

# A.M. Best Request for Comment Response: Evaluating Mortgage Insurance

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## Scope of Response

In 2017, A.M. Best introduced its initial draft of *Evaluating Mortgage Insurance (MI)*. The revision process for this draft criteria procedure extended into 2018 and involved multiple requests for comment (RFC). A.M. Best published its first RFC related to this process on March 17, 2017, and subsequently published two additional RFCs on (1) August 24, 2017 and (2) December 1, 2017. The RFC of August 24, 2017 contemplated conformance to the building-block approach outlined in the Best Credit Rating Methodology, as well as the stochastic-based Best's Capital Adequacy Ratio (BCAR), which were subsequently released for use on October 13, 2017. These changes, as well as the addition of detailed examples on mortgage insurance and reinsurance programs, resulted in significant additions/modifications in the final version compared to the March 2017 initial draft. Other significant changes relative to the initial RFC include the following:

- Emphasis on the factor-based approach, as opposed to the modeling approach for determining capital charges associated with Government Sponsored Enterprises (GSE)-related reinsurance programs
- Modification of the mortgage loss table, the Stressed Ultimate Loss (SUL) Matrix, by including associating mortgage losses with various value-at-risk (VAR) levels and providing more granular loan-to-value ratios
- Application of correlations in reserve/premium lines and correlations between investments and mortgage-related reserves/premiums
- Demonstration of the effect of mortgage-related capital charges on net required capital and BCAR for a well-diversified reinsurer participating in GSE-related reinsurance programs
- Expansion of the GSE-related examples to more clearly demonstrate the techniques used in calculating gross losses and premiums by transaction type and inclusion of approach for non-GSE-sponsored reinsurance transactions
- Inclusion of premium credits associated with mortgage insurers for the entire term of the portfolio while also explicitly adjusting premiums for expenses and uncertainty surrounding such premiums
- Consistency in the treatment of nonrefundable single premiums and periodic premiums
- Creation of three new variables in Net Loss and LAE Reserves Risk to provide more granularity and to differentiate among the reserves for current mortgage business, future mortgage business over the next year, and non-mortgage related business
- Assumption of a 100% correlation between the mortgage-related Net Loss and Loss Adjustment Expenses (LAE) Reserves Risk associated with the current mortgage portfolio



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and the mortgage-related Net Loss and LAE Reserve Risk associated with the future incremental mortgages to be written in the next year

- Reconstruction of the Stressed Ultimate Loss Matrix (SUL Matrix) for evaluating the risk of mortgages with maturities equal to or less than 20 years
- Addition of an example on how to calculate Adjusted Capital, Net Required Capital, and BCAR for a hypothetical mortgage insurer
- Inclusion of a factor of 70% in the formula for calculating the Net Loss and LAE Reserves Risk associated with business origination over the next year, to reflect that, in the event of stress, future origination volume is expected to substantively decrease; the factor is applied to the difference of the Net Discounted Losses and the Non-Refundable Single Premiums Credit associated with the most recent calendar year's origination volume

As a result of the RFCs, A.M. Best is publishing a total of 13 comments. For those respondents who chose to remain anonymous, best efforts have been made to shield the identity of both the author and the company through the redaction of any text which could be used to identify the commenter. A.M. Best greatly appreciates all the responses received during the public consultation periods. When a common theme was evident, and when possible, questions and comments on topics have been grouped into general responses.

Industry engagement enabled A.M. Best to identify multiple areas in need of further revision/clarification. A.M. Best believes these revisions promote increased transparency. A.M. Best did not respond individually to comments from the RFCs. The response below summarizes the significant changes made to MI from the initial draft releases to the final version. These changes resulted both from public feedback and internal review. This response also describes proposals that were not adopted by A.M. Best and addresses general questions about the criteria procedure in a Frequently Asked Questions (FAQ) format. In some comments, requests for elaboration on the elements, assumptions or calculations in the third-party model were received. Whenever possible, A.M. Best strives for transparency; however, all calculations or assumptions cannot be included in criteria.

