



BEST'S CREDIT RATING DISCLOSURE FORM

AMB #: 000855 - State Automobile Mutual Insurance Co

1. The Symbol, Number, or Score in the Rating Scale used to Denote the Credit Rating Categories and Notches as required by Paragraph (a)(1)(ii)(A) of Rule 17g-7

State Automobile Mutual Insurance Co

AM Best #: 000855

NAIC #: 25135

FEIN #: 31-4316080

Financial Strength Rating View Definition	
Rating:	A (Excellent)
Affiliation Code:	r (Reinsured Rating)
Financial Size Category:	XV (Greater than or Equal to USD 2.00 Billion)
Outlook:	Stable
Action:	Affirmed
Effective Date:	August 10, 2023
Initial Rating Date:	June 30, 1925

Long-Term Issuer Credit Rating View Definition	
Long-Term:	a
Outlook:	Stable
Action:	Affirmed
Effective Date:	August 10, 2023
Initial Rating Date:	February 3, 2006

(i) Denotes Indicative Rating

u Denotes Under Review Rating

pca Best's Preliminary Credit Assessment is an independent opinion on the relative general credit strengths and weaknesses of an issuer, obligor, security, or a proposed transaction or financing structure primarily based on business plans, term sheets, and AM Best's expectations relative to the execution of such business plans. AM Best does not define a PCA as a Credit Rating; however, the assessment is expressed using the existing Best's Credit Rating scales.

Best's Credit Rating Analyst	
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2. The Version of the Procedure or Methodology used to Determine the Credit Rating as required by Paragraph (a)(1)(ii)(B) of Rule 17g-7

Rating Methodology and Criteria Report:	Version
The following Methodologies and Criteria Procedures were used at the time of and the basis for the proposed rating	
Best's Credit Rating Methodology	11/13/2020
Catastrophe Analysis in A.M. Best Ratings	03/10/2023
Available Capital & Holding Company Analysis	10/13/2017
Evaluating U.S. Surplus Notes	06/15/2023
Scoring and Assessing Innovation	02/27/2023
The Treatment of Terrorism Risk in the Rating Evaluation	05/25/2023
Understanding BCAR for U.S. Property/Casualty Insurers	05/25/2023

3. The Main Assumptions and Principles used to Construct the Procedures and Methodology used to Determine the Credit Rating as required by Paragraph (a)(1)(ii)(C) of Rule 17g-7

Assumptions

Based on historical experience and AM Best's transition studies, ratings typically move no more than one or two notches when Rating Actions occur. However, certain factors could cause larger scale movement in the ratings. AM Best identifies the following primary factors as having the potential to significantly affect ratings:

- Data accuracy and reliability
- Interest rates
- Investment impairments
- Liquidity
- Equity markets
- Catastrophe model risk
- Reinsurance market capacity and credit risk
- Mortality risk
- Morbidity risk
- Holding company/affiliates
- Country risk
- Regulatory risk

Elements of Country Risk



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AM Best defines country risk as the risk that country-specific factors could adversely affect an insurer's ability to meet its financial obligations. Country risk is evaluated and incorporated into all of AM Best's credit ratings. As part of evaluating country risk, AM Best identifies the various risks within a country that may directly or indirectly affect an insurance company.

AM Best separates these risks into three main categories: economic risk, political risk and financial system risk. Given AM Best's particular focus on the insurance industry, financial system risk is further divided into two sections: insurance risk and non-insurance financial system risk.

Economic risk is the likelihood that fundamental weaknesses in a country's economy will cause adverse developments for an insurer. AM Best's determination of economic risk evaluates the state of the domestic economy, government finances, and international transactions, as well as prospects for growth and stability.

Political risk is the likelihood that governmental or bureaucratic inefficiencies, societal tensions, an inadequate legal system or international tensions will cause adverse developments for an insurer. Political risk comprises the stability of a government and society, the effectiveness of international diplomatic relationships, the reliability and integrity of the legal system and business infrastructure, the efficiency of the government bureaucracy, and the appropriateness and effectiveness of the government's economic policies.

Financial system risk (non-insurance) is the risk that financial volatility may erupt due to inadequate reporting standards, weak banking systems or asset markets, or poor regulatory structure. Non-insurance financial system risk considers a country's banking system, accounting standards, financial market development, and government finances, and assesses how vulnerable the financial system is to external or internal volatility. Basel II & III, World Bank Insolvency Principles and international accounting standards are referenced in the analysis, as are the performances of banks, equity indices and fixed-income securities.

