2019-21 Variable Annuity Contract Owner Behavior Experience Study Data Request

Request for Data Contributions
The Society of Actuaries (SOA) Research Institute’s Individual Annuity Experience Committee (IAEC) and LIMRA are soliciting surrender/lapse, withdrawal, living benefit utilization, annuitization, and premium deposit experience for variable annuities (VA) both with and without a guaranteed living benefit for calendar years 2019 through 2021.

This document describes the procedures for submitting contract- and product-level data for the study.

Purpose of the Study
The SOA Research Institute and LIMRA are partnering together to complete industry experience studies. Under this partnership, the SOA Research Institute’s IAEC and LIMRA plan to complete an update to the Individual Variable Annuity Contract Owner Behavior Experience Study previously completed in 2020 and covering experience for calendar year 2018.

Data collection and reporting will include the following types of deferred variable annuity product designs for business in the US and its territories:

1. Traditional variable annuity contracts either with or without a guaranteed living benefit (GLB).
2. Registered index linked annuity (RILA) contracts either with or without a GLB.
3. Fee-based variable annuity products for advisory channels either with or without a GLB.

Please note that this study is different from prior iterations of the study in two ways:

1. RILAs and fee-based annuity products are included.
2. The scope has expanded to include contracts without GLBs. However, the study will only examine the following types of GLBs:
   - GLWB = guaranteed lifetime withdrawal benefit
   - GMIB = guaranteed minimum income benefit
   - GLWB/GMIB hybrids
   - GMWB/GLWB hybrids which can operate as either type based on the customer usage

This change was made to discontinue the collection of data for business with GMAB and GMWB type GLBs due to the limited number of companies providing data for this business in the past several iterations of the study. In addition, data collection has been started for newer product designs such as fee-based annuity products and RILAs.

The following contract owner experience will be examined:

- Utilization of guaranteed living benefits
- Partial withdrawal activity
- Rates of contract annuitization
- Additional premium deposit activity
- Surrender rates
Results will be broken out by several factors, including: age of owner; source of funds, distribution channel; contract duration; in-the-moneyness of the benefits; product and rider features, and the method of benefit calculation.

**Form of Data Contributions**

A detailed description of the data request can be found in Appendices A and B.

**Contract Level Data**

The information at the individual contract level should be submitted on a seriatim basis for deferred VA contracts from your company’s in-force business for the calendar years of observation (2019-2021).

This should include records for the group of contracts in force as of January 1st 2019 or issued between January 1, 2019 and December 31, 2021. The data set should include contracts that remained in force until 12-31-2021 and contracts that terminated between 1-1-2019 and 12-31-2021.

In addition, contracts should only be submitted provided that the following two criteria are met:

- The contract was issued in the US or one of its territories
- The contract is nonqualified or funds an IRA (traditional or Roth)

Exclude all types of fixed annuities and annuities sold within employer-sponsored plans such as 401(k), 403(b), 457, Keogh, SEP-IRAs, SIMPLE-IRAs, etc.

Also, exclude contracts with either GMAB or GMWB (contracts with non-lifetime withdrawal benefits) and variable immediate annuities.

**Product and Rider Level Data**

For this study, product and rider level data will also be collected. For each product and GLB rider your company includes in this study, whether or not the product or rider is currently being sold, describe the product and any rider features by completing the accompanying Excel form (VA Prod and Rider Info Years 2019-2021.xlsx). Further instructions are contained within the form.

**Important Dates**

Your timely voluntary data submission is a valuable contribution to this Study. We request your data, as described in the following section, no later than October 31, 2022. If you would like to contribute, but find that this timing is challenging, please contact Debbie Boone (dboone@limra.com). In addition, please reply to Debbie with your decision to supply data for this study by August 10, 2022. Once your company’s intent to participate has been received, Debbie will send you a confidential company ID code.
Data Transmission Instructions
For contract-level data sets, please use standard text/ASCII format.

You may submit data via Secure FTP (SFTP) or via Citrix Sharefile. By arrangement with LIMRA and the SOA Research Institute, you may submit your company’s data through other designated file sharing sites. Please contact us at SOADataTransmissions@limra.com in order to utilize other approaches.

Study Outputs
A report with high level summary results of the study will be made publicly available.

