KBRA: Enhanced GSE Disclosure Provides Clarity In MI Behavior

Beginning in late 2015 and early 2016, Fannie Mae and Freddie Mac (GSEs) began added ongoing disclosure data for certain credit risk transfer (CRT) transactions. The disclosures included items such as the status of mortgage insurance (MI) policies, estimated current loan-to-value (LTV) information, and updated borrower credit scores. Ongoing performance information of this nature has not been readily available to a broad segment of market constituents in the past, and such disclosure presents a unique opportunity for market participants to monitor the current and expected performance of CRT deals more effectively than they may have been able to in the past.

MI is an important feature in "actual loss" CRT transactions with exposure to high LTV loans. In these transactions, CRT investors are exposed to, and share in, the actual loss experience of a reference pool of agency loans. Both of the aforementioned GSEs require MI prior to their acquisition of loans with origination LTVs in excess of 80%, and by extension, prior to such loans' inclusion in a CRT reference pool. As such, MI can provide effective loss mitigation for higher leverage loans that have relatively increased risk of default and loss. Generally, KBRA reduces expected losses for loans with MI in these transactions to reflect the coverage amounts applied. Therefore it is important for KBRA, as well as the broader market, to understand trends regarding MI, which may be cancelled under certain circumstances if it is purchased by the borrower – hereafter referred to as borrower-paid mortgage insurance, or BPMI. The availability of such information has already afforded us the opportunity to study the data and make certain observations. We expect that the information will continue to be helpful in understanding future mortgage behavior as well as CRT performance. Some noteworthy observations are as follows:

- Cancellation rates across the seven actual loss high LTV CRT series issued from September 2015 through June 2016 remain low. This is likely due to the limited amount of seasoning, as the first transaction was issued just nine months ago. We expect that, in periods of sustained, long-term, national home price appreciation (HPA), that MI cancellation rates can occur sooner and at higher rates than in a flat HPA scenario.
- Of the cancellations, three quarters are attributable reduced LTVs through loan balance pay-downs. There appears to be a material percentage of loans which have made substantial curtailment payments to decrease below LTV thresholds required for MI cancellation. The source of curtailment funds is not reported, though it is plausible that some borrowers may evaluate the cost of second lien financing to extinguish their MI burden.
- Of those borrowers from the most seasoned high LTV CRT transaction that were eligible for optional BPMI cancellation due to a decrease in LTV owing to balance reduction, those with origination LTVs of 85% were less likely (27.4%) to terminate their policy. By contrast, those with origination LTVs ranging from 90-95% LTV were more likely (50-55%) to cancel.
- To date, MI policies have been more likely to remain in force for borrowers who may be eligible to cancel due to home price appreciation (HPA). This may be due to some combination of practical barriers such as borrower knowledge of cancellation options, borrowers' estimate of their home value, or the cost and process to effect such a cancellation.

Background

Investors in actual loss CRT transactions benefit from covenants by the respective GSE to only pass loan losses above the MI coverage amounts to investors, even in cases where the insurer is financially unable to pay claims or in cases where a claim may be rescinded. However, as noted above, BPMI may generally be cancelled in the following cases for loans secured by one unit properties that serve as a primary residence or second home[1]:

[1] A full summary of mortgage insurance cancellation scenarios is presented in Appendix I.

- **Scheduled Amortization / 78% LTV / Automatic**: BPMI is automatically cancelled when a loan's scheduled balance would decrease below 78% LTV, based on the original appraisal value. The borrower must be current on their mortgage payments for cancellation to occur.
- **Current Balance / 80% LTV / Optional**: BPMI may be cancelled, at the request of the borrower, when their current UPB (inclusive of any curtailments) has decreased below 80% LTV, based on the original appraisal value. The borrower must have made each of the prior 12 months installment payments on time (0x30 in 12m), and not missed more than 1 consecutive installment payment in the prior 24 months (0x60 in 24m) before requesting cancellation.
- **HPA Based / 75%-80% LTV / Optional**: BPMI may be cancelled at the request of the borrower which provides an updated valuation demonstrating that the current LTV, based on the current UPB and updated home valuation, has declined below 75% two years following the loan origination date or below 80% five years after loan origination. The borrower must have a 0x30 in 12m and 0x60 in 24m pay history.
- **Improvement / 80% LTV / Optional**: BPMI may also be cancelled if a borrower can provide documentation of substantial home improvements and an updated valuation indicating that the loan's current LTV has fallen below 80%. The borrower must have a 0x30 in 12m and 0x60 in 24m pay history.