Insurance risk is the risk that the insurance industry's levels of development and public awareness, transparency and effectiveness of regulation, reporting standards, and regulatory sophistication will contribute to a volatile financial system and compromise an insurer's ability to pay claims. Insurance risk, which AM Best considers as a distinct subsection of financial system risk, is addressed separately because of the importance of, and AM Best's specific focus on, the industry. The determination is based heavily on the Insurance Core Principles (ICP) of the International Association of Insurance Supervisors (IAIS). AM Best employs a sizable subset of the 28 ICPs by organizing them into three categories: 1) government commitment to an open and well-regulated insurance industry; 2) adequacy of supervisory authority and its supporting infrastructure; and 3) insurer accountability.

Country Risk Tiers

The assignment of CRTs to score ranges is based on AM Best's assertion that the risk in countries can be categorized loosely to provide a basis of comparison, provided that country-by-country differences are acknowledged. Therefore, CRTs can be classified, in a typical scenario, by the following:

- CRT-1: A country receiving a CRT-1 assignment is characterized by a predictable and transparent political environment, legal system and business infrastructure, a sophisticated financial system regulation with deep capital markets, and a mature insurance industry framework.
- CRT-2: A country receiving a CRT-2 assignment is characterized by a predictable and transparent political environment, legal system and business infrastructure, sufficient financial system regulation, and a mature insurance industry framework.
- CRT-3: A country receiving a CRT-3 assignment is characterized by a developing political environment, legal system, business infrastructure, capital market, and insurance regulatory structure.
- CRT-4: A country receiving a CRT-4 assignment is characterized by a relatively unpredictable and nontransparent political, legal and business environment with an underdeveloped capital market, and a partially to fully inadequate insurance regulatory structure.
- CRT-5: A country receiving a CRT-5 assignment is characterized by an unpredictable and opaque political, legal and business environment with weak rule of law, lower human development and social instability, a limited, illiquid or nonexistent capital market, and a nascent insurance industry.

In short, as country risk increases (as measured by a higher Country Risk Tier), the distribution of ratings generally migrates down the rating scale. This same relationship effectively applies to any significant category of risk an insurer faces, i.e., higher risk exposure places pressures upon financial stability.



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4. The Potential Limitations of the Credit Rating as required by Paragraph (a)(1)(ii)(D) of Rule 17g-7

Please refer to the **Guide to Best's Credit Ratings** for the following:

- [1\(a\). Usage of Ratings and Limitations](#)
- [8. Best's Rating Scales: Categories and Symbols](#)

5. Information on the Uncertainty of the Credit Rating as required by Paragraph (a)(1)(ii)(E) of Rule 17g-7

Please refer to the **Guide to Best's Credit Ratings** for the following:

- [2\(b\)ii. Quality of Information](#)

6. Use of Third Party Due Diligence in Taking the Credit Rating Action as required by Paragraph (a)(1)(ii)(F) of Rule 17g-7

AM Best Company did not use due diligence services of a third party in taking the Rating Action. This disclosure only applies to Rating Actions associated with asset-backed securities as defined by section 3(a)(79) of the Securities Exchange Act of 1934, as amended.

7. How Servicer or Remittance Reports were used, and with what Frequency, to Conduct Surveillance of the Credit Rating as required by Paragraph (a)(1)(ii)(G) of Rule 17g-7

How Servicer / Remittance reports were used:

Not Applicable

Frequency of surveillance:

Not Applicable

8. A Description of the Types of Data about the Obligor, Issuer, Security, or Money Market Instrument that were Relied Upon for the Purpose of Determining the Credit Rating as required by Paragraph (a)(1)(ii)(H)(i) of Rule 17g-7

Please refer to the **Guide to Best's Credit Ratings** for the following:

- [2\(b\). Compile Information](#)
- [2\(b\)i. Material Sources of Information](#)



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9. An Overall Assessment of the Quality of Information Available and Considered in Determining the Credit Rating as required by Paragraph (a)(1)(ii)(I) of Rule 17g-7

Please refer to the **Guide to Best's Credit Ratings** for the following:

- [2\(b\)i. Material Sources of Information](#)
- [2\(b\)ii. Quality of Information](#)

10. Information Relating to Conflicts of Interest as required by Paragraph (a)(1)(ii)(J) of Rule 17g-7

1) AM Best Company has been paid to determine the Credit Rating by the obligor being rated or the issue, underwriter, depositor, or sponsor of the security or money market instrument being rated.