In addition to the changes detailed above and in the following sections, A.M. Best made minor nonmaterial editorial revisions to the final MI criteria procedure. These changes added greater clarity or were purely stylistic or grammatical.

### **Changes to the Draft MI Criteria Procedure**

The following sections detail significant changes that A.M. Best made to the draft MI criteria procedure prior to its finalization.

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## Private Mortgage Insurance & Reinsurance Programs

### **Available Capital**

In the March 2017 draft of the criteria procedure, the Available Capital and Net Required Capital components, as well as the Net Required Capital (NRC) formula were contained in a single exhibit. The December 2017 draft breaks this into three individual exhibits for clarity and to conform to presentations in other BCRM criteria procedures. The term “adjusted surplus” was also changed to “Available Capital” for consistency with other BCRM criteria.

A number of commenters requested additional clarity on how contingency reserves and unearned premium reserves (UPR) are incorporated into Available Capital.

To address questions and comments regarding the handling of contingency reserves and UPR in the Available Capital calculation, A.M. Best has included a section for each component with clarifying language and added an example in Appendix 2 that clearly demonstrates how contingency reserves and UPR are incorporated into the Available Capital calculation.

A.M. Best recognizes that contingency reserves can contribute substantially to mortgage insurers’ Available Capital. Clarifying language was added regarding credit for UPR associated with non-refundable single premium in the Available Capital calculation. Consistent with the premium calculation associated with B5<sub>fm</sub> (mortgage-related Net Loss and LAE Reserves Risk associated with future incremental mortgages to be written in the coming calendar year), a discount of 25% is applied to the unearned premiums associated with non-refundable single premium to account for expenses before inclusion in Available Capital (Section B – p. 5).

### **Net Required Capital (NRC) Components**

During the August 2017 RFC period, A.M. Best’s received a number of comments requesting a reorganization of the Balance Sheet Strength section specific to MI and more detail on the various elements/components of the NRC calculation. The reorganization of the Balance Sheet Strength section of the criteria procedure was reflected in the December 2017 draft. The various components of the NRC formula were laid out sequentially, with descriptions providing much greater detail for components that differ from the standard BCAR calculation outline in the BCRM criteria procedures.

### **Separate Risk Category for Mortgage Risk**

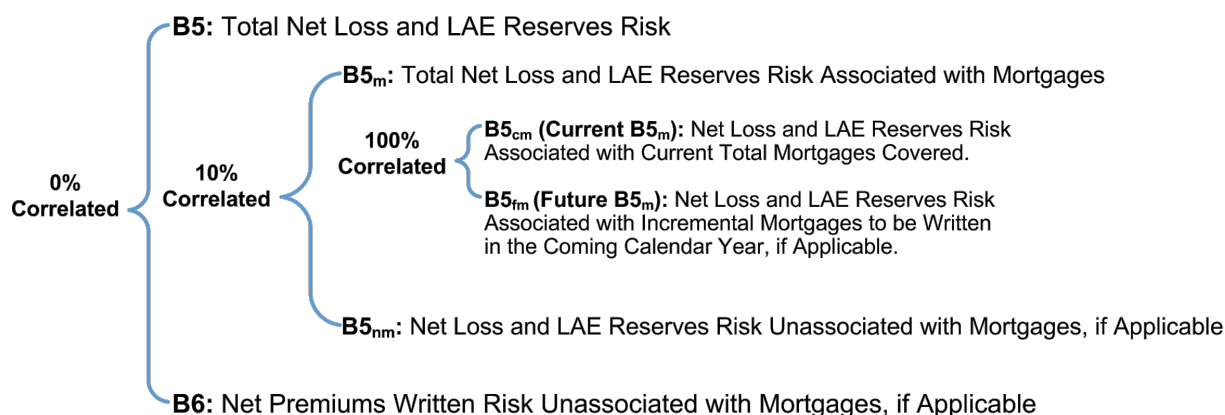
One commenter suggested that mortgage risk should be treated as a new, separate risk component added to the NRC formula. At this time, A.M. Best is of the opinion that the revised NRC formula in the December 2017 draft appropriately captures the significant risks associated with both reinsurers covering risks in the mortgage space through GSE-sponsored credit risk-sharing transactions and private mortgage insurers.

