Update to the 2020 decision Regulation Impact Statement

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| Key points* The 2020 decision RIS[[1]](#footnote-2) indicated the NTC’s preferred option as being option 3.
* Ministers did not agree a recommended option and asked the NTC to conduct further work to detail the differences between options 3 and 4 before asking for Ministers’ decision. Both options introduce a new in-service general safety duty on ADSEs enforced by a single national regulator, with option 3 using a Commonwealth law and option 4 using state and territory applied law.
* Over 2020 and 2021, the NTC has further consulted on matters relevant to the in-service national law, including the regulation of modifications and the market exit and transfer of ADSEs. The NTC also further consulted on the differences between options.
* This update presents the NTC’s further work and updated analysis of options 3 and 4, and recommends option 3.
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## Background and purpose of update to the 2020 decision RIS

The NTC’s decision RIS assessed four options to address the in-service safety of automated vehicles. Two options proposed a national legislative framework for in-service safety:

* Option 3: Introduces new in-service general safety duties enforced by a single national regulator through Commonwealth law
* Option 4: Introduces new in-service general safety duties enforced by a single national regulator through state and territory applied law.

The decision RIS and the independent cost-benefit analysis (CBA) by PwC assessed these two options as having greater benefit than options 1 and 2, and option 3 as having the highest net benefit of the four options. The NTC noted that option 3:

* was more likely to achieve national consistency,
* was more efficient to maintain,
* aligns with the regulation of automated vehicles at first supply, and
* allows for national enforcement through a single federal court system.

However, the NTC also noted that either option 3 or 4 could form the basis of the end-state regulatory framework as they both provided a national framework and regulator. National consistency is one of the main goals of the safety assurance framework for automated vehicles, as inconsistencies in regulation across states and territories could act as a barrier to industry seeking to enter the Australian market.

On further targeted engagement with governments, the NTC identified additional work to support ministers’ decision on the appropriate legislative implementation approach. This work would further clarify how each of the options would work in practice. The areas for examination were:

* compliance and enforcement
* modifications to automated vehicles
* market exit and transfer of ADSEs.

In June 2020, Ministers agreed to a new national in-service Automated Vehicle Safety Law (AVSL) which established a national in-service safety regulator, a general safety duty on ADSEs and due diligence obligations on their executive officers. The decision on a legislative implementation option was extended until after the completion of the NTC’s further work.

In October 2020 the NTC released ‘A national in-service safety law for automated vehicles: discussion paper’ for public consultation. It covered the above policy areas (and other issues) and included a chapter specifically on the legislative implementation options for the AVSL. The results of this public consultation, targeted consultation with governments and the NTC’s further analysis can be found in ‘A national in-service safety law for automated vehicles: policy paper’ **(the AVSL paper)** A set of recommendations about the in-service framework was noted by ministers in May 2021, with further work sought to examine the differences between the legislative implementation models in the context of the full end-to-end framework for automated vehicles.

A subsequent targeted consultation was held, with the release of ‘The regulatory framework for automated vehicles in Australia: discussion paper’ in June 2021. This consultation showed how the recommendations on the in-service framework looked in the context of existing and already agreed frameworks that would also apply to automated vehicles, and further showed the operational differences between the legislative implementation options. The results of the targeted consultation were incorporated into ‘The regulatory framework for automated vehicles in Australia; policy paper’ **(the regulatory framework paper).**

The purpose of this attachment to the 2020 decision RIS is to update our analysis of options 3 and 4 with the results to incorporate the NTC’s further work, and put forward a recommended option.

This update will cover:

* policy recommendations that include regulatory processes not discussed in the RIS (modifications and market exit and transfer of ADSEs)
* other relevant policy recommendations (including those on the regulator’s compliance and enforcement powers)
* updated legislative implementation analysis
* any impact of the NTC’s further work on the findings of PwC’s CBA
* the NTC’s conclusion and recommended option from the decision RIS

*This attachment and the regulatory framework paper were presented to ministers in February 2022, where recommendations on the in-service framework including legislative implementation of the AVSL, were agreed.*

## Modifications

### Policy recommendations

In June 2020, ministers agreed that significant modifications to in-service vehicles should meet a similar level of safety to those assessed at first supply and directed the NTC to consider what regulation may be required to safely enable modifications. The AVSL paper considered options for managing three types of modifications:

* Significant modifications made to existing in-service ADSs by the ADSE
* Aftermarket ‘switch-ons’ of ADSs in in-service conventional vehicles by non-ADSEs
* Aftermarket installations of ADS devices in in-service conventional vehicles by non-ADSEs.

