Auto Insurance: Strategic Shift Required for Acquiring and Retaining the Right Customers in a Post COVID-19 World

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Motivation. This paper was written in response to a 'Call for Papers' on COVID-19
Method. This essay relies on external research and what we have experience in interacting with our insurance clients.
Conclusions. Devising the best pricing strategies for customers will be critical for success particularly in regard to auto insurance premiums, and insurers will have to apply sharply focused customer segmentation in order to develop relevant auto insurance marketing strategies that resonate on an individual level in the post COVID world.

Keywords. Pricing Models, Recovery, Macroeconomic Data, Segmentation

The impact of the COVID-19 outbreak has been devastating for the global economy, and with many countries in extended lockdown, there has been a seismic shift in customer behavior and business operations. As of July 10, US auto insurers such as Allstate, Farmers Insurance, Geico, The Hartford, Liberty Mutual, Progressive, Nationwide, State Farm, and USAA are expecting to return $14 billion to policyholders via refunds, discounts, dividends and credits.[1] Auto Insurance market is likely to see significant changes to the current business models in the coming months, with significant impact on revenues across the industry such as decrease in premium volume, delay in payments without penalty, and change in valuation and loss-recognition systems.

There are several factors at play contributing to a decline in revenues for the sector. The first is a sharp decline in automobile sales leading to a fall in number of new auto insurance policies. Vehicle sales in US for August'2020 declined close to 20% (YoY) whereas the total January-August 2020 sales were down by 23%. [2] Insurance companies oversee a dramatic change in customer behavior. With partial or full loss of income, people will be more hesitant to spend, leading to a sharp decline in automobile sales and a reduction in the number of new insurance contracts.

Secondly, with the world in lockdown and most offices adopting work from home policies, people are going out only for essentials. This has drastically reduced travel and automobile usage, For example, in the US, Cumulative Travel for 2020 changed by -14.5%.[3]

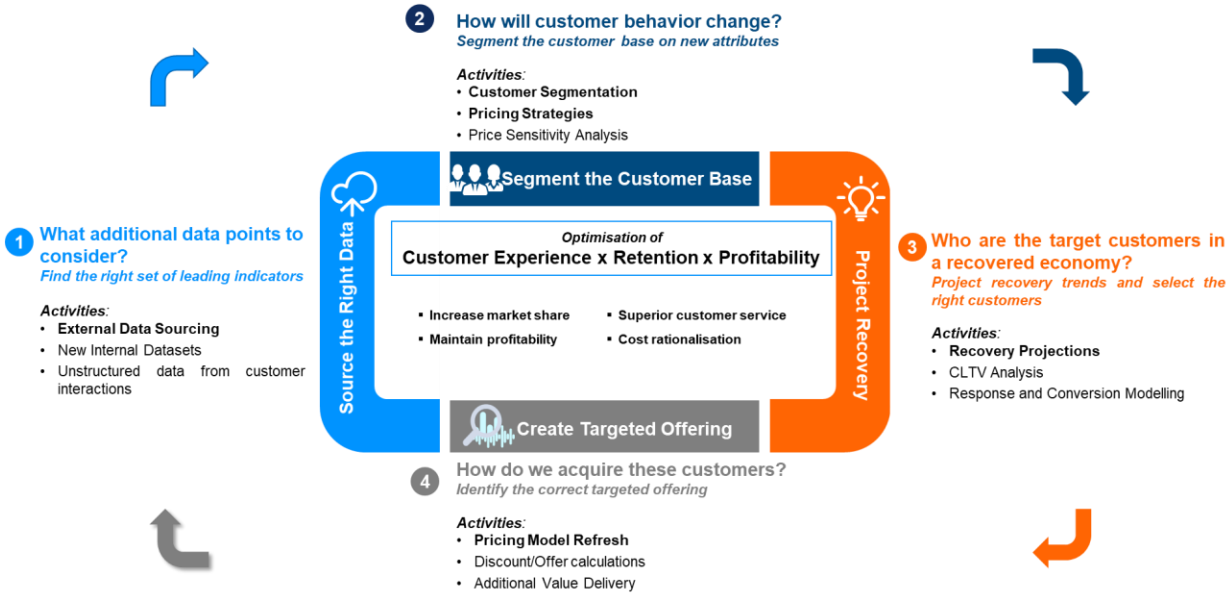
Thirdly, the mandatory grace period provided by insurance regulators for the payment of premium installments, can lead to more defaults in payment. This has also in turn reduced the amount of premiums received for auto Insurance. For instance, in the US, the Washington Office of Insurance Commissioner has provided grace periods for nonpayment of premiums and waived the fees associated with non-payment of premiums.[4]

To mitigate the impact of these revenue-reducing drivers, auto insurers need to make systematic changes in their current business strategy and adopt robust measures to optimize customer

experience, minimize losses from new business, and improve retention while maintaining profitability. Some key objectives that these measures should address are:

- Defending and growing market share by retaining and acquiring customers
- Offering superior customer service
- Improving loss ratios
- Lowering cost of acquisition and servicing

Insurers can meet these objectives by following a four-step strategy driven by effective use of data and analytics across the value chain of the organization.