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## Determination of B5

In response to comments received during the August 2017 RFC period on how mortgage-related Net Loss and LAE Reserves Risk are determined, a section was added to the December 2017 draft (“Determination of B5<sub>cm</sub> & B5<sub>fm</sub>”) to show the detailed, step-by-step process for determining B5<sub>m</sub>. A breakdown of which components comprising the B5 charge apply to mortgage insurers and reinsurers of MI and GSE business has been added. The diagram below (Exhibit B.5), which was added in the December 2017 draft, clearly details correlations and the interplay among the elements of the underwriting risk components.

### Exhibit B.5: Interaction of the Underwriting Risk Elements



## Mortgage Reserve Risk and Investment Correlation

A.M. Best received a number of comments stating that mortgage-related risks should be more correlated to investment portfolios than to non-mortgage-related reinsurance portfolios. Commenters believed this correlation should be acknowledged, but they also commented that this correlation should be relatively low.

### Exhibit B.8: Correlations Related to Mortgage Underwriting Risk

	B5 <sub>cm</sub>	B5 <sub>fm</sub>	B5 <sub>nm</sub>	B1 <sub>n</sub>	B2 <sub>n</sub>
B5 <sub>cm</sub>	100%	100%	10%	50%	50%
B5 <sub>fm</sub>	100%	100%	10%	50%	50%
B5 <sub>nm</sub>	10%	10%	100%	0%	0%
B1 <sub>n</sub>	50%	50%	0%	100%	0%
B2 <sub>n</sub>	50%	50%	0%	0%	100%

To address this issue, A.M. Best incorporated an assumption of 50% correlation between non-affiliated investments (fixed income & equity) and mortgage-related reserves risk in the December 2017 draft. A.M. Best believes the 50% correlation assumption between non-affiliated investments and mortgage-related reserves risk is appropriate, reflecting the view that mortgage industry and

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fixed income and equity investments are all driven by the overall macroeconomic environment. The correlations among mortgage-related risks and non-affiliated fixed income and non-affiliated equity securities risks, as well as the correlation between mortgage-related and non-mortgage-related risks, are discussed in Section B under “Elements of Net Required Capital.”

### ***Clarification Requested on Disparate Treatment of B5<sub>fm</sub> for PMIs and GSE Reinsurance Transactions***

During the December 2017 RFC period, there were comments asking for clarification on the rationale for including B5<sub>fm</sub> in PMI, but not in GSE business. A.M. Best notes that GSE-related reinsurance transactions are relatively new and that pricing/structures are still evolving. As a result, A.M. Best believes that a reinsurer is more likely to abstain from participating in these GSE transactions more than in other mortgage-related reinsurance transactions, where there is an established relationship between a reinsurance company and private mortgage insurers.

### ***Internal Modeling/Management’s Views on Risk***

During all three RFC periods, comments were received stating that because PMIs and reinsurers of GSE credit risk transfer (CRT) transactions may have their own views on the risks to which they are exposed, such views should be considered in the rating process for PMIs and reinsurers.

As a general statement, A.M. Best welcomes discussion with management on any topic during the rating process. However, with regard to the GSE CRT transactions, A.M. Best feels that capital charges should be consistent regardless of the company assuming the risk. The mortgage risks ceded by the GSEs through the CRT programs are highly standardized in nature and therefore not subject to variations in risk charges between companies.

