Zurich Insurance plc – Written evidence (AUV0068)

INTRODUCTION

About Zurich Insurance Group

Zurich Insurance Group is a leading global insurer, providing life insurance and general insurance products and services to retail and corporate customers in more than 170 countries. Zurich’s UK Life business is a leading provider of pensions, investment policies and protection products, available through financial intermediaries. UK Life also provides pensions and protection policies for the corporate market available through employee benefit consultants. The UK General Insurance division supplies personal, commercial and local authority insurance through a number of distribution channels.

Based at around 20 locations across the UK - with large sites in Birmingham, Cheltenham, Farnborough, Glasgow, London, Swindon and Whiteley - Zurich employs approximately 7,000 people in the UK.

Zurich welcomes the opportunity to respond to The House of Lords Science and Technology Select Committee Inquiry on Autonomous Vehicles but also appreciates that other stakeholders may be in a better position to respond to some of the specific questions raised.

IMPACTS AND BENEFITS

1. What are the potential applications for autonomous vehicles?

   1.1 Autonomous vehicle technology has the potential to transform use of the road network depending on infrastructure investment and development which could lead to more efficient use of the road network with associated easing of congestion. There is also an opportunity for widespread development in off-road scenarios which might include warehouse and storage facility movement of goods as well as agricultural uses.

   1.2 From an insurance perspective, we anticipate two significant benefits –

      • Safety mechanisms which will reduce the frequency of accidents estimated to have been caused by human error.
      • Increased information which can be analysed to assess risk and manage claims more efficiently

2. What are the potential user benefits and disadvantages from the deployment of autonomous vehicles?

   2.1 Some of the benefits anticipated are:
• Lack of human error resulting in far less accidents and injuries. Research published by Thatcham Research found that vehicles fitted with AEB technology were involved in fewer insurance claims for third-party injury than equivalent vehicle models that did not have this technology and it is anticipated that continual developments will lead to further improvements.
• Improvement in traffic conditions and congestion – for example with sensors allowing cars to travel closer together and more on the road, and platooning
• Increase in fuel economy
• Increase in mobility for all – meaning disabilities would no longer be a factor in driving
• Less space needed for parking as well as a vehicle could drop the driver off and park further away
• Many hours are wasted commuting for workers – this would free up this time to be used productively
• No need to pass a driving test
• From an insurance perspective, increased information which can be analysed to assess risk and manage claims more efficiently

2.2 Some of the disadvantages anticipated are:

• With the need for drivers reduced/eliminated there would be a substantial impact on the work force with many workers losing their employment (lorry drivers, taxi drivers etc)
• In the early days of development these vehicles are likely to be extremely expensive
• A concern that software hacking or computer malfunction could result in a catastrophic accident

3. How much is known about the potential impact of deploying autonomous vehicles in different sectors?

3.1 We are not in a position to differentiate between sectors however, our view is that if the safety performance of automated driving technology continues to develop as expected, this will reduce the overall frequency of road accidents. As such, this should reduce claims costs overall, although the incorporation of more complex components with in-built technology is likely to increase vehicle repair costs in any given case.

3.2 There will be a number of factors which could affect the potential for additional costs related to insurance for automated driving, including:

• Frequency of incidents where the driver of a ‘manual’ car is the at-fault party in an incident involving an automated car as a result of the automated vehicle reacting more quickly to any given situation during the period of transition to automated vehicles.
• The speed of transition towards ADT technology and the ease with which drivers adapt to how this technology works.
• Any change in the cost/availability of parts.
• The requirement to ensure that there is an adequate the number of engineers and repair technicians with the necessary skills to repair and maintain both manual and ADT vehicles.

4. **How much is known about public attitudes to autonomous vehicles?**

4.1 We are not in a position to answer this question at this stage.

5. **What is the scale of the market opportunity for autonomous vehicles?**

5.1 We support the development of this technology, which has the potential to have a significant beneficial impact on road use and safety. We also anticipate benefits to society and the economy as previously outlined although we are not in a position to calculate the scale of this.

**CREATING AN ENABLING ENVIRONMENT**

*Research and development*

6. **Is the scale of current and planned demonstration facilities for autonomous vehicles sufficiently broad and ambitious?**

6.1 We are aware that there are a number of controlled test and research projects currently under way which at this stage appear largely to involve low speed environments. It appears that there will ultimately need to be a framework available which will afford the opportunity to test this technology in higher speed scenarios including motorway and extra-urban conditions.

7. **Is the Government doing enough to fund research and development on autonomous vehicles, and to stimulate others to do so? Should it be doing more to coordinate UK actions?**

7.1 We refer to our answer to question 6 above regarding a structured approach to testing outside of city centre/urban conditions.

7.2 We believe there is a need to ensure that adequate type approval controls are developed which will require to be consistent from an international perspective.

