KPMG and SAS Insurance Analytics

Driving operational improvement with micro-segmentation

Business impact

The insurance industry is a multitrillion-dollar business. The volatile and uncertain economic environment is driving insurers to alter the way they conduct business. With great uncertainty coupled with rapidly changing markets, disruptive technologies, and new regulations, executives are encountering complex market issues, changing governance and risk management, and responding to an imperative to improve profitability.

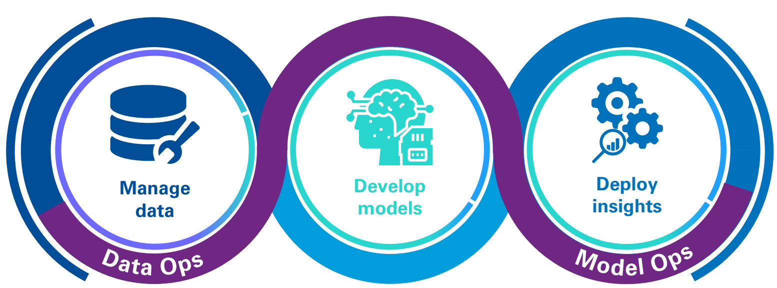
Insurance executives need to harness all available data with more sophisticated techniques to understand and manage their business. One example that highlights this is the performance of commercial auto over the past decade, with loss ratios hovering in the 80%'s, adverse claim trends running twice the rate of inflation, and adverse reserve development not just occurring eight years in a row but increasing each year.

Executives in finance, underwriting, claims, and actuarial are all wondering what techniques they can use to get ahead of long-running problems like this, and no one discipline can do it alone. This example is not unique. Companies that best understand the root causes of the issues and address them even before they become such a significant problem will be the ones that will survive and thrive in a very competitive market. Leading companies have adopted new technologies and innovative techniques, such as micro-segmentation, to gain decisive competitive advantage.

Figure 1: KPMG and SAS approach to insurance analytics

Experienced insurance team:
- Well-established success with micro-segmentation
- Deep insurance experience
- Transformational strategic advisor

Data preparation:
- Access any data source
- Current data brings value:
  - Claims
  - Policy
  - Reserving
  - Pricing
- Extend with third-party and unstructured data
- Visual data exploration



Insights:
- Visualization dashboards
- Business rules with models
- Easy model deployment and scalability
- Sample outputs:
  - Policy-level profitability
  - Claim-level reserves
  - Claim complexity scoring

AI/ML platform:
- Prebuilt machine learning accelerators
- Fully governed/configurable pipeline
- Low-code/no-code interfaces
- Flexibility to embed existing open source models

The challenges

The insurance industry is rapidly changing and is under tremendous competitive pressures to increase margins, retain existing customers, and attract new customers with new products and offers. In addition, insurers are seeking to:

- Improve pricing models and profitability
- Better understand loss emergence drivers
- Detect changing trends earlier
- Reduce expenses
- Increase speed to market and product flexibility
- Unify work streams such as marketing, underwriting, claims, actuarial, and finance, etc.
- Deliver holistic customer experience and intelligence for retention

In order to achieve these goals, insurance companies are adopting micro-segmentation, which is an advanced analytical approach using artificial intelligence (AI) and machine learning (ML) to model outcomes at policy, claim, and coverage level for more informed decision-making. Micro-segmentation is the cornerstone for insurers to thrive and succeed in the current market environment.

Contact us

Ian Sterling
Managing Director
M: 856-912-7242
E: isterling@kpmg.com

Tho Nguyen
Alliance Director
M: 919-664-7100
E: thohnguyen1@kpmg.com

Mike Riechers
Senior Director, Solution Relations
M: 919-525-5581
E: mriechers@kpmg.com

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Our joint approach

KPMG and SAS have joined efforts to develop an offering combining industry leadership, market-leading technology, operational delivery excellence, and demonstrable results for our clients. Our joint approach can deliver:

- Accelerated time to value to deploy and expand
- Transparent, easily digestible results
- More frequent and continuous monitoring
- Business friendly models
- Reduced key person dependency risk
- Controlled environment with improved documentation and model governance

Our joint offering with an experienced insurance team ingests granular data, applies advanced modeling using multiple AI and ML techniques, and visualizes results through a collaborative and integrated platform for decision-making as illustrated in Figure 1.

The potential benefits

Our offering can provide benefits across the organization:

- **Triage claims and law firm response** with earlier intelligent view of claim cost drivers
- **Enhance profitability** through improved intel into profitable/unprofitable segments
- **More inform financial forecasting** for better planning and operational efficiency
- **More precise and responsive reserving** with earlier recognition of exposure and claim mix changes
- **Identify growth opportunities** with analytics around hit rate and customer satisfaction.

With the industry experience of KPMG and AI/ML technology from SAS, we are pleased to share some results from our clients:

- **Estimated improved profitability** by 10 loss ratio points
- Deterioration in loss ratios **identified 12–24 months earlier** compared to standard methods
- Expected renewal **profitability increase of 3–5 percent** with targeted pricing, underwriting, and marketing decisions
- Estimated improved reserving efficiency and granularity of results in dashboard visuals for **15–20 percent gain in efficiency**
- Estimated reduction in legal fees **by 10 percent.**