Why Digital Life Insurance Success Demands Autonomous Underwriting

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By Analysts Richard Natale, Kimberly Harris-Ferrante

Initiatives: Financial Services Digital Business Strategy and Innovation

Life insurance CIOs scrambled to assemble a patchwork of changes to salvage underwriting during the pandemic because of its many manual processes. CIOs must use the lessons learned to build a comprehensive vision of what underwriting needs to be, avoiding simple replication of manual processes.

Overview

Key Findings

- According to LIMRA, between 2011 and 2020, the percentage of consumers who said they prefer to buy life insurance in person dropped from 64% to 41%.

- While the COVID-19 pandemic has accelerated the need to automate underwriting, insurance companies are taking a largely cautious and incremental approach to underwriting automation such as for simple products like term insurance and final expenses. Fluidless options are limited only to a relatively narrow set of customers who fit age and face-value requirements.

- Gartner's Digital Maturity Assessment indicates that less than 20% of life insurance underwriting decisions, globally, are made without human intervention.

- Autonomous underwriting requires a range of technologies including analytics, artificial intelligence/machine learning (AL/ML), and multiple automation capabilities such as APIs, business process management (BPM), optical character recognition (OCR) and robotic process automation (RPA).

Recommendations

Life insurance CIOs driving financial services technology modernization and transformation should:

- Gain business and IT consensus on your target state underwriting requirements and on IT by creating an underwriting workshop that includes a fusion team of data scientists, actuaries, underwriters and technologists.
Strategic Planning Assumption

By 2025, at least 60% of term and whole life insurance underwriting will be fully automated, driven by AI-/ML-enabled technology using nontraditional data sources.

Introduction

Even before the COVID-19 pandemic, life insurance CIOs recognized the need to improve their underwriting processes in order to attract customers. For example, between 2011 and 2020, the percentage of U.S. consumers who said they prefer to buy life insurance in-person dropped from 64% to 41% according to the LIMRA 2020 Insurance Barometer Study.¹ The study went on to show that half of Americans are more likely to buy life insurance if simplified underwriting is used, for multiple reasons, including speed and to avoid medical exams. And this trend was not limited to North America. Case in point, Ping An in China.

Case in Point: Ping An

Ping An Life launched an underwriting risk model on its smart underwriting platform, with an accuracy rate of 90.8% in risk identification. The underwriting turnaround time per case was shortened from 3.8 days of manual underwriting to 10 minutes.

Source: Ping An Insurance of China, Surperformance SAS.

The COVID-19 pandemic has accelerated the need to automate underwriting as more insurers need to move to digital channels over face-to-face sales models, and as the demand for efficiencies and speed of policy issuance increases. But underwriting automation is not necessarily at the top of insurance company priority lists globally. When 144 insurance respondents to the 2021 Gartner Financial Technology Survey were asked to select the most important metrics in their organization to assess performance against goals, only 27% selected a reduction in average underwriting cycle time. And only 27% selected a percentage of new business applications received digitally.²

So while there is a need to improve on underwriting automation, what exactly to do and when to do it is not uniformly agreed upon in the industry. And there is still much to be done. Gartner’s Digital Insurance Maturity Model, which is a self-administered survey offered to Gartner clients, indicates that on average, only 18% of life insurance underwriting decisions globally could be made in their organization without

Establish a holistic underwriting strategy for the future by using Gartner’s Life Insurance Underwriting Roadmap to plot a course from low-impact, automated underwriting point solutions to fully enabled autonomous underwriting.

Break down barriers and lack of acceptance of automation in the underwriting process by addressing internal cultural barriers using, for example, small prototypes with insurtechs that have developed proven automated underwriting solutions.

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human intervention (see Toolkit: Digital Maturity Assessment for Life and P&C Insurers 3.0). To meet the growing needs of the digital marketplace, it's critical that life insurance business and IT executives evaluate new approaches to underwriting now to support digital insurance, including meeting consumer digital demands and obtaining efficiencies needed to stay competitive.

Analysis

Gain Business and IT Consensus on Target State Underwriting Requirements and Their Impact on Information Technology

Prior to the pandemic, a Gartner study conducted in conjunction with LOMA found that the top two drivers for underwriting modernization were customer satisfaction and reducing the elapsed time of underwriting. While the COVID-19 pandemic created an urgent need to automate aspects of the underwriting process to reduce human-to-human interaction, the long-term drivers for improving underwriting remain the same.

