

The GSE CRT market reopens post COVID-19 disruption: A new normal? Or more troubles on the horizon?

A review of COVID-19 GSE CRT market disruptions, an update of market trends/new issuance, and implications of FHFA's re-proposed capital rule

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Recent financial market disruptions, caused by the rapid spread of and response to COVID-19, led to the largest gap between GSE CRT issuances since the STACR and CAS programs were created in 2013.¹ During this new issue pause, secondary market volume and CRT bond prices exhibited marked signs of stress. This led to some questioning the long-term viability of GSE CRT.

During the depths of the disruption, in May 2020, Milliman analyzed the state of the CRT market and contemplated beneficial changes to CRT programs going forward in our article, [In it for the long-haul: A case for the expanded use of the GSEs' reinsurance CRT executions](#). Since publication, the CRT market reopened and multiple large new issuances were closed in July 2020—albeit with some notable credit enhancement and pricing changes.

Using up-to-date secondary market and issuance data,² this article takes a closer look at the COVID-19 disruption's impact on the GSE CRT market—including subsequent changes to new issuance deal structure, pricing, and capital markets versus reinsurance allocation. Post-COVID-19 GSE CRT issuances have featured increased credit enhancement for issued tranches, increased pricing levels, tightened reinsurance versus capital markets pricing, and some changes in the reinsurance versus capital markets allocation.

Despite the market reaching a new steady-state post COVID-19 disruption, the recent Federal Housing Finance Agency (FHFA) re-proposed capital rule for the GSEs adds a new layer of uncertainty in the long-term state of GSE CRT. Two major takeaways from the more than 400-page re-proposed 2020 rule are: 1) the GSEs would be required to hold more capital than proposed under the 2018 rule, and 2) GSE CRT issuances would receive significantly lower capital credit than proposed in the 2018 rule. If this rule were to be enacted, it would almost certainly lead to lower CRT issuance volume in the future.

Specifically, this article:

- Provides statistics on recent GSE CRT secondary market price movements
- Compares new issuances for both GSE CRT capital markets executions and reinsurance executions
- Provides a summary of FHFA's 2020 re-proposed capital rule impact on GSE CRT

¹ 112-day gap between the closing of STACR 2020-HQA2 (March 18, 2020) and STACR 2020-DNA3 (July 8, 2020).

² Fannie Mae has not issued any CRT transactions since CAS Series 2020-SBT1 and CIRT-FE-2020-1/2, both pre COVID disruption.

COVID-19 GSE CRT market disruptions

The economic and financial market stress as a result of the COVID-19 pandemic wreaked havoc on CAS/STACR secondary market trading volume and market valuations. We provide a brief overview of the disruption, subsequent recovery, and remaining uncertainties as a backdrop, prior to discussing the new issuance changes that emerged in 3Q 2020.

COVID-19 IMPACT ON THE CRT SECONDARY MARKET

Financial markets experienced increased volatility and sharp declines in asset valuations as a result of the COVID-19 pandemic's effect on the United States; for instance, the S&P 500 Index dropped by 34% from mid-February to mid-March. However, many of these sell-offs proved temporary as assets regained the majority of value lost as of September 2020. The S&P 500 Index fully recovered from mid-March lows as-of mid-August.³ The CRT bond market followed a largely similar pattern; however, there were several notable differences.⁴

One measure to quantify market disruptions' impact on fixed-income securities is to view the change in the value of Markit credit indices. These indices track different segments of the debt markets (e.g., corporate) across various regions (e.g., North America) and are referenced in various tradable products such as credit default swaps (CDS) and exchange-listed products.⁵ CDX.NA.HY (CDX HY) is an index based on a basket of 100 liquid North American (NA) single-name entities with high-yield credit ratings. Comparing this index over 2020 to date serves as a way to measure COVID-19's impact on the market value of corporate debt.

Figure 1 compares CDX HY to Vista Data Services' CRT 2017 M Index. Vista's CRT 2017 M Index aggregates all standard CAS and STACR M2 securities issued in 2017. Vista's CRT Index is constructed based on weighting market pricing and other elements of each security by the current amount outstanding of each security. This index serves to view the impact of COVID-19 on CRT market trading.

Figure 1 shows that the CRT 2017 M experienced a swift and pronounced widening relative to CDX HY on approximately March 19, 2020. One driver of the divergence between the high-yield index and the CRT 2017 M Index was the bid-ask spread for CRT bonds. Bid-ask spreads widened considerably in late March. As the CRT market is smaller and less liquid relative to corporate debt, many of the trades were completed without the dealers absorbing the volumes into their positions—more specifically, dealers would try to find a party to take the other side of the trade before executing, as opposed to executing and then finding a party to take the other side of the trade. In Milliman's previous analysis, we discussed that the CRT market's relatively stronger adverse reaction—in terms of price and liquidity—to a broader market stress may lead to important consequences going forward (e.g., lack of a well-functioning secondary market can threaten the viability of primary CRT issuances). Although this dynamic proved temporary in this instance, it underscored potential CRT market issues in times of stress.⁶

Despite the broader market disruption's outsized impact on the CRT market, extending Figure 1 through August 31, 2020, we can find that this decoupling was temporary and the two series were tracking closely from May 2020 forward.⁷ Although these observed market dynamics should not be ignored or forgotten, the CRT market proved resilient and trading volumes and bond prices largely recovered. This recovery in secondary market valuations was a precursor to new issuances returning to the market in 3Q 2020.

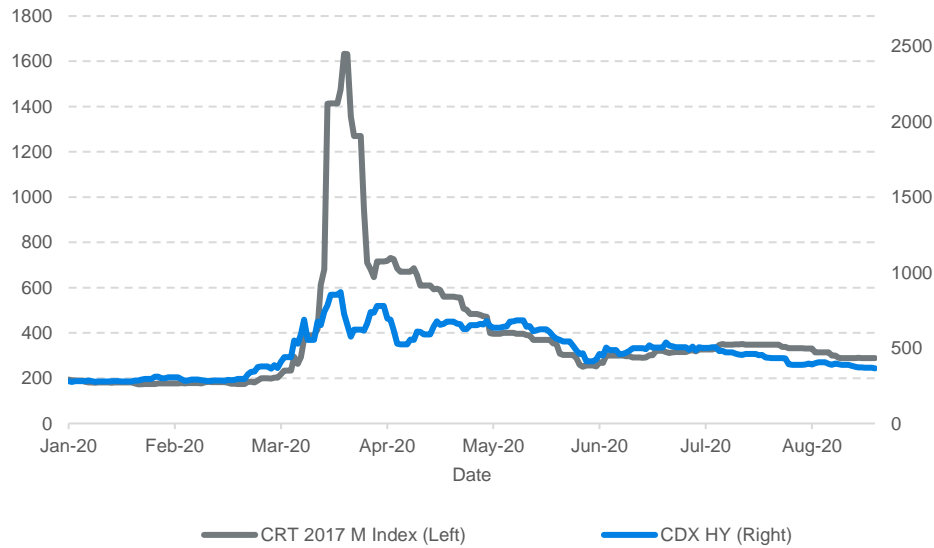
³ Federal Reserve Economic Data; S&P 500, Index, Daily, Not Seasonally Adjusted. Retrieved September 15, 2020, from <https://fred.stlouisfed.org/series/SP500>.

