A Captive Review prepared by

SIGMA Actuarial Consulting Group, Inc.

SIGMA ACTUARIAL CONSULTING GROUP, INC.

January 21, 2021

Samuel Jackson
Director of Captive Insurance Division
State Department of Insurance

Re: Review of Actuarial Feasibility Study of ABC Insurance Company, Inc. on December 31, 2020

Mr. Jackson:

Enclosed is SIGMA's final report related to our review of the methodology and findings of the Actuarial Feasibility Study prepared for ABC Insurance Company, Inc. by XYZ Consulting on December 31, 2020.

If you or any other division staff have any questions related to our review or require any additional information, please let us know. It has been a pleasure working on this assignment, and we look forward to future opportunities to work together.

Regards,

Al J. Rhodes

Al J. Rhodes, ACAS, MAAA
President & Senior Actuary
SIGMA Actuarial Consulting Group, Inc.

Qualification Statement: I, Al J. Rhodes, am associated with the firm of SIGMA Actuarial Consulting Group, Inc. I am a member of the American Academy of Actuaries and meet its qualification standards, and I am an Associate of the Casualty Actuarial Society.

Table of Contents

Scope

At the request of the Captive Insurance Division of the State Department of Insurance, SIGMA Actuarial Consulting Group, Inc. (SIGMA) conducted a review of the actuarial feasibility analysis prepared for ABC Insurance Company, Inc. (ABC) by XYZ Consulting (XYZ) on December 31, 2020.

Our review was limited to the documents containing the actuarial feasibility analysis and the detailed plan of operations, provided by the Captive Insurance Division. We have relied on the data and analysis as documented in the materials provided to us. We have not audited or verified the data. We have not completed a detailed check of the mathematical calculations. Our findings may need to be revised if any of the underlying data is found to be inaccurate or incomplete.

This review includes our comments on the following:

1. The reasonableness of the methodology and conclusion of the actuarial work.
2. The proposed capital and surplus in relation to coverage, retention, and premium volume.
3. Projected premiums.
4. The structure of the plan, including, but not limited to:
    - Ownership and control.
    - Reliance on financial support by the parent.
    - Flow of funds.
    - The adequacy of reinsurance, or the amount and type of reinsurance needed.
    - Pro-forma financial statements illustrating one or more adverse case scenarios and the reasonableness of assumptions.
    - Recommendation for approval or disapproval or an indication of areas that require further detail or discussion.

This review is intended for the use of the Captive Insurance Division. If released to any third party, it should be released only in its entirety. Please advise the authors at SIGMA of the release of this report to any other parties. SIGMA reserves the right to supplement this report with additional explanations and qualifications as it deems appropriate for the particular user.

Background

XYZ was requested by Manager, Inc. (Manager), the captive manager, to provide funding estimates for property & casualty exposures for ABC's proposed captive insurance program. ABC intends to become licensed as a pure captive insurance company, issuing policies to Parent Company (Parent) on a direct basis. ABC will cede 50% of losses and premium to Reinsurance Company, Inc. (RIN).

Policies will be issued by ABC for the following coverages and per occurrence and aggregate limits on a claims-made basis. It is our understanding that all coverages included in the analysis are property and casualty coverages.

- Risk 1[1] $1,000,000/$2,000,000
- Risk 2 $750,000/$1,500,000
- Risk 3 $75,000/$2,000,000
- Risk 4 $25,000/$1,000,000
- Risk 5 $500,000/$1,000,000

XYZ's analysis includes loss and premium estimates for direct policies as well as pro-forma financial statements for both an expected and adverse scenario. For purposes of this review, we have considered estimates for coverages shown in the actuarial feasibility analysis completed by XYZ.

[1] Generic risks are listed in this sample.

Reasonableness of the Methodology and Conclusions of Actuarial Work

The methodology used to determine the loss projections varies by coverage. Loss estimates for the expected and adverse scenarios rely on information provided by Parent and appear to give significant weight to industry and similar entity information, as limited historical loss data unique to Parent is shown for the coverages included. Methods are based on frequency and severity estimates, loss cost estimates, market information, and/or rate-on-line assumptions. Industry and similar entity information is adjusted for the specific exposure of ABC. Risk margins are also estimated for each coverage based on industry information.

Losses for most of the proposed risks are likely to be low in frequency and high in severity. Therefore, it is possible that actual losses could vary significantly from expected losses for any year and that actual losses could vary significantly from year to year. The methodology and assumptions should be monitored over time as the actual claims history emerges.

Our actuarial review was limited to the documents provided. We have relied on the data and analysis as documented in the actuarial feasibility analysis. We have not audited or verified the data contained in this report. Additionally, many of the projections rely on industry benchmark data. Our review assumes this industry benchmark information is properly compiled and sourced. We have not verified the compilation of this information. Our findings may need to be revised if any of the underlying data is found to be inaccurate or incomplete. Likewise, we have not attempted to independently estimate loss projections for any coverage. An independent analysis by SIGMA would not necessarily use the same methods or assumptions or produce similar results.

Actuarial estimates are subject to uncertainty from various sources, including economic conditions, legislative changes, and judicial decisions. Future emergence may vary significantly from the actuarially estimated loss projections. This uncertainty is compounded due to the five-year period projected and assumptions necessary to estimate the pro-forma financial statements.

Subject to the limitations of our review, it is our opinion that loss projections at the expected and adverse scenarios and estimated risk margins contained in the actuarial feasibility analysis are developed using reasonable actuarial methods given the coverages analyzed, limited historical data unique to Parent, and limited availability of industry information. The XYZ report is signed by a credentialed actuary of the Casualty Actuarial Society.