### ***Differentiation Across Mortgage Insurance Products***

During the first RFC period, a number of commenters asked A.M. Best to clarify if there were different approaches for determining risk capital for PMIs, MI reinsurers, and CRT reinsurance programs. A.M. Best agrees that the risk characteristics are different for each of these programs. The version of the criteria that is being adopted provides clear details in the different sections that are related to the respective participants/programs and provides greater transparency on how A.M. Best will approach PMIs, MI reinsurance, and CRT programs.

### ***Treatment of Other Mortgage Exposures***

Throughout the RFC periods, commenters requested insight into how A.M. Best will evaluate the risks associated with GSE CRT and other mortgage reinsurance exposures for which A.M. Best does not have pre-established analytical frameworks, such as those involving multifamily loans or non-US mortgage loans. In situations in which the mortgage pool being evaluated has a significantly different risk profile from the mortgage pool from which the risk factors were originally derived, A.M. Best under certain conditions (and where applicable), may a) use a modified SUL Matrix, Amortization

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Pattern Matrix, Loss Pattern Matrix, and Seasoning Vector, at each VaR level and maturity, b) use the LoanKinetics application to analyze mortgage risks, or c) consider the views of insurers/reinsurers on the appropriate capital charges associated with their exposures (Section B: p. 28).

### Private Mortgage Insurer

#### **Treatment of Reinsurance**

A.M. Best received comments asking for clarification on the treatment of risk transfer mechanisms such as reinsurance treaties and insurance-linked notes from the PMI and MI reinsurance perspectives, specifically when calculating capital needs/charges as part of the rating analysis. For clarity on the treatment of reinsurance from the PMI point of view, language was added to Section B of the criteria procedure (see p. 14 “Determination of  $B5_{cm}$  &  $B5_{fm}$ ”) in the December 1, 2017, draft. To provide clarity on capital charges for reinsurers providing coverage on non-GSE mortgage pools, A.M. Best added Section D, “Rating Considerations: Other Reinsurance Programs,” in the August 24, 2017, draft.

#### **Method for Determining $B5_{fm}$ for Mortgage Insurers Too Punitive**

In the December 2017 draft of the criteria procedure, the most recent calendar year’s origination history is used in calculating  $B5_{fm}$ . A.M. Best received comments suggesting that this origination volume may be too high, given that, during periods of severe stress, marginal mortgage exposures for PMIs are reduced. A.M. Best agrees that marginal exposures can dramatically decrease in times of severe stress, as was the case during the most recent financial crisis. After further consideration and review of these comments, A.M. Best removed the growth factor from the final version of the criteria procedure and now assumes a reduction in mortgage exposures during times of stress. A 70% factor is applied to the difference of Net Discounted Loss and Non-Refundable Single Premiums Credit, as described on p. 15 “Determination of  $B5_{fm}$ .” Thus,  $B5_{fm}$  is now 30% lower than it would have been using the calculation method proposed in the December 2017 draft of the criteria procedure.

#### **Correlation Between $B5_{cm}$ and $B5_{fm}$**

Comments were received that a prospective year’s mortgage business should be very highly correlated with in-force business but not be at 100%. This issue has been addressed with the introduction of  $B5_{cm}$  and  $B5_{fm}$ , which are mortgage-related Net Loss and LAE Reserves Risk for current and future business (over the next year), respectively. At this time, A.M. Best uses the 100% correlation assumption of  $B5_{cm}$  and  $B5_{fm}$  reflected in Exhibit B.5. A.M. Best acknowledges that there may be some temporal diversification between  $B5_{cm}$  and  $B5_{fm}$ , as they may likely experience different macroeconomics environments; however, A.M. Best believes that using a conservative 100% correlation is not inappropriate at this time.

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## **PMI Example**

A.M. Best received comments suggesting the provision of a numerical example of the calculation of the elements of the BCAR for a PMI. In response, “Appendix 2: Example of a Primary Mortgage Insurer’s BCAR Assessment,” has been included to show an example of how the Available Capital, Net Required Capital, and BCAR score are calculated for a hypothetical PMI company (Appendix 2 – pp. 36-40).

