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Autorité des marchés financiers
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Subject: Preparing Québec for the arrival of connected and automated vehicles

The Canadian Institute of Actuaries is pleased to present the following comments in response to the issues paper on connected and automated vehicles (CAV). We have replied to select questions posed in the document.

1. *Should the manufacturer, distributor or promoter be able to purchase adequate insurance to cover this risk?*

No response.

2. *If so, what kind of insurance product should be used to pay the SAAQ's requests for reimbursement?*

The wide scope of questions 1 and 2 make it a challenge to answer. Coverage availability will depend on a number of risk factors that are not yet known (e.g., who ultimately would bear the risk?). There will likely be a desire for liability coverage for manufacturers, but it will ultimately depend on the risk appetite of insurers. The potential for risk accumulation presents a challenge for this type of insurance.

3. *Could the SAAQ play an intermediary role between the accident victim and the auto manufacturer?*

Yes – according to its mission to protect individuals against the risks inherent in the use of the road, the *Société de l'assurance automobile du Québec* (SAAQ) could play an intermediary role between the accident victim and the auto manufacturer. This will speed up claim assessments and rehabilitation processes.

4. *Could a similar solution be considered for Québec with respect to the no fault automobile insurance regime?*

This idea has merits, but it is a shift from Québec's current no fault system. The system in the UK, for example, is not a pure no fault system. It excludes or limits the insurer's liability for damage suffered by an insured person arising from an accident under certain circumstances.

5. *Since CAVs and conventional cars will be sharing the road for some years to come, should the no fault system apply to all vehicles?*

A no fault system applied to CAVs and conventional cars has the advantage of protecting all drivers equally, no matter what type of car they drive, and is easier to administer.

6. *Can liability be shifted without too much difficulty from the individual to the CAV manufacturers under the liability regime set out in Québec legislation?*

There is no liability in a no fault system, so there would be no opportunity to shift it. Consideration should be given as to whether CAV manufacturers could be held liable in certain circumstances.

7. *What changes need to be made to insurance policies to adapt the concept of “using” a vehicle?*

Insurance policies will need more clarity on what constitutes “using a vehicle.” Under Q.P.F. No. 1, the term “using a vehicle” is defined as any person who operates a part of an insured vehicle. The form should be more precise on what “operates a vehicle” means and link that definition to SAE International standard J3016.

8. *Is there a need to adapt the concept of “driver”?*

The concept of “driver” should be adapted to include anyone who is able to intervene to control the operation of a CAV.

9. *There are questions about how CAVs will interact with traditional vehicles. How would liability for bodily injury and property damage be apportioned in an accident involving both driver error and a system failure?*

There is a need for a convention, but more details need to be worked out in order to comment, particularly in a no fault system.

10. *Should auto manufacturers and software providers be required to disclose data about each accident involving one of their vehicles (e.g., to insurers, the SAAQ and the police)?*

The idea raises privacy issues. Two types of data could be disclosed: anonymized and non-anonymized. Sharing anonymized data on each accident could help insurers and the SAAQ to assess risks of CAVs globally. Sharing non-anonymized data on each accident could help insurers, the SAAQ, and the police to assess the claim based on systems logs and driving habits. However, disclosure requires the customer’s prior consent.

Consideration should also be given to required disclosure of anonymized non-accident data. Accident data alone will be insufficient to analyze risk (i.e., claims) as a function of exposure (i.e., driving mileage driven, number of vehicles) when comparing CAVs to non-CAVs.

11. What methods should be used to assess the premium for a CAV?

Traditional ratemaking methodologies should be used to assess the premium for a CAV. Historical loss experience should be adjusted to reflect the expected shifts in frequency and severity following the introduction of CAVs.

Traditional methods already use both vehicle- and driver-related characteristics. Implementing monitoring frameworks to ensure the appropriate weight is assigned to each type of data will be key for a successful transition to pricing insurance of CAVs.

12. Should information specific to CAV loss experience be added to the data already collected by the FCSA?

CAV loss experience should be added to the FCSA to help insurers in the underwriting process and the assessment of risks. Additional information should be included such as level of autonomy at the time of the accident for both vehicles involved, software providers, and driver's/guardian's experience with CAVs.

13. In the case of CAVs, is driver information still relevant for the FCSA?

Driver information is still relevant and should be separated between CAVs and traditional vehicles.

14. Does the FCSA as it currently exists allow insurers to determine fairer rates based on the actual degree to which a person was liable and the driving mode the vehicle involved was in? If not, what changes should be made to the FCSA?

In addition to our response to Question 12, manufacturer responsibility also needs to be considered in addition to the drivers' responsibility. Thus, the manufacturer should be added to the FCSA.

15. How should the DCA apply when the vehicle of the third party involved in the collision is used in semi-automated or automated mode?

Rules and conditions will need to be adapted in this case.

16. Should changes be made to the DCA to provide for this type of situation?

There is a need to update the direct compensation agreement (DCA) for the reality of CAVs. Beyond the circumstances of the accident, other factors should be considered, such as the level of driving automation used or the capacity of occupants to act when the accident occurred.

17. To what extent would allowing subrogation against manufacturers, software providers, programmers and so forth run counter to the raison d'être of the DCA and increase the cost of claims and the number of court actions?