Rating Opinion Characteristics	
Solicited	Participating

2) AM Best Company was also paid for services by the company other than determining Credit Ratings during the most recently ended fiscal year.

Please refer to the **Guide to Best's Credit Ratings** for the following:

- [1\(d\). Not an Investment Advisor or Consultant](#)

11. An Explanation or Measure of the Potential Volatility of the Credit Rating as required by Paragraph (a)(1)(ii)(K) of Rule 17g-7

Factors and Magnitude - Change Rating:

The ratings could be negatively affected by the following factors:

- a deterioration in investment and underwriting performance leading to a trend of negative operating results; Potential rating impact:Minor
- an erosion of surplus, rise in underwriting leverage, and/or other negative impact to balance sheet metrics that causes a significant deterioration in the group's overall balance sheet strength; Potential rating impact:Minor
- a deterioration in Liberty Mutual Holding Company Inc.'s overall financial strength or credit quality. Potential rating impact:Minor

While it is unlikely that the ratings would be upgraded in the near term, a longer-term consistent trend in underwriting profitability could lead to consideration of positive rating movement. Potential rating impact:Minor

NOTE: Only a rating committee can make a rating decision and the above referenced factors would be taken into consideration, along with all available relevant information in determining a Rating Action. However, the magnitude of a potential change in the rating that could reasonably occur as a result of the impact of the factors listed above are characterized by the following summary chart:



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Rating Change Characterization	Number of ICR Notches (Up or Down)
Minor	0 - 1
Moderate	2 - 3
Severe	> 3

12. The Information on the Content of the Information of the Credit Rating as required by Paragraph (a)(1)(ii)(L) of Rule 17g-7

(1) Rating History and Performance

- [Financial Strength / Issuer Credit Rating History](#)

(2) Expected Probability of Default and Expected Loss

The Commission states that it does not expect NRSROs to alter the meanings of their Credit Ratings or rating procedures and methodologies to conform to this disclosure requirement. Rather, the Commission expects NRSROs to provide "information" to the extent it is consistent with their procedures and methodologies for determining Credit Ratings, on the expected probability of default and expected loss in the event of default. According to the Commission, this information could consist of, for example, historical default and loss statistics, respectively, for the class or subclass of the Credit Rating.

AM Best's Credit Ratings generally are intended to indicate the relative degree of credit risk of an obligor or debt instrument rather than reflect a measure of a specific default probability or loss expectation. AM Best is providing the historical default statistics or derivatives of such default statistics to comply with Rule 17g-7(a)(ii)(L)(2). AM Best does not produce any loss statistics related to any classes of Credit Ratings so it has no information about expected loss given default. Furthermore, expected losses given default is not consistent with AM Best's procedures and methodologies for determining Credit Ratings.

INSURANCE COMPANY DEFAULT RATES (FSR)

FSR	1 - Year	3 - Year	10 - Year
A++	0.00%	0.00%	0.00%
A+	0.04%	0.17%	0.51%
A	0.04%	0.27%	1.80%
A-	0.15%	0.73%	2.80%
B++	0.34%	1.45%	4.29%
B+	0.75%	2.16%	6.31%
B	1.51%	4.39%	8.81%
B-	3.45%	6.90%	12.07%
C++	3.97%	6.96%	11.20%
C+	3.51%	7.28%	11.64%
C	3.37%	7.37%	15.50%
C-	11.94%	13.95%	17.39%
D	17.35%	22.16%	29.41%

Note: Data from 1992 to 2018



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1. Impairments as a Proxy for Defaults. Upon the public placement of a company, via public court order or other international equivalent, into conservation, rehabilitation and/or insolvent liquidation it is designated by AM Best as a Financially Impaired Company (FIC). Supervisory actions undertaken by Insurance Department regulators without court order are not considered impairments for purposes of compiling Securities and Exchange Commission (SEC) Exhibit 1 statistics unless clear direction is given by the regulator to delay or limit policy or contract payments.

There are a number of regulatory oversight actions that may be taken with respect to troubled insurers in which court orders are not sought, such as required company action plans, various forms and levels of supervision, and licensure actions. Companies may be subject to these insurance department orders and actions on multiple occasions, particularly in certain jurisdictions, and while these regulatory actions suggest concern and impose constraints, they are not necessarily indicative of an insurer's inability to meet its ongoing policy and contract obligations.

