

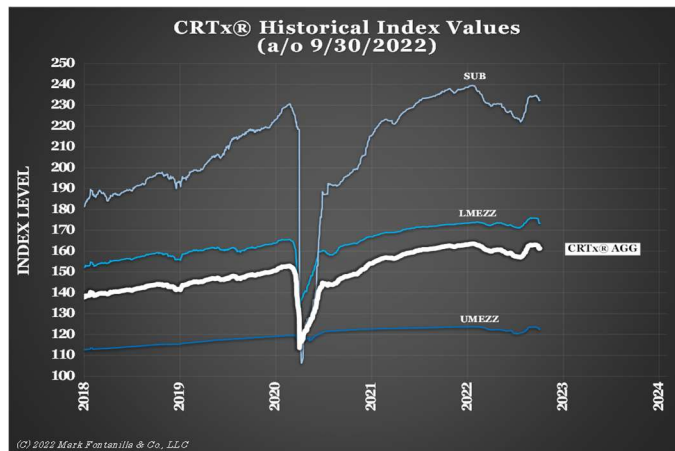
CRTx®

Credit Risk Transfer Return Tracking Index

www.markfontanilla.com/crtx-index

CRTx® Index Rebalancing Update

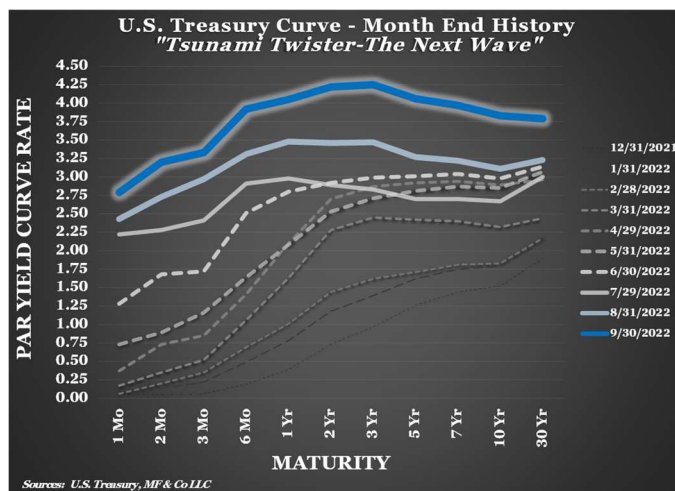
09/30/2022



Sector Musings

The "Tsunami Twister's" next wave swells higher

The initial crest of 2022's veritable "tsunami twister" curve broke around July. But, as the Fed persevered in its tightening program, the next wave formed, swelling even higher in September as Treasury yields across the curve ended +50-80 bps higher MoM, cresting at the short-end/belly junction, hitting the front-end shore with another 75 bps Fed Funds hike. Major fixed rate bond sector returns have now tumbled -13% to -18%+ YTD in the aftermath of a pull-forward demand/pull-forward borrow economy and the Fed's non-symmetric FIFO-over-LIFO (Fed Funds In/Fed Funds Out vs. Liquidity In/Funding Out) unwind of monetary policy. At least CRT coupon swells have been a good thing...



Inside

CRTx® Index Summary Panels

Page 2

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

Return Roundup

Page 3

September saw the CRTx® Aggregate stumble in kind with the broader markets, returning -1.03% MoM...roiled by higher rates, wider spreads, rising volatility, and a resolute Fed...YTD, the standard total market CRTx® Aggregate is down 1.17%, while the CRTx® RNI™ (Rolling New Issues) Aggregate has returned -5.49%...

Index Rebalancing Metrics

Page 3

The CRTx® October basket UPB rises 3.5% MoM to \$54.1B, while lower prices meant total market value only grows 1.8% to \$52.9B comprised of 325 securities/124 deals, including the latest CAS and 2 STACR September deal closings...After three straight months of contraction, benchmark GSE CRT float expanded ~\$1.8B...back up towards Q2 levels...

Latest Deal Performance

Page 5

September payment day saw mortgage credit performance narrowly better to sideways MoM with late-stage DQs continuing their steady forbearance-clearing decline, writedowns/shortfalls marginal, speeds steady, and C/Es negligibly better...

Relative Value Thoughts

Page 5

Heading into Q4, risk is asymmetrically biased to the adverse side...CRT relative value right now is a conundrum... But, for the dauntless, a couple of simple thematic suggestions...Seasoned Pre-2018 ...whenever you can find them...New Issue: take your pick...

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

09/30/2022 Index Rebalancing Update *(continued)***CRTx® Aggregate Index**

Sep 2022 CRTx® AGG Tot Ret	-103 bps
Index Month-End Closing Value	161.27
Price Attribution	-156 bps
Paydown Attribution	-1 bps
Cpn Accr&Pmt Attribution	+54 bps
Writedown+Int Shortfall Attribution	-0.11 bps
Excess Return	-122 bps
Volatility (Annualized)	1.44%
UPB Paydown %	0.89%
QTD Total Return	2.42%
YTD Total Return	-1.17%

CRTx® AGG Rebalancing For Oct 2022*As of 9/30/2022***October 2022 Aggregate Basket (w/MoM Δ):**

• Beg. UPB (\$B):	\$54.07	+3.5%
• Beg. Market Value (\$B):	\$52.88	+1.8%
• Constituents:	325	+9
• WAvg Constituent Value:	97.79	-1.55 pts
• WAvg Constituent Coupon:	6.64%	+29 bps

Index (+) Entries* & (-) Exits**(+) STACR 2022-DNA6 M1A-M1B-M2****(+) CAS 2022-R09 2M1-2M2-2B1****(+) STACR 2022-DNA7 M1A-M1B-M2****(-)**

* 4.26% of Beg. Index Market Value

CRTx® Mkt Val Breakdown: 10/2022 Basket				
Deal Yr	Aggregate	UMEZZ	LMEZZ	SUB
All	100.0%	24.7%	31.9%	43.4%
2022	38.2%	20.9%	9.3%	8.1%
2021	21.8%	3.9%	7.3%	10.6%
2020	10.5%	0.0%	2.8%	7.7%
2019	6.6%	0.0%	1.1%	5.5%
2018	6.3%	0.0%	2.0%	4.3%
2017	6.8%	0.0%	2.6%	4.2%
2016	3.9%	0.0%	2.2%	1.8%
2015	2.7%	0.0%	1.5%	1.2%
<=2014	3.1%	0.0%	3.1%	0.0%

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

Sep 2022 CRTx® RNI™ AGG Tot Ret	-201 bps
Index Month-End Closing Value	168.34
Price Attribution	-251 bps
Paydown Attribution	+0 bps
Cpn Accr&Pmt Attribution	+49 bps
Writedown+Int Shortfall Attribution	+0 bps
Excess Return	-220 bps
Volatility (Annualized)	2.39%
UPB Paydown %	0.66%
QTD Total Return	1.90%
YTD Total Return	-5.49%

CRTx® RNI™ AGG Rebalancing For Oct 2022*As of 9/30/2022***October 2022 Aggregate Basket (w/MoM Δ):**

• Beg. UPB (\$B):	\$27.24	+4.1%
• Beg. Market Value (\$B):	\$26.19	+2.0%
• Constituents:	100	+5
• WAvg Constituent Value:	96.15	-1.96 pts
• WAvg Constituent Coupon:	6.00%	+18 bps

Index (+) Entries* & (-) Exits**(+) STACR 2022-DNA6 M1A-M1B-M2****(+) CAS 2022-R09 2M1-2M2-2B1****(+) STACR 2022-DNA7 M1A-M1B-M2****(-) STACR 2021-HQA3 M1-M2-B1-B2**

* 8.60% of Beg. Index Market Value

CRTx® RNI™ Mkt Val Breakdown: 10/2022 Basket				
Deal Yr	Aggregate	UMEZZ	LMEZZ	SUB
All	100.0%	47.5%	25.1%	27.4%
2022	77.2%	42.1%	18.7%	16.4%
2021	22.8%	5.4%	6.4%	11.0%
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%

09/30/2022 Index Rebalancing Update *(continued)***Return Roundup**

September saw the CRTx® Aggregate stumble in kind with the broader markets, returning -1.03% MoM as fixed income and equities were thoroughly roiled by higher rates, wider spreads, rising volatility, and a resolute Fed. For Q3 though, the CRTx® still managed to end positively, finishing up 2.42% with some help from significant July/August tender premiums. YTD, the standard total market CRTx® Aggregate is down 1.17%, while the CRTx® RNI™ (Rolling New Issues) Aggregate has returned -5.49%.

