Submission on *Regulatory options to assure automated vehicle safety in Australia*

July 2017

About QBE

QBE Insurance Group (***QBE Group***) is one of the few Australian-based financial institutions to be operating on a truly global landscape, with operations in and revenue flowing from 37 countries. Listed on the ASX and headquartered in Sydney, stable organic growth and strategic acquisitions have seen QBE Group grow to become one of the world's top 20 general insurance and reinsurance companies, with a presence in all key global insurance markets.

As a global insurer, QBE Group believes that Australia must continually look to refresh its financial and regulatory systems, to ensure the nation remains competitive with global financial markets, and attractive to investment. As a member of the QBE Group, QBE Australia & New Zealand (***QBE***) operates primarily through an intermediated business model that provides all major lines of general insurance cover for personal and commercial risk throughout Australia.

Background

QBE welcomes the opportunity to respond to the National Transport Commission's *Discussion Paper – Regulatory options to assure automated vehicle safety in Australia* (***Discussion Paper***).

QBE is a major provider of motor vehicle, product liability and public liability insurance nationally, and has a keen interest in the trial and use of autonomous vehicles, and the regulatory challenges and opportunities posed by the changing technological landscape.

QBE considers that autonomous vehicles have the potential to offer a much safer driving experience, and substantially reduce road-related injuries and deaths. As such, QBE is supportive of the development of autonomous vehicle technology. Given the complexity of the transition to autonomous vehicles and the potential risk to other road users, it is important that regulations, supporting systems and guidelines are formulated with public safety as the top priority.

Summary of key points

The key points we make in this submission are that:

- The public is likely to expect a level of government involvement in the safety assurance process, given the novel nature of the technology and the level of risk associated with road use.
- There should be an embedded expectation that autonomous vehicles will offer superior safety outcomes, compared with vehicles operated by human drivers.
- The pre-market approval and accreditation models are, in QBE's view, most likely to minimise safety risks and maintain public confidence. A transitional approach between these two models may be required.
- From an insurance perspective, it is important for legal accountability to be clear at all times. A government-run assurance system should not operate as a mechanism for the transfer for liability from automated driving vehicle entities to government.

Response to consultation questions

QBE has limited its responses to those questions in the Discussion Paper that most closely align to our subject matter expertise.

Question 1: Should government have a role in assessing the safety of automated vehicles or can industry and the existing regulatory framework manage this? What do you think the role of government should be in the safety assurance of automated vehicles?

QBE believes a level of government involvement will be crucial in building and maintaining public confidence in the safety assurance system, and in autonomous vehicle technology more broadly. This will be especially important during the transition period, when vehicles operating at conditional,

high or full levels of driving automation will be operating alongside non-automated vehicles fully operated by human drivers.

With respect to *Figure 3: Risk and the level of regulatory intervention*, we agree that autonomous vehicles are likely to see the risk of human performance diminish, and the risk of vehicle integrity increase. The current regulatory approach will need to adapt to recognise this. The Commonwealth Government's responsibilities for overseeing vehicle standards will likely require a more comprehensive approach, recognising the greater variety of tasks that autonomous vehicles will need to perform and the lack of historical evidence of autonomous vehicle performance and reliability.

At a state level, driver licensing restrictions may change or eventually become obsolete, however vehicle registration checks may become more frequent and comprehensive. For example, the New South Wales (***NSW***) Government currently requires safety checks for light vehicles more than five years old, before registration can be renewed. Initially, autonomous vehicles may require more frequent safety checks. These could be conducted by accredited third party providers, to relieve pressure on state authorities.

National consistency will be important – both in terms of minimising the compliance burden for vehicle manufacturers and owners – and to provide certainty to the insurance industry, which will be reflected in premium pricing. With respect to the exact role governments should play in assuring the safety of automated vehicles, please see our comments further below.

More broadly, we understand that state and territory governments are currently reviewing their compulsory third party schemes, with a view to identifying any eligibility barriers to accessing these schemes by occupants of an automated vehicle, or those involved in a crash with an automated vehicle. We reiterate the importance of achieving national consistency in these reforms, and the need for state and territory governments to work closely with the insurance industry throughout the review process.

Question 2: Should governments be aiming for a safety outcome that is as safe as, or significantly safer than, conventional vehicles and drivers? If so, what metrics or approach should be used?

By eliminating human error, the expectation is that autonomous vehicles will lead to superior safety outcomes compared to conventional vehicles operated by human drivers. QBE considers that unless autonomous vehicles are held to a higher safety standard, public acceptance of the technology will be difficult to achieve.

In terms of the metric used, QBE agrees that it should go beyond a measure of fatalities. The rate of incidents that result in harm to people could be a more appropriate safety goal. We note that autonomous vehicles also offer the potential to capture information about technical failures and near-misses. We believe there would be benefit in incorporating metrics associated with this information, or at least collecting and monitoring this information for future consideration.

Question 3: Should the onus be placed on the automated driving system entity to demonstrate the methods they have adopted to identify and mitigate safety risks?

QBE agrees that there should be an onus on the automated driving system entity to demonstrate the methods they have adopted to identify and mitigate safety risks. We elaborate on this in our response to questions 6-9 below.

Question 4: Are the proposed assessment criteria sufficient to decide on the best safety assurance option? If not, what other assessment criteria should be used for the design of the safety assurance system?

As an insurer, QBE is keenly aware that the industry will need to adapt existing products to meet the risks posed by vehicles operating at conditional, high and full levels of automation. The ability of insurers to respond quickly to emerging risks will be supported by maintaining a focus on the following principles, which are appropriately reflected in the proposed assessment criteria for the safety assurance system:

- safety risks must be identified and managed, as the technology is in its infancy
- legal accountability should be clear at all times, and
- national consistency will be crucial to minimise the likelihood that regulation will stifle innovation.