The regulatory framework paper recommends that significant modifications made to an existing in-service ADS by the ADSE should be assessed by the in-service regulator. Significant modifications are defined as modifications that increase the operational design domain or automation level or otherwise significantly alter the functionality or safe operation of the ADS. This assessment will be against the safety criteria[[2]](#footnote-3) used to assess ADSs at first supply at least, with further work by governments to understand the safety risks of these modifications and identify whether any additional requirements are necessary. The paper also proposes that modifications which are more minor in nature (such as minor software updates) will be managed by the ADSE under their general safety duty, but they must keep a record of these modifications.

The regulatory framework paper recommends that proposed modifications by non-ADSEs to existing in-service vehicles to confer automation either by switch-on or installation should be assessed by the in-service regulator. The assessment of the ADS would be against criteria based on the first supply safety criteria at least, with further work by governments to understand the safety risks of these modifications and identify whether any additional requirements are necessary. The in-service regulator would also certify the applicants against corporate obligations to become ADSEs.[[3]](#footnote-4) If approved these entities would have responsibilities under the general safety duty in the AVSL for the newly installed ADS. The NTC anticipates that there would be two types of applicants that would seek to modify vehicles in this way: type-approval holders for conventional vehicles (original equipment manufacturers) or entities whose business model is to supply and install ADSs to conventional vehicles. A ban on individuals entering the market in this way is not proposed, however it is unlikely that individuals would be able to meet the safety criteria and obligations.

### Regulatory impact

The recommendation on significant modifications by ADSEs recognises that if new ADSs of the same type had been imported with such a modification, the first supply regulator would need to have received documentary evidence from the ADSE in order to vary or grant a new approval before the ADSs could be supplied to the market. This proposal requires a similar process for ADSs that are already in-service, to assure the safety of all significantly modified ADSs on the road.

The recommendations on modifications that confer automation on conventional vehicles by non-ADSEs through switch-on or installation of an ADS recognise that by conferring automation, parties should be required to self-certify they can meet criteria and obligations equivalent to those they would have had to meet if entering the market at first supply. The current recommendation would, therefore, result in a similar regulatory burden on parties entering the market in-service to those imposed on parties entering the market at first supply (though the impact of potential additional requirements is discussed further below).

The NTC anticipates two types of non-ADSE applicants seeking to undertake the other types of modifications:

* original equipment manufacturers switching-on ADS functionality in type-approved conventional vehicles, and
* ADS businesses developing aftermarket devices for installation by consumers.

The NTC considers that the PwC CBA clearly covers the compliance costs of the first type of applicant. Table 6 of the CBA presents the calculation of compliance costs, using 20 and 40 as the low and high value assumptions of potential ADSEs in the Australian market (and an estimate of $590K compliance costs per regulated ADSE). These numbers are based on their assessment that there are “currently about 20 car manufacturers in the Australian market” and “around 20 to 46 companies that are currently developing automated vehicles.”

In terms of ADS businesses, at this stage it is not clear how many, if any, entities will emerge with this business model moving into commercial deployment. To the extent that such entities emerge and meet the safety criteria and obligations, it is highly likely that they will contribute to an increased overall take up of automated vehicles and the considerable benefits estimated in the CBA.

In previous RISs, the NTC has taken the position that significant modifications should be approved against the first supply safety criteria and obligations, and hence current recommendations are in line with previous statements. They differ to that extent that for significant modifications made by ADSEs, the assessment will be undertaken by the in-service regulator rather than the first supply regulator.

However, governments will undertake further work to determine whether additional requirements are necessary in the context of all three types of modifications. The NTC considers, however, that these would only be recommended if further safety risks of these types of modifications are identified, for example, if additional risks are associate with:

* modifying a vehicle that may have already been on the road for some years
* consumers not understanding the expectations on them when operating a vehicle that has increased its functionality to include automation
* ADSs being installed in vehicles that were not intended by the existing type-approval holder to be automated vehicles
* consumers installing ADS devices themselves.