Additionally, companies that enter voluntary dissolution and are not under financial duress at that time are not counted as financially impaired.

2. Construction of Default Rates of Insurance Carriers (FSR). This table was constructed by directly observing the default rates of insurance operating companies rated on the traditional Financial Strength Rating (FSR) scale.

3. Rating a Measure of Relative Credit Risk. AM Best's Credit Ratings generally are intended to indicate the relative degree of credit risk of an obligor or debt instrument rather than reflect a measure of specific default probability.

4. Data Consistent With Submission to the Securities and Exchange Commission. The data used to calculate default rates in this table is consistent with the data used to calculate the 1-year, 3-year and 10-year default rates for insurers as required by the SEC in Exhibit 1 of Form NRSRO. Unlike the single cohort method of analysis used in the submission to the Commission, however, the calculations in this table reflect the use of the average cohort approach in order to capture the effect of the various economic cycles experienced by insurance carriers since 1992 when the current 13-point FSR scale (A++ to D) was adopted by AM Best.

5. Data Does Not Necessarily Reflect Default Expectations. The data in this table does not necessarily reflect our default rate expectations. For example, the fact that we show no default rate for the 1-year "A++" category does not mean that we expect no defaults for this rating. It only means that we have not yet observed any historical defaults over a 1-year period for companies rated "A++".

6. Data Changes Periodically. AM Best may periodically change the data in the table if warranted. The reasons for the revisions may be as follows: If AM Best 1) adds more rating cohorts which significantly changes the calculated default rates, 2) changes its criteria for recognizing insurance company defaults, or 3) incorporates new defaults or adjusts existing default data.

INSURANCE COMPANY DEFAULT RATES (ICR)

ICRs	1 - Year	3 - Year	10 - Year
aaa	0.00%	0.00%	0.00%
aa+	0.00%	0.00%	0.00%
aa	0.04%	0.17%	0.51%
aa-	0.04%	0.17%	0.51%
a+	0.04%	0.27%	1.80%
a	0.04%	0.27%	1.80%
a-	0.15%	0.73%	2.80%
bbb+	0.34%	1.45%	4.29%
bbb	0.34%	1.45%	4.29%
bbb-	0.75%	2.16%	6.31%



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ICRs	1 - Year	3 - Year	10 - Year
bb+	1.51%	4.39%	8.81%
bb	1.51%	4.39%	8.81%
bb-	3.45%	6.90%	12.07%
b+	3.97%	6.96%	11.20%
b	3.97%	6.96%	11.20%
b-	3.51%	7.28%	11.64%
ccc+	3.37%	7.37%	15.50%
ccc	3.37%	7.37%	15.50%
ccc-	11.94%	13.95%	17.39%
cc	11.94%	13.95%	17.39%
c	17.35%	22.16%	29.41%

Note: Default rates based on FSR to ICR Translation.

See Best's Credit Rating Methodology, *ICR/FSR Rating Translation Table* (Exhibit D.1)

1. Impairments as a Proxy for Defaults. Upon the public placement of a company, via public court order or other international equivalent, into conservation, rehabilitation and/or insolvent liquidation it is designated by AM Best as a Financially Impaired Company (FIC). Supervisory actions undertaken by Insurance Department regulators without court order are not considered impairments for purposes of compiling Securities and Exchange Commission (SEC) Exhibit 1 statistics unless clear direction is given by the regulator to delay or limit policy or contract payments.

There are a number of regulatory oversight actions that may be taken with respect to troubled insurers in which court orders are not sought, such as required company action plans, various forms and levels of supervision, and licensure actions. Companies may be subject to these insurance department orders and actions on multiple occasions, particularly in certain jurisdictions, and while these regulatory actions suggest concern and impose constraints, they are not necessarily indicative of an insurer's inability to meet its ongoing policy and contract obligations.

Additionally, companies that enter voluntary dissolution and are not under financial duress at that time are not counted as financially impaired.

2. Construction of Default Rates of Insurance Carriers(ICR). This table was not constructed by directly observing the default rates of insurance operating companies rated on the 21-point Issuer Credit Rating (ICR) scale because default data associated with ICRs is sparse. It was constructed by converting each operating company Financial Strength Rating (FSR) to an equivalent ICR based on AM Best's FSR/ICR translation table.

