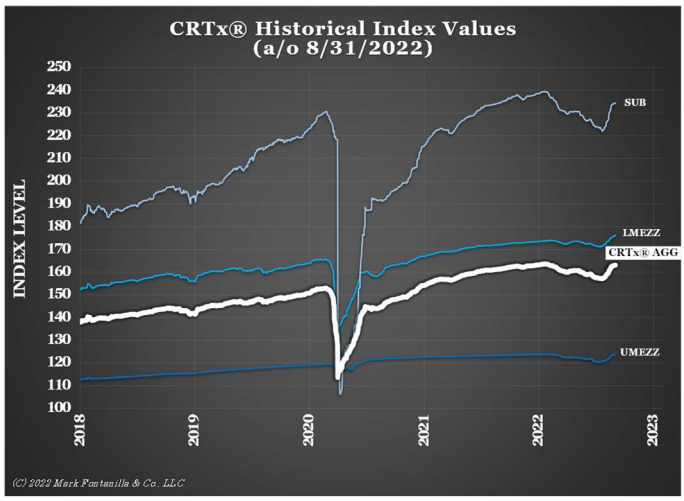
CRTx ®

Credit Risk Transfer Return Tracking Index www.markfontanilla.com/crtx-index

CRTx® Index Rebalancing Update

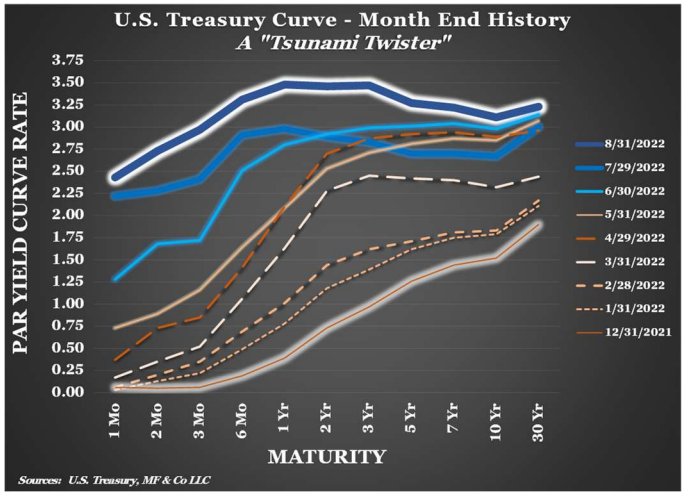
08/31/2022



Sector Musings

The Curve's "Tsunami Twister"

Inflation and the Fed have whipped the curve around this year, roiling bonds with major fixed rate sectors down anywhere between -8.00% to -10.00%+ YTD in total return. The higher 2022 rate environment, led initially by the back end selling off sharply, then the belly swelling behind it, followed by the short-end following higher with Fed tightening – a veritable "tsunami twister", has sent a wave of higher rates rolling down the curve and crashing against the economy. Floaters, especially one-month resets, are one bulkhead shore option that benefits as the rate surf hits the front-end with every passing Fed raise. And there a lot of those in CRT…



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The CRTx® Aggregate gained a substantial 3.21% in August, the 2nd positive month in a row, as the Index continues to recover from the 2022 lows hit in mid-July. With the curve "tsunami twisting", CRT solidly outperformed major fixed income asset classes as rates and IG/HY suffered from higher MoM Rates, and equities moved net-lower for August…

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The CRTx® August basket UPB declines 1.1% MoM to $52.3B as FHLMC's STACR tender retired $1.3B in float, but total market value edges up slightly MoM to $51.9B from 316 securities/121 deals, including the latest CAS and STACR August deal closings…

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August statements indicated mortgage credit performance remains on-trend: late-stage DQs declining, writedowns/shortfalls minimal, speeds steady/slowing, and C/Es stable to slightly improved…

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CRT saw the improving supply technical continue in August…Mortgage credit holds stable, and the Fed seems committed to pushing short rates higher, which means CRT coupons continue to have upside in the near-term…convexity risk has been tempered…As the curve twists adversely for the major fixed rate sectors, the CRT stack still has some relative risk/reward advantages…

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08/31/2022 Index Rebalancing Update *(continued)*

CRTx® Aggregate Index

Aug 2022 CRTx® AGG Tot Ret	+321 bps
Index Month-End Closing Value	162.94
Price Attribution	*+262 bps*
Paydown Attribution	*+4 bps*
Cpn Accr&Pmt Attribution	*+56 bps*
Writedown+Int Shortfall Attribution	*-0.08 bps*
Excess Return	+302 bps
Volatility (Annualized)	1.70%
UPB Paydown %	3.33%
QTD Total Return	**3.49%**
YTD Total Return	**-0.14%**

CRTx® AGG Rebalancing For Sep 2022

As of 8/31/2022

September 2022 Aggregate Basket (w/MoM Δ):

- **Beg. UPB ($B):** **$52.27** -1.1%
- **Beg. Market Value ($B):** **$51.92** +1.5%
- **Constituents:** **316** +5
- **WAvg Constituent Value:** **99.34** +2.53 pts
- **WAvg Constituent Coupon:** **6.34%** +48 bps

Index (+) Entries* & *(-) Exits*

(+) CAS 2022-R08 1M1-1M2-1B1
(+) STACR 2022-HQA3 M1A-M1B-M2
(-) STACR 2015-DNA2 M3

** 2.25% of Beg. Index Market Value*

CRTx® Mkt Val Breakdown: 9/2022 Basket				
Deal Yr	Aggregate	UMEZZ	LMEZZ	SUB
All	100.0%	22.8%	32.3%	44.8%
2022	35.7%	18.8%	8.6%	8.3%
2021	23.0%	4.1%	7.7%	11.2%
2020	10.9%	0.0%	3.0%	7.9%
2019	6.9%	0.0%	1.2%	5.7%
2018	6.5%	0.0%	2.1%	4.3%
2017	7.0%	0.0%	2.7%	4.3%
2016	4.1%	0.0%	2.3%	1.8%
2015	2.8%	0.0%	1.5%	1.3%
<=2014	3.2%	0.0%	3.2%	0.0%

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

Aug 2022 CRTx® RNI™ AGG Tot Ret	+368 bps
Index Month-End Closing Value	171.79
Price Attribution	*+316 bps*
Paydown Attribution	*+1 bps*
Cpn Accr&Pmt Attribution	*+51 bps*
Writedown+Int Shortfall Attribution	*+0 bps*
Excess Return	+348 bps
Volatility (Annualized)	2.29%
UPB Paydown %	0.68%
QTD Total Return	**3.99%**
YTD Total Return	**-3.56%**

CRTx® RNI™ AGG Rebalancing For Sep 2022

As of 8/31/2022

September 2022 Aggregate Basket (w/MoM Δ):

- **Beg. UPB ($B):** **$26.17** +3.9%
- **Beg. Market Value ($B):** **$25.68** +7.4%
- **Constituents:** **95** +6
- **WAvg Constituent Value:** **98.11** +3.17 pts
- **WAvg Constituent Coupon:** **5.82%** +66 bps

Index (+) Entries* & *(-) Exits*

(+) CAS 2022-R08 1M1-1M2-1B1
(+) STACR 2022-HQA3 M1A-M1B-M2
(-)

** 4.56% of Beg. Index Market Value*

CRTx® RNI™ Mkt Val Breakdown: 9/2022 Basket				
Deal Yr	Aggregate	UMEZZ	LMEZZ	SUB
All	100.0%	45.1%	25.0%	29.9%
2022	72.1%	37.9%	17.4%	16.8%
2021	27.9%	7.2%	7.6%	13.1%
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%

08/31/2022 Index Rebalancing Update *(continued)*

Return Roundup

The CRTx® Aggregate gained a substantial 3.21% in August, the 2nd positive month in a row, as the Index continues to recover from the 2022 lows hit in mid-July. With the curve "tsunami twisting", CRT solidly outperformed major fixed income asset classes as rates and IG/HY suffered from higher MoM Rates, and equities moved net-lower for August.

