AUDIT REPORT

Automated Underwriting

October 26, 2017
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Executive Summary

Background
Automated Underwriting (“AUW”) also known as Straight-Through Processing (“STP”) is a process that enables the automated processing of bound policy applications and other supporting documentation by standardizing the way electronic data is collected and formatted which should reduce or eliminate the need for human intervention. Automated Underwriting is intended to reduce the time, cost and potential bottlenecks associated with manually processing policy applications and forms. In addition, AUW allows agents to bind and auto-issue policies identified as low-risk or non-complex so that underwriters can focus their efforts on assessing complex or high value applications.

In May 2015, the Automated Underwriting (“AUW”) Initiative was developed to expand the AUW process. The goal of the AUW Initiative was to identify new benchmarks to expand automated throughput of new business submissions and policy changes for all lines of business. Implementing new benchmarks to expand automated underwriting approvals, in particular automated assignment processing for new business and policy change activities, would allow Citizens to manage the workload with less reliance on the third-party underwriting vendors. The third-party underwriting vendors currently support approximately 20% of new business submissions and 60% of policy changes. The AUW Initiative would be achieved using a phased approach in alignment with the Citizens Insurance Suite (“CIS”) releases over multiple years.

In February 2016, Citizens began implementing system enhancements in the Citizens Insurance Suite policy system to allow the auto-issuance of certain personal lines policies at the time of application. In November 2016, the percentage of policies processed through automated underwriting increased from 40% to 80% due to adjustments to the process criteria and is forecast to increase to 100% with further process adjustments by the end of October 2017. As of July 2017, approximately 4,445 bound personal lines applications were processed through AUW compared to 2,955 applications as of July 2016, which represents a 50% increase. This increase is due to the adjustments in the processing criteria to allow more bound submissions to auto-issue. The graph below shows the percentage of new business applications auto-issued through the automated underwriting process from July 2016 through July 2017.
Executive Summary

Audit Objectives and Scope

The objective of this audit was to evaluate the efficiency and effectiveness of the controls associated with Automated Underwriting (“AUW”) to ensure that underwriting activities are executed in compliance with Citizens underwriting rules and guidelines and to ensure processes are in alignment with the strategy. In addition, the automated underwriting quality control program was assessed to ensure quality assurance efforts effectively meet quality goals.

Management’s Assessment and Reporting on Controls

The Office of the Internal Auditor provided Underwriting and Agent Services management an opportunity to share known control weaknesses and their plans to remediate them. This process is intended to foster an environment whereby management and staff conduct periodic proactive reviews of controls and are aware of the risks to the business. It also enables OIA to focus its audit efforts on areas where it can add value to the organization.

At the start of the Automated Underwriting Quality Assurance audit, Underwriting and Agent Services management shared the following control weakness and remediation plans with OIA:

The Underwriting Quality Assurance (UQA) function identified recurring errors with premium discounts for protective devices, superior construction, and no prior insurance surcharge that were either not applied or incorrectly applied to bound policies auto-issued through PolicyCenter resulting in an inaccurate premium assessed to the policyholder.

Underwriting management confirmed that they are currently working with the IT organization to develop AUW informational activities in PolicyCenter for bound auto-issued policies to require underwriting review when premium discounts for protective devices or superior construction are input by the agents. These system enhancements will be implemented in a future release. In the interim, Underwriting receives a weekly report from Enterprise Metrics to monitor auto-issued policies requesting premium discounts for protective devices and/or superior construction to ensure the premium discounts are appropriately applied to the policies. However, the No Prior Insurance Surcharge will continue to be reviewed by underwriting during the Post-Automated Underwriting Review and quality assurance department during the Automated Underwriting Quality Control reviews.

Audit Opinion

Results from our audit work indicate that management has taken proactive steps to streamline underwriting processes by implementing automated underwriting (AUW). AUW has helped to identify low-risk or non-complex policies eligible for bound auto-issuance so that the underwriting staff can focus their efforts on assessing complex or high value applications. In addition, AUW has also enhanced underwriting’s workflow capabilities to allow underwriting activities to be auto-assigned to underwriters based on skill set and severity.