Cancellation in these cases could leave investors exposed where economic stresses occur after BPMI has been cancelled. However, as seen in the cancellation cases above, BPMI cancellation generally only occurs when loans are exhibiting lower risk characteristics than at origination (lower UPB, increased home equity, recent mortgage performance). KBRA further describes the potential impact on losses in CRT transactions in its published presale reports.

Data Available

Both Fannie Mae and Freddie Mac provide ongoing information related to MI active status in CRT transactions.

Freddie Mac provides loan-level indicators for whether a borrower has BPMI or Lender-Paid MI (LPMI) as well as a cancellation indicator at the loan level. Freddie Mac provides these data fields only for actual loss reference pools. Fannie Mae provides loan-level indicators for MI cancellation for all high LTV CRT issuance instead of only actual loss, but does not publicly provide loan-level BPMI and LPMI indicators.

Current State of CRT MI Coverage

To date, seven series of actual loss CRT deals have been issued that are associated with high LTV loans. At issuance, loans with cancelled MI account for between 50-70 bps of each transaction, leaving nearly 98-100% of the loans in each series with MI coverage.

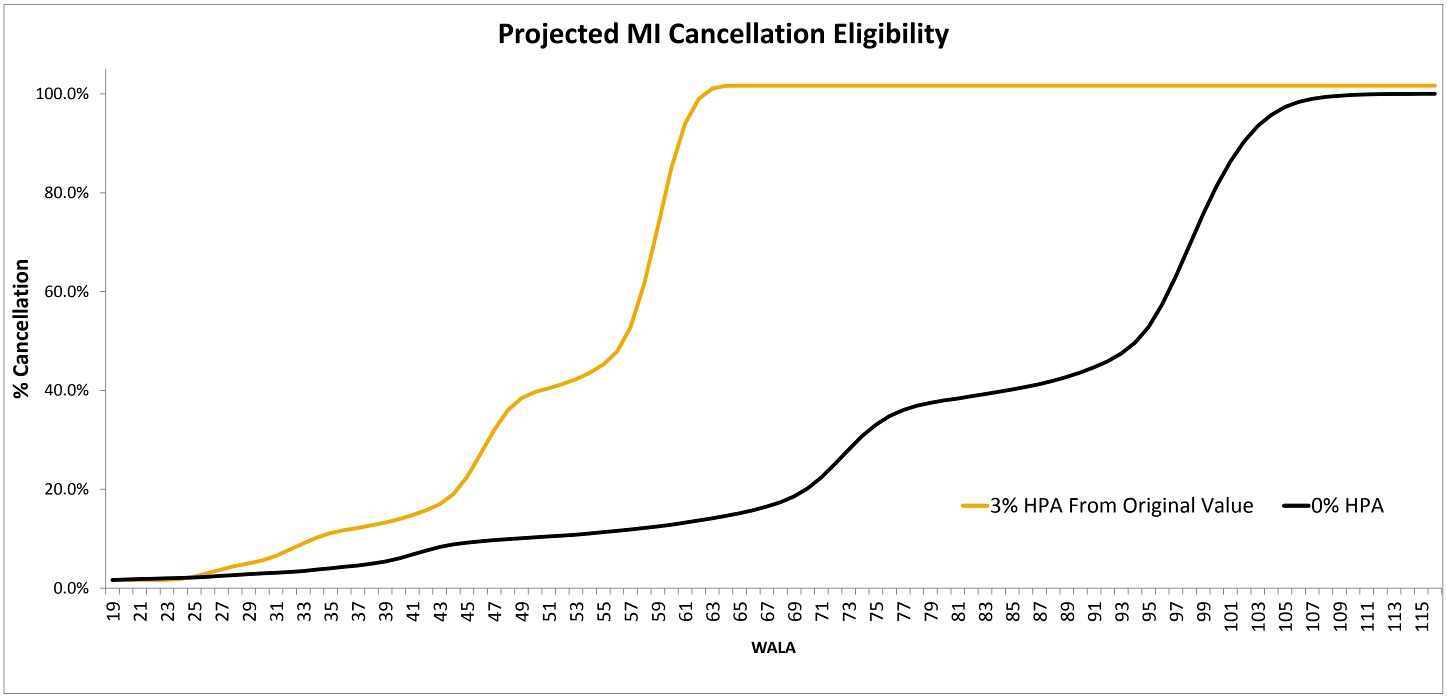
			Issuance Information				Ongoing Information			
Series	Issue Date	Group #	WA OLTV (%)	Loans w/MI (%)	Loans w/BPMI (%)	Loans w/ Canc. MI (%)	Loans w/ Canc. MI (%)	WA Am. LTV	WA HPI Cur. LTV	WA Loan Age
CAS 2015-C04	10/27/2015	2	92.0	100.0	81.6	0.5	1.1	89.3	83.8	20
CAS 2016-C01	2/18/2016	2	91.6	100.0	74.3	0.6	1.0	89.4	83.7	17
CAS 2016-C03	4/21/2016	2	91.8	100.0	76.9	0.7	0.9	89.9	86.0	13
STACR 2015-HQA1	9/28/2015	n.a.	92	99.2	78.4	0.6	1.3	89.3	83.3	21
STACR 2015-HQA2	12/8/2015	n.a.	92	99.3	70.4	0.6	1.2	89.2	82.9	17
STACR 2016-HQA1	3/15/2016	n.a.	92	99.3	72	0.5	0.9	89.6	85.2	13
STACR 2016-HQA2	6/1/2016	n.a.	92	99.9	74.4	0.5	0.7	90.5	87.9	10