Consumers have pointed out, time and time again, that they favor easy and transparent insurance purchasing experiences without the need for medical exams in the process. So life insurance companies and their CIOs need to remain focused not only on tactical requirements, but on the long-term expectations of life insurance consumers.

To accomplish this, life insurance CIOs must avoid a tendency to rely solely on quick-hit underwriting enhancements. While tactical enhancements are needed, CIOs should be creating an underwriting roadmap that leads from underwriting automation to autonomous underwriting. Figure 1 provides an overview of the underwriting improvements needed to form a set of capabilities that, when completely assembled, represent an autonomous underwriting vision for the future. As capabilities are implemented and become more mature, planning and R&D for the next level of capability can begin.
Life insurance companies are adding a variety of capabilities to enhance underwriting such as:

- Enabling real-time quotes with real-time underwriting, eliminating the need for an additional downstream underwriting step.
- Making the application process shorter and more user-friendly by reducing the number of required questions in the application process and by prefilling prospective policyholder data using such trusted third-party digital data sources as credit bureaus.
- Experimenting with AI to analyze applicant information and compare it with historical outcomes to evaluate how to further streamline the applicant experience.
- Using AI and natural language processing (NPL) to automate document intake and to prioritize insurance applications to accelerate risk selection.
- Using new data sources for enhanced risk assessment.

While it might look like life insurance companies are making progress, they are not going far enough. And those insurance companies that procrastinate could find themselves losing a competitive edge against insurance companies that are taking a more aggressive posture. For example, data analytics...
firm, Verisk, is partnering with SCOR on an automated life insurance underwriting platform. This platform will pull records from electronic health record (EHR) providers and apply ML and NLP algorithms to analyze both the structured and unstructured data in those records. And insurtechs such as Policygenius, and incumbents like Brighthouse Financial, are partnering to offer accelerated underwriting (AU) for select life insurance products.

**Case in Point: Brighthouse Financial and Policygenius**

Brighthouse Financial is now extending its digital reach by collaborating with online insurtech broker Policygenius to launch a data-driven, AU-level term life insurance product delivering the majority of applicants a decision in as little as 30 minutes. The company further says most applications requiring a closer look by a human underwriter receive an answer within 24 hours. The product is currently being sold on the Policygenius platform using a hybrid online and agent-enabled model. Prospective customers shop for quotes on 10-, 20- or 30-year terms, and, depending upon their answers to qualifying questions, are presented with SimplySelect as an option for up to $2 million in coverage.

Source: Policygenius and Brighthouse Partner on Automated Underwriting, Digital Insurance.

Thus far, however, only a small segment of the life insurance consumer market has benefited from this (for example, healthy young people looking for low-cost, traditional term insurance). While the customer experience has been improved for this demographic, focusing exclusively on simplifying reflexive questions or reducing the need for physicals and bodily fluids in the underwriting process is just the tip of the iceberg. More is needed to completely transform the underwriting process.

To lower underwriting costs, life insurers must look beyond improving the buying experience for low-face-value, low-margin life insurance products to a comprehensive strategy for modernizing underwriting (end to end) and for all constituents (such as agents, underwriters and consumers). And to scale underwriting, insurers must extend automation beyond simplified issuing of term insurance to more complex products, now typically sold via accelerated underwriting. Or they can include products that are now fully underwritten, such as for policies with face values above $3 million and for more divergent age groups.

Gartner’s aspirational goal within the next five years would be that the insurance industry strives for an order of magnitude shift away from human involvement of at least 60% when making underwriting decisions.

**Create a Holistic Underwriting Strategy for the Future by Using Gartner’s Life Insurance Underwriting Roadmap**

Overall, CIOs should explore five underwriting improvements as they evaluate underwriting modernization, initially selecting the one that best matches their current underwriting maturity.
Separately, each improvement provides incremental value, but when combined to form an integrated solution, it will offer a comprehensive improvement in underwriting outcomes as measured by a variety of indicators such as cost, productivity, revenue generation and customer satisfaction. Each of these improvements provides unique capabilities:

1. Automated underwriting to make the underwriter more productive

2. Smarter underwriting through improved analytics for decision consistency

3. Process reengineering (STP) to skip steps (e.g., fluid free) to make faster decisions for the customer and decrease time to collecting premium