Question 5: Should governments adopt a transitional approach to the development of a safety assurance system? If so, how would this work?

For practical reasons, we believe a transitional approach to the development of a safety assurance system may be necessary to avoid delaying the rollout of technologies which have the potential to significantly improve road safety. We elaborate on this in our response to questions 6-9 below.

Questions 6 to 9: Which is the best approach to regulating automated vehicle safety, and why?

The Discussion Paper outlines four broad approaches to regulating automated vehicle safety:

1. **Continue current approach** – no additional regulatory oversight, with an emphasis on existing safeguards in Australian Consumer Law and road transport laws.
2. **Self-certification** – manufacturers make a statement of compliance against high-level safety criteria developed by government. This could be supported by a primary safety duty to provide safe automated vehicles.
3. **Pre-market approval** – automated driving systems are certified by a government agency as meeting minimum prescribed technical standards prior to market entry.
4. **Accreditation** – accreditation agency accredits an automated driving system entity. The accredited party demonstrates it has identified and managed safety risks to a legal standard of care.

Preferred approaches

As noted under question 4, the central criteria from an insurance perspective involve understanding and addressing safety risks, clear legal accountability, and national consistency. Based on these criteria, QBE's preferred approaches to regulating automated vehicle safety are pre-market approval and accreditation. We consider that these options are the most likely to build and maintain public trust and confidence in the approval process.

We note the Discussion Paper's assertion that autonomous vehicles may arrive in Australia as early as 2020. It could be challenging for governments to create the infrastructure required, develop technical standards, make regulatory changes, and be in a position to assess very different vehicle systems, within this timeframe.

As such, it may be that a transitional approach is required, to prevent regulatory hurdles from delaying the roll-out of the technology. For example, initial vehicles brought to market in Australia could be assured through an accreditation approach. This could place the primary onus on automated driving vehicle entities – who have a thorough understanding of each vehicle's systems – to manage safety risks and legislative compliance with, for example, national road rules. Pre-market approval could be implemented at a later date.

This two-stage approach could allow governments time to develop a detailed understanding of autonomous vehicle technology, and to develop technical standards and assessment procedures. If, however, the accreditation approach works well during the initial phase, governments may elect to continue with this model. Especially if coupled with a primary safety duty, an accreditation model would place a high burden on manufacturers to manage safety risks, which corresponds with the notion that the party with control over the risks should bear primary responsibility for managing those risks.

Additionally, if a pre-market approval process is implemented before governments have developed sufficient knowledge of autonomous vehicle systems, there is a risk that a focus on benchmarking vehicles against prescriptive rules and standards may ignore more pressing safety risks that are not widely known.

Other issues for consideration

Autonomous vehicle trials are currently taking place in a number of states, and are likely to continue up until and beyond the point at which autonomous vehicles become available on the Australian retail market. These trials could provide valuable insights for regulators by informing the design of a safety assurance system and the development of vehicle standards, and by drawing light to those aspects of vehicle operations which will be especially relevant in the Australian context.

As noted earlier, clear legal accountability will be crucial from an insurance perspective. A government-run assurance system should not operate as a mechanism for the transfer for liability from automated driving vehicle entities to government. For example, state governments provide driver licencing training and issue licences, but are not responsible for the behaviour of licensed drivers. Where there is any scope for doubt, legislation should clarify how liability will be assigned, at the very least for insurance for bodily injury, but ideally also for liability and property damage policies.

Finally, we reiterate that the focus of the regulatory system needs to be squarely on safety assurance, and not on other aspects of vehicle design and operation which have no bearing on safety. This will maximise the efficiency of the process, and minimise the likelihood that regulatory hurdles will delay the roll-out of the technology.

Question 10: Based on the option for safety assurance of automated vehicle functions, what institutional arrangements should support this option? Why?

The Discussion Paper provides five institutional options for consideration:

1. The Commonwealth manages automated vehicle safety assurance.
2. A national entity manages automated vehicle safety assurance.
3. One state or territory manages the safety assurance system for all states and territories.
4. States and territories manage automated vehicle safety assurance individually.
5. A fully commercial, quasi-governmental entity manages automated vehicle safety assurance.

QBE does not have a strong view on this question, however we note that Option 4 is the least desirable option, as it will result in inconsistent arrangements and the unnecessary duplication of effort. Options 1, 2 and 5 are the most likely to promote a nationally consistent approach.

In particular, Option 5 has some broader benefits, including ease of establishment, a degree of independence and potentially ease of access compared to some other regulatory models. The Australasian New Car Assessment Program (***ANCAP***) could, for example, be a candidate for this role, given its links to other vehicle safety programs around the world, and the high level of public confidence in and knowledge of ANCAP safety ratings.

Question 12: How should governments ensure compliance with the safety assurance system?

Vehicle manufacturers will presumably have strong incentives to ensure that their vehicles are safe. As with the airline industry, the public is likely to have very high safety expectations of autonomous vehicles. A single incident could have a significant negative impact on a manufacturer's reputation, and consequently vehicle sales. The impact of this should not be underestimated, however, we agree that this should not be relied upon alone, and that a compliance framework should be in place.

We make no further comment on the appropriate compliance model at this stage, as this will depend on both the nature of the safety assurance system implemented, and the nature of any breach involved.

Further information

Once again, QBE appreciates the opportunity to respond to the Discussion Paper.

Please do not hesitate to contact QBE's Head of Government Relations and Industry Affairs, Kate O'Loughlin, at kate.oloughlin@qbe.com or on (02) 8275 9089, if you would like to discuss any aspect of this submission.