Proposed Capital and Surplus in Relation to Retention and Premium

The financial pro-forma included in the analysis proposes beginning capital and surplus of $250,000 to support $500,000 in net written premium, which results in a 2.00 net premium to surplus ratio at the beginning of year one. Net premium to surplus ratios at year end for the prospective five years are estimated to be in the 0.50 to 1.50 range, improving over time. This level of surplus should be adequate to support the proposed premium, as the methodology used to develop the proposed premiums seems reasonable, as discussed below.

ABC has per occurrence limits of $1,000,000 or below for the coverages included, which are mitigated by the quota-share reinsurance. Capital and surplus are expected to reach the $1,000,000 level by the end of year three. Should ABC face adverse experience in the first few years of operations, surplus may be significantly reduced, resulting in a premium to surplus ratio greater than 3.0. The risk of adverse experience may be mitigated by the reinsurance agreement with RIN. Additionally, most of the coverages included appear to be low-frequency and high-severity in nature, with a low probability of loss in any given year. It is possible for losses within any given year to be lower than projected, resulting in the accumulation of surplus at a rate greater than projected.

Projected Premiums

Premiums projected in the pro-forma financial statements are based on expected losses with a risk margin, plus a $50,000 annual expense load. The expense load was provided by Manager based on experience with similar programs. Expected losses including the risk margin appear to be reasonable and are calculated using an acceptable methodology, as noted above. The $50,000 expense load also appears to be reasonable for the coverages considered, size of the program, and potentially low volume of claims. Subject to the limitations of our review, the projected premiums appear to be reasonable.

Structure of the Plan

Ownership and Control

ABC will be formed with four directors. Manager, Inc., an approved State captive manager, will act as the captive manager in the State, per the detailed plan of operations. We recommend the state discuss the ownership and control with the captive manager and the captive owners.

Reliance on Financial Strength by the Parent

As discussed above, the proposed initial capital and surplus and projected premiums seem to be reasonable and adequate, subject to the limitations of our review. This should allow ABC to operate without reliance on financial support from the parent. We recommend the state discuss the reinsurance agreement with RIN with the captive manager and the captive owners.

Flow of Funds

Limited information is available in the actuarial feasibility analysis and business plans of operations regarding the flow of funds between the captive and other parties. However, cash flow projections (payout of incurred losses) shown in the actuarial feasibility analysis appear to be based on industry cash flows and are reasonable given the lack of unique historical information. We recommend the state discuss the flow of funds with the captive manager and the captive owners.

Adequacy of Reinsurance and Amount and Type of Reinsurance Needed

As discussed above, ABC will cede a quota-share portion of losses to RIN. Since 50% of losses are ceded on a quota-share basis, the effect of one or more adverse events may potentially be mitigated. As noted above, we recommend the state discuss the reinsurance agreement with RIN with the captive manager and the captive owners.

Pro Forma Financial Statements Illustrating One or More Adverse Case Scenarios and the Reasonableness of Assumptions

In the actuarial feasibility analysis, XYZ develops an adverse scenario for the financial pro-forma based on expected losses plus a risk margin (an adverse year expected to occur only 20% of the time) in years two and five. Given the $1,000,000 limit and the potential low-frequency and high-severity nature of the coverages included, an adverse loss in two of the five years is not unreasonable. The adverse scenario is not a worst-case scenario but is a representation of one scenario resulting from losses which are higher than expected. Subject to the limitations of our review, the adverse scenario appears to be reasonable.

Indication of Areas That Require Further Detail or Discussion

Due to the potential volatility in losses, we recommend a review of actual loss history as it emerges and the revision of premium and/or program structure (e.g., coverage, limits, and quota-share agreements) as necessary.

Qualifying Statement

SIGMA Actuarial Consulting Group, Inc is a property casualty actuarial consulting firm. There are many components related to the formation of a captive. Some of the components require detailed expertise related to insurance brokerage, captive management, program structure, accounting concerns, and tax issues. Our comments in this review come from an actuarial perspective. We are not issuing an opinion on risk transfer, tax issues, optimal program structure, optimal reinsurance structure, or contract wording. The state should seek appropriate expertise related to detailed questions or concerns that are beyond the scope of actuarial expertise and considerations.

About SIGMA

Founded in 1995, SIGMA Actuarial Consulting Group, Inc. is an independent property and casualty actuarial firm located in Brentwood Tennessee. SIGMA provides casualty actuarial consulting services to captive managers, risk managers, brokers, risk management consultants, TPAs, and CPAs. Our credentials cover a broad spectrum from actuarial credentials and advanced academic degrees to risk management and captive insurance specialty credentials. SIGMA is dedicated to offering professional services to its clients and prides itself in the method used to communicate the results of the analysis. We are known for providing an easy to read and understandable analysis free of actuarial jargon. The findings are presented in such a way that individuals not necessarily familiar with actuarial principles and procedures can follow and reasonably understand how the calculations are made and the implications of the results. The analyses of loss data are objective and reference the most recently available insurance industry statistics when necessary and appropriate. SIGMA has won numerous industry awards that highlight our commitment to excellence and education.

Captive International US Awards 2024 Winner	Captive International US Awards 2024 Winner	Captive International US Awards 2024 Winner	Captive International US Awards 2024 Winner	Captive International US Awards 2024 Winner	Captive International US Awards 2024 Winner
ACTUARIAL FIRM	ACTUARY	FEASIBILITY STUDY FIRM	FEASIBILITY STUDY INDIVIDUAL	TECHNOLOGY PRODUCT	TECHNOLOGY PRODUCT, INDIVIDUAL
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