INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

11 April 2023 (am)

Subject CP3 – Communications Practice
Core Practices

Time allowed: Three hours and five minutes

In addition to this paper you should have available the 2002 edition of the Formulae and Tables and your own electronic calculator.

If you encounter any issues during the examination please contact the Assessment Team on T. 0044 (0) 1865 268 873.

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You are an actuary in the pricing team of MotoSafe. You receive the following email from the MotoSafe Climate Change Working Group:

To: PricingTeam@MotoSafe.com
From: ClimateChangeWG@MotoSafe.com
Re: Pricing team view on new ideas

Hello,

I'd like to introduce MotoSafe's Climate Change Working Group. We have been given the task of suggesting initiatives that MotoSafe should consider to reduce the company's environmental impact. Much of the work we have done since the group was formed has been looking at changes the company can make in the office buildings to promote waste reduction and limiting use of resources. We have now started to think about how we can widen our reach. In particular, our current focus is on how the company could incentivise our customers to think about their impact on the environment.

Following a brainstorming session in our last meeting, we came up with a couple of proposals that we plan to present to the Environmental, Social and Governance (ESG) committee at their meeting next month. These proposals are focused on ways we could change our charging structure so that 'greener' policyholders are rewarded. In the working group, we don't have any detailed understanding of how premiums are decided, so we wanted to reach out and ask for your opinion on whether either of the following proposals may be viable.

Proposal 1: premium discount for 'green' (environmentally friendly) or low-emission vehicles to incentivise policyholders to drive low-emission vehicles.

Proposal 2: introduce a 'pay-per-mile' insurance model where the premium is directly related to the actual mileage of the vehicle over the year. This gives policyholders the opportunity to save money when they reduce their mileage, while also benefitting the environment.

To help with future proposals, please could you provide a brief explanation of how MotoSafe decides the premiums to charge policyholders.

We would appreciate your feedback on each of the proposals. In particular, we would like to know the following:

- Is this a viable proposal? We don't want to suggest things to the ESG committee that are impossible.
- If it is not viable, please can you give a brief explanation of the reasoning? This would help our understanding, and influence future ideas.
- If it is viable, along with the justification, please can you provide any considerations needed from a pricing perspective and also any practicalities that come to mind?

We would appreciate any help or guidance you can offer.

Thanks,
Climate Change Working Group

You have discussed the request with your manager, who made the following points:

- The working group have suggested a premium discount. Our pricing approach means that premiums are based on the risk each policy presents to MotoSafe, and as such we can't discount the premium for one set of policies unless that group is less likely to claim.
- We believe in our pricing philosophy of using risk to price policies, and this should continue to be used. There are no plans to change the office premium adjustments, such as profit margin, to allow for pricing differentials.
- The working group have asked for a brief explanation of what determines the premiums. This should be at a high level; there is no need to go into detail on risk factors or the premium calculation.
- For each proposal, please consider the ratings/risk groupings that would be used, and whether the risk would be different between these groups to justify a different premium.
- While I believe there will be correlation between mileage and burning cost, I don't think we can see any significant difference between 'green' vehicles and other vehicles.

Proposal 1:

- Vehicle category is one of the risk groupings we already use in our pricing so we can investigate whether the 'green' vehicles are already paying less. If there is evidence of a price difference, we could promote this via marketing channels.
- These are the vehicle categories that would be considered 'green' or low-emission:

MotoSafe vehicle category	*Vehicle type*
Q	Electric
R	Hybrid electric
S	Plug-in hybrid electric

- The popularity of 'green' vehicles has increased over recent years but the proportion of our policyholders who drive these vehicles is still relatively small. When we have a larger data set, we may see more evidence of differences in risk.

Proposal 2:

- Policyholders will be charged a pay-per-mile rate so that the premium paid is directly related to the actual mileage of the vehicle over the year.
- The pay-per-mile rate would need to differ according to risk categories (i.e. driver age, vehicle category) rather than being a flat rate per mile for all.
- Do we have data available to allow us to price in this way?
- We need to consider the risks when the vehicle is not in use and how the premium would charge for these risks.
- This is a new way of charging and we would need to consider the practicalities. For example, how would the mileage be monitored and how is the premium adjusted to reflect the actual mileage (it could be that the premium is adjusted at the end of the year with a rebate for lower mileage)?
- In the latest burning cost analysis, there were some groupings analysed with annual mileage (see data below) – these should give you an idea of burning cost for different mileages, but these are estimated annual mileage as given by the policyholder without independent verification.

		Claim amount/total exposure (£ per vehicle year)					*Average (£ per vehicle year)*
		2018	*2019*	*2020*	*2021*	*2022*	
Annual mileage declaration	Up to 4,000	71.48	70.81	81.27	72.40	75.62	74.32
	4,001 to 6,000	104.60	118.26	118.93	105.95	110.67	111.68
	6,001 to 8,000	167.36	189.21	190.29	169.52	177.07	178.69
	8,001 to 10,000	174.33	197.10	198.22	176.58	184.44	186.13
	10,001 to 12,000	191.76	216.81	218.04	194.24	202.89	204.75
	Over 12,000	217.91	246.37	247.77	202.73	230.55	229.07

Instructions to candidates

Remember that CP3 is a test of your ability to filter information and communicate it to a particular audience. Use only information that is contained in this examination paper and the scenario material provided. Do not draw on prior knowledge of a particular market, legislation or company.

1 Draft a paper for the Climate Change Working Group that addresses the questions raised. [80]

2 (i) The paper you drafted is for the Climate Change Working Group. For each of the following, outline, with examples, how you ensured the paper was appropriate for this audience and explain how this would have differed had you been asked to draft the paper for the board of MotoSafe instead:

- structure
- content
- language.

[12]

(ii) For each document provided in the scenario material, identify one piece of information that you did not include in the paper and explain your rationale for excluding. [6]

(iii) Explain your approach to presenting numerical information in your paper, justifying the format you used. [2]

[Total 20]

END OF PAPER