⁴ These dynamics were explored in-detail in our prior analysis.

⁵ Markit (August 2016). Markit CDX High Yield and Markit CDX Investment Grade Index Rules. Retrieved September 15, 2020, from <https://www.markit.com/Company/Files/DownloadFiles?CMSID=1ec08990b6814532ad075e242b34160d>.

⁶ On April 9, the Federal Reserve announced expanded plans to buy corporate bonds both at an investment-grade level as well as high-yield. The Fed does not buy CRT and, thus, did not add to the liquidity to the CRT market—partially contributing to the observed differences from HY. See <https://www.federalreserve.gov/newsevents/pressreleases/monetary20200409a.htm>.

⁷ CRT securities have numerous complex analytical and market-driven pricing drivers that may contribute to the patterns observed in this paper. Changing prepayment expectations are a major driver of price fluctuations. This paper focuses on a subset of pricing drivers and highlights the recent extraordinary market dynamics.

FIGURE 1: CRT M INDEX (DISCOUNT MARGIN) VERSUS CDX HY INDICES, 2020 TO DATE

Source: Vista Data Services, Markit CDX HY, as of August 31, 2020.

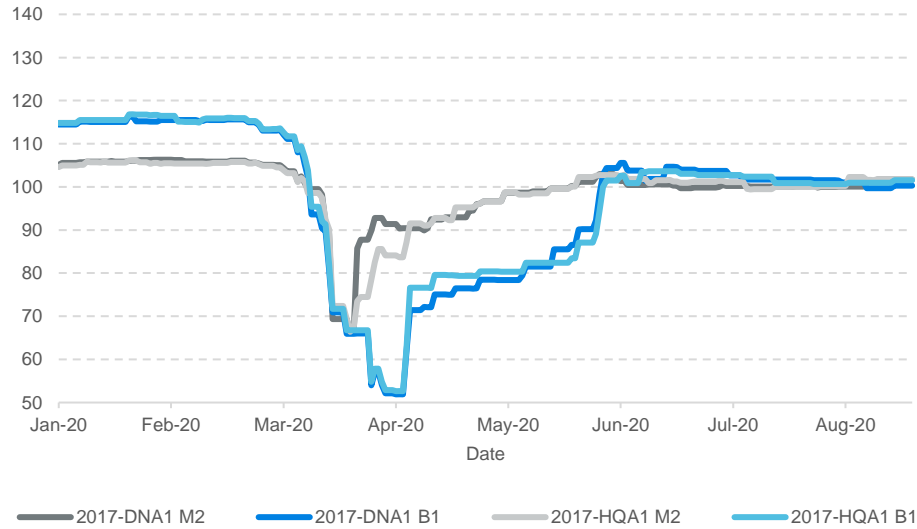
EVALUATING FUNDAMENTAL VALUE

In our [prior analysis](#), we showed that the values of relatively well-traded 2017 low and high loan-to-value (LTV) transactions—STACR 2017-DNA1 and STACR 2017-HQA1, respectively—fell precipitously during the market disruption, as shown in Figure 2. By March 25, 2020, both the B1 and M2 tranches of the 2017-DNA1 and 2017-HQA1 deals were trading in the mid-60s. Using Milliman’s M-PIRe CRT analytics platform, we evaluated the probability of principal loss given performance to date and alternative future economic scenarios. M-PIRe is Milliman’s turnkey platform for evaluating and analyzing mortgage credit risk transfer transactions, including single-family bond executions, reinsurance executions, multifamily transactions, and private mortgage insurance transactions.

As of an April 27, 2020 evaluation date, under Moody’s Baseline, S3, and S4 scenarios, neither B1 nor M2 were estimated to incur principal write-downs through maturity. Under M-PIRe’s Monte Carlo simulation model, which produces more severe stresses than Moody’s deterministic scenarios, the B1 tranches were approximately exhausted at the 99th percentile. From this, we surmised that bond prices contained a high liquidity premium, leading to much lower valuations than would be implied via a reasonable fundamental value analysis.

Extending Figure 2 through August 31, 2020, we find that prices for the B1 and M2 have generally recovered to dollar prices of 100 to 102. This valuation is much more closely aligned to M-PIRe’s implied fundamental value across both deterministic scenarios and stochastic distribution.

FIGURE 2: STACR 2017-DNA1 AND 2017-HQA1 DOLLAR PRICES, 2020 TO DATE



Source: Vista Data Services as of August 31, 2020.

REMAINING UNCERTAINTY

Despite the market price recovery, there remains uncertainty in the GSE CRT market around 1) forbearance-related delinquencies and their impact on “fixed severity” CRT transactions and 2) the ultimate claim rate on loans in forbearance-related delinquency across all transactions.

To assist borrowers suffering from the economic impacts of COVID-19 related shutdowns, the CARES Act requires the allowance of penalty-free forbearance for all federally and GSE-backed mortgages.⁸ Forbearance allows borrowers to suspend mortgage payments for a specified number of months—up to 12 months in the GSE’s COVID-19 forbearance program. Forbearance is a tool to help borrowers to avoid foreclosure when suffering from temporary financial setbacks; the goal of forbearance is for the borrower to shore up their finances and/or employment situation and repay the missed mortgage payments. Under these recent forbearance programs, mortgage servicers were required to report borrowers’ mortgage accounts as “current” to credit bureaus while in forbearance, thus not harming the borrowers’ credit. However, loans in forbearance were still treated as delinquent when reporting on CRT reference pools. Nuances such as these created uncertainty with respect to how forbearance would impact outstanding CRT transactions.

From 2013 through 2015, most GSE CRT transactions accounted for losses on the underlying reference pool following a fixed loss severity schedule, as opposed to tracking and accounting for the actual loss on each resolved loan. Credit events were generally recognized when a loan became 180 days delinquent; the corresponding loss severity applied to credit events was determined based on prescribed schedules. Until recently, ultimate credit events on “fixed severity” CRT transactions was thought of as relatively similar to “actual severity” transactions, as a large percentage of borrowers that become 180 days delinquent ultimately transition to foreclosure.

However, in the current environment, the reporting and loss calculation rules for some past CRT issuances—coupled with increased delinquency levels as a result of COVID-19 and related forbearance programs—can cause write-downs on the fixed severity CRT bonds. As the CARES Act forbearance programs allow for an initial 180-day forbearance period followed by an extension up to another 180 days, the forbearance programs increase the likelihood of credit events for fixed severity transactions. This led to many industry participants questioning whether this situation was truly the intent of the fixed severity credit event trigger, as it is likely that

⁸ Consumer Financial Protection Bureau. Learn about mortgage relief options and protections. Retrieved September 24, 2020, from <https://www.consumerfinance.gov/coronavirus/mortgage-and-housing-assistance/mortgage-relief/>.