Market value gains were seen virtually across the entire CRT complex, aided by tighter spreads and STACR tender premiums, which boosted returns well in excess of carry. Supply technicals continued to be supportive as FHLMC's tender settlement, along with reduced CAS/STACR deal sizes (and much lower B1/B2 issuance), resulted in negative supply again.

Intra-Complex Highlights

August's MoM CRTx® AGG Index component contributions were positive across the complex:

08/31/2022	M/E RETURN ATTRIBUTION						
CRTx®	Price Return	Cpn Accrual Return	CPN Pmt Return	Pay-down Return	Write-down Retun	Int Shortfall Return	Index Total Return
AGG	2.62%	0.04%	0.52%	0.04%	-0.0003%	-0.0005%	**3.21%**
UMEZZ	1.75%	0.03%	0.32%	0.01%	0.0000%	0.0000%	**2.12%**
LMEZZ	1.59%	0.03%	0.43%	0.11%	0.0000%	0.0000%	**2.15%**
SUB	3.87%	0.05%	0.68%	0.00%	-0.0007%	-0.0012%	**4.61%**

- UMEZZ Index (M1 variants) gained 02.12%, led by STACR M1As/M1Bs, as spreads followed IG tighter, while rising resets pushed CRTs yields cheaper.
- LMEZZ Index (M2s/M3s) returned 2.15%, with the latest STACR tender premiums providing an August lift to seasoned paper, while firmer M2 spreads helped recent issues lead the way.
- SUB Index (B1/B2/Bs) gained a complex-leading 4.61% total return, with recent-vintage higher coupons coming in best for August as supportive technical and wide spreads buoyed demand.
- August saw newer issue outperform seasoned into the CRT spread rally. The CRTx® RNI™ AGG and its major UMEZZ, LMEZZ, and SUB component indexes all beat their broad-market CRTx® counterpart benchmarks for the month.

Index Rebalancing Metrics

The CRTx® August basket UPB declines 1.1% MoM to $52.3B as FHLMC's STACR tender retired $1.3B in float, but total market value edges up slightly MoM to $51.9B from 316 securities/121 deals, including the latest CAS and STACR August deal closings.

Index Composition

The most recent FNMA LLTV (w/o B2) and FHLMC HLTV (w/o B1/B2) deals add ~$1.2B and 6 new constituents, while FHLMC's Aug.-settle tender took out ~$1.3B in 2014-2018 M2/M3 paper.

WAvg constituent market value surged net +2.53 points to $99.34, while LIBOR/SOFR resets rose again MoM, this time +48 bps to 6.34% in aggregate.

CRTx® AGG composition (September 2022 basket):

- **22.8%**↑ (vs 21.6% in Aug) - **UMEZZ (M1/old M2s)**
- **32.3%**↓ (vs 34.8% in Aug) - **LMEZZ (M2/old M3s)**
- **44.8%**↑ (vs 43.6% in Aug) - **SUBs (B/B1/B2s)**

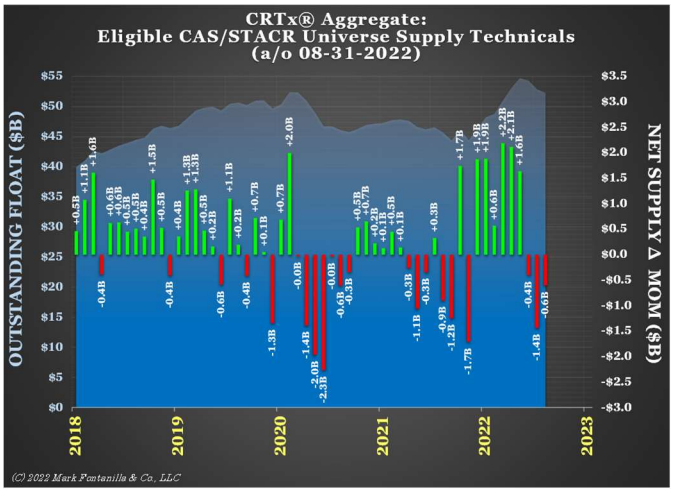
Select Benchmark GSE CRT New Issue Pricing Margins (bps):

Period	Close Dt.	Deal	Index	M1	M2	B1	B2
Post-COVID Onset	**08/12/22**	**STACR 22-HQA3**	**SOFR**	**A 230 B 355**	**535**	**-**	**-**
	08/05/22	**CAS 22-R08**	**SOFR**	**255**	**360**	**560**	**-**
	07/29/22	STACR 22-HQA2	SOFR	A 265 B 400	600	-	-
	07/01/22	CAS 22-R07	SOFR	295	465	680	1,200
	06/17/22	STACR 22-DNA5	SOFR	A 295 B 450	675	750	1,290
	06/10/22	CAS 22-R06	SOFR	275	385	635	1,060
	05/13/22	STACR 22-DNA4	SOFR	A 220 B 335	525	625	1,025
	05/11/22	CAS 22-R05	SOFR	190	300	450	700
	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

08/31/2022 Index Rebalancing Update *(continued)*

Sector Supply

Benchmark GSE CRT float as of August month-end contracted again, this time by ~$0.6B, or -1.34% MoM, to $52.3B in UPB as the latest FHLMC STACR tender retirements and regular paydowns were well in excess of August's issuance, the lowest gross supply month of 2022.



The -$0.6B net supply loss was the 3rd negative month in a row for the benchmark CRT market. Relatively slower speeds, smaller deals, and potential tender activity should likely continue to temper near-term supply as **2022's $19.4B YTD issuance, as of August, has currently surpassed 2021's $14.1B full-year total by ~37%.**

AUGUST 2022 Index-eligible net supply breakdown:

- **UMEZZ +0.601 B (+ 5.33% MoM)**
  - The top of the CRT capital structure continued to grow in proportion to the rest of the stack, and the trend should likely continue given current issuance composition.
- **LMEZZ - 1.309 B (- 7.22% MoM)**
  - The latest STACR tender takes more seasoned M2s/M3s out of the float. With paydowns and smaller issuance dollars, the positive technical should continue.
- **SUB +0.107 B (+ 0.45% MoM)**
  - B-variants are still the largest proportion of CRT outstandings at 44.8%. With recent non-issuance of STACR B1s/B2s and CAS B2s, SUB supply technicals have reverted from growing to relatively more balanced in the near-term.

CRTx® AGG (eligible universe as of 8/31/22)

BENCHMARK GSE CRT SUPPLY TECHNICALS ($MM)							
Month End	Float1	Gross Supply2	Pay-downs1	Write-downs1	Tenders1	Net Supply1	% 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%

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

08/31/2022 Index Rebalancing Update *(continued)*

Latest Deal Performance

August statements indicated mortgage credit performance remains on-trend: late-stage DQs declining, writedowns/ shortfalls minimal, speeds steady/slowing, and C/Es stable to slightly improved.