Red was seen across much of the CRT complex, with the brunt taken by newer vs. seasoned paper. Supply technicals didn't necessarily help as \$2.3B in issuance across 3 deals came in September, pricing progressively wider into month/quarter end.

Intra-Complex Highlights: September

09/30/2022 CRTx®	Index Mkt Val (\$B)	M/E RETURN ATTRIBUTION							Index Total Return
		Price	CPN Accr.	CPN Pmt	Pay- down	Write-down Retun	Int	Shortfall	
AGG	51.923	-1.56%	-0.03%	0.57%	-0.01%	-0.0006%	-0.0005%		-1.03%
UMEZZ	11.860	-1.15%	-0.03%	0.39%	0.01%	0.0000%	0.0000%		-0.78%
LMEZZ	16.785	-1.94%	-0.03%	0.49%	-0.02%	0.0000%	0.0000%		-1.50%
SUB	23.278	-1.50%	-0.04%	0.72%	0.00%	-0.0013%	-0.0012%		-0.82%

- The UMEZZ Index (M1 variants), now exclusively made up of 2021/2022 deal vintages, lost 0.78% in empathy with IG spread woes at similar mid-5% yields, but shorter durations.
- The complex loser was the LMEZZ Index (M2s/M3s) with a -1.50% return, mainly from 2021/2022 issues (the RNI™ version plummeted -3.64%). Higher belly/long end of the curve and significant spread widening drove IG/HY blended yields wider, and LMEZZ followed.
- The large SUB Index (B1/B2/Bs), representing 43% of CRT float, fell 0.82% MoM, but the RNI™ SUB Index (the most recently issued 1/3rd of B1/B2/Bs) dropped 2.48%. Approximately 9%+ yields for CRT B1s/B2s are in context with HY levels, even though HY dollar handles/coupons are lower, and durations are longer.

Index Rebalancing Metrics

The CRTx® October basket UPB rises 3.5% MoM to \$54.1B, while lower prices meant total market value only grows 1.8% to \$52.9B comprised of 325 securities/124 deals, including the latest CAS and 2 STACR September deal closings.

Index Composition

The most recent FNMA HLTV (again w/o B2) and the 2 FHLMC LLTV (again w/o B1/B2) deals add ~\$2.3B and 9 closer-to-par constituents to the AGG. The new bonds come with wide margins and higher attachment points than previous deals. No sector classes paid off in September.

WAvg constituent market value skids a net -1.55 points to \$97.79, while Fed-driven LIBOR/SOFR resets rise again, this time an Index-blended +29 bps to 6.64%, moving carry to ~56bps to the next reset.

CRTx® AGG composition (October 2022 basket):

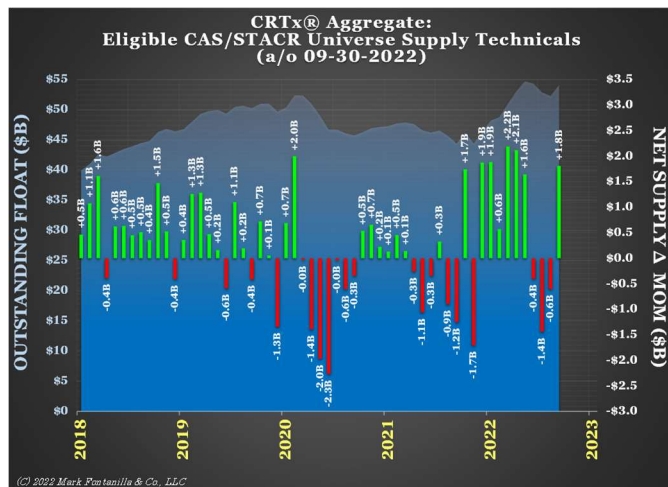
- 24.7%↑** (vs 22.8% in Sep) - **UMEZZ (M1/old M2s)**
- 31.9%↓** (vs 32.3% in Sep) - **LMEZZ (M2/old M3s)**
- 43.4%↓** (vs 44.8% in Sep) - **SUBs (B/B1/B2s)**

A majority of Index constituent deals have remaining terms to optional redemption of ≤5 years, mostly ≤2017 and especially 2022 deals (which combined account for ~54% of the AGG basket), helping bring Index cashflow average life- and duration-to-optional-redemptions to a rebalanced 3.5 years and 2.9 years, respectively, with the October basket.

2022 GSE CRT Deal Pricing Margins (bps) & Orig. Ces						
Close		Pricing Margin / Original CE				
Date	2022 Deals	LTV	M1 or M1A/M1B	M2	B1	B2
01/20	CAS 22-R01	L	100/2.30	190/1.45	315/0.85	600/0.25
01/21	STACR 22-DNA1	L	100/3.00 185/2.00	250/1.25	340/0.75	710/0.25
02/09	CAS 22-R02	H	120/2.45	300/1.55	450/0.90	765/0.35
02/11	STACR 22-DNA2	L	130/3.40 240/2.00	375/1.25	475/0.75	850/0.25
03/18	STACR 22-HQA1	H	210/3.75 350/2.60	525/1.25	700/0.75	1100/0.25
03/30	CAS 22-R03	L	210/2.15	350/1.25	625/0.75	985/0.25
04/08	CAS 22-R04	L	200/2.35	310/1.35	525/0.80	950/0.25
04/18	STACR 22-DNA3	L	200/3.60 290/2.00	435/1.25	565/0.75	975/0.25
05/11	CAS 22-R05	H	190/2.45	300/1.85	450/1.45	700/0.65
05/13	STACR 22-DNA4	L	220/3.60 335/2.00	525/1.25	625/0.75	1025/0.25
06/10	CAS 22-R06	L	275/2.50	385/1.45	635/0.85	1060/0.30
06/17	STACR 22-DNA5	L	295/3.60 450/2.05	675/1.25	750/0.75	1290/0.25
07/01	CAS 22-R07	L	295/2.55	465/1.60	680/1.00	1200/0.30
07/29	STACR 22-HQA2	H	265/3.00 400/2.00	600/1.25		
08/05	CAS 22-R08	L	255/2.55	360/1.90	560/1.10	
08/12	STACR 22-HQA3	H	230/3.00 355/2.00	535/1.25		
09/16	STACR 22-DNA6	L	215/3.60 370/2.20	575/1.30		
09/28	CAS 22-R09	H	250/2.80	475/1.90	675/1.25	
09/30	STACR 22-DNA7	L	250/3.50 500/2.55	700/1.50		

09/30/2022 Index Rebalancing Update (continued)**Sector Supply**

After three straight months of contraction, benchmark GSE CRT float expanded ~\$1.8B, or +3.46% MoM, to \$54.1B in UPB as of September month-end. A lack of tender activity, slow prepayments, and 3 closed deals in the month brought float back up towards Q2 levels.