Fannie Mae. Our Approach to COVID-19. Retrieved September 24, 2020, from <https://www.fanniemae.com/about-us/our-approach-covid-19>.

Freddie Mac. Our COVID-19 Response. Retrieved September 24, 2020, from <http://www.freddiemac.com/about/covid-19.html>.

many of the borrowers in forbearance (initiated/granted by the GSEs themselves) will resume paying at some point in time, leading to no actual losses. This also led to prices for fixed severity CRT bonds in the secondary market to trade at a larger discount than actual severity bonds.

Mitigating the situation somewhat, Freddie Mac deemed that COVID-19 related forbearance shall be treated as a natural disaster—which allowed extended grace periods to take effect in some fixed severity transactions with specific language regarding natural disaster.⁹ However, transactions that did not include such language on natural disaster grace periods began receiving ratings reviews with some being put on negative watch and ultimately downgraded.¹⁰ Despite the majority of transactions, as well as all new issuances, being actual severity transactions, this dynamic led to uncertainty on how the COVID-19 pandemic would ultimately impact GSE CRT performance.

Forbearances also impacted actual severity CRT deals, with delinquencies rising to their highest to-date levels on many transactions. Figure 3 shows the impact of COVID-19 and forbearances on delinquency rates for recent Freddie Mac STACR/ACIS transactions.

Large levels of delinquencies in CRT reference pools have two main impacts to the bonds themselves: 1) causing transaction Delinquency Tests to fail and preventing structure amortization, and 2) increasing the likelihood of principal write-downs. Figure 3 shows the share of 30+ day delinquent loan share across STACR/ACIS 2018-DNA3 through 2020-HQA3 transactions as of March 2020 and August 2020 to visualize the impact of the COVID-19 pandemic—and associated forbearance programs—on transaction delinquency levels.

Freddie Mac STACR/ACIS transactions control the allocation of prepayments to the issued tranches via various conditions (e.g., Minimum Credit Enhancement Test, Cumulative Net Loss Test, Delinquency Test). The Delinquency Test in particular prevents the issued tranches from receiving prepayments when the average of the 60+ days delinquent unpaid principal balance (UPB) for the trailing six periods is greater than 50% of the sum of the B3 through M1 tranche balance. Current delinquency levels cause the Delinquency Test to fail for the majority of STACR/ACIS transactions 2018-DNA3 through 2020-HQA2. This has the impact of extending the weighted average life (WAL) of the issued tranches and increasing the uncertainty around when (and if) investors will be repaid their principal.

In addition to extending the WAL of the transactions, high delinquency levels also result in a higher probability of credit events and potential principal write downs if the borrowers ultimately transition to foreclosure/claim (do not cure). Principal write downs are allocated sequentially from the B3 tranche up through the M1 tranche. Although the ultimate resolution of loans in forbearance will not be known for years, market data points and our internal analysis indicate that the current delinquency levels are likely to drop in the near future. For example, on September 14, 2020, the Mortgage Bankers Association reported that the share of Fannie Mae and Freddie Mac loans in forbearance dropped for the 14th week in a row to 4.65%—a 15 bp improvement week over week and down from a peak rate of 6.40%.¹¹ As borrowers exit forbearance prior to the up to 12 month maximum currently granted by the GSEs, it is a positive signal on the ability for borrowers to resume making their normal mortgage payment. All else equal, this should decrease the delinquency rate for CRT transactions going forward.

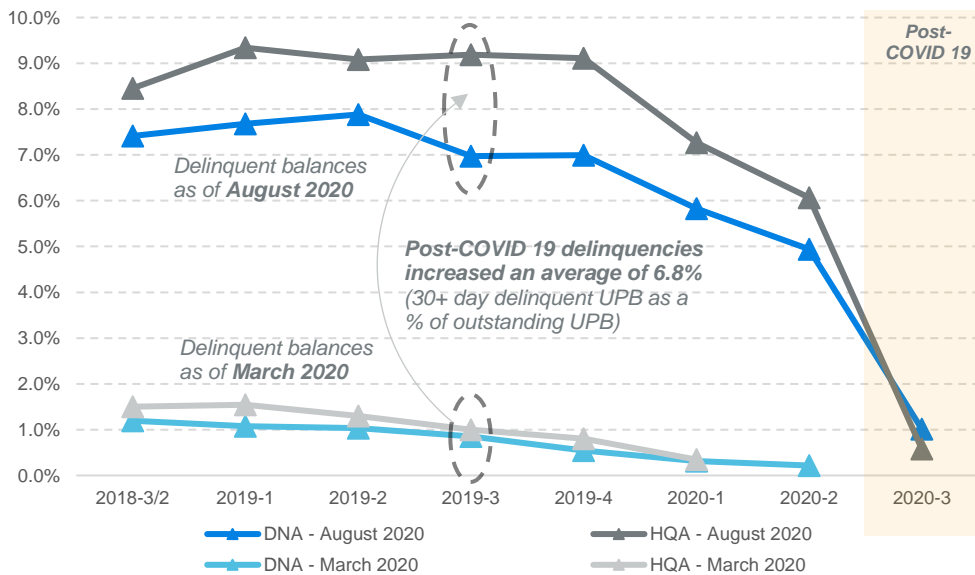
⁹ Freddie Mac (May 2020). COVID-19 Pandemic is a Natural Disaster Under Certain Credit Risk Transfer Transactions Issued Under the Fixed-Severity Framework. Retrieved September 24, 2020, from <https://crt.freddie.mac.com/news-insights/news/covid-19-fixed-severity-framework.aspx>.

¹⁰ Fitch Ratings (May 2020). Fitch Reviews 16 Fixed Severity Transactions in Response to Coronavirus Forbearance Treatment. Retrieved September 24, 2020, from <https://www.fitchratings.com/research/structured-finance/fitch-reviews-16-fixed-severity-transactions-in-response-to-coronavirus-forbearance-treatment-19-05-2020>.

Fitch Ratings (September 2020). Fitch Downgrades 18 Fixed Severity Credit Risk Transfer Ratings. Retrieved September 24, 2020, from <https://www.fitchratings.com/research/structured-finance/fitch-downgrades-18-fixed-severity-credit-risk-transfer-ratings-10-09-2020-1>.

¹¹ Mortgage Bankers Association (September 2020). MBA: Share of Mortgage Loans in Forbearance Declines to 7.01%. Retrieved September 24, 2020, from <https://newslink.mba.org/servicing-newslink/2020/september/mba-share-of-mortgage-loans-in-forbearance-declines-to-7-01/>

FIGURE 3: STACR/ACIS 30+ DAY DELINQUENT LOAN SHARE: 2018-DNA3 THROUGH 2020-HQA3¹²



Source: Milliman M-PIRe, Freddie Mac as of September 12, 2020.