## Market exit and transfer of ADSEs

### Policy recommendations

In June 2020 ministers directed the NTC to consider potential regulatory arrangements to manage the market exit of ADSEs and the transfer of their responsibilities for an ADS. The AVSL paper considered options for enabling this, and the regulatory framework paper recommends a certification process for new parties seeking to take responsibility for an in-service ADS. This process would be used when an ADSE needs to transfer its responsibilities for an ADS for reasons such as insolvency. The in-service regulator would certify a new entity to become the ADSE, with the certification requirements being assessment of the new entity against the three first supply obligations – corporate presence, minimum financial requirements and data recording and sharing capability, as well as an assessment of the systems the entity has in place to meet the general safety duty.

The regulatory framework paper also recommends that where an ADSE can no longer support its ADS and needs to exit the market, but a new ADSE has not been found to take over its responsibilities, the original ADSE should be required to disengage the ADS (which could be a fleet). Disengagement in a vehicle with manual controls could mean that the vehicle could still be operated in manual mode, but where the vehicle has no manual controls the vehicle would be inoperable.

### Regulatory impact

The requirement for a new ADSE to be certified is consistent with the first supply requirements which require all new ADSEs to meet the three first supply corporate obligations. All ADSEs must also meet the general safety duty from day one of being certified, and the requirement for the entity to show the systems it has in place to meet this duty is intended to ensure they can do so.[[4]](#footnote-5) The certification requirement does not therefore add any additional regulatory burden on these entities above what is expected of all ADSEs, but does provide an alternate pathway for entities to enter the automated vehicle market outside of the type approval process for new vehicles.[[5]](#footnote-6) Having a process to certify new ADSEs also protects consumers that would otherwise not be able to operate their ADS safely (as noted below). The regulatory framework paper proposes the ADS does not need to be reassessed against the first supply safety criteria, instead, the new entity must maintain compliance with the general safety duty on becoming the ADSE.

The requirement to disengage ADSs with no responsible ADSE is consistent with requirement for an ADS to be supported by an ADSE that maintains compliance with a general safety duty. Having an ADSE to support an ADS at all times means that consumers are protected from the potential safety risks of not having a responsible entity maintaining the safe operation of their ADS.

The requirement to disengage an ADS where there is no ADSE to support it (for example, in the case of sudden insolvency) will have an adverse impact on consumers, particularly those who own automated vehicles without manual controls. For the driver of a vehicle with both automated and manual controls, if the ADS was switched off this would still allow for manual driving; however, for a driver of a vehicle without manual controls this action would render their vehicle inoperable. As a last resort, the relevant Minister under the Road Vehicle Standards Act may issue a compulsory recall of vehicles under the that Act[[6]](#footnote-7), and it may be an appropriate response in circumstances where the ADSE has refused or is unable to disengage its ADSs – in consultation with the in-service regulator.[[7]](#footnote-8) The cumulative impact of a fleet of disengaged or potentially recalled ADSs could be significant, both on the ADSE and for consumers/users, and particularly disruptive if an ADSE contributes a dominant share of a region’s fleet.

Recourse for consumers may be limited. Recourse through the Australian Consumer Law may be difficult to access given the resource required to take legal action.[[8]](#footnote-9) Consumers may also be able to seek damages through insurance claims, though at this point in time this market mechanism is still to develop.

Experience with conventional vehicles suggests that vehicle manufacturers having to exit the market would be rare. However, the market for other types of ADSEs (for example ADS-only manufacturers) is only emerging so little is known about the stability of these types of companies.

The scenario is mitigated to a certain extent by the requirement for all ADSEs to have originally entered the market after meeting corporate obligations at first supply, including minimum financial obligations. These sorts of requirements are not placed on vehicle manufacturers seeking type approval to enter the market currently. They aim to provide some assurance that an ADSE is fit and proper and has the ability to support an ADS over its life.

However, the NTC acknowledges the residual gap in consumer protection caused by these policy recommendations. In the regulatory framework paper we suggest that this gap should be reviewed at the first review of the AVSL, when the automated vehicle market is more mature.