September's +\$1.8B monthly net supply gain was effectively just an offset to Jul/Aug negatives as Q3 ends down a mere \$75M lower float. 2022's issuance stands at \$21.6B YTD, +53% more vs. 2021's \$14.1B total with 3 months go in the year.

SEP. 2022 Index-eligible net supply breakdown:

- **UMEZZ** +1.366 B (+ 11.50% MoM)
 - Top-of-the-capital-structure bonds have become the largest-sized new issue classes given market and capital considerations, which should likely continue in the near term.
- **LMEZZ** -+0.408 B (+ 2.43% MoM)
 - Tenders have taken a lot of non-REMIC supply out, while new issue puts moderate amounts back in. In the near term, a reasonably positive technical should persist given the current \$17B float is the lowest since 2016.
- **SUB** +0.033 B (+ 0.14% MoM)
 - While bottom-of-the-capital structure B-variants are still the largest proportion of CRT outstandings at 43.4%, the significantly lower issuance since July will likely continue. This won't necessarily provide a negative technical, but more an interesting one.

CRTx® AGG (eligible universe as of 9/30/22)

BENCHMARK GSE CRT SUPPLY TECHNICALS (\$MM)									
Month End	Float ₁	Gross Supply ₂	Pay-downs ₁	Write-downs ₁	Tenders ₁	Net Supply ₁	% Δ MoM		
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%		
2022-May	54,707.01	2,471.03	829.79	.19	.00	+1,641.05	+3.09%		
2022-Jun	54,305.82	2,176.38	689.16	.38	1,888.03	-401.19	-0.73%		
2022-Jul	52,868.64	1,493.11	598.48	.17	2,331.64	-1,437.18	-2.65%		
2022-Aug	52,267.27	1,166.30	509.11	.14	1,258.41	-601.37	-1.14%		
2022-Sep	54,074.84	2,273.03	465.18	.28	.00	+1,807.57	+3.46%		

1-Current Face

2-Original face issued based on CAS/STACR deal closing dates

Sources: FNMA, FHLMC, MF&Co

09/30/2022 Index Rebalancing Update *(continued)*

Latest Deal Performance

September payment day saw mortgage credit performance narrowly better to sideways MoM with late-stage DQs continuing their steady forbearance-clearing decline, writedowns/ shortfalls marginal, speeds steady, and C/Es negligibly better. While performance has stabilized/is stabilizing, at this point in the cycle it's time to closely watch for inflection in early-stage DQs and roll rates given the economic backdrop.

Credit

- Pre-COVID total DQs were slightly better, with 180+ bucket DQ #s/\$s continuing to fall in the high single-digits % MoM on average, while early stage DQs were slightly mixed, but in context with pre-COVID levels for now.
- CRTx® 1st Loss Sub-Index (1st loss Bs) writedowns/int. shortfalls for September:
 - **-3.5 bps hit to 1st Loss Sub-Index:**
 - **-4.7 bps to Fxd. Sev. Sub-Index component** (vs. -7.0 bps in Aug.)

Paydowns

- **STACR factor speeds were largely sideways, with seasoned reference pools in the high single-digits to mid-teens CPR, averaging about 10%-11% currently.**
 - **MTD CRTx® AGG return attribution from paydowns/retirements: -0.01 bps**
- **The CRTx® AGG's 0.88% Sep. UPB paydown was meaningfully lower vs. August's 3.31%, which included a STACR tender:**

Sep. Index Paydowns	\$465M
---------------------	---------------

- | | |
|--|--|
| <ul style="list-style-type: none"> ◦ UMEZZ (Mostly M1s): ◦ LMEZZ (M2s/old M3s): ◦ SUB (Bs/B1s/B2s): | <ul style="list-style-type: none"> \$204M \$247M \$ 14M |
|--|--|

Structure

- Class C/Es minorly improving, effectively at modest original-issue assumptions pace.
- September LIBOR resets +64bps, SOFR resets +10bps. **YTD, LIBOR & SOFR resets are now up 299bps & 223bps, respectively.**
- **14 pre-COVID reference pools continued to fail DQ Tests in September, down 1 vs. 15 failing in Aug.**

- Three 2021/2022 recent-issue STACR deals weren't passing their target C/E tests (ramping-related vs. performance-related) and were locked out in September.

Relative Value Thoughts

Ideas

Heading into Q4, risk is asymmetrically biased to the adverse side, with inflation pressures, an unrelenting Fed tightening program, and the specter of an "official" recession all continuing to hover. Market sectors, including CRT, remain down significantly for the year and with just 3 months left in 2022, CRT relative value right now is a conundrum:

- Credit fundamentals are currently stable but housing/economic pressures are building.
- CRT yields are high (and coupons are going higher), but so are all fixed income yields.
- Prices are cheap, but liquidity is not.

But, for the dauntless, a couple of simple thematic suggestions:

- ❖ **Seasoned Pre-2018 M2/M3s & B/B1/B2s, whenever you can find them.**
 - 99 tranches and a ~\$8B+ float that continues to shrink, but shortening durations-to-optional-redemption, significant structural de-levering, and favorable fundamentals provide for arguably the best credit risk/reward option in the CRT complex:
 - 60%+ HPA gains, substantial CEs (3.5x+ vs original CEs) and/or thickened tranches, and big LIBOR-indexed coupon entitlements for now.
- ❖ **New Issue: take your pick.**
 - With recent rating-equivalent yields shadowing IG/HY, the CRT stack options have a liquidity give, but still offer:
 - Floater benefits including coupon upside, lower inherent volatility vs. the curve, and monthly interest+principal paydown payments.
 - Housing-collateralized mortgage borrower risk vs. commercial credit risk.

CRTx® Index Suite Total Return Performance: Month-End Matrix 09/30/2022

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	161.27	-1.03%	2.42%	-1.17%	-0.55%	2.78%	9-30-22	
Upper Mezzanine	122.56	-0.78%	1.68%	-0.94%	-0.73%	1.17%	9-30-22	
Lower Mezzanine	173.34	-1.50%	1.11%	-0.06%	0.43%	2.37%	9-30-22	
Subordinate	232.23	-0.82%	3.77%	-2.67%	-1.84%	2.11%	9-30-22	
Upper/Lower Mezz.	153.80	-1.20%	1.36%	-0.14%	0.33%	2.44%	9-30-22	
Lower Mezz./Sub.	182.86	-1.10%	2.62%	-1.09%	-0.45%	2.64%	9-30-22	
CAS	159.75	-0.56%	2.46%	0.38%	1.24%	3.18%	9-30-22	
STACR	159.95	-1.33%	2.36%	-2.22%	-1.76%	2.52%	9-30-22	
LLTV	160.75	-0.73%	2.80%	-0.93%	-0.33%	2.76%	9-30-22	
HLTV	143.24	-1.61%	1.69%	-1.65%	-1.00%	2.74%	9-30-22	
Upper Mezzanine	2022	98.43	-0.90%	2.01%	-1.57%	-	9-30-22	
	2021	100.13	-0.22%	0.56%	-0.56%	-0.35%	-	9-30-22
	2020		-	-	-	-	9-30-22	
	2019		-	-	-	-	9-30-22	
	2018		-	-	-	-	9-30-22	
	2017		-	-	-	-	9-30-22	
	2016		-	-	-	-	9-30-22	
	2015		-	-	-	-	9-30-22	
	<=2014		-	-	-	-	9-30-22	
Lower Mezzanine	2022	93.71	-4.09%	0.90%	-6.29%	-	9-30-22	
	2021	98.63	-2.23%	0.83%	-4.63%	-	9-30-22	
	2020	102.67	0.03%	1.77%	1.66%	1.90%	-	9-30-22
	2019	114.50	-0.58%	0.29%	1.37%	1.70%	2.91%	9-30-22
	2018	118.34	0.45%	2.34%	2.42%	3.07%	3.47%	9-30-22
	2017	133.00	0.05%	1.15%	1.80%	2.44%	3.06%	9-30-22
	2016	153.97	0.57%	1.78%	3.83%	4.19%	3.58%	9-30-22
	2015	142.69	0.55%	1.76%	3.37%	3.91%	3.00%	9-30-22
	<=2014	171.77	0.41%	2.32%	2.31%	3.31%	3.36%	9-30-22
Subordinate	2022	95.45	-0.97%	4.84%	-4.55%	-	9-30-22	
	2021	96.43	-2.96%	4.04%	-10.00%	-9.55%	-	9-30-22
	2020	95.25	-0.01%	2.54%	-1.52%	-0.75%	-	9-30-22
	2019	134.52	-0.39%	3.70%	2.19%	2.62%	4.18%	9-30-22
	2018	129.60	0.79%	5.04%	1.67%	2.06%	3.70%	9-30-22
	2017	161.56	0.22%	4.05%	2.32%	4.29%	3.43%	9-30-22
	2016	202.83	0.57%	1.29%	2.68%	4.57%	3.04%	9-30-22
	2015	214.10	1.03%	2.08%	2.50%	3.24%	1.75%	9-30-22
	<=2014						9-30-22	