3. Rating a Measure of Relative Credit Risk. AM Best's Credit Ratings generally are intended to indicate the relative degree of credit risk of an obligor or debt instrument rather than reflect a measure of specific default probability.

4. Data Does Not Necessarily Reflect Default Expectations. The data in this table does not necessarily reflect our default rate expectations. For example, the fact that we show no default rate for the 1-year "aaa" category does not mean that we expect no defaults for this rating. It only means that we have not yet observed any historical defaults over a 1-year period for companies with an equivalent "aaa" rating.

5. Data Changes Periodically. AM Best may periodically change the data in the table if warranted. The reasons for the revisions may be as follows: If AM Best 1) adds more rating cohorts which significantly changes the calculated default rates, 2) changes its criteria for recognizing insurance company defaults, or 3) incorporates new defaults or adjusts existing default data.

CORPORATE DEFAULT RATES



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ICRs	1 - Year	3 - Year	10 - Year
aaa	0.00%	0.00%	0.00%
aa+	0.00%	0.00%	0.00%
aa	0.00%	0.00%	0.00%
aa-	0.00%	0.00%	0.00%
a+	0.02%	0.08%	0.26%
a	0.04%	0.17%	0.51%
a-	0.04%	0.17%	0.51%
bbb+	0.04%	0.27%	1.80%
bbb	0.04%	0.27%	1.80%
bbb-	0.15%	0.73%	2.80%
bb+	0.34%	1.45%	4.29%
bb	0.34%	1.45%	4.29%
bb-	0.75%	2.16%	6.31%
b+	1.13%	3.27%	7.56%
b	1.51%	4.39%	8.81%
b-	1.51%	4.39%	8.81%
ccc+	3.45%	6.90%	12.07%
ccc	3.71%	6.93%	11.64%
ccc-	3.97%	6.96%	11.20%
cc	3.97%	6.96%	11.20%
c	3.51%	7.28%	11.64%

Note: Default rates based on notching applied to insurance ICRs.

See Best's Credit Rating Methodology, *Typical Notching Difference Between Operating Company ICR and Holding Company ICR* (Part IV, Exhibit B.1)

1. Impairments as a Proxy for Defaults. Upon the public placement of a company, via public court order or other international equivalent, into conservation, rehabilitation and/or insolvent liquidation it is designated by AM Best as a Financially Impaired Company (FIC). Supervisory actions undertaken by Insurance Department regulators without court order are not considered impairments for purposes of compiling Securities and Exchange Commission (SEC) Exhibit 1 statistics unless clear direction is given by the regulator to delay or limit policy or contract payments.

There are a number of regulatory oversight actions that may be taken with respect to troubled insurers in which court orders are not sought, such as required company action plans, various forms and levels of supervision, and licensure actions. Companies may be subject to these insurance department orders and actions on multiple occasions, particularly in certain jurisdictions, and while these regulatory actions suggest concern and impose constraints, they are not necessarily indicative of an insurer's inability to meet its ongoing policy and contract obligations.

Additionally, companies that enter voluntary dissolution and are not under financial duress at that time are not counted as financially impaired.

2. Construction of Default Rates of Corporates. This table was not constructed by directly observing the default rates of corporate ratings on the 21-point Issuer Credit Rating (ICR) scale because default data associated with corporate ICRs is sparse. Rather, this table was constructed by a) converting each default rate associated with each Financial Strength



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Rating (FSR) to its equivalent operating company ICR based on AM Best's FSR/ICR translation table, and then, b) converting the operating company ICR to an equivalent corporate rating based on a notching algorithm set forth in the criteria, Insurance Holding Company and Debt Ratings, to reflect the legal separation of insurance holding companies from operating insurers as well as the normal subordination of insurance holding company creditors to operating company policyholders.

3. Ratings a Measure of Relative Credit Risk. AM Best's Credit Ratings generally are intended to indicate the relative degree of credit risk of an obligor or debt instrument rather than reflect a measure of specific default probability.

4. Data Does Not Necessarily Reflect Default Expectations. The data in this table does not necessarily reflect our default rate expectations. For example, the fact that we show no default rate for the 1-year "aaa" category does not mean that we expect no defaults for this rating. It only means that we have not yet observed any historical defaults over a 1-year period for corporate obligations with an equivalent "aaa" rating.