Table above represents all seven actual loss high LTV CRT issuance to date.
OTLV – Original LTV Canc. – Cancelled Am. – Amortized HPI – Home Price Index adjusted Cur. – Current

As noted previously, cancellation rates remain low. Cancellation rates have increased by 20 to 70 bps since issuance, and the figures currently range from 0.7% to 1.3%.

Maximum Eligible Cancellation Curves

Most of the loans in reference pools from actual loss high LTV CRT issuance to date have not seasoned enough to become eligible for MI cancellation owing to HPA. However, it is fairly straightforward to derive maximum eligible scenarios regarding future cancellations. Two such scenarios appear below that consider HPA and amortization-based cancellation options. In these scenarios, KBRA calculates potential BPMI cancellation eligibility for a single CRT transaction using simplified, linear national home price appreciation assumptions. Maximum eligible cancellation rates are provided in a 0% HPA environment, which serves as a proxy for an amortization-based cancellation scenario, as well as a 3% growth scenario.



Options for MI cancellation which allow for an updated appraisal to meet LTV thresholds over time can enable significantly earlier cancellation eligibility beginning when loans season beyond 24 and 60 months seasoned. We expect that, in a housing environment which has experienced home price appreciation nationally between 5% and 6% per year since 2013, the more seasoned loans in CRT transactions to date may have eligibility that is similar to the 3% HPA scenario presented above. As illustrated above, a 3% annual HPA scenario could allow for half of the reference pool to be eligible for cancellation after nearly 5 years of seasoning and HPA. By contrast, over the same period of seasoning with amortization-only, only 12% of loans with MI would be eligible for MI cancellation. Loan age, OLTV concentration, and regional HPA will all play a part in potential MI cancellation for a given CRT issuance. The ongoing cancellation data provided by the GSE's also allows KBRA to track current cancellation rates against these projected cancellation curves. KBRA believes that some of the most meaningful uses of this data will be to understand the propensity of borrowers who may be eligible for cancellation to exercise their ability to cancel.

MI Cancellation Drivers

The actual loss CRTs that have been issued to date do not contain many loans which meet the 24 month seasoning requirement for MI cancellation based on HPA. As a result, it is to be expected that most of the cancellations that have occurred to date appear to be a function of UPB balance reduction (approximately 70% to 75%), though a fair amount of cancellations appear to stem from increases in home value (approximately 25% to 30%), as noted in the table below. In the table, we have segmented the loans which have MI cancellations from the 2015 vintage actual loss high LTV CRT transactions. Cancellations for loans with Amortized OLTV > 80% are a proxy for cancellations due to increases in home value while those with Amortized OLTV < 80% are more likely to be driven by decreases in UPB. The table below summarizes cancellations for the earliest issued vintage of actual loss, high LTV CRT transactions from each GSE.