CRTx® Index Suite Total Return Performance: Month-End Matrix 09/30/2022 (Continued)

CRTx® RNI™ (Rolling New Issues*) Return Summary							
	Index Level	RETURNS					
		Period			Annualized		As of Date
		MTD	QTD	YTD	1-YR	3-YR	
Aggregate	168.34	-2.01%	1.90%	-5.49%	-4.99%	2.01%	9-30-22
Upper Mezzanine	123.23	-0.79%	1.72%	-1.02%	-0.82%	1.00%	9-30-22
Lower Mezzanine	181.29	-3.64%	0.26%	-5.64%	-5.46%	0.99%	9-30-22
Subordinate	236.16	-2.48%	3.50%	-8.41%	-7.61%	0.92%	9-30-22
LLTV	168.05	-1.53%	2.65%	-5.38%	-4.81%	2.19%	9-30-22
HLTV	149.20	-3.11%	0.08%	-5.86%	-5.62%	1.80%	9-30-22

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

CRTx® (Credit Risk Transfer Return Tracking Index) Return Summary							
Special Sub-Indexes:	Index Level	RETURNS					
		Period			Annualized		As of Date
		MTD	QTD	YTD	1-YR	3-YR	
Fxd Severity - Type I*	Custom Client Access Only	0.55%	2.21%	1.91%	3.07%	3.81%	9/30/22
Fxd Severity - Type II*		0.58%	2.71%	3.60%	4.33%	3.26%	9/30/22
Actual Loss		-1.10%	2.42%	-1.36%	-0.76%	2.83%	9/30/22
CAS Fxd Severity - Type I*		0.54%	2.75%	1.73%	2.81%	3.36%	9/30/22
STACR Fxd Severity - Type I*		0.55%	1.81%	2.07%	3.29%	4.20%	9/30/22
CAS Fxd Severity - Type II*		0.36%	2.74%	3.29%	4.04%	3.24%	9/30/22
STACR Fxd Severity - Type II*		1.27%	2.80%	4.52%	5.21%	3.39%	9/30/22
CAS Act. Loss		-0.63%	2.45%	0.21%	1.07%	3.24%	9/30/22
STACR Act. Loss		-1.40%	2.37%	-2.39%	-1.96%	2.57%	9/30/22

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

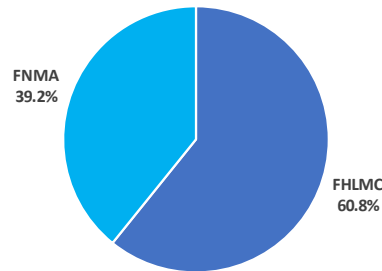
Type II - Some Credit Event Relief Provisions For Natural Disaster/Casualty Events

* CRTx® Aggregate Index and Sub Index Constituency

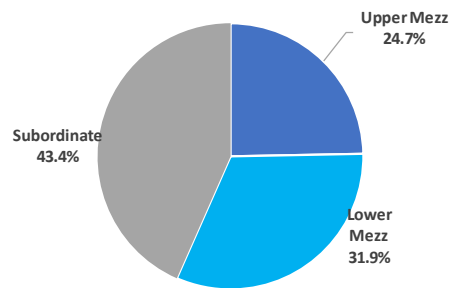
Aggregate	Upper Mezzanine	Lower Mezzanine	Subordinate	LLTV	HLTV
All Index-Eligible FNMA CAS shelf and FHLMC STACR shelf At-Issuance Classes	<u>FNMA CAS Shelf:</u> M1 Classes	<u>FNMA CAS Shelf:</u> M2 Classes	<u>FNMA CAS Shelf:</u> All B Classes	All Index-Eligible FNMA CAS shelf and FHLMC STACR shelf 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
	<u>FHLMC STACR Shelf:</u> M1 Classes (in M1/M2 structures) M1/M2 Classes (in M1/M2/M3 structures)	<u>FHLMC STACR Shelf:</u> M2 Classes (in M1/M2 structures) M3 Classes (in M1/M2/M3 structures)	<u>FHLMC STACR Shelf:</u> 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 09/30/2022 Rebalancing

Sponsor % of CRTx® Mkt Val For 10/2022



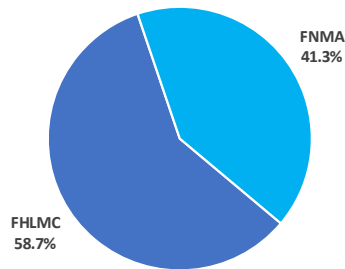
Sub Index % of CRTx® Mkt Val For 10/2022


CRTx® AGG

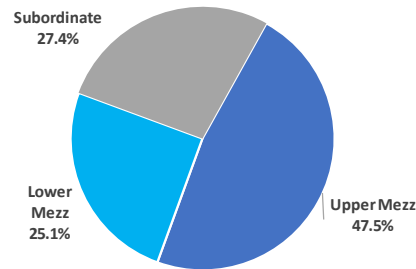
MONTH END CLOSINGS			BEGINNING MONTH BASKET					
Calculation Month	INDEX VALUE	Month to Date Total Return	# of Constituents	Beg Month UPB	Beg Month Total \$ Market Value	W Avg Adj Beg Month Security Mkt Value	WTD Avg Current Coupon	WTD Avg Cpn Margin
Nov-2019	149.76	0.48%	228	50,975,909,280	53,606,190,708	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	159.01	-1.03%	291	53,065,956,573	53,054,131,960	99.98	4.34	386
Jun-2022	157.45	-0.98%	297	54,707,014,476	53,912,547,204	98.55	4.66	388
Jul-2022	157.87	0.27%	305	54,305,816,176	52,723,290,518	97.09	5.21	399
Aug-2022	162.94	3.21%	311	52,868,638,801	51,179,435,509	96.81	5.87	406
Sep-2022	161.27	-1.03%	316	52,267,272,868	51,923,167,525	99.34	6.34	407
Oct-2022			325	54,074,843,112	52,881,044,458	97.79	6.64	407

CRTx® RNI™ Index Basket History: Select Metrics As of 09/30/2022 Rebalancing

Sponsor % of CRTx® RNI™ Mkt Val For 10/2022



Sub Index % of CRTx® RNI™ Mkt Val For 10/2022



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
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	168.30	-1.48%	72	21,068,208,560	20,517,088,834	97.38	3.64	336
Jun-2022	165.20	-1.84%	80	23,394,497,238	22,433,577,349	95.89	4.00	343
Jul-2022	165.70	0.30%	85	24,884,587,943	23,480,348,016	94.36	4.49	358
Aug-2022	171.79	3.68%	89	25,180,986,750	23,907,838,996	94.94	5.17	365
Sep-2022	168.34	-2.01%	95	26,170,925,042	25,675,201,828	98.11	5.82	365
Oct-2022			100	27,235,965,638	26,187,236,662	96.15	6.00	372