Overall, extending our prior analysis through August 31, 2020, shows that the market price declines of CRT bonds observed during the COVID-19 market disruption was largely temporary—exacerbated by market frictions (e.g., high liquidity premia) rather than a fundamental credit-driven event. Although the ultimate resolution of loans in forbearance is still largely unknown, market implied valuations have recovered to levels that are generally consistent with fundamental analysis from May/June onward. With this market backdrop, we now analyze how new issuances have changed since the start of the pandemic.

New issuance market

In our [prior analysis](#), we identified the potential for disruptions in the secondary CRT capital market to cause the reinsurance execution to become a more competitive option for GSEs to transfer risk. Below we review new issuance changes that emerged in 3Q 2020 while drawing attention to changes from issuances prior as well as any differences between STACR (capital markets) and ACIS (reinsurance markets) executions.

In our analysis of GSE CRT new issuances, we focus on post COVID-19 market disruption low LTV issuance STACR/ACIS 2020-DNA3, closed July 8, 2020, and post COVID-19 market disruption high LTV issuance, STACR/ACIS 2020-HQA3, closed July 28, 2020, and compare them to the pre-COVID-19 market disruption DNA and HQA transactions, respectively. As of the time of article publication, Freddie Mac has also issued 2020-DNA4, closed August 25, 2020, and was in the midst of marketing 2020-HQA4. These transactions were not included in the analysis due to full publicly facing data not yet being available.¹³

Note: We focus our analysis on Freddie Mac STACR/ACIS issuances, as there have not been any Fannie Mae CAS or CIRT issuances post COVID-19 market disruption.

¹² 2018-DNA3 and 2018-HQA2 reflected under 2018-3/2; these deals were the last in the DNA/HQA series issued in 2018 (STACR closing dates of 9/21/2018 and 10/24/2018, respectively) as well as the first in the respective series with a structure that included a B3 tranche—similar to the capital stack used as of the time of article publication.

¹³ Freddie Mac. STACR (Structured Agency Credit Risk): Pricing. Retrieved September 15, 2020, from <https://crt.freddie.mac.com/offerings/stacr.aspx#issuance-details>.

Freddie Mac. ACIS (Agency Credit Insurance Structure): Pricing. Retrieved September 15, 2020, from <https://crt.freddie.mac.com/offerings/acis.aspx#issuance-details>.

STRUCTURES AND CREDIT ENHANCEMENT

For Freddie Mac's 2020-DNA3 and 2020-HQA3 issuances (referred to collectively as the "2020-3 issuances"), the transactions' capital structures were changed to include more credit enhancement for each tranche relative to the 2020-2 issuances. This reflects change in risk appetite from investors and reinsurance participants. The increased credit enhancement provides an additional buffer for losses given the current level of economic uncertainty.

Low LTV Initial Credit Enhancement by Tranche: 2020-DNA2 → DNA3

- A: 3.75% -> 4.00% (+25bps)
- M1: 2.50% -> 3.00% (+50bps)
- M2: 1.10% -> 1.75% (+65bps)
- B1: 0.60% -> 0.75% (+15bps)
- B2: 0.10% -> 0.25% (+15bps)

High LTV Initial Credit Enhancement by Tranche: 2020-HQA2 → HQA3

- A: 4.00% -> 4.00% (+0bps)
- M1: 3.00% -> 3.30% (+30bps)
- M2: 1.10% -> 1.75% (+65bps)
- B1: 0.60% -> 0.75% (+15bps)
- B2: 0.10% -> 0.25% (+15bps)

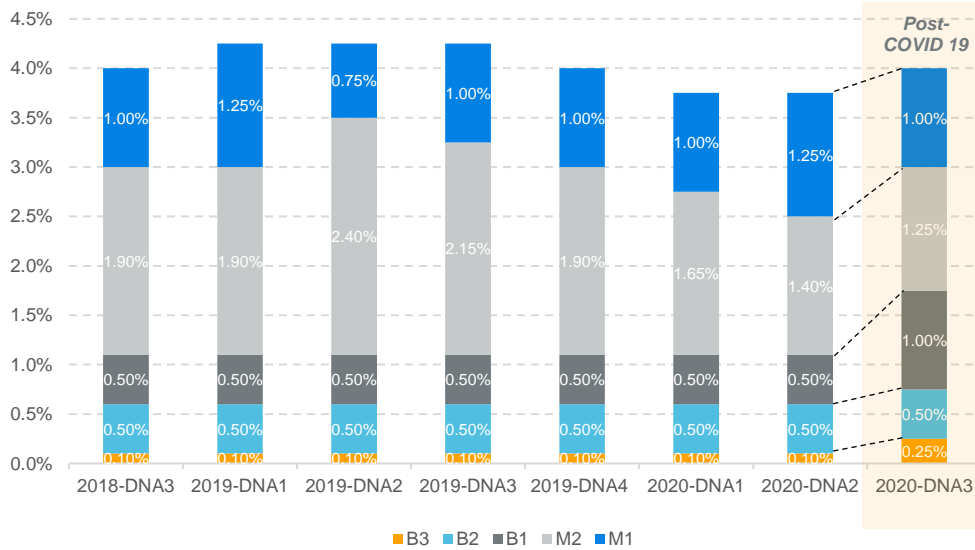
For all issued layers B2 through M1, credit enhancement increased by at least 15 bps in the 2020-3 transactions. This was largely driven by the expansion of the GSE-retained first-loss B3 layer, which grew from 10 to 25 bps. Furthermore, we observed an expansion of the B1 layer from 50 bps, in the 2020-2 transactions, to 100 bps. These were the largest B1 layers (in %) since the STACR/ACIS DNA and HQA series shifted to the current structure (with a B3 retained layer). This provided the M1 and M2 layers with more additional credit enhancement than the 15 bps increase for B1/B2.

As each layer receives more credit enhancement, the probability of principal write-downs (loss) becomes more remote, all else equal. This being said, post COVID-19, many market participants are pricing mortgage credit risk using less optimistic medium-term house price appreciation forecasts, higher unemployment rate forecasts, and correspondingly higher frequencies of credit events. These structural changes help to counteract the increased market uncertainty and many participants' increased expectation of mortgage credit losses in the current environment. Coupling the additional credit enhancement with the expectation of higher loss expectation, Milliman's M-PIRe estimates that the probability of principal write-downs for the M2 tranche decreased from 8.0% to 4.5% for the DNA series from 2020-2 to 2020-3 and decreased from 6.0% to 2.5% for the HQA series from 2020-2 to 2020-3, when evaluated as-of issuance. This represents a net reduction of risk.

However, we show below that despite these structure changes making losses more remote, pricing levels still increased from the 2020-2 issuances, indicating that investors/reinsurers are pricing to either a higher level of loss or a higher target return.