5. Data Changes Periodically. AM Best may periodically change the data in the table if warranted. The reasons for the revisions may be as follows: If AM Best 1) adds more rating cohorts which significantly changes the calculated default rates, 2) changes its criteria for recognizing insurance company defaults, or 3) incorporates new defaults or adjusts existing default data.

ASSET-BACKED SECURITIES DEFAULT RATES (All Subclasses)

ICRs	1 - Year	3 - Year	10 - Year
aaa	0.03%	0.11%	0.42%
aa+	0.08%	0.14%	0.58%
aa	0.11%	0.17%	0.69%
aa-	0.14%	0.28%	0.88%
a+	0.16%	0.33%	1.09%
a	0.20%	0.41%	1.31%
a-	0.22%	0.62%	2.24%
bbb+	0.28%	0.96%	3.45%
bbb	0.35%	1.26%	4.50%
bbb-	0.45%	1.56%	5.48%
bb+	0.84%	2.90%	10.00%
bb	1.23%	4.68%	15.65%
bb-	1.56%	6.02%	19.50%
b+	3.28%	9.73%	31.11%
b	3.73%	10.80%	33.58%
b-	4.77%	13.08%	38.23%
ccc+	6.74%	17.66%	47.84%
ccc	10.33%	20.41%	49.46%
ccc-	13.85%	23.11%	51.07%
cc	19.53%	28.87%	57.44%
c	23.30%	31.74%	59.04%

Source: Best's Insurance-Linked Securities & Structures Methodology

Best's Idealized Issue Default Matrix (Exhibit E.2)



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1. Asset-Backed Securities Default. AM Best designates an asset-backed security as being in default if the issuer of the security failed to timely pay principal or interest due according to the terms of the security.

2. Construction of Default Rates of Asset-Backed Securities. This table was not constructed by directly observing the default rates of asset-backed securities. The default rates of the ratings in this category are equivalent to the default rates in Best's Idealized Issue Default Matrix. This matrix reflects AM Best's long-term view of defaults of asset-backed securities and structured finance transactions. This view was formed by considering the defaults associated with operating insurance companies rated by AM Best, the notching process employed to derive the ratings associated with holding company debt obligations, and the need to make distinctions between rating categories.

3. Ratings a Measure of Relative Credit Risk. AM Best's Credit Ratings generally are intended to indicate the relative degree of credit risk of and obligor or debt instrument rather than reflect a measure of specific default probability.

4. Data Changes Periodically. The data in the table will change if AM Best modifies Best's Idealized Issue Default Matrix. This matrix is published in Best's Insurance-Linked Securities & Structures Methodology and may be revised based on more recent insurance company default data.

For ratings issued in or endorsed into the European Union, historic default rates published by ESMA are available at:
<https://registers.esma.europa.eu/cerep-publication/>

For ratings issued or endorsed into the United Kingdom, historic default rates published by the FCA are available at:
<https://data.fca.org.uk/#/ceres/craStats>

13. Information on the Sensitivity of the Credit Rating to Assumptions as required by Paragraph (a)(1)(ii)(M) of Rule 17g-7

Topic	(1) Key Assumption Detail	(2) Potential Impact on the Rating
Data Accuracy and Reliability	While public information is considered as part of the rating process, AMB relies primarily on audited financial statements, third party actuarial reports, documents and assertions provided by management. The assumption is that the financial information provided is reliable and credible, although AMB does not undertake to verify the accuracy of this information.	A material misstatement of financial performance or capital position, whether through negligence or fraud, could negatively affect a company's rating. For example, inflated asset valuations or a faulty actuarial opinion of reserve adequacy could result in an incorrect assessment of the financial strength of a company.
Investment Impairments	Investment impairments at or below the historical average.	Significant downgrades in credit quality of fixed income portfolios, realized losses through impairments of invested assets increases required capital and reduces net income and capital/surplus. Rating Action may occur.
Catastrophe Model Risk	Key assumption used in determining this rating takes into consideration information provided by third party catastrophe modelers. Best does not validate these models but assumes a degree of confidence in these models which Best uses as a benchmark to measure a company's exposure to modeled catastrophe risk. Best also uses this modeled output as a discussion point around enterprise risk management and risk mitigation. While this output can have a high degree of variability, Best believes these models are very useful tools which provides its users with the expertise, research and technical knowledge otherwise unavailable to them. Company specific data quality, data resolution and	Catastrophe models are risk management tools that can vary widely due to the actual event (versus model event set) and model sensitivities including geocoding / data resolution, data quality (construction / ITV), reliability (missing information) and coverage. Therefore, if assumptions used in the model prove to be significantly different from actual performance, a company's capital position can be potentially exposed to a material negative impact due to a lack of reinsurance protection. Rating pressure may occur as a result.