Credit

- Pre-COVID total DQ %s were modestly mixed, and 180+ bucket DQ #s/$s continued falling around the high single-digits % MoM on average.
- CRTx® 1st Loss Sub-Index (1st loss Bs) writedowns/int. shortfalls for August:
  - **-1.2 bps hit to 1st Loss Sub-Index:**
    - **-7.0 bps to Fxd. Sev. Sub-Index component** (vs. -5.8 bps in July)
    - -2.1 bps to ACT LOSS Sub-Index component (vs. -2.1 bps in July)

Paydowns

- **STACR factor speeds fell marginally, with seasoned reference pools remaining in the low- to high-teens CPR area.**
  - **MTD CRTx® AGG return attribution from paydowns/retirements: +3.9 bps** *(assisted by STACR tender premiums)*
- **The CRTx® AGG's 3.31% August paydown + STACR tender retirement pct. was higher vs. July's paydown + CAS tender pct. of 5.38%:**

Aug Index Paydowns/Tenders	**$1,768M**
UMEZZ (Mostly M1s):	$208M
LMEZZ (M2s/old M3s):	$1,544M
Tender retirements	*$1,258M*
Paydowns	*$286M*
SUB (Bs/B1s/B2s):	$ 16M

Structure

- Class C/Es stable/slightly improved (slower speeds continue to temper de-levering).
- July LIBOR resets +18bps, SOFR resets +67bps. **YTD, LIBOR & SOFR resets are now up 235bps & 213bps, respectively.**
- **15 pre-COVID reference pools continued to fail DQ Tests in August, -1 vs. 16 failing in July.**
- Four 2021/2022 recent-issue STACR deals weren't passing their target C/E tests (ramping-related vs. performance-related) and were locked out in August.

Relative Value Thoughts

Ideas

CRT saw the improving supply technical continue in August, which should persist for the remainder of the year. Mortgage credit holds stable, and the Fed seems committed to pushing short rates higher, which means CRT coupons continue to have upside in the near-term. As speeds stabilize towards historical levels, and prices moving back closer to par, convexity risk has been tempered vs. the past few years. As the curve twists adversely for the major fixed rate sectors, the CRT stack still has some relative risk/reward advantages:

- **Newest Issues:**
  - M1/M1A/M1Bs:
    - Carry/yield now at blended ~40bps/month and now high 4.00%+ static yields with a 2-3yr avg life, a yield/unit duration pick vs. longer duration IG.
  - M2s:
    - Overall net supply continues to trend negative,
    - Carry at ~50bps/month, closer to par, wider 6.50%-ish+ static yields vs. comparable corporates.
  - B1/B2s:
    - Blended and individual yields, to the 5yr issuer call, now in the 7.00%-12.00% range, cheaper vs. low IG/mid to high HY.
    - Still a lot of modest discounts, with coupon upside.
    - U.S. mortgage credit losses/shortfalls remain very muted.
- **Seasoned (Pre-2018 M2/M3s & B/B1/B2s):**
  - Float is continuing to decline, but shorter durations and seasoning provide:
    - Significant and still growing HPA, increasingly large CEs (3x+ vs original CEs), and big coupon margins.
    - LIBOR/SOFR basis still provides incremental coupon advantage as SOFR resets lag in a Fed tightening cycle (still +4bps LIBOR/SOFR basis, with another Fed raise looming).
    - Still some possible tender opportunities (although this is waning in size).

CRTx® Index Suite Total Return Performance: Month-End Matrix 08/31/2022

CRTx® (Credit Risk Transfer Return Tracking Index) Return Summary								
			RETURNS					
		Index	Period			Annualized		
		Level	MTD	QTD	YTD	1-YR	3-YR	As of Date
Aggregate		**162.94**	**3.21%**	**3.49%**	**-0.14%**	**1.03%**	**3.36%**	**8-31-22**
Upper Mezzanine		**123.52**	**2.12%**	2.48%	-0.16%	0.12%	1.50%	8-31-22
Lower Mezzanine		**175.98**	**2.15%**	2.65%	1.46%	2.31%	3.11%	8-31-22
Subordinate		**234.16**	**4.61%**	4.63%	-1.87%	-0.10%	2.71%	8-31-22
Upper/Lower Mezz.		**155.66**	**2.14%**	2.59%	1.08%	1.89%	3.06%	8-31-22
Lower Mezz./Sub.		**184.91**	**3.52%**	3.77%	0.02%	1.23%	3.27%	8-31-22
CAS		**160.65**	**2.37%**	3.04%	0.95%	2.25%	3.60%	8-31-22
STACR		**162.11**	**3.75%**	3.74%	-0.90%	0.18%	3.21%	8-31-22
LLTV		**161.93**	**3.21%**	3.56%	-0.20%	0.94%	3.24%	8-31-22
HLTV		**145.58**	**3.22%**	3.35%	-0.05%	1.18%	3.53%	8-31-22
Upper Mezzanine	**2022**	**99.33**	**2.26%**	2.93%	-0.67%	-	-	8-31-22
	2021	**100.34**	**1.50%**	0.77%	-0.34%	-0.07%	-	8-31-22
	2020		**-**	-	-	-	-	8-31-22
	2019		**-**	-	-	-	-	8-31-22
	2018		**-**	-	-	-	-	8-31-22
	2017		**-**	-	-	-	-	8-31-22
	2016		**-**	-	-	-	-	8-31-22
	2015		**-**	-	-	-	-	8-31-22
	<=2014		**-**	-	-	-	-	8-31-22
Lower Mezzanine	**2022**	**97.70**	**3.90%**	5.20%	-2.30%	-	-	8-31-22
	2021	**100.88**	**3.33%**	3.13%	-2.45%	-1.94%	-	8-31-22
	2020	**102.64**	**1.20%**	1.73%	1.62%	2.03%	-	8-31-22
	2019	**115.16**	**0.58%**	0.87%	1.96%	2.53%	3.22%	8-31-22
	2018	**117.82**	**1.20%**	1.88%	1.97%	3.01%	3.48%	8-31-22
	2017	**132.94**	**0.83%**	1.09%	1.75%	2.83%	3.34%	8-31-22
	2016	**153.11**	**0.84%**	1.21%	3.24%	3.92%	3.69%	8-31-22
	2015	**141.90**	**0.67%**	1.20%	2.79%	3.78%	3.09%	8-31-22
	<=2014	**171.06**	**1.08%**	1.89%	1.88%	3.38%	3.43%	8-31-22
Subordinate	**2022**	**96.38**	**3.85%**	5.87%	-3.62%	-	-	8-31-22
	2021	**99.37**	**8.68%**	7.21%	-7.26%	-5.09%	-	8-31-22
	2020	**95.26**	**3.99%**	2.54%	-1.52%	-0.11%	-	8-31-22
	2019	**135.04**	**3.20%**	4.10%	2.59%	3.63%	4.76%	8-31-22
	2018	**128.58**	**2.88%**	4.21%	0.87%	2.48%	3.91%	8-31-22
	2017	**161.22**	**3.10%**	3.82%	2.10%	4.71%	3.69%	8-31-22
	2016	**201.67**	**0.96%**	0.71%	2.09%	4.50%	2.93%	8-31-22
	2015	**211.91**	**1.74%**	1.04%	1.45%	3.49%	1.28%	8-31-22
	<=2014							8-31-22

CRTx® Index Suite Total Return Performance: Month-End Matrix 08/31/2022 *(Continued)*