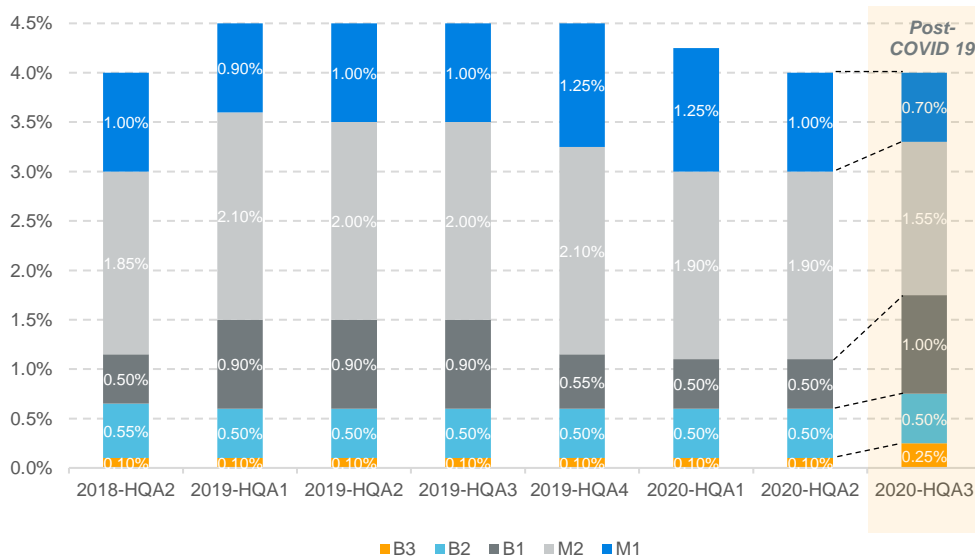
Figures 4 and 5 show the DNA and HQA series structures evolution over time.

FIGURE 4: STACR/ACIS DNA SERIES STRUCTURES: 2018-DNA3 THROUGH 2020-DNA3



Source: Milliman M-PIRe, Freddie Mac as of September 12, 2020.

FIGURE 5: STACR/ACIS HQA SERIES STRUCTURE: 2018-HQA2 THROUGH 2020-HQA3



Source: Milliman M-PIRe, Freddie Mac as of September 12, 2020.

Both 2020-3 transactions ceded risk from 25 bps to 400 bps (B2 attachment through A attachment). This reflected a 25 bps higher A-tranche attachment for 2020-DNA3 versus 2020-DNA2. The overall size of the 2020-HQA3 issuance did not increase from 2020-HQA2.

In addition to the increases in initial credit enhancement, the Minimum Credit Enhancement Test, which is a condition for the credit enhancement of the A tranche, was increased deal over deal. This condition helps control the allocation of prepayments to the issued tranches and thus impacts the WAL of the tranches. The minimum was increased from initial+25 bps relatively for the 2020-2 transactions, to initial+50 bps for the 2020-3 transactions. A higher “build” from the initial credit enhancement causes longer WAL of the tranches and generally leads to higher levels of loss transferred to bond holders/reinsurers in stress scenarios, all else equal.

VOLUME AND SHARE OF CAPITAL MARKETS VERSUS REINSURANCE EXECUTION

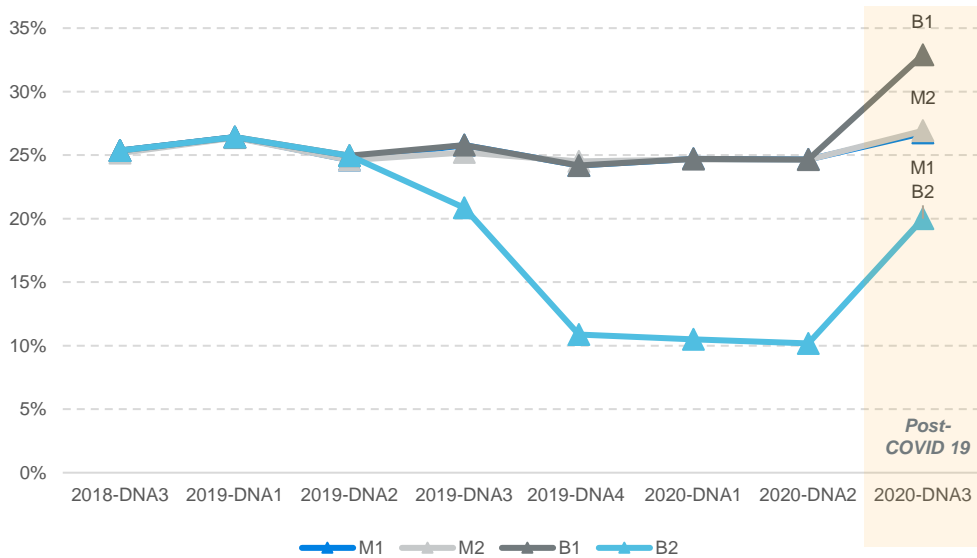
In our [prior analysis](#), we outlined potential benefits for placing a larger share of GSE CRT in reinsurance executions (ACIS) versus capital markets executions (STACR) (e.g., that secondary market disruptions may cause ACIS reinsurance execution pricing to become competitive relative to the STACR capital markets execution pricing). Reviewing the 2020-3 transactions, we observed shifts in the relative percentage of risk shared with reinsurance markets versus capital markets.

Beginning with the low LTV, DNA series, when the series transitioned to having a B3 layer in 2018-DNA3, the percentage of risk transferred via ACIS was relatively consistent at 25% across the capital stack. Starting from 2019-DNA3, while the M1, M2, and B1 tranches remained ceding approximately 25% of risk via ACIS, the share of B2 risk ceded via ACIS began to drop. 2019-DNA4 through 2020-DNA2 reflected just over 10% of the B2 risk transferred via the reinsurance markets—a deviation from the 25% share that the other tranches shared via reinsurance.

After relatively static STACR/ACIS shares across the last three transactions pre COVID-19 market disruption, we observed that the 2020-DNA3 issuance ceded a higher percentage of risk via ACIS across all tranches—with B2 ACIS share increasing from 10% to 20%, B1 increasing from 25% to 33%, and M2/M1 increasing from 25% to 27%.

Figures 6 and 7 show the DNA and HQA series share of risk transferred via ACIS over time.