## **Premium Credit**

After the second draft of the criteria procedure was released for comment in August 2017, A.M. Best received several comments on how much premium credit should be given to mortgage insurers in the analysis. Specifically, commenters suggested that by limiting the number of years in which premiums accrue to a mortgage insurer, A.M. Best was perhaps inadvertently favoring single premium payment patterns over periodic period payment patterns in its analysis. Commenters further suggested that such a bias could have unintended consequences with regard to the recognition of future operating expenses and the structure of reinsurance agreements. In addition, commenters suggested that any diminution of premiums should be explicitly defined. For example, one commenter suggested that the full spectrum of premiums should be recognized in the analyses of mortgage risk and diminished by operating expenses based on the historical operating expenses of the particular mortgage insurer being evaluated.

After further consideration and review of these comments, A.M. Best revised its approach in the December 2017 draft of the criteria procedure in the calculation of both  $B5_{cm}$  and  $B5_{fm}$  as follows:

- 1) The full spectrum of the periodic premium amount will be discounted using a 4% rate and then further reduced by a factor of 40% (25% for operating expenses and 15% for uncertainty).
- 2) Non-refundable single premiums and UPR (associated with non-refundable single premiums) will be reduced by 25% for expenses.

A.M. Best is comfortable that the 25% operating expense factor approximates the average operating expense factor for the mortgage insurance industry and believes that over the long term and in a stressed, run-off, steady-state environment, the 25% operating expense factor is reasonable.

After the December 2017 draft of the criteria procedure was released, one commenter questioned the basis of the 15% premium uncertainty factor, which will effectively diminish capital. A.M. Best is of the opinion that an additional level of conservatism is warranted for modelling errors associated with the calculation of periodic premiums.

## **Recovery of Tax Payments**

A.M. Best received comments suggesting that recoveries of tax payments should be included in the analysis, as well as comments that it was not necessary to include taxes in the analysis as long-term

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operating losses that would likely occur in the event of stress would result in no cash taxes being paid.

A.M. Best believes that risk components should be calculated on a pre-tax basis, as this ensures consistency with other NRC components that are not tax affected. A.M. Best notes the difficulty of forecasting a company's future tax position and that tax rates may vary by type of company and country.

### **Model Transparency**

Multiple commenters cited concerns regarding A.M. Best's reliance on a third-party model and transparency in ongoing model management.

A.M. Best believes that using a third-party credit risk model, LoanKinetics, to develop the Net Loss and Loss Adjustment Expense Reserves and the Premium risks used in BCAR is appropriate for the rating analysis, given that it attaches losses at various confidence levels. A.M. Best regularly reviews output from the model and will make adjustments when appropriate.

Comments also suggested the A.M. Best should provide detailed modelled output to companies. A.M. Best plans to provide detailed model output to rated entities.

## Reinsurance Programs

### **Disconnect Between Factor-based and Model-based Approach**

Following release of the initial criteria procedure draft in March 2017, A.M. Best received comments regarding the framework set up for using either a factor-based approach or a model-based approach for the analysis of GSE reinsurance transactions depending on the limits being ceded to reinsurers. Concerns were raised about the inconsistency in results between the two approaches and the appearance that the approaches were calibrated differently.

A.M. Best revised its approach in the August 2017 draft to rely primarily on the factor-based analysis for all GSE reinsurance programs (except under special circumstances noted in the criteria procedure).

### **SUL Matrix**

During the RFC periods, A.M. Best received a number of comments on the SUL Matrix. These issues are discussed below.

*Following the initial draft released in March 2017, A.M. Best received comments stating that the losses calculated using the factors in what is now called the SUL Matrix<sup>1</sup> for high and low loan-to-value (LTV) loans diverge more*

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<sup>1</sup> The table, "UPB Factors," in the March 2017 draft of the criteria procedures is called the "SUL Matrix" in the latest version.