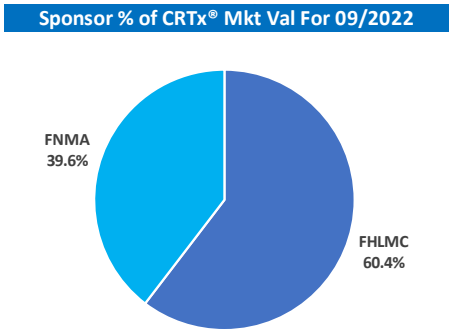
CRTx® RNI™ (Rolling New Issues*) Return Summary							
		RETURNS					
	Index	Period			Annualized		
	Level	MTD	QTD	YTD	1-YR	3-YR	As of Date
Aggregate	**171.79**	**3.68%**	**3.99%**	**-3.56%**	**-2.27%**	**2.92%**	**8-31-22**
Upper Mezzanine	**124.21**	**2.17%**	2.54%	-0.23%	0.04%	1.34%	8-31-22
Lower Mezzanine	**188.13**	**3.60%**	4.05%	-2.07%	-1.62%	2.37%	8-31-22
Subordinate	**242.17**	**6.00%**	6.13%	-6.08%	-3.93%	2.27%	8-31-22
LLTV	**170.66**	**3.60%**	4.25%	-3.91%	-2.50%	2.89%	8-31-22
HLTV	**153.99**	**3.87%**	3.29%	-2.84%	-1.90%	3.16%	8-31-22

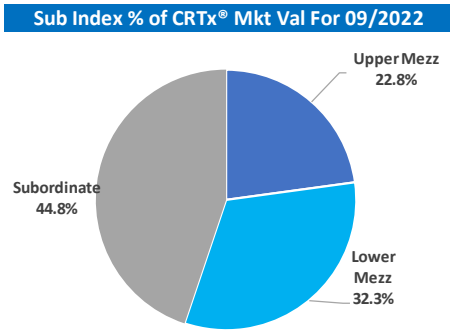
** Most recently issued securities within a "rolling" 12-month window*

CRTx® (Credit Risk Transfer Return Tracking Index) Return Summary							
		RETURNS					
	Index	Period			Annualized		
Special Sub-Indexes:	Level	MTD	QTD	YTD	1-YR	3-YR	As of Date
Fxd Severity - Type I*	*Custom Client Access Only*	**0.76%**	1.66%	1.36%	2.94%	3.83%	8/31/22
Fxd Severity - Type II*		**1.30%**	2.12%	3.00%	4.48%	3.23%	8/31/22
Actual Loss		**3.31%**	3.56%	-0.27%	0.88%	3.44%	8/31/22
CAS Fxd Severity - Type I*		**0.86%**	2.20%	1.18%	2.74%	3.33%	8/31/22
STACR Fxd Severity - Type I*		**0.69%**	1.25%	1.51%	3.12%	4.27%	8/31/22
CAS Fxd Severity - Type II*		**1.43%**	2.37%	2.92%	4.09%	3.33%	8/31/22
STACR Fxd Severity - Type II*		**1.00%**	1.51%	3.21%	5.30%	3.06%	8/31/22
CAS Act. Loss		**2.44%**	3.09%	0.84%	2.15%	3.69%	8/31/22
STACR Act. Loss		**3.84%**	3.82%	-1.01%	0.03%	3.28%	8/31/22

* 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 FHLMC STACR Shelf: M1 Classes (in M1/M2 structures) M1/M2 Classes (in M1/M2/M3 structures)	FNMA CAS Shelf: M2 Classes FHLMC STACR Shelf: M2 Classes (in M1/M2 structures) M3 Classes (in M1/M2/M3 structures)	FNMA CAS Shelf: All B Classes FHLMC STACR 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
	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 08/31/2022 Rebalancing

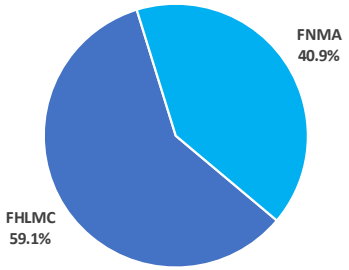




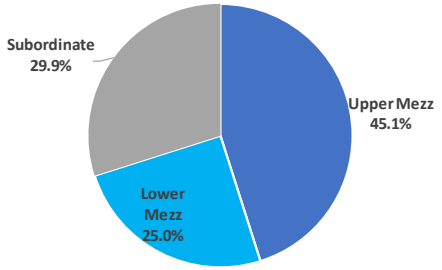
CRTx® AGG								
MONTH END CLOSINGS			BEGINNING MONTH BASKET					
Calculation Month	INDEX VALUE	Month to Date Total Return	# of Constituents	Beg Month UPB	Beg Month Total $ Market Value	WAvg Adj Beg Month Security Mkt Value	WTD Avg Current Coupon	WTD Avg Cpn Margin
Oct-2019	149.04	0.34%	222	50,254,380,617	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	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			316	52,267,272,868	51,923,167,525	99.34	6.34	407

CRTx® RNI™ Index Basket History: Select Metrics As of 08/31/2022 Rebalancing

Sponsor % of CRTx® RNI™ Mkt Val For 09/2022



Sub Index % of CRTx® RNI™ Mkt Val For 09/2022



CRTx® RNI™ 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	WAvg Adj Beg Month Security Mkt Value	WTD Avg Current Coupon	WTD Avg Cpn Margin
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	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			95	26,170,925,042	25,675,201,828	98.11	5.82	365

Latest Deal Performance Metrics: August 2022 Monthly Statements - CAS

CRTx® AGG Index Constituent Performance Data (Aug-2022 Monthly Statements)