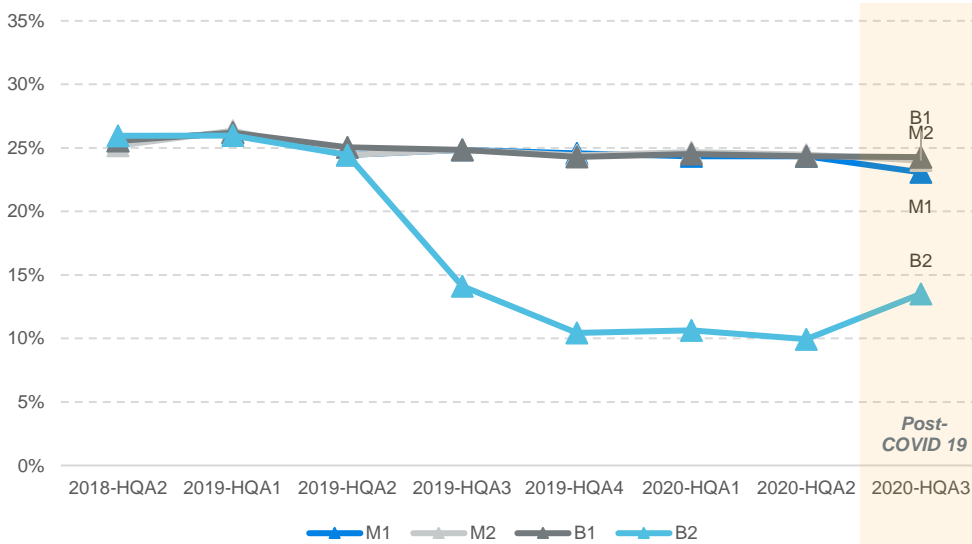
FIGURE 6: STACR/ACIS DNA SERIES SHARE OF RISK TRANSFERRED VIA ACIS: 2018-DNA3 THROUGH 2020-DNA3



Source: Milliman M-PIRe, Freddie Mac as of September 12, 2020.

Less marked changes in ACIS share were observed for the HQA series; however, B2 ACIS share increased from 10% to 14%.

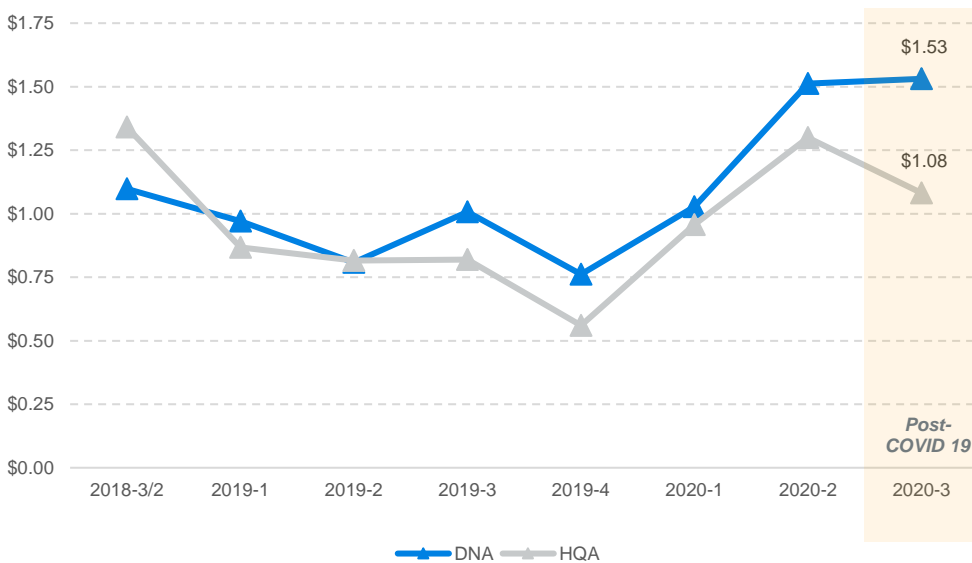
FIGURE 7: STACR/ACIS HQA SERIES SHARE OF RISK TRANSFERRED VIA ACIS: 2018-HQA2 THROUGH 2020-HQA3



Source: Milliman M-PIRe, Freddie Mac as of September 12, 2020.

We also compared the aggregate dollars of risk transferred by deal pre and post COVID-19 market disruption to evaluate whether the overall GSE CRT market capacity—across both capital markets and reinsurance—were impacted by the issuance pause and secondary market stress. The 2020-DNA3 transaction— fueled by low interest rates and strong refinance volumes in the primary mortgage market—transferred the largest amount of risk (\$1.53 billion) in a single DNA transaction since at least when the structure of the DNA series changed to include a B3 tranche (2018-DNA3). The 2020-HQA3 transaction was also large, transferring more than \$1 billion of risk. This showed the CRT market’s robustness and capacity to continue to support large placements post market disruption.

FIGURE 8: STACR/ACIS ISSUANCE VOLUME: 2018-DNA3 THROUGH 2020-HQA3



Source: Milliman M-PIRe, Freddie Mac as of September 12, 2020.

Overall, we observed strong issuance volume post COVID-19 market disruption, with many tranches transferring a higher percentage of risk to the reinsurance markets via the ACIS program.

PRICING

Despite the credit enhancement for each issued tranche being increased (see above), pricing levels increased for both ACIS and STACR executions 2020-2 versus 2020-3 transactions. The lists below summarize the pricing changes—by tranche—for both STACR (spread off one-month LIBOR) and ACIS (premium rate).

Low LTV Pricing Changes: 2020-DNA2 → DNA3 (STACR Spread off 1mL; ACIS Premium Rate)

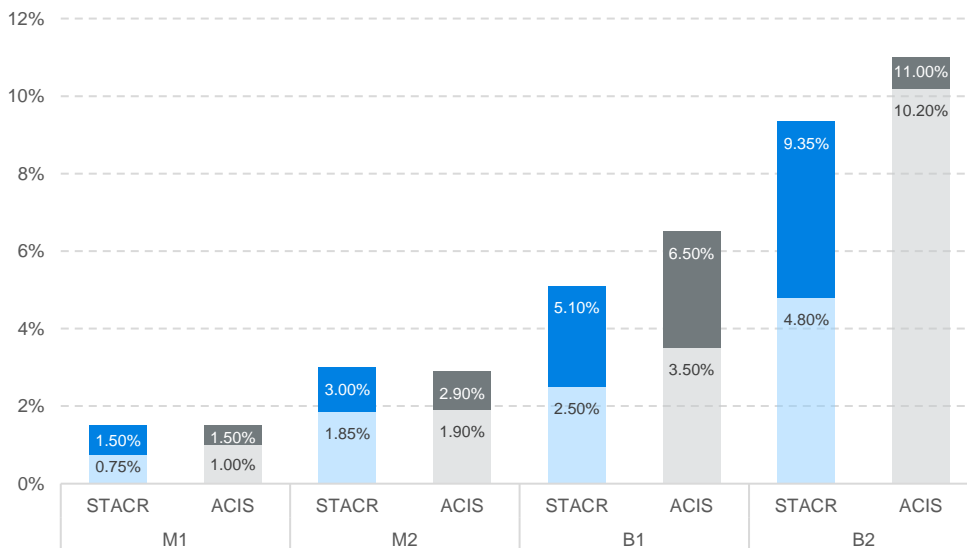
- M1: 0.75% -> 1.50% (+75bps; +100%); 1.00% -> 1.50% (+50bps; +50%)
- M2: 1.85% -> 3.00% (+115bps; +62%); 1.90% -> 2.90% (+100bps; +53%)
- B1: 2.50% -> 5.10% (+260bps; +104%); 3.50% -> 6.50% (+300bps; +86%)
- B2: 4.80% -> 9.35% (+455bps; +95%); 10.20% -> 11.00% (+80bps; +8%)