The Automated Underwriting Quality Control (AUWQC) program has adequate controls in place to effectively identify gaps to ensure weaknesses in the underwriting processes are remediated in a timely manner. In addition, the quality assurance staff is comprised of individuals who have extensive underwriting knowledge to execute the reviews.
The current AUW processes are not fully automated and do not appropriately align with the Strategic Automated Initiative as the same manual processes are still in place to perform the post-issuance activities on the back-end. Our observation of the underwriting review process confirmed that the underwriters spent most of their time manually correcting or entering data required to underwrite a file due to incomplete or inaccurate application information and/or supporting documentation submitted in PolicyCenter. The overall efficiency of the AUW process evaluated during the audit is rated as Needs Minor Improvement.

Results from our work noted some opportunities to increase the efficiencies and effectiveness of the automated underwriting process. As the Automated Underwriting Program continues to evolve, management is encouraged to consider the following OIA suggestions to increase the effectiveness and efficiencies of the program:

- Complete a comprehensive Cost Benefit Analysis (CBA) for the Strategic Automated Underwriting Initiative to measure the overall financial impact as well as to determine if expected benefits, including increased efficiencies, were realized. The CBA can be utilized to make strategic adjustments as necessary to the program and to identify key performance indicators that should be monitored to evaluate the ongoing success of the initiative.

- Perform a comprehensive End-to-end Process Review to evaluate the current underwriting operations to identify redundant and inefficient processes, systems utilized, costs, decision points and bottlenecks. The End-to-end process review can be utilized to identify opportunities to automate other manual processes to increase efficiencies, productivity, speed and quality of services provided to the policyholder.

- Conduct a staffing analysis including a core competency inventory to determine the requirements for the utilization of external versus internal resources. The staffing analysis can be used to determine the best mix of underwriting activities to be processed externally or internally for cost optimization.

- Perform a comprehensive analysis of the referred underwriting applications reviewed during the Post-Issuance validation process and establish an error rate threshold to identify which risk characteristics would require further review by the underwriting staff. This analysis would enable management to streamline processing and increase underwriting efficiency by identifying which risk characteristics would require further review and potentially reduce the review of the post-issuance activities by the underwriting staff.

- Metrics appear to be limited to underwriting cycle time. Consider additional metrics such as new business application processing expense, underwriting incomplete application rate, and loss frequency, to provide a more comprehensive view of the underwriting department’s overall performance. Baselines should be established for each metric. In addition, the underwriting data should be validated to ensure the appropriate critical key data fields are captured which are essential to reporting, decision making and analysis.
Executive Summary

- Revisit the process steps performed in the Post-Issuance validation process to determine if the steps outside of the informational activities could be eliminated. If steps are eliminated, streamline the Automated Underwriting Workflow procedures as appropriate and communicate any process changes to the underwriting staff.

- Evaluate the amount of time spent by underwriters to manually correct or enter data required to underwrite files due to incomplete or inaccurate application information submitted by agents. Determine the key fields necessary to underwrite a policy and consider implementing a system enhancement to make key fields mandatory before submission in order to eliminate the manual entry by underwriters. Improving policy data completeness and quality before a policy is submitted will positively impact underwriting efficiency, costs and cycle time.

- Enhance the automated underwriting process by integrating advanced analytics such as predictive and fraud analytics with the existing business rules engine to further increase underwriting consistency, process efficiencies and productivity, reduce costs and prevent fraud. Predictive analytics can screen applications out, qualify applications for straight-through processing, and alert the underwriter only to the key risk characteristics that require further review. Combining predictive analytics with the business rules engine can provide greater consistency to the organization’s book of business.

- Revisit the underwriter core competency model to ensure that current and future underwriting staff have the appropriate skills and expertise. As automated and analytical solutions are further integrated into the underwriting processes, the underwriting staff will need to have advanced analytical skills in order to perform additional responsibilities such as business rules and predictive modeling development and management and data analysis. A strong talent pipeline and robust training capabilities can help the underwriting organization to continuously improve the underwriting processes.