4. The use of new data types (e.g., facial analytics) to shorten underwriting timelines by eliminating traditional evidence providers

5. Using AI and ML to support improved decisions to solve the impending gap in the availability of underwriters in the workforce; augment underwriting with genomics and epigenetics to improve decision accuracy can also be applied here

The assembly and integration of these capabilities into a single strategic solution, starting with the creation of a roadmap, is a start for life insurance CIOs. Every life insurance CIO's roadmap will be different, and the pace at which CIOs will be able to execute will also vary based on factors such as budget and skills. But it is essential that all life insurance CIOs have a roadmap in place that provides a path forward over the next five years (see 4 Steps to Automation Success in Financial Services and Innovation Insight for Artificial Intelligence in Life and P&C Insurance).

**Role of Vendors for Winning Underwriting Capability**

Most current underwriting solutions will not support this vision. They lack the advanced analytics, ML and workflow capabilities that will be needed in the future. They cannot serve as the platform for automation and lack the ability to bring in the third-party data needed to drive precision. CIOs will need to look beyond the traditional underwriting workstation and core system market to be able to support underwriting innovation. For example, in North America, the range of underwriting solutions currently in place is eclectic, with a large percentage of solutions still homegrown or manual (see Figure 2).
Insurance company CIOs really have only two paths to travel to begin realizing their underwriting vision:

1. Choosing a reinsurer who is investing heavily in the technology to assemble a suite of visionary capabilities with whom they can develop a long-term relationship.

2. Building one themselves by integrating with third-party technology providers for technologies such as AI and machine learning and with insurtechs

Reinsurer and Underwriting Platforms

Reinsurers are, by definition, investing in underwriting capabilities. For example, SwissRe Magnum Pure, Reinsurance Group of America (RGA) AURA and SCOR Velogica are all candidates for evaluation. This is a good place to start developing an awareness of R&D taking place within the walls of incumbent underwriting platform providers. CIOs, working with underwriting management, should understand the
pros and cons of using reinsurance-provided technology, however. For example, the primary business of reinsurers is not selling technology services.

Reinsurers have vast amounts of data and extensive underwriting business expertise. The value of underwriting software that is offered by a reinsurer might be directly tied to data and services. CIOs should determine how independent the use of the underwriting platform is from other reinsurer underwriting services and associated pricing. CIOs should also factor in how a reinsurer’s underwriting software integrates with insurance companies’ internal systems and processes, and how adaptable the underwriting software is. Underwriting modernization is as much a business process and a cultural, product and regulatory compliance change as it is a technology change.

**Combo of In-House and Third Parties**

For those CIOs who are realizing their underwriting vision in-house, CIOs will need to weave together the five capabilities listed in Figure 2 over time, integrating them into a seamless user experience for underwriters (see The Top 10 Digital Insurance IT Imperatives for Ensuring IT Agility and Innovation Success). This will include new best-of-breed underwriting solutions, RPA, analytical solutions, AI/ML solutions, third-party data platforms and integration tools such as APIs (see What CIOs Need to Know to Apply Analytics for Digital Insurance Success and RPA Vendors Must Include Industry-Specific Functionality to Win More Deals in Insurance). Solutions will be needed to manage large datasets (internal and third party), analyze data in real time, and manage the entire workflow across robots and humans. Intelligence will be at the center of modern underwriting solutions, surrounded by an integration layer for access to new data sources and for integration with insurance carrier and distributor systems (see Insurance CIOs Must Build an Intelligence Platform to Support Digital Insurance). Integration to an omnichannel customer experience will also be essential. And to the extent that manual underwriting will be required, and it will be for many complex products over the next five years, comprehensive case management and workflow capabilities will also be needed.

CIOs can augment internally any traditional third-party sources of data with new data sources. Insurance CIOs should be looking for insurtechs as examples that provide a predictive analytics library to give them the ability to use data beyond traditional underwriting and customer acquisition analytics. Libraries should include prebuilt algorithms, mortality tables and claim prediction modules to improve decision making.