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*than would be expected given the efficacy of mortgage insurance associated with high LTV loans. Commenters also suggested that the SUL Matrix should not differ as much for mortgages with maturities longer than 20 years, versus those with maturities of 20 years or less.*

Following internal review, A.M. Best revised the SUL Matrix in the August 2017 draft, by taking a more granular approach to evaluating mortgage losses. Specifically, A.M. Best applied frequency, severity, and the mortgage insurance benefit associated with groups of mortgages, bucketed by LTV and credit scores, to determine the factors in the SUL Matrix for mortgages with maturities longer than 20 years. The revised framework more appropriately addresses the relationship between the losses associated with high and low LTV loans.

Although the SUL Matrix associated with maturities of 20 years or less was also modified in the same August 2017 draft, commenters noted that A.M. Best did not apply the same framework for determining the factors in the matrix as it did for the SUL Matrix associated with maturities longer than 20 years.

A.M. Best conducted more extensive analyses on the relatively sparse data available on mortgages with maturities of 20 years or less, compared to mortgages with maturities longer than 20 years. As a result of this analysis and in response to these comments, the published SUL Matrix for mortgages with maturities of 20 years or less now reflects the same framework as the one used for mortgages with maturities longer than 20 years, which was reflected in the December 2017 draft and the adopted version of the criteria.

*After the March 2017 draft of the criteria procedure was issued, a comment suggested that tight underwriting standards in today's mortgage environment should be factored into the development of the factors in the SUL Matrix.*

The SUL Matrix in the August 2017 draft does somewhat consider the different mix of business that has resulted from tight underwriting in the current housing market versus the mix of business before the last mortgage crisis. However, A.M. Best notes that losses associated with the 2007 vintage mortgages pool (which provides the basis for some of the analyses on mortgage losses) are still evolving, and as a result, ultimate losses should be higher in the future. Therefore, some gains based on a less risky mix of mortgage originations are likely to be offset somewhat by additional losses on existing mortgages in the future.

*Commenters have suggested that in addition to LTVs and credit scores, A.M. Best should consider other major drivers of mortgage losses such as the type of product origination, the purpose of the mortgage, occupancy, debt-to-income ratios, and the type of mortgage insurance. The suggested mechanism for incorporating such risk drivers includes the use of multipliers similar to those in Private Mortgage Insurer Eligibility Requirements (PMIERS) in the SUL Matrix.*

A.M. Best acknowledges that there are many drivers of mortgage risk; however, A.M. Best believes that LTVs and credit scores are the most significant risk drivers of losses in a mortgage pool. Nevertheless, as mentioned in the section titled “Discretion to Modify Matrices or Use Model Results” in Section C of the criteria procedure, A.M. Best may use a modified SUL Matrix if the risk profile of the mortgage pool being evaluated differs significantly from that of the mortgage pool

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from which the factors in the matrix were originally derived. Thus, A.M. Best does not believe that creating additional multipliers to apply to the SUL Matrix would be appropriate at this time.

### **Suggestion to Create Crisis and Non-Crisis Loss Development Pattern**

One commenter suggested that A.M. Best develop a Loss Development Pattern based on both a crisis and non-crisis basis. Given that the loss analysis factors in stress scenarios, A.M. Best does not believe that it is appropriate at this time to create a non-crisis-based table that does not factor in stress scenarios.

### **Seasoning Factors**

One commenter suggested that the significant appreciation of home prices and very limited number of delinquencies since 2012 should lead to much lower risk than is reflected in A.M. Best's Seasoning Vectors.