8. **How effective are Innovate UK and the CCAV in this area?**

8.1 We are not in a position to answer this question.

9. **Is the environment for small and medium-sized enterprises (SMEs) working in this sector sufficiently enabling?**
9.1 We are not in a position to answer this question.

**Real world operation**

10 **Will successful deployment of autonomous vehicles require changes to digital or physical infrastructure?**

10.1 We agree with the ABI response on this matter in relation the need for insurers to have access to data and information on vehicle specification/capability as well as post-accident information.

10.2 Many of the automated driving systems will require ongoing upgrades and maintenance (including, potentially, via over the air software updates). The insurance industry would expect there to be regulatory oversight ensuring that safety-critical upgrades are performed and clarifying where the responsibilities of manufacturers and registered keepers lie in relation to ongoing maintenance of the vehicle. It is likely that this will need to be supported by digital infrastructure that will be capable of verifying that necessary upgrades have been performed.

11 **How might a move from current levels of highly automated vehicles to their extensive deployment best be managed? What do you see as the key milestones?**

11.1 Zurich supports the proposal contained within the recent C-CAV ‘Pathway to Driverless Cars’ consultation that a “rolling programme” of regulatory reviews should be implemented. Such a rolling programme will permit regulatory change based on experience and enhanced understanding and will allow consideration of the complexity of interdependent national and international regulation that will be required.

11.2 In that respect, it is vital that, in addition to the issues being considered in the context of the Modern Transport Bill, the UK Government actively works with its worldwide counterparts to establish:

- Universally agreed, easily understood, consumer-friendly definitions of advanced driver assistance systems and automated driving systems; and
- Universally agreed minimum and maximum technical requirements for different levels of ADAS and for ADT, binding upon all involved parties.

12 **Does the Government have an effective approach on data and cybersecurity in this sector?**

12.1 We are not in a position to answer this question although we understand the critical nature of this in ensuring safe development and maintenance of an effective automated vehicle environment.
13 Are further revisions needed to insurance, regulation and legislation in the UK to create an enabling environment for autonomous vehicles?

13.1 Yes. Zurich submitted a response to the recent C-CAV consultation in relation to its ‘Pathway to Driverless Cars’ work and we would be happy to furnish a copy of the response if that would be of assistance.

13.2 It is essential that the existing compulsory motor insurance framework is developed to accommodate automated driving scenarios however we do not believe that the appropriate mechanism to achieve this is through extending the application of ‘product liability’ insurance.

13.3 Consideration also needs to be given to the creation of an associated right of recovery (allowing insurers to claim costs from manufacturers, developers or other stakeholders where they are ultimately responsible for a road accident) which would ensure that automated driving is covered and provide cover for the ‘not at fault’ driver as well as passengers and (external) third parties.

13.4 There will need to be a consistent approach to this from manufacturers regarding software design and development as well as “allocation” of responsibility in the event of a technology failure which results in an accident. We believe a manufacturing industry wide alignment would be of considerable benefit. We expect that the UK Government’s work on the Modern Transport Bill will prompt vehicle manufacturers to engage constructively on these questions on an industry-wide basis. It is clear that regulation cannot be ‘brand specific’, and that all vehicles on the road will ultimately need to be bound to the same standards and regulatory framework.

14 What, if any, ethical issues need to be addressed in the substitution of human judgement in the control of vehicles by algorithms and Artificial Intelligence?

14.1 We recognise that this is a matter which requires very careful consideration as safety standards for automated driving are developed however we do not have access to any detailed information on this issue.

Wider governance

15 What does the proposed Modern Transport Bill need to deliver?

15.1 The Modern Transport Bill needs to afford a common sense and workable framework which will provide clarity for both consumers and insurers in relation to insurance arrangements for the initial introduction of automated vehicles onto UK roads and flexibility to accommodate ongoing technological development in this area. We see the Government’s commitment to setting a clear direction in advance of the technology being commercially available as very welcome.
15.2 It is hoped that the Modern Transport Bill will also set out a framework to manage the needs and expectations of all stakeholders including drivers and consumers as this technology develops.

16 How effective is the UK’s education system in delivering people with the right skills to support the autonomous vehicles sector?

16.1 We have no specific information to provide but recognise that this is a matter which requires active consideration to ensure that suitably skilled and qualified people are available to support the development of infrastructure and vehicles in an autonomous landscape.

17 Is the Government’s strategy and work in this area sufficiently wide-reaching? Does it take into account the opportunities that autonomous vehicles offer in a wide range of areas, not just on the road?

   We are not in a position to answer this question.

18 What are the implications of exit from the European Union for research and development and the autonomous vehicle industry in the UK? Are specific actions from the Government needed to support or protect the autonomous vehicles sector in the short term or after the terms of Brexit have been negotiated?

18.1 We are not aware of any reason why the terms of Brexit should directly affect the ongoing research and development into how automated vehicles will be used although it is important that the UK works collaboratively on an international basis in this field.

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