In an effort to align the costs to produce this study with the entities who have the most interest in the results, the SOA Research Institute and LIMRA will offer the detailed outputs of this study for a fee. The following may be included in the outputs available for purchase:

- detailed experience study report with analysis and commentary;
- a set of data visualization dashboards with the ability to filter on and drill down into the details of the results of the study;
- dataset(s) containing the aggregated experience collected for the purpose of this study. The datasets may be made available in Excel files, text files or downloads from the data visualization tool;
- models or other tools developed to support the analyses completed in the study; and
- other outputs as determined by the SOA Research Institute and LIMRA.

Any output of the study, whether publicly available or available for purchase, will not contain any private information or any confidential contributor-level information.

Benefits to Data Contributors
Data contributors will be acknowledged in the study output. Their experience data will be part of a broad industry study that will benefit the industry. The experience data for this study will/may be compared against current industry standard valuation assumptions and significant variance from the current standard may trigger the development of new standards. In such a situation, the data from this study may be used as the basis to develop new valuation standards. Data contributors will benefit from having their company’s data be included in the comparison to standard valuation assumptions and from being included in the basis for any new valuation standards.

Data contributors whose data is retained for inclusion in the study and who purchase the available study outputs will also receive the following benefits:

- the purchase fee for data contributors will be discounted relative to the purchase fee for non-data contributors. The data contributors’ fee is expected to be at a nominal level;
- the ability to see their own experience results compared to the industry results in any available data visualization dashboards or excel pivot tables;
- the option to choose a set of 5 peer companies from the companies who provided data to the study to allow comparison of the aggregated results of these peer companies to their own company results. All peer companies must agree to be included in the selected group and confidentiality safe harbors will be maintained;
• the opportunity to have a meeting with the SOA Research Institute and LIMRA researcher(s) who performed the analyses for the study. At this meeting, the contributor will be able to quickly gain deeper insights into the results and questions in specific areas of interest.

Data Access, Ownership and Retention

The SOA Research Institute and LIMRA have partnered together to collect and process experience data for this effort. The data collected under this partnership will be processed and housed within LIMRA’s existing study data infrastructure. The agreement between the SOA Research Institute and LIMRA includes provisions to ensure the data is kept secure and confidential. Only SOA Research Institute and LIMRA staff directly involved with the project will have access to the original data. SOA Research Institute volunteers working on the experience analysis and table development will not have access to original data. For more information on LIMRA’s information security program, please see the LLG (LIMRA) Governing Information Security Policy in the Appendix C.

The SOA Research Institute and LIMRA will create aggregated datasets from the original data contributions for the purpose of completing this effort. These aggregated datasets will not contain any personally identifiable information (PII). All aggregated datasets compiled by the SOA Research Institute and LIMRA from the original data contributions will be the property of the SOA Research Institute and LIMRA. Only SOA Research Institute staff, LIMRA staff, or contracted independent consultants will have access to contributor-level data. The aggregated datasets may be used for future research, education or other purposes and offerings, as deemed appropriate by the SOA Research Institute or LIMRA.
Appendix A – Data Request Description

Data submissions for this study will include two types of information:

1. Product and Rider Level Data
2. Contract Level Data

Product and Rider Level Data

For each product and GLB rider your company includes in this study, whether or not the product or rider is currently being sold, describe the product and rider features by completing the accompanying Excel form (VA Prod and Rider Info Years 2019-2020.xlsx). Further instructions are contained within the form.

Contract Level Data

The information at the individual contract level should be submitted on a seriatim basis for deferred VA contracts from your company’s in-force business for each of calendar years 2019-2021.

Draw the records from the group of VA contracts in force at the beginning of each calendar year or issued between January 1 and December 31 of that year. The data set should include both contracts that remain in force until the end of that calendar year and contracts that terminated before the end of the year. Include single- and flexible-premium products. Contracts should be included regardless of whether they have a GLB or other type of guaranteed living benefit elected. Contracts with either GMAB or GMWB benefits should be excluded.

Exclude all types of fixed indexed annuities and traditional, fixed-rate annuities. Also, exclude annuities sold within employer-sponsored plans such as 401(k), 403(b), 457, Keogh, SEP-IRAs, and SIMPLE plans.

Please refer to the “Data Request Layout” in Appendix B when assembling your company’s data.