High LTV Pricing Changes: 2020-HQA2 → HQA3 (STACR Spread off 1mL; ACIS Premium Rate)

- M1: 1.10% -> 1.55% (+45bps; +41%); 1.30% -> 1.50% (+20bps; +15%)
- M2: 3.10% -> 3.60% (+50bps; +16%); 2.75% -> 3.20% (+45bps; +16%)
- B1: 4.10% -> 5.75% (+165bps; +40%); 6.00% -> 6.70% (+70bps; +12%)
- B2: 7.60% -> 10.00% (+240bps; +32%); 13.00% -> 12.50% (-50bps; -4%)

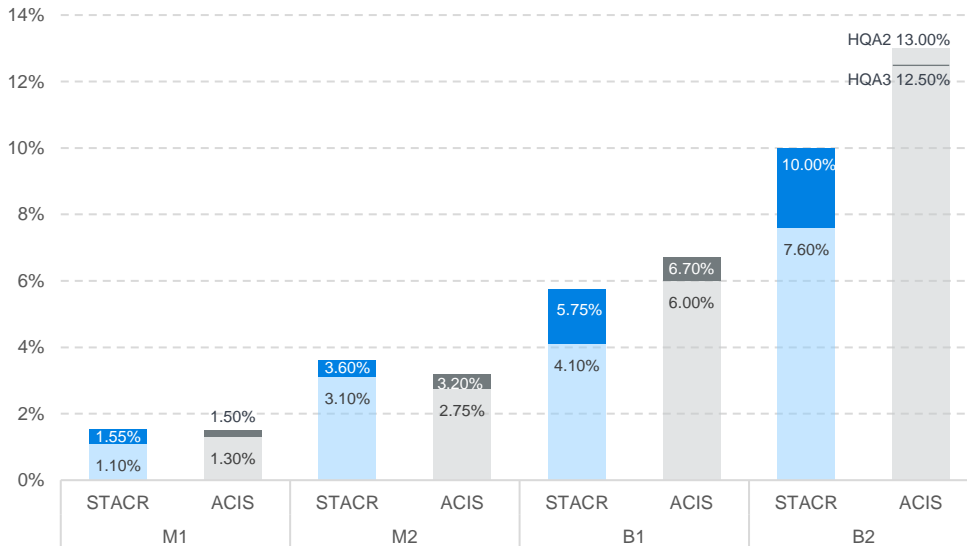
For all issued layers B2 through M1, STACR spreads increased by at least 45 bps in the 2020-3 transactions—the percentage next to the absolute increase in bps displays the relative change. ACIS premium rates continued to be higher on average than STACR spreads. Similar to STACR, ACIS pricing increased for all tranches except the HQA B2 tranche (from 2020-2 to 2020-3). **However, the relative increases between 2020-2 and 2020-3 pricing were all smaller for ACIS than STACR, indicating a narrowing in the price delta observed between the STACR and ACIS executions.** Figures 9 and 10 show these changes graphically.

FIGURE 9: STACR/ACIS DNA SERIES PRICING BY TRANCHE: 2020-DNA2 TO 2020-DNA3
 LIGHT BARS 2020-2; DARK BARS 2020-3



Source: Milliman M-PIRe, Freddie Mac as of September 12, 2020.

FIGURE 10: STACR/ACIS HQA SERIES PRICING BY TRANCHE: 2020-HQA2 TO 2020-HQA3
LIGHT BARS 2020-2; DARK BARS 2020-3



Source: Milliman M-PIRe, Freddie Mac as of September 12, 2020.

In our [prior analysis](#), we identified the potential for disruptions in the secondary capital market to cause the reinsurance execution to become a more competitive pricing option for GSEs to transfer risk. We highlighted historical data points that indicated that in times of market stress, relative pricing between the two executions tightens—in particular, STACR spreads widen by a larger degree than ACIS premiums. The 2020-3 data points directionally support that thesis.

Figure 11 displays how the market spreads compare to relative STACR/ACIS new issue pricing¹⁴ across the DNA series. The chart shows the Vista Data Services’ CRT 2017 M Index in red and new pricing on capital markets executions in blue. The chart demonstrates that new issuance pricing reflects market prices, with a slight lag.¹⁵ When comparing relative pricing changes from 2020-2 to 2020-3, we find the weighted average pricing (across all tranches) increased by 75% for STACR while it only increased by 24% for ACIS—leading to a tightening in the relative prices.

This same trend holds true for the HQA series. Figure 12 shows a 31% increase in STACR spreads, relative to a 9% increase in ACIS pricing from 2020-HQA2 to 2020-HQA3.¹⁶

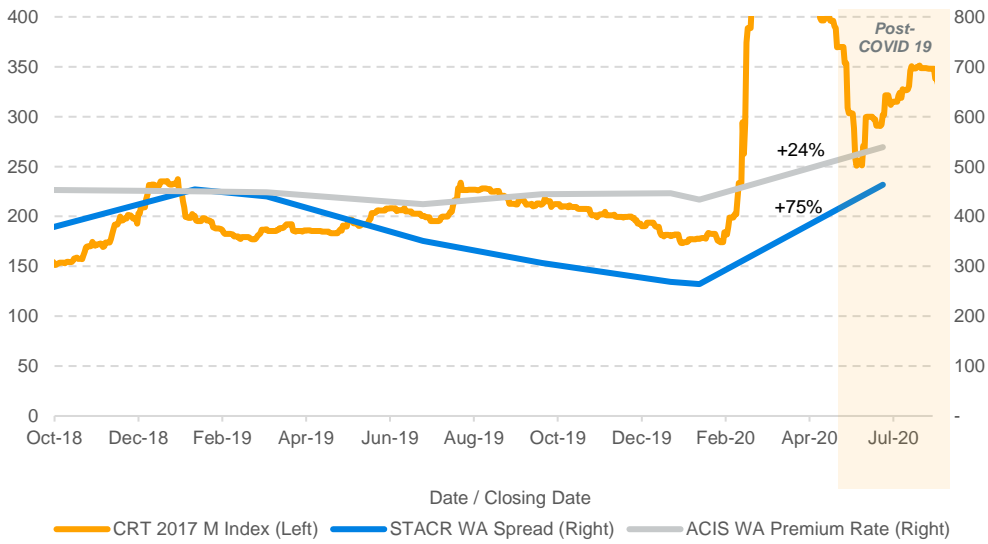
This tightening between the STACR and ACIS pricing, coupled with the STACR/ACIS share shift that Freddie Mac utilized, shows that the STACR/ACIS programs relationship is relatively dynamic and should not be viewed as perfectly static over time.

¹⁴ Weighted average pricing calculated as =SUMPRODUCT(Size, WAL, Price) / SUMPRODUCT(Size, WAL) across the M1, M2, B1, and B2 tranches; where Size is the STACR Total Bond Issuance, WAL is the Weighted Average Life assuming 10 CPR and 0 CDR to the STACR Early Redemption date, and Price is the respective STACR Spread and ACIS Premium.