## Other relevant issues consulted on

### Prescriptive duties on the ADSE

Each of the reform options (options 2-4) in the 2020 decision RIS proposed that the ADSE would be subject to discrete prescriptive duties as well as the general safety duty, and Ministers agreed to this recommendation. Examples of these prescriptive duties were given in Appendix B of the consultation RIS.[[9]](#footnote-10) The AVSL paper and regulatory framework paper further consulted on these prescriptive duties and recommended two categories of duties:

* Prescriptive duties to support the general safety duty – these will assist the ADSE to meet compliance with its general safety duty
* Prescriptive requirements – these will assist the in-service regulator to enforce the ADSE’s compliance with the AVSL.

The full list of recommended duties and requirements can be found in chapter 5 of the regulatory framework paper.

A general safety duty is expressed in general terms. This allows for flexible implementation by regulated parties. The prescriptive duties to support the general duty are intended to provide additional certainty for ADSEs about how it can comply with general duty without limiting its scope. Feedback to the consultation RIS indicated support for this type of certainty for discrete areas of automated vehicle safety.[[10]](#footnote-11) The prescriptive duties also provide certainty about how it can ensure ongoing compliance with the first supply safety criteria.

The other prescriptive requirements include requirements to maintain certain records of safety incidents and modifications, develop a law enforcement interaction protocol, notify the regulator of certain events and disengage an ADS where it can no longer support it and there is no new ADSE. In terms of the maintenance of records, we expect that these records would be kept by ADSEs as part of their ongoing safety management, and would not result in additional burden. At first supply, an ADSE will be required to show how their ADS can interact safely with law enforcement – it is likely that this information can be used to develop the protocol. Notifying the regulator of significant safety incidents and where it has had corporate changes likely to result in market exit (as described in 1.3) would create an additional process for the ADSE to undertake; however, it is not anticipated that a notification requirement would impose significant burden. The requirement to disengage an ADS it can no longer support where there is no new ADSE is discussed in 1.3.2.

### In-service regulator’s compliance and enforcement powers

The regulatory framework paper recommends a range of powers for the in-service regulator in order to facilitate a risk-based compliance and enforcement approach. Most of these powers were previously consulted on in the decision RIS. Additional powers recommended in the regulatory framework paper are the power to suspend operation of an ADS until a safety issue is resolved by the ADSE and the power to permanently suspend an ADSE. These powers were considered necessary due to the potentially systemic nature of safety risks in automated vehicles – a safety issue in one ADS could potentially exist in a whole fleet of vehicles with the same ADS. These powers would only be used in circumstances where other enforcement action had not resulted in the ADSE addressing the safety risk.

The regulatory framework paper also recommends the in-service regulator have the power to access, collect and share information. This power will be for the primary purpose of monitoring and enforcing compliance with the general safety duty. This was not specifically consulted on in the consultation RIS. Information required will be about compliance, operation of an automated vehicle and parties involved in the ADSE’s operations. For example, an ADSE may need to provide information about whether an ADS or a fallback-ready user was in control of an automated vehicle at the time of road rule breach. Key information flows will be between the in-service regulator, first supply regulator, the ADSE and state and territory law enforcement agencies. Some state and territory systems may require changes to facilitate this. It is also anticipated that some information required will be personal information, and the NTC has commissioned a privacy impact assessment which considers the privacy implications of this.[[11]](#footnote-12)

### In-service regulator’s functions

The 2020 decision RIS consulted on the in-service regulator’s required functions. Four additional functions have been recommended in regulatory framework paper.

* Administering the process for in-service modifications – this function has been added to accommodate the scenario in 1.2 where an ADSE makes significant modifications to an existing in-service ADS.
* Certification – This function has been added to accommodate the scenarios in 1.2 and 1.3 where a new entity is seeking to enter the market under the in-service framework, either because it will be responsible for a new ADS being switched-on or installed in a conventional vehicle, or to replace an ADSE exiting the market.
* Crash investigation – It is recommended that the in-service regulator will have two key roles in the investigation of crashes: to leverage its expertise to assist state and territory police in their investigations into individual crashes (rather than replace police investigations), and to undertake its own investigations to identify systemic safety issues.
* Reporting – It is recommended that the in-service regulator should report to its responsible minister(s) on the operation of the AVSL including, for example, the extent to which the object of the law is being achieved and the extent and nature of noncompliance with the law.