Deal	Loss	Pool	Form	Structure	Early Redemption Option (Yrs)	Maturity (Yrs)	Rem. Early Redemp. Option (Yrs)	Rem. Maturity (Yrs)	Delinquency Pipeline 30d	60d	90d	120d	150d	180d+	Total DQ%	MoM % Chg	CPR 1mth	Net Credit Event Test Pass	Min CE Test Pass	Net Loss Test Pass	DQ Test Pass
CAS 2013-C01	FXD1	LLTV	DEBT	M1-M2		10.0		1.2	0.50	0.07	0.03	0.03	0.02	-	0.65	19%	11%	NA	YES	NA	NA
CAS 2014-C01	FXD1	LLTV	DEBT	M1-M2		10.0		1.4	0.47	0.06	0.02	0.02	0.01	-	0.58	-2%	10%	NA	YES	NA	NA
CAS 2014-C02	FXD1	LLTV	DEBT	1M1-1M2		10.0		1.8	0.43	0.07	0.04	0.02	0.02	-	0.58	7%	10%	NA	YES	NA	NA
	FXD1	HLTV	DEBT	2M1-2M2		10.0		1.8	0.62	0.09	0.04	0.01	0.04	-	0.80	-1%	12%	NA	YES	NA	NA
CAS 2014-C03	FXD2	LLTV	DEBT	1M1-1M2		10.0		1.9	0.52	0.08	0.04	0.03	0.01	-	0.68	10%	10%	NA	YES	NA	NA
	FXD2	HLTV	DEBT	2M1-2M2		10.0		1.9	0.65	0.13	0.05	0.04	0.04	-	0.91	7%	12%	NA	YES	NA	NA
CAS 2014-C04	FXD2	LLTV	DEBT	1M1-1M2		10.0		2.3	0.58	0.14	0.06	0.03	0.04	-	0.85	0%	12%	NA	YES	NA	NA
	FXD2	HLTV	DEBT	2M1-2M2		10.0		2.3	0.87	0.15	0.10	0.12	0.05	-	1.29	3%	15%	NA	YES	NA	NA
CAS 2015-C01	FXD2	LLTV	DEBT	1M1-1M2		10.0		2.5	1.15	0.23	0.08	0.08	0.04	-	1.58	0%	12%	NA	YES	NA	NA
	FXD2	HLTV	DEBT	2M1-2M2		10.0		2.5													
CAS 2015-C02	FXD2	LLTV	DEBT	1M1-1M2		10.0		2.8	1.47	0.31	0.11	0.06	0.05	-	2.00	16%	14%	NA	YES	NA	NA
	FXD2	HLTV	DEBT	2M1-2M2		10.0		2.8													
CAS 2015-C03	FXD2	LLTV	DEBT	1M1-1M2		10.0		2.9	1.48	0.22	0.11	0.08	0.09	-	1.98	28%	15%	NA	YES	NA	NA
	FXD2	HLTV	DEBT	2M1-2M2		10.0		2.9													
CAS 2015-C04	ACT	LLTV	DEBT	1M1-1M2	10.0	12.5	3.2	5.7	1.48	0.32	0.16	0.10	0.12	1.30	3.48	6%	14%	NA	YES	NA	YES
	ACT	HLTV	DEBT	2M1-2M2	10.0	12.5	3.2	5.7	2.17	0.51	0.27	0.16	0.12	1.97	5.20	7%	19%	NA	YES	NA	YES
CAS 2016-C01	ACT	LLTV	DEBT	1M1-1M2-1B	10.0	12.5	3.5	6.0	1.39	0.25	0.15	0.09	0.11	1.21	3.20	9%	14%	NA	YES	NA	YES
	ACT	HLTV	DEBT	2M1-2M2	10.0	12.5	3.5	6.0	2.24	0.38	0.14	0.14	0.05	1.43	4.38	8%	17%	NA	YES	NA	YES
CAS 2016-C02	ACT	LLTV	DEBT	1M1-1M2-1B	10.0	12.5	3.6	6.1	1.01	0.17	0.09	0.08	0.04	0.76	2.15	3%	12%	NA	YES	NA	YES
CAS 2016-C03	ACT	LLTV	DEBT	1M1-1M2-1B	10.0	12.5	3.7	6.2	1.01	0.15	0.13	0.07	0.04	0.94	2.34	7%	12%	NA	YES	NA	YES
	ACT	HLTV	DEBT	2M1-2M2-2B	10.0	12.5	3.7	6.2	1.35	0.32	0.17	0.12	0.07	1.35	3.38	3%	17%	NA	YES	NA	YES
CAS 2016-C04	ACT	LLTV	DEBT	1M1-1M2-1B	10.0	12.5	3.9	6.4	1.17	0.23	0.15	0.08	0.07	1.17	2.87	5%	14%	NA	YES	NA	YES
CAS 2016-C05	ACT	HLTV	DEBT	2M1-2M2-2B	10.0	12.5	3.9	6.4	1.71	0.45	0.24	0.14	0.13	1.54	4.21	2%	18%	NA	YES	NA	YES
CAS 2016-C06	ACT	LLTV	DEBT	1M1-1M2-1B	10.0	12.5	4.2	6.7	1.07	0.28	0.13	0.07	0.09	1.03	2.67	-4%	13%	NA	YES	NA	YES
CAS 2016-C07	ACT	HLTV	DEBT	2M1-2M2-2B	10.0	12.5	4.3	6.8	1.65	0.43	0.22	0.15	0.19	1.51	4.15	3%	18%	NA	YES	NA	YES
CAS 2017-C01	ACT	LLTV	DEBT	1M1-1M2-1B1	10.0	12.5	4.4	6.9	1.12	0.17	0.12	0.10	0.08	0.95	2.54	7%	15%	NA	YES	NA	YES
CAS 2017-C02	ACT	HLTV	DEBT	2M1-2M2-2B1	10.0	12.5	4.6	7.1	1.31	0.27	0.16	0.11	0.12	1.24	3.21	2%	17%	NA	YES	NA	YES
CAS 2017-C03	ACT	LLTV	DEBT	1M1-1M2-1B1	10.0	12.5	4.7	7.2	0.91	0.15	0.09	0.08	0.05	0.72	2.00	-2%	14%	NA	YES	NA	YES
CAS 2017-C04	ACT	HLTV	DEBT	2M1-2M2-2B1	10.0	12.5	4.8	7.3	1.27	0.31	0.18	0.13	0.11	1.19	3.19	0%	16%	NA	YES	NA	YES
CAS 2017-C05	ACT	LLTV	DEBT	1M1-1M2-1B1	10.0	12.5	4.9	7.4	0.84	0.18	0.09	0.06	0.07	0.80	2.04	0%	13%	NA	YES	NA	YES
CAS 2017-C06	ACT	LLTV	DEBT	1M1-1M2-1B1	10.0	12.5	5.0	7.5	1.12	0.23	0.13	0.13	0.10	1.19	2.90	0%	14%	NA	YES	NA	YES
	ACT	HLTV	DEBT	2M1-2M2-2B1	10.0	12.5	5.0	7.5	1.96	0.43	0.24	0.17	0.11	1.88	4.79	-2%	19%	NA	YES	NA	YES
CAS 2017-C07	ACT	LLTV	DEBT	1M1-1M2-1B1	10.0	12.5	5.3	7.8	1.32	0.38	0.15	0.16	0.07	1.49	3.57	2%	16%	NA	YES	NA	YES
	ACT	HLTV	DEBT	2M1-2M2-2B1	10.0	12.5	5.3	7.8	1.98	0.55	0.31	0.24	0.18	2.22	5.48	4%	19%	NA	YES	NA	YES
CAS 2018-C01	ACT	LLTV	DEBT	1M1-1M2-1B1	10.0	12.4	5.4	7.9	1.41	0.28	0.13	0.12	0.10	1.38	3.42	6%	17%	NA	YES	NA	YES
CAS 2018-C02	ACT	HLTV	DEBT	2M1-2M2-2B1	10.0	12.5	5.5	8.0	1.68	0.46	0.23	0.23	0.11	1.86	4.57	-2%	20%	NA	YES	NA	YES
CAS 2018-C03	ACT	LLTV	DEBT	1M1-1M2-1B1	10.0	12.5	5.7	8.2	1.33	0.34	0.17	0.10	0.13	1.44	3.51	2%	17%	NA	YES	NA	YES
CAS 2018-C04	ACT	HLTV	DEBT	2M1-2M2-2B1	10.0	12.5	5.8	8.3	1.85	0.55	0.31	0.23	0.14	2.15	5.23	-1%	18%	NA	YES	NA	YES
CAS 2018-C05	ACT	LLTV	DEBT	1M1-1M2-1B1	10.0	12.5	5.9	8.4	1.28	0.32	0.16	0.15	0.13	1.57	3.61	-3%	16%	NA	YES	NA	YES
CAS 2018-C06	ACT	LLTV	DEBT	1M1-1M2-1B1	10.0	12.5	6.1	8.6	1.54	0.43	0.29	0.20	0.12	2.01	4.59	0%	18%	NA	YES	NA	YES
	ACT	HLTV	DEBT	2M1-2M2-2B1	10.0	12.5	6.1	8.6	1.72	0.44	0.26	0.19	0.18	2.40	5.19	-6%	18%	NA	YES	NA	YES
CAS 2018-R07	ACT	LLTV	REMIC	1M1-1M2-1B1	10.0	12.5	6.2	8.7	1.74	0.36	0.30	0.19	0.16	2.34	5.09	-2%	18%	NA	YES	NA	NO
CAS 2019-R01	ACT	HLTV	REMIC	2M1-2M2-2B1	10.0	12.5	6.4	8.9	1.99	0.64	0.45	0.23	0.18	2.71	6.20	-2%	21%	NA	YES	NA	NO
CAS 2019-R02	ACT	LLTV	REMIC	1M1-1M2-1B1	10.0	12.5	6.5	9.0	1.54	0.58	0.29	0.22	0.20	2.04	4.87	-4%	21%	NA	YES	NA	NO
CAS 2019-R03	ACT	LLTV	REMIC	1M1-1M2-1B1	9.9	12.4	6.6	9.1	1.53	0.54	0.26	0.27	0.19	2.26	5.05	-3%	20%	NA	YES	NA	NO
CAS 2019-R04	ACT	HLTV	REMIC	2M1-2M2-2B1	7.0	20.0	3.8	16.8	2.13	0.58	0.47	0.28	0.27	2.94	6.67	-3%	22%	NA	YES	NA	NO
CAS 2019-R05	ACT	LLTV	REMIC	1M1-1M2-1B1	7.0	20.0	3.9	16.9	2.04	0.52	0.28	0.26	0.20	2.51	5.81	2%	18%	NA	YES	NA	NO
CAS 2019-R06	ACT	HLTV	REMIC	2M1-2M2-2B1	7.0	20.0	4.1	17.1	1.65	0.51	0.32	0.18	0.16	2.43	5.25	-6%	21%	NA	YES	NA	NO
CAS 2019-R07	ACT	LLTV	REMIC	1M1-1M2-1B1	7.0	20.0	4.2	17.2	1.28	0.31	0.18	0.08	0.13	1.86	3.84	-6%	16%	NA	YES	NA	NO
CAS 2020-R01	ACT	LLTV	REMIC	1M1-1M2-1B1	7.0	20.0	4.4	17.4	0.93	0.21	0.16	0.11	0.11	1.17	2.69	-6%	15%	NA	YES	NA	YES
CAS 2020-R02	ACT	HLTV	REMIC	2M1-2M2-2B1	7.0	20.0	4.4	17.4	1.31	0.37	0.26	0.17	0.16	1.66	3.93	-2%	16%	NA	YES	NA	NO
CAS 2021-R01	ACT	LLTV	REMIC	1M1-1M2-1B1-1B2	5.0	20.0	4.2	19.2	0.32	0.05	0.02	0.01	0.02	0.05	0.47	-1%	8%	NA	YES	NA	YES
CAS 2021-R02	ACT	HLTV	REMIC	2M1-2M2-2B1-2B2	5.0	20.0	4.3	19.3	0.45	0.09	0.06	0.06	0.05	0.10	0.81	4%	8%	NA	YES	NA	YES
CAS 2021-R03	ACT	LLTV	REMIC	1M1-1M2-1B1-1B2	5.0	20.0	4.3	19.3	0.33	0.04	0.02	0.01	0.02	0.03	0.45	1%	8%	NA	YES	NA	YES
CAS 2022-R01	ACT	LLTV	REMIC	1M1-1M2-1B1-1B2	4.9	19.9	4.3	19.3	0.33	0.06	0.03	0.02	0.03	0.04	0.51	-6%	7%	NA	YES	NA	YES
CAS 2022-R02	ACT	HLTV	REMIC	2M1-2M2-2B1-2B2	5.0	20.0	4.4	19.4	0.43	0.11	0.06	0.05	0.06	0.06	0.77	0%	7%	NA	YES	NA	YES
CAS 2022-R03	ACT	LLTV	REMIC	1M1-1M2-1B1-1B2	5.0	20.0	4.6	19.6	0.31	0.04	0.03	0.02	0.01	-	0.41	-12%	7%	NA	YES	NA	YES
CAS 2022-R04	ACT	LLTV	REMIC	1M1-1M2-1B1-1B2	5.0	20.0	4.6	19.6	0.38	0.06	0.02	0.02	0.02	-	0.50	15%	8%	NA	YES	NA	YES
CAS 2022-R05	ACT	HLTV	REMIC	2M1-2M2-2B1-2B2	5.0	20.0	4.7	19.7	0.42	0.08	0.05	0.03	-	-	0.58	31%	6%	NA	YES	NA	YES
CAS 2022-R06	ACT	LLTV	REMIC	1M1-1M2-1B1-1B2	5.0	20.0	4.8	19.8	0.34	0.05	0.02	-	-	-	0.41	23%	8%	NA	YES	NA	YES
CAS 2022-R07	ACT	LLTV	REMIC	1M1-1M2-1B1-1B2	5.0	20.0	4.8	19.8	0.33	0.03	-	-	-	-	0.36	39%	7%	NA	YES	NA	YES
CAS 2022-R08	ACT	LLTV	REMIC	1M1-1M2-1B1	5.0	20.0	4.9	19.9	0.24	-	-	-	-	-	0.24		7%	NA	YES	NA	YES

