HIGH-FREQUENCY DATA AND AI ENABLE INSURERS TO FLOURISH

By Charles-Antoine Wallaert and Iman Karimi

AS THE CURRENT PANDEMIC has demonstrated, the premise that the past is a harbinger of the future is not always true. Yet this premise has been a cornerstone of assessing and pricing risks in insurance. Traditionally, insurers have created risk profiles by establishing varied risk levels using statistical and actuarial models based on historical data. But to compete successfully amid rapid change, insurers must improve their ability to look ahead, not behind. To help companies build this kind of predictive view, BCG has created Lighthouse. By taking advantage of Lighthouse by BCG's high-frequency data sources and artificial intelligence (AI) capabilities, insurers can make better decisions even during periods of market upheaval.

The New Reality: A Deeper Understanding, Better Decisions

COVID-19 has accelerated an emerging shift in risk paradigms in much the same way that Hurricanes Andrew and Katrina led insurers to change their approach to catastrophe risk assessment. In moments of great disruption, markets become more volatile—and riskier. Risks that once were considered independent may become increasingly correlated. In fact, prolonged upheaval can trigger lasting changes in market dynamics that make the old rules outdated and irrelevant to the process of business decision making.

Insurance companies that transform the way they measure and predict the occurrence of risk during the current pandemic will, we believe, be much better positioned to succeed in times of future turmoil. But to do so, insurers must both increase their understanding of their customer base and make fundamental changes to their business practices. Perhaps the most critical change is to become more forward looking and sensitive to live events. Insurers can accomplish this by basing their decisions and actions on high-frequency data that helps them make sense of rapid shifts in market conditions and consumer behaviors. The more that insurers can confidently look ahead, the more empowered they are to fundamentally rethink core processes

including pricing, underwriting, customer management, and claims handling.

Becoming More Data and Analytics Driven

Lighthouse by BCG is a proprietary platform of high-frequency data and advanced AI models that helps our clients succeed by accessing and analyzing the most current, relevant data. As the following infographic demonstrates, the platform can, for instance, visualize the search trends in Google for insurance products such as home, motor, and travel policies. These data can improve insurers' understanding of their channel mix and demand forecast. Other data ingested by Lighthouse can be of help in the commercial-lines space because of its ability to measure COVID-19 impacts on client activity. With sufficiently granular data and insight, Lighthouse can rank the vulnerability of customers and their likelihood to default, trade down, or—in a desperate moment—commit fraud.

This ability to learn more about customer behavior also increases insurers' understanding of how risks that were previously considered independent can, in fact, be correlated. Typically, insurers create various risk profiles for a given event, with the probability of that event based on statistical computations from past occurrences. Issues arise, however, when the context changes so much that past history is no longer predictive of future events, as has been the case during the COVID-19 pandemic. In this crisis, traditional approaches are no longer accurate because insurers have not been able to gather enough data on emerging events to statistically evaluate risk levels for new profiles.

A better solution involves pushing the risk evaluation to the level of individual customers. To do so, insurers require data beyond what is traditionally captured at the point of underwriting. Furthermore, in times of market volatility, insurance companies need access to the most up-to-date customer data available. A perennial problem for insurers is that they usually know very little about their customers.

Insurance distribution in many countries relies heavily on agents and brokers who, de facto or de jure, own the customer relationship. Moreover, the nature of the insurance business means that interactions with customers are often limited to writing new policies, renewing existing policies, and processing claims. The current pandemic has severely restricted even those few face-to-face interactions, thus further distancing insurers from customers. Lighthouse steps into the gap by leveraging typically untapped data and human knowledge, giving insurers an opportunity to build bridges to customers that will endure long after the pandemic has passed.