Step1: Sourcing the Right Data

It is critical to bring in the right data sources (both internal and external) so that insurers can execute the next 3 steps and make timely strategic decisions based on key recovery indicators. COVID-19-specific insights can be extracted using internal data points like telematics data and driving behavior, customer interactions, and Mid Term Adjustments during the pandemic, and by categorizing customers into sub-groups like essential/non-essential workers. External data sources such as mobility data, macroeconomic indicators, consumer behavior data, business activity, and recovery trends can be used to enrich the existing models for better business insights.

For instance, movement of people is highly correlated with vehicle usage, hence, mobility data can be a leading indicator of economic and business activity recovery. Some of the public sources which can be utilized for the same include Google Mobility Data, Apple Mobility Report etc.

Similarly, since forecasts for major macroeconomic indicators are widely tracked, insurers can use them to predict how Auto Insurance premiums may behave over the years. Employment rate has

the highest correlation with Auto Insurance GWP, but it is a lagging indicator. Household Disposable Income mimics the GWP numbers very closely.

Likewise, based on how businesses perceive the economic threat of the COVID-19 crisis, there will be a direct impact on the volume of exports and imports, which will in turn impact the auto insurance business as well. Therefore, the Business Confidence Index can be leveraged here as it has the highest correlation with auto insurance GWP and its behavior over the years has closely resembled GWP trends.

Customer behavior and sentiment can be tracked using indexes like Consumer Confidence Index (CCI) and Consumer Price Index (CPI), which show the degree of optimism consumers feel surrounding the country's economy. Analyzing consumer behavior and sentiment can help insurers price accordingly and improve loss recognition models. In particular, CCI is a good indicator to feed into pricing models as it has a strong correlation with GWP numbers and closely resembles consumer's behavioral changes due to the pandemic. Other external indicators such as employment rate and household savings can also be used.

Step 2: Segmenting the Customer Base

In the post pandemic world, it is critical that insurers identify the right customers for their products to match the risk appetite and offer the best combination of channel, proposition, risk coverage, and customer experience. Insurers should be looking at their existing and prospective customer base and re-evaluating their target segments. It is essential to evaluate the needs and preferences of customers at each stage of their journey, and correlate these across marketing, sales & service, underwriting, policy administration and claims.

The fundamentals of segmentation for auto insurance customers have not changed, but several parameters have now become key to the segmentation process in a post COVID-19 world. These key parameters will be governed by requirements for travel and vehicle usage, relative risk of infection and financial strength of certain groups of customers.

With many people furloughed or out of jobs, employment status and type have become key categorical variables for segmentation. A distinction between essential versus non-essential workers has also become extremely critical with respect to future auto insurance requirements. As an example, customer segmentation using job category could look like:

a. Increased Mobility – Frontline Workers (24%)

b. Quick Return to Normal – Outdoor Activities (47%)

c. Slow Recovery – Hospitality & Travel (10%)

d. Work From Home – IT & Professional Services (19%)

A combined financial stress score created for the financial stress of individuals can be another key indicator for segmentation. It can consider different parameters such as affluence in the area of home address, primary source of income, job profile, stability of the employment sector, previous

payment history (including any deferred payments during COVID19 crisis). This score can also help determine the propensity to buy add-on coverages and premium products.

Lastly, age is also a critical segmentation parameter. Since the impact of the virus is quite disproportionate based on different age groups, certain age groups (mostly above 50) are expected to stay in isolation longer and hence will have significantly reduced demand for auto insurance, which will also impact claim scenarios.

These new segmenting attributes could drive different marketing, servicing and pricing strategies for different groups of customers based on their incremental or reduced driving needs, propensity to buy different coverages and their unique risk factors. When using these attributes, one must be careful to avoid sensitive attributes in pricing models that might lead to discriminatory pricing. However, it is critical to align these segments to the right pricing strategy. A three-tier pricing strategy will align with most customer needs. This includes usage-based pricing, traditional pricing, and discounted pricing.

1. **Usage Based Pricing:** A low fixed premium with a variable usage-based premium calculated every cycle.

2. **Traditional Pricing:** The standard pricing strategy with a fixed premium for standard coverage allocated over the policy period.

3. **Discounted Pricing:** A fixed premium pricing with a lower premium providing only basic coverage.

Once a new customer segment is created, it is also important to perform price sensitivity analysis for each segment to position different products and coverages appropriately surrounding that sensitivity.

Step 3: Projecting Recovery

In the past, auto insurance premiums have shown strong correlation with a few macroeconomic indicators, business activities and customer indicators. Today, insurers must track these indicators in real time to project what the future holds in their road to recovery.