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Topic	(1) Key Assumption Detail	(2) Potential Impact on the Rating
	historical model reliability are also elements which lend itself to confidence in the modeled loss provided.	
Reinsurance Market Capacity and Credit Risk	A key assumption used in the determination of this rating assumes no material change in availability and/or credit quality of its reinsurers; receivable balances to be current with no evidence of overdue material balances or third-party credit default/dispute risk. Given the significant role that third party reinsurance plays in this rating, this rating is heavily dependent on reinsurance and susceptible to reinsurer default.	In the event reinsurance capacity available to the company is materially and negatively impacted and/or its reinsurers inability or unwillingness to pay its claims, negative rating pressure could occur.
Holding Company / Affiliates	Assumes no sudden change in holding company leverage, coverage and/or liquidity. Additional assumptions include no change in credit facilities to obtain letters of credit from a commercial bank, through the placement of assets in trust. If rating includes a level of rating enhancement based on a degree of implicit and explicit support provided by the parent company and/or affiliate, the assumption is that the level of support will remain prospectively.	Any sudden change in holding company leverage, coverage, and or liquidity could result in a rating change for both the holding company and its operating insurance subsidiaries. Any alteration in a parent (holding) company's ability to provide implicit and/or explicit parental support could alter Best's view of rating enhancement which could suddenly cause a rating downgrade. In addition, changes in enhancement provided to group-rated members, may have an impact on the rating(s). Best evaluates impact on capital via forecasted BCAR including planned dividends to Parent and by evaluating BCAR for the entire Enterprise based on tangible equity. The starting point for every rating is the stand-alone evaluation of the legal entity's balance sheet strength, operating performance and business profile.

14. Information on the Representations, Warranties, and Enforcement Mechanisms as required by Paragraph (a)(1)(ii)(N) of Rule 17g-7

The representations, warranties, and enforcement mechanisms available to investors which were disclosed in the prospectus, private placement memorandum, or other offering documents for the asset-backed security and that relate to an asset pool underlying the asset-backed security. This disclosure only applies to Rating Actions associated with asset-backed securities as defined by section 3(a)(79) of the Securities Exchange Act of 1934, as amended. Furthermore, the disclosure applies to asset-backed securities that were initially rated on or after September 26, 2011.



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15. Attestation as required by Paragraph (a)(1)(iii) of Rule 17g-7

Attestation

Attached is a signed statement by a person within AM Best that has responsibility for the Rating Action and, to the best knowledge of the person: (A) No part of the Credit Rating was influenced by any other business activities; (B) The Credit Rating was based solely upon the merits of the obligor, security, or money market instrument being rated; and (C) The Credit Rating was an independent evaluation of the credit risk of the obligor, security, or money market instrument.

As the person responsible for this Rating Action, which was determined through the rating committee process, to the best of my knowledge:

- No part of the Credit Rating was influenced by any other business activities;
- The Credit Rating was based solely upon the merits of the obligor, security, or money market instrument being rated; and
- The Credit Rating was an independent evaluation of the credit risk of the obligor, security, or money market instrument.

Note: Best's Credit Ratings are a product/service of AM Best Rating Services, Inc. and not of any particular individual group or committee within AM Best.

Name, Title: **/s/ Michael J. Lagomarsino, CFA, FRM**, Senior Director



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16. Additional Regulatory Disclosures

Key Elements Underlying the Rating

The Rating Rationale is based on the consolidated financials of the Rating Unit 000060 Liberty Mutual Insurance Cos of which 000855 State Automobile Mutual Ins Co is a member.