Latest Deal Performance Metrics: August 2022 Monthly Statements - STACR

CRTx® AGG Index Constituent Performance Data (Aug-2022 Monthly Statements)

Deal	Loss	Pool	Form	Structure	Early Redemption Option (Yrs)	Maturity (Yrs)	Rem. Early Redemp. Option (Yrs)	Rem. Maturity (Yrs)	Delinquency Pipeline 30d	60d	90d	120d	150d	180d+	Total DQ%	MoM % Chg	CPR 1mth	Net Credit Event Test Pass	Min CE Test Pass	Cum Net Loss Test Pass	DQ Test Pass
STACR 2013-DN1	FXD1	LLTV	DEBT	M1-M2		10.0		0.9	0.42	0.06	0.03	0.01	0.02	-	0.54	13%	9%	YES	YES	NA	NA
STACR 2013-DN2	FXD1	LLTV	DEBT	M1-M2		10.0		1.3	0.44	0.07	0.03	0.01	0.01	-	0.56	6%	8%	YES	YES	NA	NA
STACR 2014-DN1	FXD1	LLTV	DEBT	M1-M2-M3		10.0		1.5	0.52	0.08	0.04	0.03	0.03	-	0.70	17%	10%	YES	YES	NA	NA
STACR 2014-DN2	FXD1	LLTV	DEBT	M1-M2-M3		10.1		1.7	0.53	0.11	0.08	0.04	0.03	-	0.79	-5%	10%	YES	YES	NA	NA
STACR 2014-DN3	FXD2	LLTV	DEBT	M1-M2-M3		10.0		2.0	1.19	0.28	0.06	0.08	0.08	0.27	1.96	2%	10%	YES	YES	NA	NA
STACR 2014-DN4	FXD2	LLTV	DEBT	M1-M2-M3		10.0		2.2	1.14	0.27	0.10	0.12	0.11	0.32	2.06	6%	10%	YES	YES	NA	NA
STACR 2014-HQ1	FXD2	HLTV	DEBT	M1-M2-M3		10.0		2.0													
STACR 2014-HQ2	FXD2	HLTV	DEBT	M1-M2-M3		10.0		2.1	0.74	0.16	0.06	0.07	0.05	0.16	1.24	4%	10%	YES	YES	NA	NA
STACR 2014-HQ3	FXD2	HLTV	DEBT	M1-M2-M3		10.0		2.2													
STACR 2015-DN1	FXD2	LLTV	DEBT	M1-M2-M3-B		10.0		2.4	1.11	0.26	0.19	0.13	0.06	0.27	2.02	6%	11%	YES	YES	NA	NA
STACR 2015-HQ1	FXD2	HLTV	DEBT	M1-M2-M3-B		10.0		2.6	1.73	0.33	0.10	0.07	0.08	0.39	2.70	7%	13%	YES	YES	NA	NA
STACR 2015-HQ2	FXD2	HLTV	DEBT	M1-M2-M3-B		10.0		2.8	0.68	0.15	0.05	0.07	0.04	0.16	1.15	6%	10%	YES	YES	NA	NA
STACR 2015-DNA1	ACT	LLTV	DEBT	M1-M2-M3-B	10.0	12.5	2.7	5.2	0.45	0.10	0.05	0.06		0.27	0.93	4%	9%	NA	YES	YES	YES
STACR 2015-DNA2	ACT	LLTV	DEBT	M1-M2-M3-B	10.0	12.5	2.8	5.3	1.19	0.32	0.15	0.19		0.82	2.67	5%	10%	NA	YES	YES	YES
STACR 2015-DNA3	ACT	LLTV	DEBT	M1-M2-M3-B	10.0	12.5	3.2	5.7	1.02	0.22	0.12	0.16		0.86	2.38	0%	10%	NA	YES	YES	YES
STACR 2015-HQA1	ACT	HLTV	DEBT	M1-M2-M3-B	10.0	12.5	3.1	5.6	1.57	0.47	0.21	0.22		1.48	3.95	1%	13%	NA	YES	YES	YES
STACR 2015-HQA2	ACT	HLTV	DEBT	M1-M2-M3-B	10.0	12.5	3.3	5.8	1.57	0.39	0.20	0.32		1.43	3.91	5%	12%	NA	YES	YES	YES
STACR 2016-DNA1	ACT	LLTV	DEBT	M1-M2-M3-B	10.0	12.5	3.4	5.9	0.81	0.19	0.09	0.11		0.77	1.97	1%	10%	NA	YES	YES	YES
STACR 2016-DNA2	ACT	LLTV	DEBT	M1-M2-M3-B	10.0	12.5	3.7	6.2	0.94	0.29	0.11	0.18		1.09	2.61	-1%	10%	NA	YES	YES	YES
STACR 2016-DNA3	ACT	LLTV	DEBT	M1-M2-M3-B	10.0	12.5	3.8	6.3	1.14	0.24	0.19	0.21		1.00	2.78	1%	12%	NA	YES	YES	YES
STACR 2016-DNA4	ACT	LLTV	DEBT	M1-M2-M3-B	10.0	12.5	4.1	6.6	1.30	0.30	0.12	0.21		0.99	2.92	7%	10%	NA	YES	YES	YES
STACR 2016-HQA1	ACT	HLTV	DEBT	M1-M2-M3-B	10.0	12.5	3.6	6.1	1.41	0.33	0.12	0.16		1.38	3.40	4%	13%	NA	YES	YES	YES
STACR 2016-HQA2	ACT	HLTV	DEBT	M1-M2-M3-B	10.0	12.5	3.8	6.3	1.57	0.37	0.21	0.24		1.38	3.77	9%	11%	NA	YES	YES	YES
STACR 2016-HQA3	ACT	HLTV	DEBT	M1-M2-M3-B	10.0	12.5	4.1	6.6	1.53	0.46	0.17	0.18		1.50	3.84	5%	11%	NA	YES	YES	YES
STACR 2016-HQA4	ACT	HLTV	DEBT	M1-M2-M3-B	10.0	12.5	4.2	6.7	1.79	0.38	0.27	0.38		1.68	4.50	5%	12%	NA	YES	YES	YES
STACR 2017-DNA1	ACT	LLTV	DEBT	M1-M2-B1-B2	10.0	12.5	4.4	6.9	1.00	0.29	0.11	0.14		0.93	2.47	0%	10%	NA	YES	YES	YES
STACR 2017-DNA2	ACT	LLTV	DEBT	M1-M2-B1-B2	10.0	12.5	4.7	7.2	0.96	0.22	0.12	0.15		0.86	2.31	4%	10%	NA	YES	YES	YES
STACR 2017-DNA3	ACT	LLTV	DEBT	M1-M2-B1	10.0	12.5	5.1	7.6	0.93	0.22	0.11	0.15		0.88	2.29	-2%	9%	NA	YES	YES	YES
STACR 2017-HQA1	ACT	HLTV	DEBT	M1-M2-B1-B2	10.5	12.5	5.0	7.0	1.50	0.37	0.22	0.20		1.33	3.62	0%	13%	NA	YES	YES	YES
STACR 2017-HQA2	ACT	HLTV	DEBT	M1-M2-B1	10.0	12.5	4.8	7.3	1.42	0.36	0.22	0.25		1.28	3.53	5%	11%	NA	YES	YES	YES