Contract level data can be submitted in one of the following file formats, which must use the ASCII character set:

- Fixed width text (.txt) using specified columns to denote data elements.
- Delimited text files (comma separated values (CSV), tab delimited or other)
- For formats that do not match the enclosed format specifications, column headings and/or attached mapping instructions are required.
Appendix B – Data Request Layout

If any data item is not available, leave the field blank; do not code missing items as zero. For dollar amounts, do not include dollar signs, commas, decimal points, or cents — round to the nearest dollar. Express percentages as integer amounts (ex. 50 (50 percent), 7.5 (7.5 percent)).

<table>
<thead>
<tr>
<th>Position</th>
<th>Data Item</th>
<th>Description and Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-4</td>
<td>Company Code</td>
<td>Please contact <a href="mailto:dboone@limra.com">dboone@limra.com</a> for your company’s 4 digit code</td>
</tr>
<tr>
<td>5-8</td>
<td>Calendar Year</td>
<td>Calendar year of experience (2019-2021)</td>
</tr>
<tr>
<td>9-24</td>
<td>Contract ID</td>
<td>If this number is alphanumeric, include alphabetic codes. Contract IDs should be unique within a study year. For contracts present for multiple study years, consistent IDs should be used across study years and across previous study data submissions. If this is not possible, please contact us for guidance. For data security reasons, we request that you provide a de-identified contract ID rather than the actual contract number associated with the contract owner(s). This can be any alphanumeric format value as long as the data contributor is able to tie the contract ID provided for the study back to the original contract number on their end.</td>
</tr>
<tr>
<td>25-33</td>
<td>Plan Code</td>
<td>If data are submitted for more than one product (or more than one version of a product), include some way of identifying the different products. The plan codes used should match with plan codes provided in the product-level data (accompanying Excel spreadsheet). Leading zeros may be used for numeric codes and leading blanks may be used for alpha codes.</td>
</tr>
</tbody>
</table>
| 34       | Product Type      | 1 = Traditional VA  
2 = Registered Index Linked Annuity (RILA)                                                                                                        |
| 35       | GLB Type          | 1 = GLWB  
2 = GMIB  
3 = Hybrid  
4 = None                                                                                                                                             |
| 36       | Compensation Type | 1 = Commission-based  
2 = Fee-based  
3 = Other, please describe in notes with data contribution                                                                                           |
<p>| 36-43    | Contract Issue Date | Date contract was issued. MMDDYYYY format.                                                                                                               |</p>
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
</table>
| **44** | Market Type                                                                 | **A**= Qualified - IRA (traditional)  
**B**= Qualified - IRA (Roth)  
**C**= Nonqualified                                                                                                                                                                                                                                                                   |
| **45-54** | Account Value at Beginning of Calendar Year                                 | Report account value before surrender charges as of the beginning of the year. Leave blank for contracts issued during the calendar year of observation.                                                                                                                                                                                                                      |
| **55-57** | Percentage of Beginning of Year Account Value in Fixed Account              | Fixed account = any funds solely invested in the company’s general account in which the interest rate is guaranteed, including any market-value adjustment funds. Exclude amounts applied to dollar-cost-averaging programs (i.e., where amount is dedicated to periodic purchases of separate account funds). Express percentages as integer amounts (ex. 50 (50 percent), 7.5 (7.5 percent). Leave blank if contract has no fixed account available. |
| **58-67** | Account Value at Anniversary Date                                          | Report account value before any surrender charges as of the contract’s anniversary. If unable to provide anniversary value, please use nearest end-of-quarter value.                                                                                                                                                                                                 |
| **68-70** | Percentage of Anniversary Account Value in Fixed Account                    | Express percentages as integer amounts (ex. 50 (50 percent), 7.5 (7.5 percent). Leave blank if contract has no fixed account available.                                                                                                                                                                                                 |
| **71-80** | Account Value at End of Calendar Year                                      | Report account value before surrender charges as of the end of the year. Please leave blank if contract terminates during the year.                                                                                                                                                                                                                                         |