**Break Down Barriers and Lack of Acceptance of Automation in the Underwriting Process**

While life insurance business leaders and CIOs are recognizing the need to modernize underwriting, there are significant cultural and regulatory headwinds to overcome, and success will be limited until they are addressed. Insurance companies are advancing beyond the use of predictive analytics to accelerate some underwriting decisions to the use of AI and ML (to perform tasks now performed by underwriters). As this occurs, governmental insurance regulators must be convinced that the use of new technology, such as AI/ML and nontraditional data sources, do not create prohibited life insurance discriminatory practices. Insurance CIOs will need to be sure that model management tools already created for
predictive analytics to calculate risk scores can be extended to make the variables used in underwriting decisions transparent and auditable.

Demonstrating that the use of new technologies, such as AI/ML and nontraditional data sources, will not be discriminatory will not come from the regulators, but from insurance companies and reinsurers. Only the accumulation of evidence provided by industry incumbents will overcome this barrier.

As a next step in improving underwriting automation, insurance CIOs and chief operating officers will need to determine what additional steps can be fully automated that are now manually performed to gather data, make underwriting decisions and manage underwriting evidence. For example, CIOs can begin by:

1. Using AI and ML to determine and request the correct evidence requirements for consumers whose risk scores don’t permit immediate approval

2. Orchestrating evidence gathering and management using intelligent business process management

3. Making machines become responsible for many activities that people now perform when business is being fully underwritten

Decades-old cultural norms that are biased toward human decision making will have to be overcome as insurers shift to the use of machine-generated algorithms to make more complex and automated underwriting decisions. Channel conflict resulting from underwriting automation must be overcome when agents feel that automated underwriting could lead to their disintermediation as a next step. While CIOs are not responsible for intermediary or underwriting culture change, CIOs can help the business break down cultural barriers and any lack of acceptance of automation in the underwriting process. This can be achieved by working with them to build small prototypes by partnering with insurtechs and other technology firms.

In some cases, underwriters might feel that technology is threatening their job and maybe even replacing them in the future. For example, in the U.S., the Bureau of Labor Statistics predicts a 5.2% decline in underwriting jobs between now and 2028, driven by automation. But underwriters will still be needed to support autonomous underwriting. Regardless of the level of automation, underwriters will still be needed to design, train, monitor and manage underwriting automation and algorithms (see How Automation Will Change the Future of Work in Financial Services).

CIOs and underwriting management must face these challenges head-on or risk being disadvantaged by first movers. For example, Haven Life is using AI for such targeted products as insurance for people with chronic illnesses. And there are insurtechs that can help insurers with underwriting modernization, such as Carpe Data, dacadoo, DataRobot and BioSignia, for example.
Insurance companies are not going to overcome these barriers all at once. Companies that are slow adopters or facing resistance to changing manual underwriting processes can find results first through improving workflow and enabling productivity enhancements of underwriting staff. Those that are more aggressive may go beyond this to focus on automated underwriting, including the deployment of ML and advanced AI tools, one product at a time.

Evidence

1 LIMRA 2020 Insurance Barometer Study: The Insurance Barometer is an annual study that tracks the perceptions, attitudes and behaviors of adult consumers in the U.S. In January 2020, LIMRA and Life Happens engaged an online panel to survey adult consumers who are financial decision makers in their households. The survey generated over 2,000 responses.

2 2021 Gartner Financial Services Technology Survey: The 2021 Financial Services Technology Survey was conducted online between October 2020 and December 2020. The respondents included senior leaders who were either primary decision makers for their organization or business unit's technology strategy or had a high level of influence in those decisions. The total sample was 847, with representation from all geographies and both the banking and investment services, and insurance industry sectors. The survey was developed collaboratively by a team of Gartner analysts, and was reviewed, tested and administered by Gartner's CIO Financial Services Quantitative Analytics and Data Science (QUADS) team.

3 Gartner Digital Insurance Maturity Assessment, n = 83 life insurance companies. The Gartner Digital Maturity Assessment provides business and IT leaders from life and property and casualty (P&C) insurers with a baseline assessment of the current degree of digitalization within their organizations. This self-assessment tool can be used to take a one-time snapshot of an organization or it can be repeated periodically to track the progress.

4 Gartner/LOMA Study 2019, n = 39. This research was conducted in 2019 among 39 respondents in the U.S. and Canada. Participants were members of LOMA.


Document Revision History

Life Insurance CIOs Need a Winning Vision for Underwriting - 3 October 2019

Recommended by the Authors

2021 CIO Agenda: An Insurance Perspective

Tool: Artificial Intelligence Use Cases for Insurance

Top Strategic Technology Trends for 2021: Hyperautomation