The data can be used for projecting premiums, recovery trends, and market sentiments. For example, it has been seen that employment rates have a direct correlation to household spending and an indirect correlation to household savings - which further translates to auto sales and impacts mew auto insurance contracts.

Additionally, due to changes in risk factors and the financial appetite, there will be a significant shift in the lifetime value of different customer segments. This will require an overlay of different behavioral and financial trends over existing CLTV models to make them more robust and dynamic so that they are able to capture COVID-19 related uncertainties.

To increase CLTV, there will also be a shift towards a bundle approach rather than singular products. The bundle approach will streamline the process for customers as they can buy different policies from a single insurer.

Furthermore, customers from different segments will be impacted differently by COVID-19, and their risk appetites and financial outlooks will change. This shift will have a major impact on response and conversion models that have been built on historical data and which are becoming obsolete.

Insurers will need to assess the impact of the new normal and incorporate new variables and data modeling practices. This will see inclusion of real time data, application of telematics and use of advanced Machine Learning techniques like Generative Adversarial Networks (GANs).

Step 4: Creating a Targeted Offering

In the long term, the behavioral and operational changes associated with the pandemic will impact not only the way fundamental risk assessment is done for technical pricing, but also the way retail price and premiums are determined by insurers. The size of the auto insurance market will likely contract, and insurers will be looking to defend and grow their market share. The industry will need to constantly innovate and come up with novel targeted offerings that can help acquire and retain the most profitable set of customers.

The starting point of this will be a refreshment of pricing models. The frequency of claims is trending downwards in recent months, but the claims are more severe in nature; [5] which means that many loss cost models will require refreshing in order to incorporate the new scenarios. Therefore, personal line insurers will need to incorporate newer data points emerging from greater use of technology, including telematics and IOT devices.

Additionally, while Machine Learning and AI have made significant progress in areas such as claims and marketing, adoption has been quite low in pricing due to challenges around definition and reinforcement of biases in machine learning models. Insurers are now able to capture significant amount of customer data which can be combined with advanced machine learning models to better evaluate customer risk profiles and provide customized prices to their customers. The current traditional GLM models can go only so far due to limited accuracy and prediction power. .This will help insurers reduce losses and improve customer retention.

Pricing teams on the other hand will need to adopt a rapid experimentation approach for getting results faster, while also experimenting with different methodologies in an agile manner.

In terms of refresh frequency, typically core pricing models are not refreshed frequently and only marginal changes are done. However, in a rapidly changing insurance landscape, it is imperative to increase the frequency of model refreshes.

Also, for machine learning based pricing model deployment, it is critical to set up a flexible and scalable technology architecture that can ingest data and provide outputs in near real time in order to satisfy the complex requirements of personal lines insurers.

The second major point is the new insurance offers/discounts that will be provided to the customer. This is vital because how insurance firms treat their customers now is likely to create a long-lasting perception in the market. Insurers that understand the plight of the people and implement fair and balanced reforms in their pricing and premium practices will be rewarded in the long run. However,

there are multiple methods of calculating and offering the discounts to the end customer. Some of the common methodologies are:

- Flat Discounts
- Flat Personalized Discounts
- Premium Proportionate Discounts
- Premium & Claim Proportionate Discounts

Lastly, Insurers can take other proactive steps to create additional value for their customers, such as utilizing any spare capacity in their sales, service and claim contact centers to keep in touch with tenured and elderly customers in these difficult times to inquire about their well-being. Making the necessary changes in customer journeys to make them more streamlined and digital is also an additional value add.

In conclusion, COVID-19 is unlike any challenge humanity has faced in the recent past, and the economic impact has been unprecedented. Like all sectors, insurance recognizes the need to be agile and to use new data to project recovery so that it can understand the behavioral and financial changes customers are experiencing. Devising the best pricing strategies for customers will be critical for success particularly in regard to auto insurance premiums, and insurers will have to apply sharply focused customer segmentation in order to develop relevant auto insurance marketing strategies that resonate on an individual level.

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Abbreviations and notations

CLTV, customer lifetime value

GLM, generalized linear models

IoT, internet of things

AI, artificial intelligence

Biography(ies) of the Author(s)

First Author is Swarnava Ghosh (Senior Engagement Manager – Analytics): A dedicated analytics professional with 10+ years of experience in global engagement management, analytics project execution, business case development, building data and analytics strategy and risk management in insurance. He has led teams on numerous engagements involving interaction with senior stakeholders in Pricing & Underwriting, Claims, Finance, Risk, Sales & Marketing, Operations and other business functions. He has extensive experience of setting up and running Analytics Centre of Excellence at scale across UK, US, India and Philippines.

Second Author is Aditya (Assistant Project Manager – Analytics): A dedicated analytics professional with extensive knowledge of analytics model development and implementation in BI platforms for decision support. He has worked on managing multiple stakeholders, development and deployment of analytical models, implementation of efficient solutions and driving data science enabled growth to solve challenging business problems for key major P&C insurers in domains like Marketing, Claims and Underwriting.