Rating Rationale

Balance Sheet Strength: Very Strong

- Risk-adjusted capitalization exceeds the threshold for the very strong categorization, as measured by AM Best's stochastic Best's Capital Adequacy Ratio (BCAR).
- The balance sheet benefits from the use of a comprehensive reinsurance program with highly rated reinsurers.
- The group benefits from financial flexibility achieved through its ultimate parent, Liberty Mutual Holding Company Inc. (LMHC), which has access to the capital markets. Membership in the Federal Home Loan Bank affords additional borrowing capability.
- Surplus has grown modestly over the most recent five- and ten-year period driven mainly by net investment income, as well as realized and unrealized capital gains.
- Offsetting these strengths are Liberty Mutual's historical pattern of modest adverse loss reserve development, though improvement has been noted in recent years. In addition, Liberty Mutual maintains an elevated level of high-risk assets when compared to other rating units, driven by a high level of affiliated investments; the investment risk has been well managed over time.

Operating Performance: Adequate

- AM Best views the group's operating performance as adequate, with positive operating income in nine of the last ten calendar years through 2022 driven by strong investment income and realized and unrealized capital gains, which have generally offset underwriting losses.
- The group's underwriting performance continues to trail the property/casualty industry benchmark when viewed on a five- and ten-year average combined ratio basis. The group has been challenged by catastrophe and non-catastrophe losses.
- Management is focused on improving its underwriting performance by leveraging scale, agility, distribution capabilities, and data driven enhancements to better refine its book, while maintaining market position and improving value to the customer base.
- As the group implements initiatives to lower longer-term costs and improve operational efficiencies, this has resulted in some increased expenses in the short term.

Business Profile: Favorable

- The group's business profile is viewed as a favorable rating factor as the group has a strong, diversified business profile that serves to protect its earnings stream.
- Liberty Mutual is principally engaged in underwriting virtually all lines of personal and commercial property/casualty business and continues to rank in the top ten in the US based on 2022 direct written premiums (DWP).
- The group is highly diversified by product and geography with approximately 52% of net written premiums (NWP) derived from personal lines and 39% derived from commercial lines, consistent with recent years. Domestic DWP is well diversified with the largest states, Texas and California, each accounting for approximately 9.5% of 2022 DWP.
- Liberty Mutual currently operates in 29 countries and economies around the globe. In May 2023, Liberty Mutual announced the planned divestiture of some of its foreign operations in Latin America, and in June 2023, Liberty Mutual announced the planned divestiture of some of its foreign operations in Western Europe.
- Liberty Mutual continues to thrive on its name recognition, customer service, technological advantages, strategic alliances in managed care, and breadth of its products and value-added services. Insurance products and services are distributed primarily through independent agents and a direct sales force that enhance the group's overall franchise value.

Enterprise Risk Management: Appropriate



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- The group's risk management practices are comprehensive and sophisticated, and appropriate given the size and complexity of the organization, and as such are fully supportive of its operations.
- Managing risk is a core competency of the group, as it is central to the operational execution of its strategic plan. Liberty Mutual's risk management is overseen as part of the LMHC enterprise, which maintains an extensive ERM program that is wide ranging and integrated throughout its worldwide operations.

Outlook Rationale

The stable outlooks reflect AM Best's belief that the ratings for Liberty Mutual Insurance Companies' members are appropriately positioned at the current levels. The group's very strong balance sheet metrics and historically profitable operating results partially mitigate potential concerns surrounding prolonged competitive conditions in certain key business lines and the group's variable underwriting performance.

Note: An outlook determination is assigned in tandem with a Best's Credit Rating and other opinion types to supplement the opinion by providing an indication of the potential future direction of the opinion over an intermediate period, generally defined as 36 months. For additional information refer to: [Guide to Best's Credit Ratings](#)

Additional Disclosures:

- For information on whether the credit rating is solicited or unsolicited, please see Section 10 above.
- For information on the lead rating analyst and name and address of the entity responsible for the rating, please see the "Best's Credit Rating Analyst" box at the beginning of this form.
- For information on the person primarily responsible for approving the credit rating, please see Section 15 above.
- For information on the substantially material sources of information for this rating action, please see Section 8 above.
- For more information on the methodology used to develop this rating action, please see Section 2 above.
- The below listed model was used to determine this rating. For a description of the model, see the link to the associated criteria in Section 2.
 - US Property/Casualty Best's Capital Adequacy Ratio (BCAR) Model
- For information on actions or events that could lead to an upgrade or downgrade, please see Section 11 above.
- For information on the rating categories and symbols, please see the "View Definition" links in the rating boxes in Section 1 above.
- For information on the definition of default, please see Section 12 above.
- For information on the sensitivity of assumptions in the rating process, please see Section 13 above.
- The credit rating was disclosed to the rated entity prior to publication.

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