¹⁵ New issuance data points are plotted at a date 10 business days prior to the STACR. This more closely aligns the deals with the dates where investors or reinsurers are evaluating and underwriting the transactions.

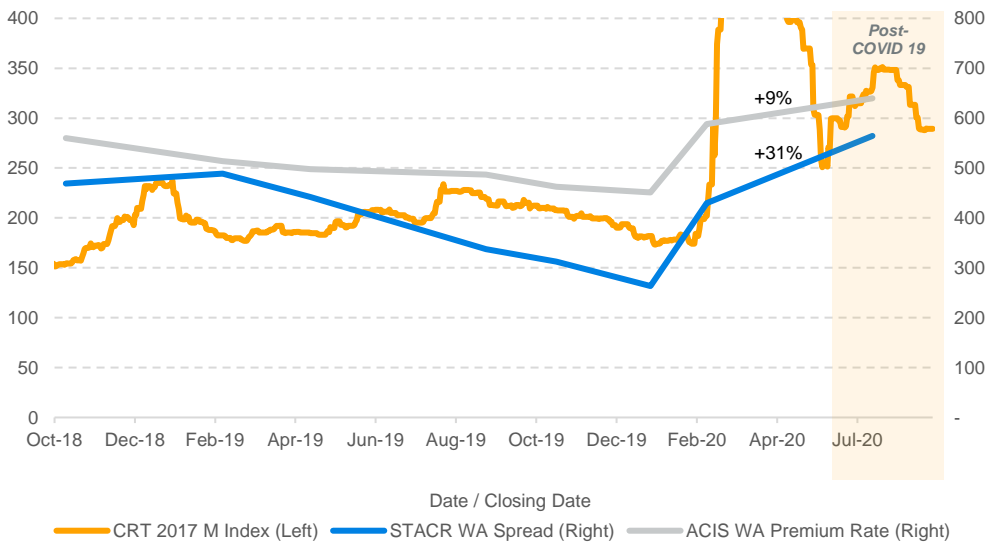
¹⁶ Note: 2020-HQA2 pricing was partially impacted by the start of the pandemic, leading to a 63% increase in STACR spreads and a 30% increase in ACIS pricing HQA1 to HQA2. As a result, the HQA2 to HQA3 pricing increases are not as stark as the DNA series.

FIGURE 11: STACR/ACIS DNA SERIES ISSUANCE SPREADS VERSUS REINSURER PREMIUM: 2018-DNA3 THROUGH 2020-DNA3



Source: Vista Data Services, Bloomberg, Freddie Mac as of August 31, 2020.

FIGURE 12: STACR/ACIS HQA SERIES ISSUANCE SPREADS VERSUS REINSURER PREMIUMS: 2018-HQA2 THROUGH 2020-HQA3



Source: Vista Data Services, Bloomberg, Freddie Mac as of August 31, 2020.

Implications of FHFA’s re-proposed capital rule on GSE CRT

In late May, as market volatility and concerns about borrower forbearance began to subdue, FHFA released a re-proposed capital rule for the GSEs. The re-proposed rule was issued for public comment and was generally thought of as a major step in advance of FHFA releasing the GSEs from conservatorship. The proposed rule is comprehensive and has wide-reaching implications for the mortgage market. Two major takeaways from the more than 400-page re-proposed 2020 rule are 1) the GSEs would be required to hold more capital than proposed under the 2018 rule, and 2) the GSE CRT issuances would receive significantly lower capital credit relative to the 2018 proposed rule. If this re-proposed framework were to be enacted, it would almost certainly lead to lower CRT issuance volume.

In our [prior analysis](#), we briefly provided an overview of the benefit CRT provides from a capital relief point of view. Using both the capital markets and reinsurance as sources of private capital can diversify the GSEs capital base and potentially decrease net cost of capital in times of stress. We outlined that, despite the possibility for many different reasonable approaches to calculate GSE CRT capital relief, there is a benefit to CRT that should be appreciated and recognized by any re-proposed capital rule.

Once the re-proposed rule was released for comment, it became clear that benefits for CRT contemplated under the 2020 re-proposed rule are significantly lower than the 2018 rule. As discussed in Milliman's response to the re-proposed capital rule, the capital benefit under the re-proposed rule is overly punitive for CRT deals and will likely result in a significant reduction in deal issuance.¹⁷ If enacted, this proposal will unjustifiably reduce benefits for CRT—a significant source of capital to absorb mortgage credit risk—and increase the potential credit losses to the GSEs during a stress period.

While the final rule and impact to the CRT market is still uncertain at this time, FHFA has received many comments and suggested revisions on the proposed rule. FHFA held a listening session on September 10, 2020, focused on the GSE CRT market. In that session, numerous industry stakeholders outlined the benefits of CRT and the unreasonable treatment under the re-proposed 2020 capital rule. In this session, the reinsurance executions were a major focal point with investors, reinsurers, and brokers all championing the need to maintain access to the deep pools of reinsurance capital. Since CRT program inception, many participants in the industry (both brokers and reinsurers) invested heavily in teams of mortgage analytics professionals to underwrite and monitor this growing line of business. The re-proposed capital rule risks eliminating this market entirely.

With 2020 being an election year, it is possible that a new administration will have a different viewpoint on the GSEs and releasing them from conservatorship. Because of these factors, the proposed rule adds uncertainty to the current market.

Conclusion: Searching for a long-term steady state

After overcoming financial market disruptions caused by the rapid spread of and response to COVID-19, the GSE CRT has seemed to find solid footing in 3Q 2020—following the successful issuance of multiple STACR/ACIS transactions. Post-COVID-19 GSE CRT issuances have featured increased credit enhancement for issued tranches, increased pricing levels, tightened reinsurance versus capital markets pricing, and some changes in the reinsurance versus capital markets allocation.

Despite the market reaching a new steady state post COVID-19 disruption, a recent FHFA re-proposed capital rule for the GSEs adds a new layer of uncertainty in the long-term state of GSE CRT. Two major takeaways from the more than 400-page re-proposed 2020 rule are 1) the GSEs would be required to hold more capital than proposed under the 2018 rule, and 2) the GSE CRT issuances would receive significantly lower capital credit than proposed in the 2018 rule. If this rule were to be enacted, it would almost certainly lead to lower CRT issuance volume.

The GSE CRT market has shown remarkable resilience and robustness since its formation in 2013. It has further demonstrated its durability through its recovery post COVID-19-related market disruption. FHFA's 2020 repurposed capital rule creates a new type of uncertainty and a threat to the long-term sustainability and economic viability of the GSE CRT programs. Milliman will be closely following all market and regulatory GSE CRT landscape developments and will continue to be a thought leader in the space.

¹⁷ Federal Housing Finance Agency (August 2020). Supervision & Regulation. Retrieved September 24, 2020, from <https://www.fhfa.gov/SupervisionRegulation/Rules/Pages/Comment-Detail.aspx?CommentId=15574>.



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