Latest Deal Performance Metrics: September 2022 Monthly Statements - CAS

CRTx® AGG Index Constituent Performance Data (Sep-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	Net					
									30d	60d	90d	120d	150d	180d+	Total		MoM	1mth	Credit Event	Min CE	Net Loss	DQ
															DQ%		% Chg		Test	Test	Test	Test
CAS 2013-C01	FXD1	LLTV	DEBT	M1-M2	10.0		1.1	0.45	0.08	0.03	0.02	0.02	-	0.60	-8%	10%	NA	YES	NA	NA		
CAS 2014-C01	FXD1	LLTV	DEBT	M1-M2	10.0		1.3	0.51	0.07	0.03	0.02	0.01	-	0.64	10%	9%	NA	YES	NA	NA		
CAS 2014-C02	FXD1	LLTV	DEBT	1M1-1M2	10.0		1.7	0.39	0.09	0.02	0.02	0.01	-	0.53	-9%	8%	NA	YES	NA	NA		
	FXD1	HLTV	DEBT	2M1-2M2	10.0		1.7	0.64	0.12	0.04	0.01	0.01	-	0.82	2%	8%	NA	YES	NA	NA		
CAS 2014-C03	FXD2	LLTV	DEBT	1M1-1M2	10.0		1.8	0.57	0.08	0.04	0.03	0.02	-	0.74	8%	9%	NA	YES	NA	NA		
	FXD2	HLTV	DEBT	2M1-2M2	10.0		1.8	0.73	0.14	0.05	0.03	0.04	-	1.00	10%	10%	NA	YES	NA	NA		
CAS 2014-C04	FXD2	LLTV	DEBT	1M1-1M2	10.0		2.2	0.61	0.14	0.06	0.03	0.03	-	0.88	3%	9%	NA	YES	NA	NA		
	FXD2	HLTV	DEBT	2M1-2M2	10.0		2.2	1.04	0.22	0.12	0.06	0.10	-	1.55	20%	12%	NA	YES	NA	NA		
CAS 2015-C01	FXD2	LLTV	DEBT	1M1-1M2	10.0		2.4	1.14	0.25	0.08	0.05	0.07	-	1.59	1%	10%	NA	YES	NA	NA		
	FXD2	HLTV	DEBT	2M1-2M2	10.0		2.4									0%	0%	0%	0%			
CAS 2015-C02	FXD2	LLTV	DEBT	1M1-1M2	10.0		2.7	1.37	0.31	0.16	0.05	0.05	-	1.94	-3%	10%	NA	YES	NA	NA		
	FXD2	HLTV	DEBT	2M1-2M2	10.0		2.7															
CAS 2015-C03	FXD2	LLTV	DEBT	1M1-1M2	10.0		2.8	1.32	0.31	0.14	0.08	0.07	-	1.92	-3%	11%	NA	YES	NA	NA		
	FXD2	HLTV	DEBT	2M1-2M2	10.0		2.8															
CAS 2015-C04	ACT	LLTV	DEBT	1M1-1M2	10.0	12.5	3.1	5.6	1.53	0.40	0.16	0.12	0.07	1.22	3.51	1%	10%	NA	YES	NA	YES	
	ACT	HLTV	DEBT	2M1-2M2	10.0	12.5	3.1	5.6	2.27	2.27	0.27	0.17	0.13	1.77	6.89	32%	14%	NA	YES	NA	YES	
CAS 2016-C01	ACT	LLTV	DEBT	1M1-1M2-1B	10.0	12.5	3.4	5.9	1.10	0.30	0.14	0.13	0.06	1.12	2.86	-11%	12%	NA	YES	NA	YES	
	ACT	HLTV	DEBT	2M1-2M2	10.0	12.5	3.4	5.9	1.83	0.58	0.17	0.09	0.07	1.33	4.06	-7%	12%	NA	YES	NA	YES	
CAS 2016-C02	ACT	LLTV	DEBT	1M1-1M2-1B	10.0	12.5	3.5	6.0	1.03	0.18	0.10	0.08	0.05	0.69	2.13	-1%	10%	NA	YES	NA	YES	
CAS 2016-C03	ACT	LLTV	DEBT	1M1-1M2-1B	10.0	12.5	3.6	6.1	1.03	0.15	0.11	0.08	0.06	0.88	2.32	-1%	11%	NA	YES	NA	YES	
	ACT	HLTV	DEBT	2M1-2M2-2B	10.0	12.5	3.6	6.1	1.46	0.40	0.17	0.11	0.10	1.25	3.49	3%	11%	NA	YES	NA	YES	
CAS 2016-C04	ACT	LLTV	DEBT	1M1-1M2-1B	10.0	12.5	3.8	6.3	1.22	0.24	0.14	0.09	0.09	1.04	2.82	-2%	10%	NA	YES	NA	YES	
CAS 2016-C05	ACT	HLTV	DEBT	2M1-2M2-2B	10.0	12.5	3.8	6.3	1.75	0.45	0.20	0.20	0.12	1.42	4.14	-2%	13%	NA	YES	NA	YES	
CAS 2016-C06	ACT	LLTV	DEBT	1M1-1M2-1B	10.0	12.5	4.1	6.6	1.14	0.29	0.14	0.10	0.07	0.95	2.68	1%	11%	NA	YES	NA	YES	
CAS 2016-C07	ACT	HLTV	DEBT	2M1-2M2-2B	10.0	12.5	4.2	6.7	1.71	0.41	0.26	0.14	0.14	1.50	4.16	0%	13%	NA	YES	NA	YES	
CAS 2017-C01	ACT	LLTV	DEBT	1M1-1M2-1B1	10.0	12.5	4.3	6.8	1.06	0.23	0.11	0.09	0.09	0.90	2.47	-3%	11%	NA	YES	NA	YES	
CAS 2017-C02	ACT	HLTV	DEBT	2M1-2M2-2B1	10.0	12.5	4.5	7.0	1.45	0.34	0.15	0.11	0.11	1.13	3.28	2%	13%	NA	YES	NA	YES	
CAS 2017-C03	ACT	LLTV	DEBT	1M1-1M2-1B1	10.0	12.5	4.6	7.1	0.95	0.17	0.08	0.08	0.06	0.64	1.97	-2%	10%	NA	YES	NA	YES	
CAS 2017-C04	ACT	HLTV	DEBT	2M1-2M2-2B1	10.0	12.5	4.7	7.2	1.24	0.33	0.15	0.12	0.11	1.12	3.07	-4%	11%	NA	YES	NA	YES	
CAS 2017-C05	ACT	LLTV	DEBT	1M1-1M2-1B1	10.0	12.5	4.8	7.3	0.81	0.22	0.10	0.06	0.05	0.72	1.97	-3%	9%	NA	YES	NA	YES	
CAS 2017-C06	ACT	LLTV	DEBT	1M1-1M2-1B1	10.0	12.5	4.9	7.4	1.11	0.32	0.13	0.10	0.09	1.11	2.85	-2%	11%	NA	YES	NA	YES	
	ACT	HLTV	DEBT	2M1-2M2-2B1	10.0	12.5	4.9	7.4	1.95	0.50	0.25	0.15	0.14	1.76	4.75	-1%	13%	NA	YES	NA	YES	
CAS 2017-C07	ACT	LLTV	DEBT	1M1-1M2-1B1	10.0	12.5	5.2	7.7	1.32	0.46	0.18	0.11	0.09	1.31	3.47	-3%	12%	NA	YES	NA	YES	
	ACT	HLTV	DEBT	2M1-2M2-2B1	10.0	12.5	5.2	7.7	2.00	0.57	0.36	0.24	0.21	2.10	5.48	0%	15%	NA	YES	NA	YES	
CAS 2018-C01	ACT	LLTV	DEBT	1M1-1M2-1B1	10.0	12.4	5.3	7.8	1.37	0.37	0.15	0.11	0.10	1.22	3.33	-3%	12%	NA	YES	NA	YES	
CAS 2018-C02	ACT	HLTV	DEBT	2M1-2M2-2B1	10.0	12.5	5.4	7.9	1.85	0.46	0.23	0.19	0.21	1.61	4.55	0%	15%	NA	YES	NA	YES	
CAS 2018-C03	ACT	LLTV	DEBT	1M1-1M2-1B1	10.0	12.5	5.6	8.1	1.31	0.42	0.19	0.11	0.11	1.29	3.43	-2%	12%	NA	YES	NA	YES	
CAS 2018-C04	ACT	HLTV	DEBT	2M1-2M2-2B1	10.0	12.5	5.8	8.3	1.91	0.55	0.30	0.25	0.20	1.89	5.09	-3%	13%	NA	YES	NA	YES	
CAS 2018-C05	ACT	LLTV	DEBT	1M1-1M2-1B1	10.0	12.5	5.8	8.3	1.43	0.42	0.16	0.14	0.12	1.41	3.68	2%	12%	NA	YES	NA	YES	
CAS 2018-C06	ACT	LLTV	DEBT	1M1-1M2-1B1	10.0	12.5	6.0	8.5	1.56	0.48	0.23	0.22	0.15	1.82	4.47	-3%	12%	NA	YES	NA	YES	
	ACT	HLTV	DEBT	2M1-2M2-2B1	10.0	12.5	6.0	8.5	1.96	0.57	0.32	0.19	0.18	2.06	5.27	2%	14%	NA	YES	NA	YES	
CAS 2018-R07	ACT	LLTV	REMIC	1M1-1M2-1B1	10.0	12.5	6.1	8.6	1.86	0.55	0.23	0.24	0.19	2.07	5.14	1%	14%	NA	YES	NA	NO	
CAS 2019-R01	ACT	HLTV	REMIC	2M1-2M2-2B1	10.0	12.5	6.3	8.8	2.41	0.60	0.35	0.33	0.22	2.50	6.41	3%	15%	NA	YES	NA	NO	
CAS 2019-R02	ACT	LLTV	REMIC	1M1-1M2-1B1	10.0	12.5	6.4	8.9	1.78	0.58	0.27	0.27	0.18	1.88	4.95	2%	13%	NA	YES	NA	NO	
CAS 2019-R03	ACT	LLTV	REMIC	1M1-1M2-1B1	9.9	12.4	6.5	9.0	1.83	0.56	0.27	0.19	0.21	2.03	5.11	1%	13%	NA	YES	NA	NO	
CAS 2019-R04	ACT	HLTV	REMIC	2M1-2M2-2B1	7.0	20.0	3.7	16.8	2.47	0.69	0.30	0.32	0.26	2.68	6.71	1%	14%	NA	YES	NA	NO	
CAS 2019-R05	ACT	LLTV	REMIC	1M1-1M2-1B1	7.0	20.0	3.8	16.8	2.04	0.57	0.31	0.21	0.17	2.39	5.70	-2%	15%	NA	YES	NA	NO	
CAS 2019-R06	ACT	HLTV	REMIC	2M1-2M2-2B1	7.0	20.0	4.0	17.0	1.98	0.61	0.32	0.25	0.18	2.14	5.47	4%	13%	NA	YES	NA	NO	
CAS 2019-R07	ACT	LLTV	REMIC	1M1-1M2-1B1	7.0	20.0	4.1	17.1	1.39	0.36	0.17	0.11	0.06	1.58	3.67	-4%	12%	NA	YES	NA	NO	
CAS 2020-R01	ACT	LLTV	REMIC	1M1-1M2-1B1	7.0	20.0	4.3	17.3	1.05	0.25	0.12	0.14	0.09	1.10	2.75	2%	12%	NA	YES	NA	YES	
CAS 2020-R02	ACT	HLTV	REMIC	2M1-2M2-2B1	7.0	20.0	4.3	17.3	1.37	0.46	0.21	0.17	0.15	1.51	3.87	-2%	13%	NA	YES	NA	NO	
CAS 2021-R01	ACT	LLTV	REMIC	1M1-1M2-1B1-1B2	5.0	20.0	4.1	19.1	0.38	0.05	0.03	0.02	0.01	0.06	0.55	16%	6%	NA	YES	NA	YES	
CAS 2021-R02	ACT	HLTV	REMIC	2M1-2M2-2B1-2B2	5.0	20.0	4.2	19.2	0.55	0.12	0.06	0.04	0.05	0.13	0.95	18%	6%	NA	YES	NA	YES	
CAS 2021-R03	ACT	LLTV	REMIC	1M1-1M2-1B1-1B2	5.0	20.0	4.2	19.3	0.35	0.05	0.02	0.01	0.01	0.04	0.50	12%	6%	NA	YES	NA	YES	
CAS 2022-R01	ACT	LLTV	REMIC	1M1-1M2-1B1-1B2	4.9	19.9	4.2	19.3	0.40	0.05	0.03	0.02	0.01	0.06	0.58	14%	6%	NA	YES	NA	YES	
CAS 2022-R02	ACT	HLTV	REMIC	2M1-2M2-2B1-2B2	5.0	20.0	4.3	19.3	0.53	0.12	0.07	0.05	0.05	0.11	0.93	20%	6%	NA	YES	NA	YES	
CAS 2022-R03	ACT	LLTV	REMIC	1M1-1M2-1B1-1B2	5.0	20.0	4.5	19.5	0.41	0.05	0.02	0.03	0.01	0.01	0.54	32%	6%	NA	YES	NA	YES	
CAS 2022-R04	ACT	LLTV	REMIC	1M1-1M2-1B1-1B2	5.0	2																