As noted above, the mortgage loss analysis factors in a number of stress scenarios (VaR 95, VaR 99, VaR 99.5, and VaR 99.6). Therefore, in these scenarios home prices would drop somewhat precipitously and as reflected in the Seasoning Vectors. Given the current benign mortgage conditions, this may appear punitive but reflects the partly countercyclical nature of required capital, in that it increases as home prices appreciate and decreases as they fall. A.M. Best believes that, although recalibrating the Seasoning Vectors in various home price appreciation scenarios would not be appropriate at this time, it may modify the current matrices and vectors if the mortgage pool being evaluated has a risk profile that differs significantly from that of the mortgage pool used to derive such matrices and vectors. (See "Discretion to Modify Matrices or Use Model Results" in Section C of the criteria procedure.)

### **Amortization Vector**

One commenter observed in the December 2017 draft that the example given on p. 45 of the proposed draft showed an initial premium credit factor of 97.73% for the first year. The commenter suggested that when a transaction is new, it should receive 100% premium credit at the outset.

The premium credit for the first year is less than 100%, since it is the average of premiums over a one-year period, which reflects the amortization of the Unpaid Principal Balance (UPB).

### **Deal/Loan Age**

One commenter suggested that because there can be a significant amount of time between the formation of a reference pool for a GSE reinsurance transaction and the transaction's inception date, the Seasoning Vector could understate the actual seasoning of the transaction.

The criteria procedure allows flexibility in certain circumstances. When there is a significant amount of time between the origination of mortgage loans and the inception of a reinsurance deal, A.M. Best will apply analytical judgment and may choose to advance the Seasoning Vector associated with the transaction.

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## **Minimum Charges/Premium Credit in GSE CRT**

A.M. Best received multiple comments stating that applying a 5% minimum charge on each tranche of a GSE CRT transaction was too conservative and suggesting this minimum charge be applied on a transaction or portfolio basis. There were also comments suggesting that since the expected life of the most senior layers is relatively short, A.M. Best should not give premium credit for the entire contractual term of the most senior layers.

In the December 2017 draft of the criteria, A.M. Best applied the 5% minimum charge to the total limit associated with each transaction after considering the layers being covered. Doing so also obviates the need to limit the premium amounts that should accrue to the most remote layers because the risk charge floor would effectively negate the potential over-estimation of premium. (See Section C, p. 18 of the criteria procedure.)

## **Treatment of GSE Reinsurance Transactions Compared to Bond Charges**

During the RFC period in March 2017, a number of commenters suggested that capital charges for GSE reinsurance transactions should be similar to bond risk charges associated with securitizations related to the GSE business.

A.M. Best notes that there are unique differences between risks in GSE reinsurance transactions and Securities Valuation Office-rated GSE mortgage-backed bonds. Primarily, GSE CRT transactions are illiquid, compared to bonds. Investors can trade out of bond risk relatively easily, but reinsurers cannot easily trade out of reinsurance risk. In addition, capital charges for some layers in GSE CRT transactions can change dramatically over time, as demonstrated in Exhibit 17 in Appendix 3.

## **Simplification of Data Requirements for GSE CRT**

Several responders to the first RFC in March 2017 noted that data reporting requirements should be simplified. In response, A.M. Best greatly simplified the data reporting requirements for reinsurers involved in GSE CRT transactions in the August 2017 draft.

## **Back-end vs. Front-end GSE CRT Deals**

Responders to the March 2017 RFC asked if there will be a difference in how back-end and front-end deals will be treated. A.M. Best currently makes no distinction between back-end and front-end deals.

## **Regularly Publish Capital Charges by Tranche and Transaction for GSE CRT**

Several requests were made during the first and third RFC periods for a list of capital charges to be published by tranche and transaction for GSE CRT deals.

A.M. Best does not plan to publish all charges by tranche and transaction in the criteria procedure. However, as part of the rating process, A.M. Best will share with an insurer/reinsurer the capital charges commensurate with its specific participation level in the GSE CRT transactions.

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## **Treatment of Reserves in GSE Reinsurer Analysis**

A.M. Best received comments asking for clarification on how booked reserves for GSE CRT transactions will be handled when calculating capital charges.