| **81-83** | Percentage of End of Year Account Value in Fixed Account                    | Express percentages as integer amounts (ex. 50 (50 percent), 7.5 (7.5 percent). Leave blank if contract has no fixed account available.                                                                                                                                                                                                                      |
| **84**   | Status Code                                                                 | Status as of end of the calendar year of experience:  
0=Contract in force  
1=Contract terminated for reason of death  
2=Contract transferred to annuity payout status (annuitized)  
3=Contract terminated due to full surrender or replacement                                                                                                                                                                                                                                 |
<p>| <strong>85-86</strong> | Month of Termination or Transfer to Annuity Payout Status                   | 1-12 if contract terminated or transferred to annuity payout status, otherwise leave blank.                                                                                                                                                                                                                                               |
| <strong>87-88</strong> | Day of Termination or Transfer to Annuity Payout Status                     | 1-31 if contract terminated or transferred to annuity payout status, otherwise leave blank.                                                                                                                                                                                                                                                  |</p>
<table>
<thead>
<tr>
<th>89-98</th>
<th>Partial Withdrawals During Calendar Year</th>
<th>Sum of all systematic and non-systematic partial withdrawals during the calendar year. This field represents total partial withdrawals regardless of whether they are under the terms of the GLB.</th>
</tr>
</thead>
<tbody>
<tr>
<td>99-108</td>
<td>Systematic Withdrawals During Calendar Year</td>
<td>Sum of all systematic withdrawals during the calendar year. This field represents total systematic withdrawals regardless of whether they are under the terms of the GLB.</td>
</tr>
<tr>
<td>109-118</td>
<td>Partial Withdrawals During Calendar Year BEFORE the Contract Anniversary</td>
<td>Sum of all systematic and non-systematic withdrawals occurring from January 1 to the day before the anniversary. Leave blank for contracts issued in the current calendar year. This field represents total withdrawals regardless of whether they are under the terms of the GLB.</td>
</tr>
<tr>
<td>119-128</td>
<td>Systematic Withdrawals During Calendar Year BEFORE the Contract Anniversary</td>
<td>Sum of systematic withdrawals occurring from January 1 to the day before the anniversary. Leave blank for contracts issued in the current calendar year. This field represents total withdrawals regardless of whether they are under the terms of the GLB.</td>
</tr>
<tr>
<td>129-138</td>
<td>Cumulative Withdrawals Since Issue, as of Beginning of Year</td>
<td>If unknown, leave blank (do not code as 0). This field represents total cumulative withdrawals that occurred before the calendar year of experience, regardless of whether they are under the terms of the GLB.</td>
</tr>
<tr>
<td>139-148</td>
<td>Current-Year Premiums Collected</td>
<td>Sum of all premiums received in the calendar year.</td>
</tr>
<tr>
<td>149-158</td>
<td>First Contract Year Premiums Collected</td>
<td>All premiums collected in the first policy year, even if collected prior to the current calendar year.</td>
</tr>
<tr>
<td>159-168</td>
<td>Cumulative Premiums Collected Since Date of Issue, as of Beginning of Calendar Year</td>
<td>This field represents cumulative premiums received before the calendar year of experience.</td>
</tr>
<tr>
<td>169-176</td>
<td>Primary Annuitant’s Date of Birth</td>
<td>MMDDYYYY Format.</td>
</tr>
<tr>
<td>177</td>
<td>Sex of Primary Annuitant</td>
<td>1=M, 2=F</td>
</tr>
<tr>
<td>178-187</td>
<td>Secondary Annuitant’s Date of Birth</td>
<td>MMDDYYYY Format. Leave this field and the next field blank if no secondary annuitant.</td>
</tr>
<tr>
<td>188</td>
<td>Sex of Secondary Annuitant</td>
<td>1=M, 2=F. Leave blank if no secondary annuitant.</td>
</tr>
</tbody>
</table>
| 189 | Distribution Channel | See Glossary for definitions  
1=Career agent  
2=Independent agent  
3=Full-service national broker/dealer  
4=Independent broker/dealer  
5=Bank/S&L  
6=Direct response  
7 = RIA (fee-based products only) |
| 190 | Share Class / Cost Structure | 1=A-share (Load paid up front; no surrender charge)  
2=B-share (Back-end loaded; surrender paid for early withdrawal; most annuities have this structure)  
3=C-share, no load product (No surrender charges)  
4=L-share (Short surrender charge, e.g., 3-4 years)  
5=O-share, level-load product  
6=Other (e.g., I-share) |
| 191-192 | State of Contract Issue | Use standard state abbreviation codes (e.g., NY for New York) |
| 193-197 | Zip Code of Contract Issue | 5-digit code |
| 198 | Guaranteed Minimum Death Benefit | See Glossary for definition  
1 - Standard / return of premium  
2 - Step-up  
3 - Other enhanced  
4 - No guaranteed minimum death benefit |