There is a need to find the right balance between the DCA and subrogation. Allowing subrogation protects the financial sustainability of the insurance market but increases the cost of claims and the number of court actions.

18. *Where auto manufacturers retain ownership of their vehicles, could they claim compensation from users for damage to the vehicles? If so, what would the consequences be for the users of such vehicles?*

Yes. This could lead to the creation of a new insurance product, such as mobility insurance, or to an adaptation of the current existing automobile product for using the CAV fleet service.

19. *In a context where CAVs will become increasingly commonplace, is the DCA still relevant and why?*

Yes, so long as drivers still have some responsibility.

20. *Will universal standards need to be adopted to smooth CAV development? Which authority would be empowered to enact such standards? On what bases?*

This is a question for the auto manufacturing sector and its regulators. It will take a long time for the technology to converge to the point where standards could be adopted. That being said, standards would be in the public interest once that convergence has taken place. The SAAQ would have the authority to enforce any such standards.

21. *Should a legal presumption of liability apply to manufacturers or software providers and, if so, should manufacturers and software providers be able to contest the liability attributed to them?*

Yes to both, but there is still more for the courts to decide.

22. *In such a context, in what order should the possible insurance policies at play when there is a loss respond (vehicle owner, vehicle driver, auto manufacturer, software providers, etc.)? Should such an order be set out in regulations and in the automobile insurance policies?*

Yes, an order should be set out, but it depends on the nature of the policies in play. Any order should provide indemnification to injured parties first.

23. *Should a group damage insurance plan be introduced in Québec to insure these new business models?*

We do not see a need to create this, as a market already exists.

24. *How would insurers assess risk in the specific situations where little in the way of decision-making is left to chance and the outcome is preprogrammed? Is the role of the insurer going to gradually become one of simply damage appraiser?*

No – there are still several risk factors that can be used. To the extent that pilot overrides or interventions will still be possible, the insurer still has a role to play in risk pricing and risk selection.

25. For “traditional” insurers, what would be the impact of auto manufacturers or web titans like Google, Apple, Facebook and Amazon (GAFA) entering the insurance market?

New players will increase competition in the market in favour of customers, but these new larger players could also potentially crowd out traditional insurers, by taking advantage of economies of scale or access to additional data. Guardrails might be needed to ensure GAFA are not taking unfair advantage of the extensive non-insurance related data they have access to – similar to what is currently in place with the Bank Act. Legacy carriers would also be forced to innovate.

26. Who will be tasked with “managing” personal data and information? Would such management depend on the use and purpose of the information that is collected and analyzed? The SAAQ for CAV registration and victim compensation? Insurance companies for setting premiums and assigning fault in the event of an accident? The manufacturer and/or dealer for software updates and vehicle servicing?

Sharing personal data and information with tiers (manufacturers, SAAQ, and insurers) should be an informed decision made by customers. Customers should be aware of the types of data collected and the usage of that data.

27. In terms of governance and supervision, what authority in Québec should be intervene with respect to the protection of CAV-related personal information and what means should be put into place?

The entities that currently enforce privacy regulations could take on this responsibility, provided that insurers could still get access to the information necessary for pricing purposes.

28. The IBC has recommended that a data sharing agreement be established between insurers and auto manufacturers to facilitate determination of the cause of an accident. Is this option possible and feasible? If so, what rules and limitations should be imposed on such sharing? If not, are other solutions possible and why?

This is a good idea. The Insurance Bureau of Canada (IBC) and auto manufacturers will need to develop data standards to ensure consistency of data collected and to govern the acceptable uses of the data. Privacy issues will need to be addressed. For example, sharing anonymized data could benefit insurers and auto manufacturers and protect customers' rights of privacy. Standards must be developed.

29. How will all the relevant legal obligations pertaining to data security, consent and liability be conveyed throughout the data sharing process?

No response.

30. Still within the context of a data sharing agreement, how do you see the concept of data ownership and should there be a legal framework for it?

No response.

31. *Should the cybersecurity standards applicable to CAVs and in the automotive industry be different from those in other industries, and if so, how?*

Standards should be higher proportional to the matter at risk, such as vehicle users' lives.

32. *How should cybersecurity standards be set in the automotive industry and who should set them?*

No response.

33. *When there is a cyberattack on a vehicle's critical features that potentially endangers the life of a passenger, would the SAAQ be responsible for compensating the victims of the road accident? To whom should fault be assigned in the case of a cyber breach (e.g. the auto manufacturer, the technology provider, the owner of the vehicle fleet, the infrastructure owners)?*

The SAAQ should be responsible for compensating the victims first. This will protect the victims from the financial burden associated with the claims. Then, the SAAQ could recover from the third party at fault.

34. *Should new specific insurance products be developed for cybersecurity and the protection of personal information?*

Yes – insurance products should be available and these types of policies exist today.

The CIA appreciates the opportunity to provide feedback on these issues, and we would welcome further discussion with you throughout this process.

If you have any questions, please contact Chris Fievoli, CIA Staff Actuary, Communications and Public Affairs, at 613-656-1927 or chris.fievoli@cia-ica.ca.

Sincerely,

[original signature on file]

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