Management Response

Management is in agreement with the process improvement opportunities highlighted in the report. We appreciate the work that has gone into this audit and look forward to implementing OIA suggestions to improve the criticality of the AUW process.

Our work also identified opportunities to improve the effectiveness of the automated underwriting quality control program. Management has already implemented action plans to address the following recommendations:

- Develop a formal follow-up process to document, monitor and track the status of management corrective action plans through closure on quality control findings identified from the AUW QC results. The follow-up process should be designed to include the tracking of quality control errors, root causes of the errors, sources of the errors, management corrective action plans and the anticipated implementation date. Appropriate tracking of management corrective actions on quality control findings is critical to ensure that weaknesses in the underwriting activities are remediated in a timely manner.
Management Response

Quality Assurance (QA) has implemented a systematic notification and resolution process in the quality assurance database (QCenter). System generated notifications will be sent to Underwriting when quality errors identified from the quality control evaluations require review and possible corrective action. Remediation will be tracked in the quality assurance database. A required comments box will appear to input the justifications for not remediating the quality errors. The information entered in the comments field will be reportable and available for ad hoc review and analysis. In addition, the monthly Automated Underwriting Quality Control dashboard has been enhanced to include the root causes of the quality findings. QA has reviewed all error codes to ensure drill down capabilities to the root cause level is available. The notification and resolution process will go live in QCenter on 11/01/2017.

- Enhance the AUWQC dashboard to include trending analysis on top quality errors by category to isolate negative trends and detect problems that may require corrective action or to determine if the implemented corrective actions were effective to remediate the quality errors. Additionally, the AUWQC dashboard should include an executive summary to communicate key points of quality control results such as accomplishments, top quality errors and corrective action, other areas of concern and ongoing or future initiatives to enhance underwriting quality to ensure the results can be easily interpreted by management or other stakeholders, regardless of their knowledge or expertise.

Management Response

The monthly Automated Underwriting Quality Control dashboard has been enhanced to include monthly trending of the impactful quality errors which will also be reported on a rolling 13-month basis. An executive summary communicating the quality control results will be included with the monthly dashboard.

We would like to thank management and staff for their cooperation and professional courtesy throughout the course of this audit.
Appendix 1

Definitions

Audit Ratings

Satisfactory:
The control environment is considered appropriate and maintaining risks within acceptable parameters. There may be no or very few minor issues, but their number and severity relative to the size and scope of the operation, entity, or process audited indicate minimal concern.

Needs Minor Improvement:
The number and severity of issues relative to the size and scope of the operation, entity, or process being audited indicate some minor areas of weakness in the control environment that need to be addressed. Once the identified weaknesses are addressed, the control environment will be considered satisfactory.

Needs Improvement:
The audit raises questions regarding the appropriateness of the control environment and its ability to maintain risks within acceptable parameters. The control environment will require meaningful enhancement before it can be considered as fully satisfactory. The number and severity of issues relative to the size and scope of the operation, entity, or process being audited indicate some noteworthy areas of weakness.

Unsatisfactory:
The control environment is not considered appropriate, or the management of risks reviewed falls outside acceptable parameters, or both. The number and severity of issues relative to the size and scope of the operation, entity, or process being audited indicate pervasive, systemic, or individually serious weaknesses.
### Issue Classifications