For contracts with a GLB elected, the following fields should also be completed. For contracts with no GLB, the following fields can be left blank/missing.

| 199-200 | Rider Version | Enter code (1 to 99) to link to the rider-level data (provided in accompanying spreadsheet). |
| 201-204 | Year Rider Effective | Report 4-digit year in which rider became effective on the contract. This is usually the date the contract was issued unless the rider was elected post-issue. |
| 205-206 | Month Rider Effective | 1-12 |
| 207-208 | Day Rider Effective | 1-31 |
| 209-218 | Benefit Base, Beginning of Year | See Glossary for definition  
Set to zero for contracts issued during the calendar year of observation. |
<p>| 219-228 | Benefit Base on Day of Contract Anniversary | If unable to provide anniversary value, please use nearest end-of-quarter value. |
| 229-233 | Maximum Annual Withdrawal Percentage, Beginning of Year | Up to two decimal places: XX.XX. Do not include percent sign. |
| 234-238 | Maximum Annual Withdrawal Percentage, on Contract Anniversary | Up to two decimal places: XX.XX. Do not include percent sign. |</p>
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>239-248</td>
<td>Maximum Annual Withdrawal Amount, Beginning of Year</td>
<td>Set to zero for contracts issued during the calendar year of observation.</td>
</tr>
<tr>
<td>249-258</td>
<td>Maximum Annual Withdrawal Amount, on Contract Anniversary</td>
<td>For contracts issued during the calendar year of observation, indicate initial maximum withdrawal amount based on first premium.</td>
</tr>
<tr>
<td>259-266</td>
<td>Date of First Withdrawal Under Terms of GLWB</td>
<td>Date on which first withdrawal is taken under terms of the GLWB. Leave blank if no withdrawals have been taken under terms of the GLWB. Please use MMDDYYYY format.</td>
</tr>
<tr>
<td>267-276</td>
<td>Partial Withdrawals During Calendar Year Under Terms of the GLWB</td>
<td>Sum of all systematic and non-systematic withdrawals during the calendar year under terms of the GLWB. Please refer to the Glossary for definition of withdrawal under the terms of the GLWB.</td>
</tr>
<tr>
<td>277-286</td>
<td>Systematic Withdrawals During Calendar Year Under Terms of the GLWB</td>
<td>Sum of all systematic withdrawals during the calendar year under the terms of the GLWB. Please refer to the Glossary for definition of withdrawal under the terms of the GLWB.</td>
</tr>
<tr>
<td>287-296</td>
<td>Partial Withdrawals in Calendar Year BEFORE Contract Anniversary Under the Terms of the GLWB</td>
<td>Sum of all systematic and non-systematic withdrawals occurring from January 1 to the day before the anniversary (only amounts under terms of the GLWB). Leave blank for contracts issued in the current calendar year. Please refer to the Glossary for definition of withdrawal under the terms of the GLWB.</td>
</tr>
<tr>
<td>297-306</td>
<td>Systematic Withdrawals in Calendar Year BEFORE Contract Anniversary Under the Terms of the GLWB</td>
<td>Sum of systematic withdrawals occurring from January 1 to the day before the anniversary (only amounts under terms of the GLWB). Leave blank for contracts issued in the current calendar year. Please refer to the Glossary for definition of withdrawal under the terms of the GLWB.</td>
</tr>
<tr>
<td>307</td>
<td>Asset Allocation Restrictions Enforced (as of Beginning of Year)</td>
<td>1-Yes, forced asset allocation model 2-Yes, limitations on fund selection 3-Yes, other restrictions 4-No, but rider may restrict asset allocations 5-No, rider has no allocation restrictions 6-Yes, dynamic asset allocation program 7-Yes, managed volatility funds</td>
</tr>
<tr>
<td>308</td>
<td>Benefit Stepped Up During Calendar Year of Observation</td>
<td>See Glossary for definition 1-Yes, manual step-up 2-Yes, automatic step-up 3-No, but step-up was available during year 4-No, not available during year</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Notes</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>309-318</td>
<td>Stepped-Up Benefit Base</td>
<td>If benefit stepped up during calendar year of observation, provide new benefit base.</td>
</tr>
<tr>
<td>319</td>
<td>Lifetime Payout Selected</td>
<td>1-Single life, 2-Joint lives, 3-Not available with this benefit. This field can be left blank if the benefit has not been activated.</td>
</tr>
<tr>
<td>320-329</td>
<td>Benefit Base, End of Year</td>
<td>if benefit was cancelled during year, code as zero.</td>
</tr>
</tbody>
</table>
Glossary

Distribution Channels

Career agents includes agents and multiple-line exclusive agents who devote at least 75 percent of their time selling one company’s products. Companies generally provide financing, training, supervision, and office space.