MI Cancellation Qualification (as % of all cancellations to date)		STACR[1]	CAS[2]
Amortized Original LTV > 80		28.3%	24.4%
Amoritized Original LTV < 80		71.7%	75.6%
	OLTV 81 - 84	7.0%	8.0%
	OLTV 85 - 89	10.7%	12.2%
	OLTV 90 - 95	53.9%	55.4%

[1]STACR 2015-HQA1 and STACR 2015-HQA2 and [2]CAS 2015-C04 (group 2)

Interestingly, a meaningful portion of loans made curtailments which allowed their LTV to become eligible earlier than scheduled amortization. The source of borrower funds used to make such curtailments is unknown, however the amount of curtailment necessary, particularly from the higher OLTV ranges, may suggest some borrowers are accessing secondary financing in order to relieve their MI burden. We also note that approximately 25% to 30% of the cancellations to date have occurred on loans which have not amortized below 80%, likely reflecting the cancellation option which requires substantial home improvements. Since cancellation rates are generally low, we expect that this mix of cancellation causes may materially change over time.

Although the maximum eligible cancellation curve scenarios above may indicate that a significant population of loans *could* be eligible for MI cancellation with modest price appreciation, it ignores borrower behavior. Ultimately, such behaviors are not easily quantifiable, and are influenced by a number factors, namely:

- Borrowers may not be aware of the various cancellation options available.
- Those borrowers that are aware of their rights under the MI contracts may not know or be confident that their home has realized the necessary HPA to allow for cancellation.
- Borrowers may not be willing to pay for a required appraisal or BPO that must evidence their cancellation request. This concern is somewhat magnified in situations where the borrower lacks certainty that the valuation will demonstrate enough of a valuation increase to successfully cancel the policy.

To explore further, KBRA grouped likely MI cancellation options by OLTV and estimated current LTVs for the CAS 2014-C02 (group 2) CRT issuance[2], which represents the most seasoned high LTV CRT for which the ongoing MI data has been provided by either GSE. The table below compares the three most highly represented original LTVs in CAS 2014-C02 (group 2) and breaks each LTV grouping down by its cancellation eligibility and current status.

[2] We note that the reference pool includes both LPMI and BPMI but the payer is not specified in the CAS file layout. Since only BPMI may be cancelled, cancellation rates would appear higher if the analysis was restricted solely to BPMI.

Likely Eligible for Cancellation				
	E1: Amortized OLTV < 80%			
Original LTV (%)	Active MI Policy % of Bucket	Prepaid % of Bucket	MI Cancelled % of Bucket	% of LTV Cohort
85	68.8	3.8	27.4	43.6
90	35.1	8.8	56.1	5.3
95	32.5	8.4	59.1	1.9
	E2: Amortized OLTV > 80% & Est Cur LTV 65% - 75%			
Original LTV (%)	Active MI Policy % of Bucket	Prepaid % of Bucket	MI Cancelled % of Bucket	% of LTV Cohort
85	53.4	44.5	2.1	9.7
90	79.5	15.6	4.9	21.2
95	77.4	16.9	5.7	16.4
	E3: Amortized OLTV > 80% & Est Cur LTV < 65%			
Original LTV (%)	Active MI Policy % of Bucket	Prepaid % of Bucket	MI Cancelled % of Bucket	% of LTV Cohort
85	59.8	33.9	6.3	5.1
90	69.9	6.5	23.6	11.9
95	70.6	6.6	22.8	1.6

Ineligible for Cancellation	
Amortized OLTV > 80% & Est Cur LTV > 75%	
Original LTV (%)	% of LTV Cohort
85	41.6
90	61.6
95	80.2

Nearly 60% of the 85% OLTV loans were eligible for cancellation as of June 2016, predominantly due to decreased loan balance vs. HPA. Of those loans, represented in table E1 above, only 27% cancelled their MI through June 2016 and 69% were still paying. By contrast, the 90% and 95% OLTV loans were much more likely to cancel their MI due to eligible LTV based on decreased loan balance, though fewer of those loans have reached that level to date. KBRA believes this may be due to higher OLTV borrowers requiring significant curtailments to reach an eligible LTV – a choice of the borrower that may have been specifically made in order to remove their MI payment burden. Lower OLTV borrowers continue pay BPMI premiums that they may no longer need to pay.