## Legislative implementation

The NTC consulted on the legislative implementation approach for the in-service framework in more detail through the AVSL paper and the regulatory framework paper. The AVSL paper presented the key differences in implementing and administering the AVSL under the different implementation approaches and assessed the approaches against a range of policy objectives. The analysis showed there were potential benefits under both options:

**Complementary law approach – benefits:**

* There would be greater national consistency, which reduces costs for industry and maintains Australia as a single market for vehicles. A complementary law avoids derogations from the national law enacted by states and territories at enactment or by amendment, or the risk of particular states not joining the scheme, or potential inconsistent enforcement of the law in individual state and territory courts.
* The AVSL and amendments to the AVSL would only need to pass in a single parliament, potentially meaning more efficient establishment and maintenance of the law (although some complementary amendments to state and territory law will be required).
* Potential efficiencies due to the regulation of both first supply and the in-service safety of automated vehicles by the Commonwealth.
* There would be more direct accountability through a single Minister.
* Breaches of the AVSL (for example, a safety issue that affects a nationwide fleet of ADSs) would be prosecuted in state and territory courts exercising federal jurisdiction, rather than in a single state or territory as a breach of its law with no ability to prosecute the same breach in another state or territory (due to the doctrine of double jeopardy).
* Avoids potential cross-border enforcement challenges (such as an incident occurring when a remote driver in one state operates a vehicle in another state).
* Potential marginal cost efficiencies given the use of a single Parliament to enact and amend the AVSL.
* Provides individuals with avenues for recourse in the event of a privacy breach, regardless of where the individual resides or where the breach occurred.

**State and territory law approach – benefits:**

* The AVSL could regulate more parties more easily if required in the future, such as repairers or fallback-ready users, as there are no constitutional limits. This could result in greater national consistency for regulation relating to those parties.
* Potential efficiencies due to the in-service regulation of automated vehicles and conventional vehicles both occurring under state and territory law.
* States and territories would have greater control over automated vehicle legislation in their jurisdictions.

Stakeholders provided limited feedback on the differences presented between the two legislative implementation approaches. However, most stakeholders who responded to this issue supported a complementary law approach. Reasons given were national consistency and the need for a single national market, efficiency in establishing and maintaining the law, the regulator’s accountability, simplification of judicial processes, reduced duplication between states and territories, integration with the first supply process, and the application of privacy laws.

Reasons given in support of the state and territory applied law approach were the maintenance of the current split of roles between the Commonwealth and states and territories in road transport, greater capacity for states and territories to derogate to respond to local issues, and the benefit of having nationally consistent legislation for fallback-ready users particularly in the early years when there will be heavy reliance on them.

The regulatory framework paper presented the operational differences between the two approaches across the full regulatory framework that would apply to automated vehicles, and asked stakeholders about the impacts of each approach on their sector. This paper did not provide a further assessment of the options. Government stakeholders noted that benefits under a complementary law approach included:

* the potential for increased accountability as the regulator would be directly accountable to a single Commonwealth minister
* a simpler overall regulatory framework
* a single market for automated vehicles, given the inability for jurisdictions to derogate from the AVSL
* more efficient amendment of the AVSL
* less potential difficulty with cross-border enforcement,

while a benefit of state and territory applied law was fewer potential constitutional limits.

Industry stakeholders noted the benefits under complementary law approach included:

* the applicability of Commonwealth privacy legislation ensuring individuals have consistent and enforceable privacy rights
* a single market for automated vehicles, given the inability for jurisdictions to derogated from the AVSL – resulting in lower costs for industry and a higher degree of clarity, consistency and certainty
* efficiencies in regulatory oversight given the potential for a common minister for both first supply and in-service frameworks
* more efficient amendment of the AVSL.

No benefits of state and territory applied law were submitted.

## PwC cost benefit analysis

PwC prepared a cost benefit analysis (CBA) in support of the 2020 decision RIS. It concluded that of the four options in the decision RIS, option 3 (complementary law) had the highest net benefit. The ranking of options in the CBA was largely based on an assessment of the likelihood that the options would either delay or bring forward take-up of automated vehicles, which in turn would delay or bring forward realisation of the anticipated benefits of automated vehicles. Option 3 was found to have the highest net benefit, primarily because it was assessed as the option least likely to lead to delay in the uptake of automated vehicles in Australia. The option was assessed as having a higher net benefit than option 4 (state and territory applied law) on the basis that higher level of national consistency would potentially have a positive impact on timeframes for uptake. The above analysis strengthens that conclusion.