Independent agents includes PPGAs and life brokers using company’s own broker-dealer. PPGAs are experienced, full-time producers who earn commissions plus overrides on personally produced business. Life brokers have no primary company relationship and are paid straight commissions only (no overrides). Also included in this category is any other type of independent agent.

Full service national Broker-Dealers includes national wirehouses and large regional broker-dealers.

Independent Broker-Dealers includes sales by representatives who sell through independent FINRA firms. Excludes national wirehouses and large regional broker-dealers, sales through a company’s own broker-dealer, and FINRA firms that market through banks/S&Ls

Banks includes sales through banks, credit unions, and FINRA firms that market through banks and/or savings and loan companies (S&Ls).

Direct response includes sales made by salaried employees, direct mail, and telemarketing. Employees may be paid incentives or bonuses; however, no commissions are paid.

Financial advisors/RIAs includes sales through financial planners and registered investment advisors that market products to their customers.

GLWB Benefit Activation / Taking Withdrawals Under the Terms of GLWB

GLWB Benefit Activation is considered to occur when the contract owner requests to receive, on an ongoing basis, an amount up to the maximum annual withdrawal amount permitted under the terms of the GLWB rider. The amount requested can be received in a series of annual payments or in regularly-scheduled payments during the year (i.e., systematic withdrawals). The owner request to activate the GLWB may have occurred prior to or during the calendar year of observation.

For IRA owners over the age when required minimum distributions (RMDs) must begin, the owner will be considered to be taking withdrawals under the terms of the GLWB if s/he requests the required minimum distribution (RMD) amount, even if this value exceeds the maximum annual withdrawal amount determined by the benefit calculation method for the rider, as long as the rider permits these withdrawals (i.e., is “RMD friendly”).

If the owner had requested a one-time withdrawal, then the owner should not be considered to have taken withdrawals under the terms of the GLWB during the year. Withdrawals occurring prior to the minimum age of onset of lifetime withdrawals should not be considered to be under the terms of the rider unless the rider allows such withdrawals to be treated as guaranteed non-lifetime withdrawals.
Benefit Base

The benefit base generally equals the initial premium received (and premium bonuses, if applicable), plus additional premium, rollups, ratchets, or step-ups, less cumulative withdrawals under certain circumstances. If the cumulative withdrawals exceeded the annual benefit maximum withdrawal amount in the year in which they occurred, the excess withdrawal amount may have reduced the benefit base proportionally to the contract value or have had a dollar-for-dollar reduction. If the cumulative withdrawals were equal to or less than the maximum withdrawal amount, there should not have been any decrease in the benefit base.

Benefit Stepped Up

A step-up increases the benefit base to the account value or to a value determined by a specified percentage of premium. Step-ups can be manual (the owner must request step-up) or automatic (the owner does not need to request step-up).
Appendix C - LLG Governing Information Security Policy

LLG Information Technology has created and maintains a comprehensive information security program called Governing Information Security Policy for LLG. This program covers information security, risk assessment, and privacy for all LLG IT activities. The program ensures that LLG has in place adequate technical, administrative, and physical safeguards to protect sensitive information. LLG’s Chief Information Security Officer is the owner of the program document, and reviews and updates it annually.

1. Zero Trust Architecture Model
LLG’s security model is centered on the belief that devices are not to automatically trusted inside or outside our perimeters. All connections must verify and continually be verified they meet a defined set of requirements before being granted access as well as ongoing access.

2. Physical Security
LLG has industry best practice physical controls to protect staff, information, and guard against intrusion theft, damage, and unauthorized access. A badge reader system controls access to LLG’s facilities, computer rooms, and areas where sensitive information is stored. Employees, contractors, and consultants have photo ID badges, that must be prominently displayed. Visitors and third parties must be provided with badges that are prominently displayed at all times during their use of LLG’s buildings. LLG IT maintains procedures to ensure that computer and communications rooms are secured and protected from fire.