The Lighthouse Interface Showing the Results of Online Searches for Insurance Products in France
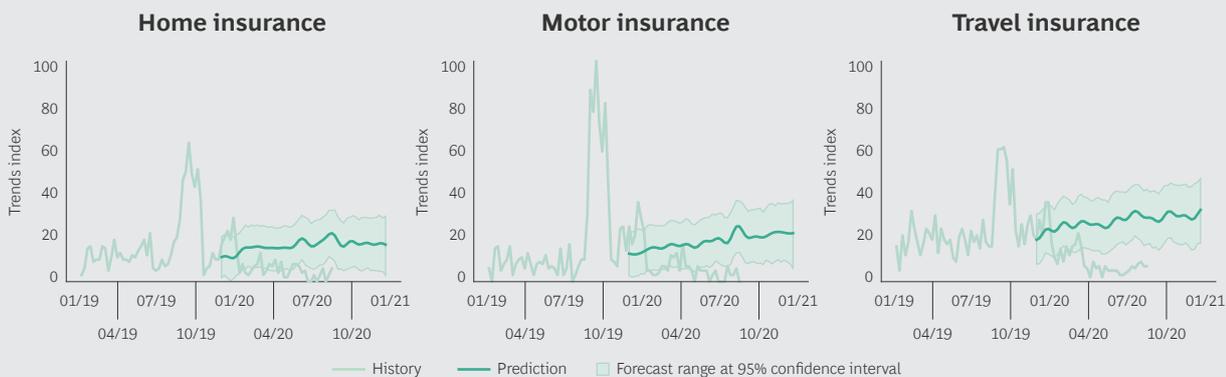
Source: Lighthouse by BCG.
Note: The darker green line represents the forecast trend of search in 2020 based on the history of searches from January 2019 to January 2020. The light green line represents the actual searches, while the green shade denotes a 95% confidence interval.

Recent experience with clients has also shown that the benefits of external high-frequency data are significant enough that insurers should consider using similarly high-frequency data that they already possess in their CRM, collection, or claims systems. One client, for example, discovered it had live access to all full and partial unemployment data via the company's group-protection business line.

Lighthouse can help companies build bridges to customers by first identifying all relevant data sources. Some of these sources are well known, such as policy information, account details (including other coverage, payment and plan histories), demographics, customer tenure, prior quotes, and win history. Lighthouse adds to these sources by acquiring and analyzing information on customer behaviors such as mobility, spending, demand, state of mind, and social media presence. It acquires credit scores, credit card spending, income, search and traffic data, and for commercial customers, company sales and financial projections.

And it accesses open data from government sources to develop unemployment models, epidemiological projections, consumer-spending predictions by sector or geographic area, as well as predicted shifts in online consumer behavior—along with resulting changes in demand. Specific to this moment in time, Lighthouse also provides AI models and scenarios that predict how changes in the path of the pandemic may affect an insurer's business practices in specific local areas, regions, and countries around the world.

These new data sources improve Lighthouse algorithms, enabling the platform to provide insurers with deeper insight into future customer behavior. When applied to underwriting, pricing, marketing, claims handling, and operations, Lighthouse can also help insurers significantly increase profit margins.

The Benefits of Predictive Modeling

Lighthouse is purposefully designed to ease the difficulty that insurers face as they transition to using advanced analytics in order to gain insight from these new data sources. It helps them define the long-range benefit of adopting AI techniques, understand their value propositions, and implement responsible-governance principles to guide their use.

Once appropriate, high-value AI solutions are selected and at-scale delivery models are tuned, the benefits of Lighthouse begin to emerge. With the Lighthouse platform in place, insurers can advance to forward-looking risk assessment using high-frequency data and AI-supported insight into market demand and customer behavior. Specific Lighthouse benefits include:

- Support for frontline employees (such as agents, salaried sales forces, and distribution partners) to identify what to offer any given client, at the right time and with the right format and channel

- Assessment of customer lifetime value by combining many dimensions including upselling and cross-selling potential, churn risk, default risk, and claims risk

- Upgraded underwriting and pricing techniques, adding new risk and behavior features to risk selection models

- Optimized payouts by reducing leakage and fraud

- Increased efficiency, effectiveness, and customer satisfaction with the automation of many manual, repetitive, and paper-based steps of first notification of loss and contract administration activities

An Unexpected Opportunity

The pandemic has amplified the need for the insurance industry as a whole to become much smarter about how it understands its customers. It also presents a rare opportunity for individual insurers to not

only survive the crisis but flourish in the aftermath. The fact is that many insurance companies have yet to become truly data driven. By integrating AI and new internal and external data into their business practices, these insurers—whether agent based, broker focused, or with salaried sales forces—can find new ways to succeed even during periods of upheaval.

Data and AI can be a tremendous help in navigating a volatile market, but Lighthouse delivers much more than that: it solves problems at the heart of complexity and delivers bottom-line impact. Light-house can help insurers gain insight into the true dimensions of the current market volatility and learn to predict customer behavior—even as that behavior becomes harder to anticipate. It can help clients frame their current problems and define an ecosystem strategy and potential data collaboration that allow them to build and deploy strong AI solutions. Rather than operating in the dark, insurers can rely on Lighthouse to provide data visualizations and action management tools that incorporate the kind of predictive knowledge successful business leaders will increasingly rely on in the future.

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