Latest Deal Performance Metrics: September 2022 Monthly Statements - STACR

CRTx® AGG Index Constituent Performance Data (Sep-2022 Monthly Statements)																								
Deal	Loss	Pool	Form	Structure	Early Redemption Option (Yrs)	Maturity (Yrs)	Rem. Early Redemp. Option (Yrs)	Rem. Maturity (Yrs)											CPR	Net Credit Event		Cum Net Loss		DQ
									Delinquency Pipeline							Total DQ%	MoM % Chg	1mth		Pass Test	Pass Test	Pass Test	Pass Test	
									30d	60d	90d	120d	150d	180d+										
STACR 2013-DN1	FXD1	LLTV	DEBT	M1-M2	10.0		0.8	0.34	0.04	0.05	0.02	0.01	-	0.46	-15%	10%	YES	YES	NA	NA				
STACR 2013-DN2	FXD1	LLTV	DEBT	M1-M2	10.0		1.2	0.37	0.08	0.02	0.01	0.01	-	0.49	-13%	8%	YES	YES	NA	NA				
STACR 2014-DN1	FXD1	LLTV	DEBT	M1-M2-M3	10.0		1.4	0.36	0.07	0.03	0.02	0.03	-	0.51	-27%	9%	YES	YES	NA	NA				
STACR 2014-DN2	FXD1	LLTV	DEBT	M1-M2-M3	10.1		1.6	0.47	0.09	0.05	0.06	0.04	-	0.71	-10%	9%	YES	YES	NA	NA				
STACR 2014-DN3	FXD2	LLTV	DEBT	M1-M2-M3	10.0		1.9	0.93	0.43	0.11	0.06	0.07	0.26	1.86	-5%	11%	YES	YES	NA	NA				
STACR 2014-DN4	FXD2	LLTV	DEBT	M1-M2-M3	10.0		2.1	1.19	0.21	0.11	0.07	0.12	0.26	1.96	-5%	12%	YES	YES	NA	NA				
STACR 2014-HQ1	FXD2	HLTV	DEBT	M1-M2-M3	10.0		1.9																	
STACR 2014-HQ2	FXD2	HLTV	DEBT	M1-M2-M3	10.0		2.0	0.62	0.16	0.08	0.02	0.06	0.15	1.09	-12%	9%	YES	YES	NA	NA				
STACR 2014-HQ3	FXD2	HLTV	DEBT	M1-M2-M3	10.0		2.1																	
STACR 2015-DN1	FXD2	LLTV	DEBT	M1-M2-M3-B	10.0		2.3	1.29	0.26	0.15	0.11	0.10	0.24	2.15	6%	11%	YES	YES	NA	NA				
STACR 2015-HQ1	FXD2	HLTV	DEBT	M1-M2-M3-B	10.0		2.5	1.65	0.36	0.09	0.07	0.05	0.37	2.59	-4%	15%	YES	YES	NA	NA				
STACR 2015-HQ2	FXD2	HLTV	DEBT	M1-M2-M3-B	10.0		2.7	0.57	0.14	0.07	0.02	0.06	0.15	1.01	-12%	9%	YES	YES	NA	NA				
STACR 2015-DNA1	ACT	LLTV	DEBT	M1-M2-M3-B	10.0	12.5	2.6	5.1	0.45	0.08	0.05	0.08	0.24	0.90	-3%	9%	NA	YES	YES	YES				
STACR 2015-DNA2	ACT	LLTV	DEBT	M1-M2-M3-B	10.0	12.5	2.7	5.3	1.20	0.36	0.18	0.21	0.75	2.70	1%	11%	NA	YES	YES	YES				
STACR 2015-DNA3	ACT	LLTV	DEBT	M1-M2-M3-B	10.0	12.5	3.1	5.6	1.13	0.21	0.11	0.16	0.77	2.38	0%	10%	NA	YES	YES	YES				
STACR 2015-HQA1	ACT	HLTV	DEBT	M1-M2-M3-B	10.0	12.5	3.0	5.5	1.52	0.44	0.19	0.25	1.35	3.75	-5%	13%	NA	YES	YES	YES				
STACR 2015-HQA2	ACT	HLTV	DEBT	M1-M2-M3-B	10.0	12.5	3.2	5.7	1.36	0.46	0.20	0.28	1.32	3.62	-7%	11%	NA	YES	YES	YES				
STACR 2016-DNA1	ACT	LLTV	DEBT	M1-M2-M3-B	10.0	12.5	3.3	5.8	0.85	0.19	0.10	0.11	0.68	1.93	-2%	10%	NA	YES	YES	YES				
STACR 2016-DNA2	ACT	LLTV	DEBT	M1-M2-M3-B	10.0	12.5	3.6	6.1	0.91	0.28	0.14	0.17	0.99	2.49	-5%	11%	NA	YES	YES	YES				
STACR 2016-DNA3	ACT	LLTV	DEBT	M1-M2-M3-B	10.0	12.5	3.7	6.3	1.13	0.22	0.10	0.23	0.92	2.60	-6%	12%	NA	YES	YES	YES				
STACR 2016-DNA4	ACT	LLTV	DEBT	M1-M2-M3-B	10.0	12.5	4.0	6.5	1.33	0.32	0.15	0.17	0.92	2.89	-1%	11%	NA	YES	YES	YES				
STACR 2016-HQA1	ACT	HLTV	DEBT	M1-M2-M3-B	10.0	12.5	3.5	6.0	1.27	0.39	0.09	0.13	1.24	3.12	-8%	12%	NA	YES	YES	YES				
STACR 2016-HQA2	ACT	HLTV	DEBT	M1-M2-M3-B	10.0	12.5	3.7	6.2	1.44	0.45	0.15	0.30	1.23	3.57	-5%	12%	NA	YES	YES	YES				
STACR 2016-HQA3	ACT	HLTV	DEBT	M1-M2-M3-B	10.0	12.5	4.0	6.5	1.39	0.48	0.28	0.22	1.41	3.78	-2%	11%	NA	YES	YES	YES				
STACR 2016-HQA4	ACT	HLTV	DEBT	M1-M2-M3-B	10.0	12.5	4.1	6.6	1.75	0.43	0.25	0.33	1.68	4.44	-1%	12%	NA	YES	YES	YES				
STACR 2017-DNA1	ACT	LLTV	DEBT	M1-M2-B1-B2	10.0	12.5	4.3	6.8	1.40	0.24	0.15	0.14	0.85	2.78	13%	10%	NA	YES	YES	YES				
STACR 2017-DNA2	ACT	LLTV	DEBT	M1-M2-B1-B2	10.0	12.5	4.6	7.1	0.90	0.21	0.11	0.15	0.81	2.18	-6%	9%	NA	YES	YES	YES				
STACR 2017-DNA3	ACT	LLTV	DEBT	M1-M2-B1	10.0	12.5	5.0	7.5	0.85	0.21	0.10	0.14	0.78	2.08	-9%	10%	NA	YES	YES	YES				