3. Data Storage
The physical storage location of data is Windsor, CT. The core physical infrastructure that includes physical hardware asset management, security, data protection, and networking services is managed by LLG staff. All systems are managed, monitored, and operated by LLG.

4. End-Point Protection
LLG Information Technology department develops, maintains, and revises as needed, a manual of procedures that govern the following:

- Use of software to protect the computing environment from viruses and other malicious tools
- Updating the computing environment with “patches” for known vulnerabilities
- Restricting the ability of unprotected systems to access the environment
  - Installed and running on all LLG connected computers is an industry approved end-point protection software program that is updated regularly. Definitions are set to update daily

5. Firewalls
LLG utilizes next-generation firewalls to inspect all traffic including applications, threats, and content. The next-generation firewalls provide LL Global the ability to:

- Securely enable applications, users, and content by classifying all traffic.
- Apply security policies to block known vulnerability exploits, viruses, ransomware, spyware, botnets, and other unknown malware, such as advanced persistent threats.
- Protect our network by segmenting data and applications and enforcing the Zero Trust principle.
- Provide centralized visibility and streamline network security, making data actionable to prevent successful cyberattacks.
- URL filtering for outbound connections to prevent access to inappropriate websites.
• Malware analysis and reporting via a cloud-based analysis service that provides detailed analysis and reporting on malware that passes through the firewall.

6. Network Zoning
LLG isolates critical network segments. Virtual machines are one network segment, databases are another, etc.

7. Access Controls
LLG has a comprehensive Access Control Policy that governs access control standards within processing systems and LLG networks, for user registration and privilege management, and for password use and management. This policy also contains requirements and safeguards associated with mobile technologies.

To access LLG computer network and business applications, all users must authenticate with a single unique user ID and a personal secret password managed through Active Directory. Each computer and communication system user ID uniquely identifies only one user. Shared or group user IDs are not created or used. User passwords have strength Requirements and must be changed every 90 days for LLG systems.

8. Least Privilege
LLG adheres to the principle of least privilege. The computer and communications system privileges of all users, systems, and programs are restricted based on the need to know. Special system privileges, such as the ability to examine the files of other users, are restricted to those directly responsible for system management and/or systems security. The number of privileged user IDs is strictly limited to people who absolutely need such privileges for authorized business purposes.

System administrators who manage computer systems with more than one user will have at least two user IDs, one that provides privileged access and is logged, and the other that provides the privileges of a normal user for day-to-day work.

9. Default System Configuration
LLG disables and does not use default or vendor accounts.

10. Recertification of Access
LLG recertifies users access accounts on a quarterly basis.

11. Connection to LLG Network
LLG network does not permit anyone to physically connect a personal computer or device to the network. All computers and devices that physically connect to the LLG network are owned, configured, and maintained by LLG. LLG does have a smartphone Bring Your Own Device policy, but devices covered under this policy, are configured only for e-mail access and do not connect to the LLG network.
About The Society of Actuaries Research Institute

Serving as the research arm of the Society of Actuaries (SOA), the SOA Research Institute provides objective, data-driven research bringing together tried and true practices and future-focused approaches to address societal challenges and your business needs. The Institute provides trusted knowledge, extensive experience and new technologies to help effectively identify, predict and manage risks.

Representing the thousands of actuaries who help conduct critical research, the SOA Research Institute provides clarity and solutions on risks and societal challenges. The Institute connects actuaries, academics, employers, the insurance industry, regulators, research partners, foundations and research institutions, sponsors and non-governmental organizations, building an effective network which provides support, knowledge and expertise regarding the management of risk to benefit the industry and the public.

Managed by experienced actuaries and research experts from a broad range of industries, the SOA Research Institute creates, funds, develops and distributes research to elevate actuaries as leaders in measuring and managing risk. These efforts include studies, essay collections, webcasts, research papers, survey reports, and original research on topics impacting society.

Harnessing its peer-reviewed research, leading-edge technologies, new data tools and innovative practices, the Institute seeks to understand the underlying causes of risk and the possible outcomes. The Institute develops objective research spanning a variety of topics with its strategic research programs: aging and retirement; actuarial innovation and technology; mortality and longevity; diversity, equity and inclusion; health care cost trends; and catastrophe and climate risk. The Institute has a large volume of topical research available, including an expanding collection of international and market-specific research, experience studies, models and timely research.

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