The NTC does not consider any of the new policy recommendations or the further analysis of the legislative implementation options affect the methodology and evidence used in the CBA, and has therefore not further updated it.

## NTC conclusion: recommended option from the 2020 decision RIS

The AVSL paper assessed the issues directed for further work by ministers and other relevant matters. The NTC considers the recommendations in the resulting regulatory framework paper either reinforce or do not materially change the options analysis in the decision RIS and the CBA conducted by PwC.

The NTC also further assessed the two remaining legislative implementation options themselves in the AVSL paper: option 3 which introduces new in-service general safety duties enforced by a single national regulator through Commonwealth law, and option 4 which introduces new in-service general safety duties enforced by a single national regulator through state and territory applied law. We consider this further assessment reinforces the options analysis in the decision RIS and the CBA conducted by PwC, and that given this, further assessment would not materially change the findings of the CBA. The NTC considers option 3 still shows a greater benefit than option 4, largely due to the greater ability of this option to provide national consistency, which will create a more consistent framework and a single market for automated vehicles in Australia. This will reduce costs for industry who may otherwise need to develop different products to meet differing requirements in each state and territory. This will lessen barriers to entry and in turn lead to less delays in uptake of automated vehicles (as shown in the CBA).

The need for national consistency in reforms to accommodate automated vehicles has been a key goal of the reform program agreed by Ministers, and the problem statement in the decision RIS notes national consistency as one of the two key goals of the in-service framework (the other being safety). The risk of derogation and potentially states and territories not signing up the national law under the applied law approach could significantly detract from that goal. Potential increases in consistency under option 4 due to the potential to regulate additional parties in the AVSL (rather than separate state and territory laws) in the future would be negligible in comparison if these risks eventuated.

Further, the NTC considers there are efficiencies under option 3 due to the use of a single parliament to establish and maintain the national law. Avoiding the need for each state and territory to enact and amend their own applications Acts will potentially reduce further delays in implementation of the framework, and the risk of further divergence. Use of a single parliament also provides a more directly accountable Minister (as opposed to a group of COAG ministers).

**As such, the NTC recommends option 3 of the decision RIS as providing the greatest net benefit.**

1. The decision RIS is available on the NTC website here: <https://www.ntc.gov.au/sites/default/files/assets/files/NTC-Decision-RIS-In-service-safety-for-AVs.pdf>. [↑](#footnote-ref-2)
2. The safety criteria are set out in Appendix B. They were agreed by Ministers in November 2018, and are currently being incorporated into Australian Design Rule 90/01 by the Commonwealth. [↑](#footnote-ref-3)
3. The first supply safety criteria relate to the ADS and the obligations relate to the ADSE. They can be found in Appendix B. [↑](#footnote-ref-4)
4. The AVSL will also place a prescriptive duty on ADSEs to have systems to carry out the general safety duty – so this requirement on new entities replicates this prescriptive duty. [↑](#footnote-ref-5)
5. Though if they wished to import new ADSs of the same type they would have to go through the first supply type approval process for those ADSs. [↑](#footnote-ref-6)
6. Once the Road Vehicle Standards Act fully commences. This power is currently within the *Competition and Consumer Act 2010* (Cth), with the first supply regulator administering the recalls. [↑](#footnote-ref-7)
7. For automated vehicle with manual controls, potentially the ‘recall’ could just require switching off the ADS whilst allowing operation in manual mode. [↑](#footnote-ref-8)
8. Advice provided by the Australian Competition and Consumer Commission. [↑](#footnote-ref-9)
9. The consultation RIS is available on the NTC’s website here: <https://www.ntc.gov.au/sites/default/files/assets/files/NTC%20Consultation%20RIS%20-%20In-service%20safety%20for%20automated%20vehicles.pdf>**.**  [↑](#footnote-ref-10)
10. *In-service safety for automated vehicles: Consultation RIS*, June 2020, p. 83. [↑](#footnote-ref-11)
11. The privacy impact assessment is available on the NTC’s website here: <https://www.ntc.gov.au/transport-reform/ntc-projects/in-service-safety-AVs>. [↑](#footnote-ref-12)