<table>
<thead>
<tr>
<th>Control Category</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
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</thead>
<tbody>
<tr>
<td><strong>Financial Controls</strong></td>
<td>• Actual or potential financial statement misstatements &gt; $10 million</td>
<td>• Actual or potential financial statement misstatements &gt; $5 million</td>
<td>• Actual or potential financial statement misstatements &lt; $5 million</td>
</tr>
<tr>
<td>(Reliability of financial reporting)</td>
<td>• Control issue that could have a pervasive impact on control effectiveness in business or financial processes at the business unit level</td>
<td>• Control issue that could have an important impact on control effectiveness in business or financial processes at the business unit level</td>
<td>• Control issue that does not impact on control effectiveness in business or financial processes at the business unit level</td>
</tr>
<tr>
<td></td>
<td>• A control issue relating to any fraud committed by any member of senior management or any manager who plays a significant role in the financial reporting process</td>
<td></td>
<td></td>
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<tr>
<td><strong>Operational Controls</strong></td>
<td>• Actual or potential losses &gt; $5 million</td>
<td>• Actual or potential losses &gt; $2.5 million</td>
<td>• Actual or potential losses &lt; $2.5 million</td>
</tr>
<tr>
<td>(Effectiveness and efficiency of operations)</td>
<td>• Achievement of principal business objectives in jeopardy</td>
<td>• Achievement of principal business objectives may be affected</td>
<td>• Achievement of principal business objectives not in doubt</td>
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<td></td>
<td>• Customer service failure (e.g., excessive processing backlogs, unit pricing errors, call center non responsiveness for more than a day) impacting 10,000 policyholders or more or negatively impacting a number of key corporate accounts</td>
<td>• Customer service failure (e.g., processing backlogs, unit pricing errors, call center non responsiveness) impacting 1,000 policyholders to 10,000 or negatively impacting a key corporate account</td>
<td>• Customer service failure (e.g., processing backlogs, unit pricing errors, call center non responsiveness) impacting less than 1,000 policyholders</td>
</tr>
<tr>
<td></td>
<td>• Actual or potential prolonged IT service failure impacts one or more applications and/or one or more business units</td>
<td>• Actual or potential IT service failure impacts more than one application for a short period of time</td>
<td>• Actual or potential IT service failure impacts one application for a short period of time</td>
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<td></td>
<td>• Actual or potential negative publicity related to an operational control issue</td>
<td>• Any operational issue leading to injury of an employee or customer</td>
<td>• Any operational issue leading to injury of an employee or customer</td>
</tr>
<tr>
<td></td>
<td>• An operational control issue relating to any fraud committed by any member of senior management or any manager who plays a significant role in operations</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Any operational issue leading to death of an employee or customer</td>
<td></td>
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<tr>
<td><strong>Compliance Controls</strong></td>
<td>• Actual or potential for public censure, fines or enforcement action (including requirement to take corrective actions) by</td>
<td>• Actual or potential for public censure, fines or enforcement action (including requirement to take corrective actions) by</td>
<td>• Actual or potential for non-public action (including routine fines) by any regulatory body</td>
</tr>
<tr>
<td>(Compliance with applicable laws and regulations)</td>
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### Appendix 2

<table>
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<tr>
<th>Control Category</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>any regulatory body which could have a significant financial and/or reputational impact on the Group</td>
<td>take corrective action) by any regulatory body</td>
<td>Areas of non-compliance identified which could ultimately lead the above outcome</td>
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<tr>
<td></td>
<td>• Any risk of loss of license or regulatory approval to do business</td>
<td>• Areas of non-compliance identified which could ultimately lead to the above outcomes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Areas of non-compliance identified which could ultimately lead to the above outcomes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• A control issue relating to any fraud committed by any member of senior management which could have an important compliance or regulatory impact</td>
<td></td>
<td></td>
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<tr>
<td>Remediation timeline</td>
<td>• Such an issue would be expected to receive immediate attention from senior management, but must not exceed 60 days to remedy</td>
<td>• Such an issue would be expected to receive corrective action from senior management within 1 month, but must be completed within 90 days of final Audit Report date</td>
<td>• Such an issue does not warrant immediate attention but there should be an agreed program for resolution. This would be expected to complete within 3 months, but in every case must not exceed 120 days</td>
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Appendix 3

Distribution

Addressee(s)  Scott Crozier, VP Underwriting & Product Development
               Michelle Stark, Director Quality Assurance
               Carl Rockman, Director Agent Management

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