STACR 2017-HQA1	ACT	HLTV	DEBT	M1-M2-B1-B2	10.5	12.5	4.9	6.9	1.44	0.30	0.17	0.25	1.18	3.34	-8%	12%	NA	YES	YES	YES				
STACR 2017-HQA2	ACT	HLTV	DEBT	M1-M2-B1	10.0	12.5	4.7	7.3	1.14	0.40	0.19	0.27	1.19	3.19	-10%	11%	NA	YES	YES	YES				
STACR 2017-HQA3	ACT	HLTV	DEBT	M1-M2-B1	10.0	12.5	5.1	7.6	1.35	0.43	0.20	0.17	0.15	1.61	3.90	-7%	13%	NA	YES	YES	YES			
STACR 2018-DNA1	ACT	LLTV	DEBT	M1-M2-B1	10.0	12.5	5.3	7.8	1.21	0.34	0.16	0.21	1.29	3.21	-6%	12%	NA	YES	YES	YES				
STACR 2018-HQA1	ACT	HLTV	DEBT	M1-M2-B1	10.0	12.5	5.5	8.0	1.65	0.51	0.31	0.20	0.18	1.82	4.68	-6%	14%	NA	YES	YES	YES			
STACR 2018-DNA2	ACT	LLTV	TRUST	M1-M2-B1	10.0	12.5	5.8	8.3	0.99	0.24	0.14	0.19	0.93	2.49	-6%	12%	NA	YES	YES	YES				
STACR 2018-DNA3	ACT	LLTV	TRUST	M1-M2-B1-B2	10.0	30.0	6.0	26.0	0.96	0.32	0.19	0.11	0.09	1.31	2.98	-13%	12%	NA	YES	YES	YES			
STACR 2018-HQA2	ACT	HLTV	TRUST	M1-M2-B1-B2	9.9	30.0	6.0	26.1	1.47	0.49	0.29	0.21	0.20	1.60	4.26	-7%	12%	NA	YES	YES	YES			
STACR 2019-DNA1	ACT	LLTV	TRUST	M1-M2-B1-B2	10.0	30.0	6.3	26.4	1.28	0.39	0.28	0.18	0.12	1.46	3.71	-9%	14%	NA	YES	YES	YES			
STACR 2019-DNA2	ACT	LLTV	TRUST	M1-M2-B1-B2	10.0	30.0	6.5	26.5	1.27	0.34	0.26	0.23	1.64	3.74	-16%	13%	NA	YES	YES	YES				
STACR 2019-DNA3	ACT	LLTV	TRUST	M1-M2-B1-B2	10.0	30.0	6.8	26.8	1.22	0.41	0.18	0.28	1.25	3.34	-9%	11%	NA	YES	YES	YES				
STACR 2019-HQA1	ACT	HLTV	TRUST	M1-M2-B1-B2	9.9	30.0	6.3	26.4	1.84	0.61	0.31	0.23	0.28	2.14	5.41	-8%	14%	NA	YES	YES	YES			
STACR 2019-HQA2	ACT	HLTV	TRUST	M1-M2-B1-B2	10.0	30.0	6.6	26.6	1.70	0.68	0.40	0.48	2.22	5.48	-12%	14%	NA	YES	YES	YES				
STACR 2019-HQA3	ACT	HLTV	TRUST	M1-M2-B1-B2	10.0	30.0	7.0	27.0	1.87	0.60	0.27	0.43	2.03	5.20	-7%	14%	NA	YES	YES	YES				
STACR 2019-DNA4	ACT	LLTV	REMIC	M1-M2-B1-B2	10.0	30.9	7.1	27.9	1.11	0.36	0.16	0.18	1.19	3.00	-7%	12%	NA	YES	YES	NO				
STACR 2019-HQA4	ACT	HLTV	REMIC	M1-M2-B1-B2	10.0	30.0	7.2	27.2	1.81	0.51	0.38	0.39	2.05	5.14	-6%	13%	NA	YES	YES	NO				
STACR 2020-DNA1	ACT	LLTV	REMIC	M1-M2-B1-B2	10.0	30.0	7.3	27.4	0.92	0.26	0.18	0.10	0.09	0.90	2.45	-10%	13%	NA	YES	YES	NO			
STACR 2020-DNA2	ACT	LLTV	REMIC	M1-M2-B1-B2	10.0	30.0	7.4	27.4	0.76	0.22	0.12	0.12	0.65	1.87	-5%	11%	NA	YES	YES	YES				
STACR 2020-DNA3	ACT	LLTV	REMIC	M1-M2-B1-B2	10.0	30.0	7.8	27.8	0.49	0.11	0.07	0.11	0.39	1.17	-9%	11%	NA	YES	YES	YES				
STACR 2020-DNA4	ACT	LLTV	REMIC	M1-M2-B1-B2	10.0	30.0	7.9	27.9	0.59	0.11	0.08	0.08	0.37	1.23	-5%	10%	NA	YES	YES	YES				
STACR 2020-DNA5	ACT	LLTV	REMIC	M1-M2-B1-B2	10.0	30.0	8.1	28.1	0.37	0.06	0.04	0.07	0.24	0.78	-18%	8%	NA	YES	YES	YES				
STACR 2020-DNA6	ACT	LLTV	REMIC	M1-M2-B1-B2	10.0	30.0	8.3	28.3	0.39	0.07	0.03	0.02	0.02	0.17	0.70	-13%	8%	NA	YES	YES	YES			
STACR 2020-HQA1	ACT	HLTV	REMIC	M1-M2-B1-B2	10.0	30.0	7.3	27.4	1.39	0.34	0.29	0.15	0.13	1.50	3.81	-7%	12%	NA	YES	YES	NO			
STACR 2020-HQA2	ACT	HLTV	REMIC	M1-M2-B1-B2	10.0	30.0	7.5	27.5	1.04	0.31	0.17	0.24	1.02	2.78	-9%	12%	NA	YES	YES	NO				
STACR 2020-HQA3	ACT	HLTV	REMIC	M1-M2-B1-B2	10.0	30.0	7.8	27.8	0.67	0.17	0.10	0.12	0.47	1.53	-6%	11%	NA	YES	YES	YES				
STACR 2020-HQA4	ACT	HLTV	REMIC	M1-M2-B1-B2	10.0	30.0	8.0	28.0	0.60	0.15	0.07	0.06	0.05	0.44	1.37	-6%	10%	NA	YES	YES	YES			
STACR 2020-HQA5	ACT	HLTV	REMIC	M1-M2-B1-B2	10.0	30.0	8.2	28.2	0.50	0.14	0.06	0.09	0.34	1.13	-11%	9%	NA	YES	YES	YES				
STACR 2021-DNA1	ACT	LLTV	REMIC	M1-M2-B1-B2	10.0	30.0	8.3	28.4	0.34	0.04	0.03	0.04	0.13	0.58	-11%	8%	NA	YES	YES	YES				
STACR 2021-DNA2	ACT	LLTV	REMIC	M1-M2-B1-B2	12.5		10.9	0.32	0.05	0.03	0.04	0.12	0.56	-2%	8%	NA	YES	YES	YES					
STACR 2021-DNA3	ACT	LLTV	REMIC	M1-M2-B1-B2	12.5																			