STACR 2017-HQA3	ACT	HLTV	DEBT	M1-M2-B1	10.0	12.5	5.2	7.7	1.49	0.41	0.24	0.17	0.19	1.71	4.21	-1%	12%	NA	YES	YES	YES
STACR 2018-DNA1	ACT	LLTV	DEBT	M1-M2-B1	10.0	12.5	5.4	7.9	1.37	0.32	0.16	0.17		1.41	3.43	2%	12%	NA	YES	YES	YES
STACR 2018-HQA1	ACT	HLTV	DEBT	M1-M2-B1	10.0	12.5	5.6	8.1	1.73	0.58	0.27	0.23	0.16	1.99	4.96	1%	14%	NA	YES	YES	YES
STACR 2018-DNA2	ACT	LLTV	TRUST	M1-M2-B1	10.0	12.5	5.8	8.3	1.02	0.28	0.13	0.19		1.03	2.65	-4%	11%	NA	YES	YES	YES
STACR 2018-DNA3	ACT	LLTV	TRUST	M1-M2-B1-B2	10.0	30.0	6.1	26.1	1.29	0.34	0.18	0.09	0.11	1.42	3.43	2%	11%	NA	YES	YES	YES
STACR 2018-HQA2	ACT	HLTV	TRUST	M1-M2-B1-B2	9.9	30.0	6.1	26.2	1.65	0.54	0.25	0.21	0.17	1.75	4.57	0%	14%	NA	YES	YES	YES
STACR 2019-DNA1	ACT	LLTV	TRUST	M1-M2-B1-B2	10.0	30.0	6.4	26.4	1.42	0.48	0.25	0.11	0.17	1.63	4.06	-4%	14%	NA	YES	YES	YES
STACR 2019-DNA2	ACT	LLTV	TRUST	M1-M2-B1-B2	10.0	30.0	6.6	26.6	1.59	0.47	0.19	0.31		1.91	4.47	1%	15%	NA	YES	YES	YES
STACR 2019-DNA3	ACT	LLTV	TRUST	M1-M2-B1-B2	10.0	30.0	6.9	26.9	1.47	0.31	0.17	0.34		1.40	3.69	-2%	13%	NA	YES	YES	YES
STACR 2019-HQA1	ACT	HLTV	TRUST	M1-M2-B1-B2	9.9	30.0	6.4	26.5	2.14	0.58	0.31	0.32	0.16	2.37	5.88	6%	13%	NA	YES	YES	YES
STACR 2019-HQA2	ACT	HLTV	TRUST	M1-M2-B1-B2	10.0	30.0	6.7	26.7	2.19	0.67	0.39	0.50		2.48	6.23	3%	15%	NA	YES	YES	YES
STACR 2019-HQA3	ACT	HLTV	TRUST	M1-M2-B1-B2	10.0	30.0	7.1	27.1	2.04	0.60	0.25	0.43		2.25	5.57	1%	16%	NA	YES	YES	NO
STACR 2019-DNA4	ACT	LLTV	REMIC	M1-M2-B1-B2	10.0	30.9	7.2	28.0	1.27	0.29	0.15	0.18		1.34	3.23	1%	13%	NA	YES	YES	NO
STACR 2019-HQA4	ACT	HLTV	REMIC	M1-M2-B1-B2	10.0	30.0	7.3	27.3	1.84	0.65	0.27	0.42		2.28	5.46	3%	15%	NA	YES	YES	NO
STACR 2020-DNA1	ACT	LLTV	REMIC	M1-M2-B1-B2	10.0	30.0	7.4	27.4	1.07	0.28	0.14	0.09	0.10	1.06	2.74	-3%	13%	NA	YES	YES	NO
STACR 2020-DNA2	ACT	LLTV	REMIC	M1-M2-B1-B2	10.0	30.0	7.5	27.5	0.78	0.20	0.09	0.14		0.76	1.97	-5%	10%	NA	YES	YES	YES
STACR 2020-DNA3	ACT	LLTV	REMIC	M1-M2-B1-B2	10.0	30.0	7.8	27.9	0.58	0.12	0.07	0.09		0.42	1.28	-14%	9%	NA	YES	YES	YES
STACR 2020-DNA4	ACT	LLTV	REMIC	M1-M2-B1-B2	10.0	30.0	8.0	28.0	0.62	0.13	0.07	0.06		0.42	1.30	-11%	10%	NA	YES	YES	YES
STACR 2020-DNA5	ACT	LLTV	REMIC	M1-M2-B1-B2	10.0	30.0	8.2	28.2	0.49	0.07	0.05	0.07		0.27	0.95	2%	9%	NA	YES	YES	YES
STACR 2020-DNA6	ACT	LLTV	REMIC	M1-M2-B1-B2	10.0	30.0	8.3	28.4	0.48	0.06	0.03	0.02	0.02	0.20	0.81	3%	8%	NA	YES	YES	YES
STACR 2020-HQA1	ACT	HLTV	REMIC	M1-M2-B1-B2	10.0	30.0	7.4	27.4	1.43	0.49	0.21	0.15	0.13	1.70	4.11	-1%	13%	NA	YES	YES	NO
STACR 2020-HQA2	ACT	HLTV	REMIC	M1-M2-B1-B2	10.0	30.0	7.6	27.6	1.19	0.28	0.18	0.22		1.18	3.05	1%	12%	NA	YES	YES	NO
STACR 2020-HQA3	ACT	HLTV	REMIC	M1-M2-B1-B2	10.0	30.0	7.9	27.9	0.71	0.18	0.08	0.15		0.51	1.63	-6%	11%	NA	YES	YES	YES
STACR 2020-HQA4	ACT	HLTV	REMIC	M1-M2-B1-B2	10.0	30.0	8.1	28.1	0.63	0.16	0.08	0.07	0.06	0.46	1.46	-9%	10%	NA	YES	YES	YES
STACR 2020-HQA5	ACT	HLTV	REMIC	M1-M2-B1-B2	10.0	30.0	8.3	28.3	0.61	0.12	0.08	0.09		0.37	1.27	-1%	10%	NA	YES	YES	YES
STACR 2021-DNA1	ACT	LLTV	REMIC	M1-M2-B1-B2	10.0	30.0	8.4	28.4	0.39	0.04	0.03	0.04		0.15	0.65	-2%	8%	NA	YES	YES	YES
STACR 2021-DNA2	ACT	LLTV	REMIC	M1-M2-B1-B2		12.5		11.0	0.33	0.05	0.03	0.04		0.12	0.57	-5%	7%	NA	YES	YES	YES
STACR 2021-DNA3	ACT	LLTV	REMIC	M1-M2-B1-B2		12.5		11.2	0.35	0.05	0.03	0.05		0.10	0.58	7%	6%	NA	YES	YES	YES
STACR 2021-DNA5	ACT	LLTV	REMIC	M1-M2-B1-B2		12.5		11.4	0.36	0.05	0.02	0.03		0.09	0.55	10%	6%	NA	YES	YES	YES
STACR 2021-DNA6	ACT	LLTV	REMIC	M1-M2-B1-B2	5.0	20.0	4.2	19.2	0.38	0.06	0.02	0.01	0.02	0.05	0.54	10%	6%	NA	NO	YES	YES
STACR 2021-DNA7	ACT	LLTV	REMIC	M1-M2-B1-B2	5.0	20.0	4.3	19.3	0.48	0.06	0.04	0.02	0.02	0.08	0.70	9%	6%	NA	NO	YES	YES
STACR 2021-HQA1	ACT	HLTV	REMIC	M1-M2-B1-B2		12.5		11.0	0.53	0.11	0.06	0.04	0.04	0.30	1.08	5%	9%	NA	YES	YES	YES

