2	5.0	20.0	5.0	20.0									NA	YES	YES	YES		
STACR 2022-HQA1	ACT	HLTV	REMIC	M1A-M1B-M2-B1-B2	5.0	20.0	4.9	19.9	0.32	0.07	-	-	-	0.39		10%	NA	YES	YES	YES		

For information on CRTx® Rules and Guidelines, commercial licensing, data usage, and redistribution of the CRTx® suite of indexes, please contact:

Mark Fontanilla

Mark Fontanilla & Co., LLC

255 W MLK Blvd

Suite 2402

Charlotte, NC 28202

C: (201) 213-7168

O: (704) 405-0575

mark@markfontanilla.com

Security pricing and information powered by Refinitiv, an LSEG (London Stock Exchange Group) business.

Copyright © 2017-2022, Mark Fontanilla & Co., LLC (“MFCo”). All rights reserved. The information presented herein is protected by United States intellectual property and copyright laws and may not be reproduced, rewritten, distributed, published, broadcast, disseminated, transmitted, displayed, either directly or indirectly, in any medium or incorporated in other electronic or printed works without the prior consent of MFCo. CRTx® is a registered trademark, and RNI™ is a trademark, of MFCo. MFCo and any third-party licensors of its commercial indexes make no representation or warranty, express or implied, as to the capability of any index to accurately represent the security asset class or financial market sector that any respective MFCo index intends to represent. MFCo and any third-party licensors of its commercial indexes shall not be liable for any errors, omissions, or interruptions in the calculation or presentation of any MFCo index and its related data. Past performance of an index is neither an indication, nor a guarantee, of future results for either the index, the future results of the securities, or markets the index represents. The material herein does not constitute an offer for the sale of securities or services. Except for MFCo Custom Index Design Services, all information provided by MFCo is for general public dissemination and not specifically tailored for the purposes of any single individual, group, or legal entity. MFCo receives fees associated with the licensing of its indexes to third parties, development and administration of custom indexes, and the provision of index data products and services. An index itself cannot be invested in. Investment exposure to the securities or financial markets that an index represents may be made available via third-party financial instrument or investment vehicle that references the respective index. MFCo does not sell, endorse, promote, or directly manage any financial instrument or investment vehicle that seeks to offer an economic return based on the performance of any of MFCo’s indexes. MFCo is not an investment advisor and does not provide legal or tax advice. For more information on any of MFCo’s index products or other professional services, please visit www.markfontanilla.com.