Loans across all OLTV cohorts which may be eligible by HPA but not decreased loan balance, represented in table E2 above, showed far lower cancellation rates. Instead, KBRA notes that incidence of prepayment for these loans, particularly 85% OLTV cohort, were quite high (15-45%) in light of the low original WAC for the pool (3.6%). This phenomenon may be illustrative of competing processes between a borrower's propensity for voluntary prepayment and cancelling their MI premium when they have experienced material home price appreciation. The stickiness of MI in the loans which haven't prepaid from this bucket may illustrate a lack of a borrower knowledge regarding their ability to cancel, a lack of their understanding of their current home value, a hesitance to pay for an updated home value without a guaranteed decrease in MI premiums, or a combination of the three.

Finally, table E3 above represents the bucket which may have experienced significantly larger HPA therefore reducing the potential effect of borrowers' lower confidence in HPA and/or likelihood of paying for an updated valuation that may be out-of-the-money. Indeed, cancellation rates were more significant for loans which we estimate to have an LTV at or below 65% based on current value. Between 5% and 25% cancellation rates were observed, depending on OLTV, with both the 90 and 95 OLTV cohorts showing the highest cancellation rates. The impact of competing options between prepayment and cancellation is still visible in this bucket as well. KBRA believes that the higher cancellation rate in the higher OLTV cohorts may also be indicative of the fact that borrowers with higher OLTV will have higher MI premium burdens and will therefore be more incentivized than those with lower OLTV to pursue optional cancellation.

Conclusion

Each of the transactions discussed in this report has yet to significantly season, particularly when considering the seasoning requirements for MI cancellation based on HPA. With the passage of time, as well as more information on current and future CRT issues, further study of the data will likely provide greater insight regarding MI cancellation behavior – ultimately providing KBRA and investors with better information with which to project expected losses. KBRA welcomes further disclosures by the GSEs on MI and other topics, as further transparency on loan behaviors is helpful in providing for a more robust RMBS marketplace – in CRT as well as non-agency private-label securities.

Appendix I: MI Cancellation Cases Summary[3]

#	MI Type	Cancellation Type	# Units	Occ. Type	LTV Hurdle	LTV Numerator	LTV Denominator	Ultimate PITI	12m Pay Hurdle	24m Pay Hurdle	Minimum Seasoning (m)
1	BPMI	Optional	1	Prim. or 2nd	80%	Current UPB	Orig. Appr. Val.	n.a.	0x30	0x60	0
2	BPMI	Optional	1	Prim. or 2nd	80%	Current UPB	Upd. Appr. Val.	n.a.	0x30	0x60	60
3	BPMI	Optional	1	Prim. or 2nd	75%	Current UPB	Upd. Appr. Val.	n.a.	0x30	0x60	24
4*	BPMI	Optional	1	Prim. or 2nd	80%	Current UPB	Upd. Appr. Val.	n.a.	0x30	0x60	0
5	BPMI	Optional	2-4	Primary	65%	Current UPB	Orig. Appr. Val.	n.a.	0x30	0x60	0
6	BPMI	Optional	2-4	Primary	65%	Current UPB	Upd. Appr. Val.	n.a.	0x30	0x60	24
7*	BPMI	Optional	2-4	Primary	65%	Current UPB	Upd. Appr. Val.	n.a.	0x30	0x60	0
5	BPMI	Optional	1-4	Investor	65%	Current UPB	Orig. Appr. Val.	n.a.	0x30	0x60	0
6	BPMI	Optional	1-4	Investor	65%	Current UPB	Upd. Appr. Val.	n.a.	0x30	0x60	24
7*	BPMI	Optional	1-4	Investor	65%	Current UPB	Upd. Appr. Val.	n.a.	0x30	0x60	0
8	BPMI	Automatic	1	Prim. or 2nd	78%	Am. Sched. Bal.	Orig. Appr. Val.	Paid In Full	n.a.	n.a.	0
9	BPMI	Automatic	1	Prim. or 2nd	n.a.	n.a.	n.a.	Paid In Full	n.a.	n.a.	(Am. Term)/2
10	LPMI	Ineligible	Any	Any	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

*Option only available if substantial improviement shave been made to the subject property, are documented in the updated appraisal report, and were performed to applicable building codes.

UPB - Unpaid Principal Balance; Am. - Amortized; Sched. - Scheduled; Bal. - Balance; Orig. - Original; Appr. - Appraisal; Val. - Value; Upd. - Updated; n.a. - Not Applicable; m - Months

[3] The full set of cancellation cases are described in the GSEs' respective seller guides.

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