In response, the “Reinsurer Information for Capital Charge Analysis” (p. 28) was added to Section C in the December 2017 draft. Booked reserves are used as a proxy for expected losses, and this amount is subtracted from the total capital charges calculated for credit risk sharing programs, to determine the net unexpected capital charge attributed to these programs.

## **Addition of Vectors and Matrices**

Several responders requested the addition of more vectors and matrices to the criteria procedure. The final version of the criteria procedure includes matrices and vectors that have been added for calculating losses associated with the GSE CRT programs.

### **Vectors**

The March 2017 draft of the criteria procedure had only one vector related to the seasoning of a portfolio of loans with maturities longer than 20 years. The final criteria procedure includes additional “Seasoning Vectors” related to mortgages with maturities of 20 years or less.

### **Loss Pattern Matrix**

The final version of the criteria procedure adopted a Loss Pattern Matrix that expanded the “Loss Distribution Pattern” vector. This matrix displayed the loss pattern over time as the GSE reinsurance transactions age.

### **Amortization Pattern Matrix**

The August 2017 draft of criteria procedure introduces an Amortization Pattern Matrix, which was adopted in the final version. This matrix displayed the amortization pattern over time as the GSE reinsurance transactions age.

## **FAQ**

### ***For companies participating in the mortgage space, what kind of additional data requests can participants expect for surveillance?***

The rating process is interactive. Typically, A.M. Best would expect that, during the regular review cycle for a rated reinsurer, any current GSE position data would be captured. Typical data requests for MIs are included in Exhibit B.9 of the criteria procedure. As conditions change, A.M. Best may request additional information.

### ***Will A.M. Best be capturing lender pay and borrower pay cancellations for mortgages with PMI?***

Yes. This is addressed in the third-party Credit Risk Model.

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### ***Has A.M. Best compared the Ad&Co. Loankinetics model output to other model results?***

A.M. Best does not compare the model output to outputs from regulatory or other models. A.M. Best is interested in understanding the different views of risk that may come from another model output and may discuss that as part of the analysis.

### ***Will the home price appreciation (HPA) factor in the model that A.M. Best is using change by rating category?***

No. Generally, changes to HPA, as well as other parameters, are based on the various confidence levels.

### ***What are the moving parts of the model that A.M. Best is using?***

Appendix 1 of the criteria procedure describes the third-party Credit Risk Model A.M. Best uses.

### ***For CRT transactions, are losses that have already occurred factored in, and are they applied to the SUL grid? And is A.M. Best using a lifetime number or a time series number in the analysis?***

A.M. Best captures future losses, not any previously realized losses. The Stressed Ultimate Loss (SUL) is a lifetime number, not a time series number, because the analysis is based on a static pool.

### ***Did A.M. Best consider using mark to market LTVs in its analyses based on an estimated value from a model and an FHFA index? What LTVs is A.M. Best using?***

A.M. Best uses a static pool approach that incorporates original LTVs.

### ***Does A.M. Best recognize the differences in CRT programs in terms of loss limits and detachment points?***

A.M. Best views each CRT transaction individually, as illustrated by the examples given in the criteria procedure.

### ***For the Loss Development Patterns used in the CRT analysis, what type of prepayment scenario was used to develop this?***

A.M. Best used an embedded low prepayment scenario of 3%-4% CPR to develop this loss development pattern.

### ***How will the collateral posted in the CRT transactions be treated?***

A.M. Best does not make adjustments for this specific collateral in its BCAR analysis.

### ***Given that CRT transactions (CIRT & ACIS) have varying durations, how many years of loss and premium are assumed in the calculation of the net capital charge?***

For 30-year transactions, A.M. Best assumes 12 years of gross losses and applies 12 years of premiums for ACIS, as long as a limit is in place and 12 years of for gross losses and 10 years of premium for CIRT. For 15-year transactions, A.M. Best assumes seven years of gross losses and applies seven years of premiums for ACIS and nine years of gross losses and seven years of premium for CIRT.