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

CRTx® AGG Index Constituent Performance Data (Sep-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	Net Cum				
																Total		MoM	Test	Test	Test	DQ
									30d	60d	90d	120d	150d	180d+	DQ%	% Chg		1mth	Pass	Pass	Pass	Pass
STACR 2021-HQA2	ACT	HLTV	REMIC	M1-M2-B1-B2		12.5		11.3	0.42	0.10	0.06	0.07	0.21	0.86	-3%	6%	NA	YES	YES	YES		
STACR 2021-HQA3	ACT	HLTV	REMIC	M1-M2-B1-B2	5.0	20.0	4.0	19.0	0.39	0.10	0.07	0.08	0.19	0.83	-3%	6%	NA	YES	YES	YES		
STACR 2021-HQA4	ACT	HLTV	REMIC	M1-M2-B1-B2	5.0	20.1	4.2	19.3	0.40	0.10	0.06	0.09	0.14	0.79	-8%	5%	NA	YES	YES	YES		
STACR 2022-DNA1	ACT	LLTV	REMIC	M1A-M1B-M2-B1-B2	5.0	20.0	4.3	19.3	0.55	0.09	0.04	0.06	0.07	0.81	7%	6%	NA	YES	YES	YES		
STACR 2022-DNA2	ACT	LLTV	REMIC	M1A-M1B-M2-B1-B2	5.0	20.1	4.4	19.4	0.56	0.09	0.04	0.07	0.06	0.82	15%	6%	NA	YES	YES	YES		
STACR 2022-DNA3	ACT	LLTV	REMIC	M1A-M1B-M2-B1-B2	5.0	20.0	4.6	19.6	0.43	0.09	0.06	0.05	0.01	0.64	-7%	6%	NA	YES	YES	YES		
STACR 2022-DNA4	ACT	LLTV	REMIC	M1A-M1B-M2-B1-B2	5.0	20.0	4.7	19.7	0.41	0.08	0.05	0.05	-	0.59	-5%	6%	NA	YES	YES	YES		
STACR 2022-DNA5	ACT	LLTV	REMIC	M1A-M1B-M2-B1-B2	5.0	20.0	4.7	19.8	0.49	0.09	0.05	0.02	-	0.65	7%	5%	NA	NO	YES	YES		
STACR 2022-HQA1	ACT	HLTV	REMIC	M1A-M1B-M2-B1-B2	5.0	20.0	4.5	19.5	0.64	0.12	0.08	0.09	0.04	0.97	18%	4%	NA	YES	YES	YES		
STACR 2022-HQA2	ACT	HLTV	REMIC	M1A-M1B-M2	5.0	20.0	4.8	19.8	0.45	0.10	0.04	0.00	-	0.59	23%	3%	NA	YES	YES	YES		
STACR 2022-HQA3	ACT	HLTV	REMIC	M1A-M1B-M2	5.0	20.0	4.9	19.9	0.34	0.03	-	0.00	-	0.37		6%	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.