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

CRTx® AGG Index Constituent Performance Data (Aug-2022 Monthly Statements)

Deal	Loss	Pool	Form	Structure	Early Redemption Option (Yrs)	Maturity (Yrs)	Rem. Early Redemp. Option (Yrs)	Rem. Maturity (Yrs)	Delinquency Pipeline 30d	60d	90d	120d	150d	180d+	Total DQ%	MoM % Chg	CPR 1mth	Net Credit Event Test Pass	Min CE Test Pass	Cum Net Loss Test Pass	DQ Test Pass
STACR 2021-HQA2	ACT	HLTV	REMIC	M1-M2-B1-B2		12.5		**11.3**	0.46	0.09	0.05	0.06		0.23	**0.89**	10%	6%	NA	YES	YES	YES
STACR 2021-HQA3	ACT	HLTV	REMIC	M1-M2-B1-B2	5.0	20.0	**4.1**	**19.1**	0.44	0.10	0.05	0.10		0.17	**0.86**	10%	6%	NA	YES	YES	YES
STACR 2021-HQA4	ACT	HLTV	REMIC	M1-M2-B1-B2	5.0	20.1	**4.3**	**19.3**	0.50	0.10	0.05	0.08		0.13	**0.86**	15%	6%	NA	NO	YES	YES
STACR 2022-DNA1	ACT	LLTV	REMIC	M1A-M1B-M2-B1-B2	5.0	20.0	**4.4**	**19.4**	0.53	0.07	0.04	0.06		0.06	**0.76**	25%	6%	NA	YES	YES	YES
STACR 2022-DNA2	ACT	LLTV	REMIC	M1A-M1B-M2-B1-B2	5.0	20.1	**4.5**	**19.5**	0.48	0.08	0.05	0.07		0.03	**0.71**	16%	6%	NA	YES	YES	YES
STACR 2022-DNA3	ACT	LLTV	REMIC	M1A-M1B-M2-B1-B2	5.0	20.0	**4.7**	**19.7**	0.52	0.09	0.03	0.05		-	**0.69**	41%	6%	NA	YES	YES	YES
STACR 2022-DNA4	ACT	LLTV	REMIC	M1A-M1B-M2-B1-B2	5.0	20.0	**4.8**	**19.8**	0.49	0.07	0.04	0.02		-	**0.62**	24%	5%	NA	NO	YES	YES
STACR 2022-DNA5	ACT	LLTV	REMIC	M1A-M1B-M2-B1-B2	5.0	20.0	**4.8**	**19.8**	0.52	0.06	0.03	0.00		-	**0.61**	49%	5%	NA	YES	YES	YES
STACR 2022-HQA1	ACT	HLTV	REMIC	M1A-M1B-M2-B1-B2	5.0	20.0	**4.6**	**19.6**	0.54	0.12	0.06	0.08		0.02	**0.82**	22%	4%	NA	YES	YES	YES
STACR 2022-HQA2	ACT	HLTV	REMIC	M1A-M1B-M2	5.0	20.0	**4.9**	**19.9**	0.43	0.05	-	-		-	**0.48**		7%	NA	YES	YES	YES

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