

Institute of Actuaries of Australia

To Fault or Not to Fault That is the Question?

Prepared by Nick Allsop, Hardik Dalal and Peter McCarthy

Presented to the Institute of Actuaries of Australia 12th Accident Compensation Seminar 22-24 November 2009 Melbourne

This paper has been prepared for the Institute of Actuaries of Australia's (Institute) 12th Accident Compensation Seminar The Institute Council wishes it to be understood that opinions put forward herein are not necessarily those of the Institute and the Council is not responsible for those opinions.

© Nick Allsop, Hardik Dalal and Peter McCarthy, Ernst & Young

The Institute will ensure that all reproductions of the paper acknowledge the Author/s as the author/s, and include the above copyright statement:

> The Institute of Actuaries of Australia Level 7 Challis House 4 Martin Place Sydney NSW Australia 2000 Telephone: +61 2 9233 3466 Facsimile: +61 2 9233 3446

Email: actuaries@actuaries.asn.au Website: www.actuaries.asn.au

Abstract

There has been recent discussion in the Australian community about establishing a national disability insurance scheme (NDIS). Given the various accident compensation schemes already in existence one option could be to harmonise the benefits provided under these schemes. However, a NDIS would need to provide benefits to all injured parties; this is not currently the case for all motor vehicle accident schemes. This paper provides a qualitative discussion and quantitative analysis of a number of the implications of moving from a fault based motor vehicle accident insurance scheme to a no fault scheme thereby achieving one of the possible objectives of a NDIS.

The various motor vehicle personal injury schemes across Australian and New Zealand jurisdictions can be loosely classified by the parties that they cover. The criteria used to determine coverage can be considered on two bases:

- The nature of the cover provided by the scheme, be it a first party scheme or a third party scheme
- The relationship of the party to the accident giving rise to the injuries, i.e. either at-fault or not at-fault

It is usually the case that first party schemes are operated on a no fault basis and third party schemes are fault based. However, this relationship is not strict and what are often termed "blended" schemes also exist.

There have been cases in the past where schemes have changed the fault classification that they operate under. This has more commonly involved a transition from a fault based scheme to a no fault scheme but there have been cases where the transition has gone the other way. Recent investigations around the provision of more comprehensive cover on a no fault basis have led us to consider the issues that could arise in moving from a fault based scheme to a no fault scheme.

This paper reviews various characteristics of Australian and New Zealand motor vehicle personal injury schemes. The paper provides a qualitative discussion and quantitative analysis of the implications of moving from a fault based scheme to a no fault scheme for various key metrics; including:

- Benefit structure
- Cost impact and the relationship with benefit structure
- Stakeholder relationships
- Scheme utilisation
- Cost relativities for the various types of claims

Regardless of the nature of any scheme change, there will be considerable uncertainty around the final direct and indirect impacts of this change.

Keywords: motor vehicle, personal injury, fault, no-fault, first party, third party

Table of Contents

1	INTRODUCTION	4
2	REASONS FOR FAULT AND NO FAULT SCHEMES	6
3	HISTORY OF MOTOR VEHICLE PERSONAL INJURY SCHEMES IN AUSTRALASIA	9
4	IMPACTS OF MOVING FROM FAULT TO NO FAULT BASED SCHEMES	10
5	OTHER CONSIDERATIONS	20
6	CONCLUSION	25
7	REFERENCES	27
8	APPENDIX A – RTA DATA	28

1 Introduction

There has been recent discussion in the Australian community about establishing a national disability insurance scheme (NDIS). Given the various accident compensation schemes already in existence one option could be to harmonise the benefits provided under these schemes. However, a NDIS would need to provide benefits to all injured parties; this is not currently the case for all motor vehicle accident schemes. This paper provides a qualitative discussion and quantitative analysis of a number of the implications of moving from a fault based motor vehicle accident insurance scheme to a no fault scheme thereby achieving one of the possible objectives of a NDIS.

The various motor vehicle personal injury schemes across Australian and New Zealand jurisdictions can be loosely classified by the parties that they cover. The criteria used to determine coverage can be considered on two bases:

- The nature of the cover provided by the scheme, be it a first party scheme or a third party scheme
- The relationship of the party to the accident giving rise to the injuries, i.e. either at-fault or not at-fault

A first party personal injury scheme is one where an individual policy provides benefits to all injured parties involved in a vehicle accident, including the policyholder. In contrast, third party based personal injury schemes provide benefits to the parties injured by the policyholders but not to the policyholders themselves.

In a no fault scheme benefits are, in general, provided to all injured parties regardless of who caused the accident. Fault based schemes on the other hand provide benefits to those who did not give rise to the accident (i.e. those who were not at-fault). In such fault based schemes, it is often the case that where an injured party is found to have contributed to the accident even if they did not cause it, reduced benefits are paid. This is usually referred to as contributory negligence.

It is usually the case that first party schemes are no fault and third party schemes are fault based. However, this relationship is not strict and what are often termed "blended" schemes also exist.

A blended scheme is one that operates predominantly under one system but has components of another system within it. An example of a blended scheme would be the current personal injury cover for motor vehicle accidents in NSW. While the majority of the Scheme operates on a third party fault based structure, catastrophic injuries (which are managed by the Lifetime Care and Support Scheme) are managed on a first party no fault basis; additionally, from April 2010, the \$5,000 ANF¹ benefit will also be extended to at-fault injured parties.

Motor vehicle personal injury insurance has been in existence in Australia since soon after World War II. It is viewed as so important by government that it is one of only three classes of insurance which are defined to be compulsory; that is all parties undertaking certain activities must buy insurance. The others are Workers Compensation and Builders Warranty insurance.

In Australia it is regulated at a state level. Of the eight states and territories, three are underwritten in the private sector (New South Wales, Australian Capital Territory and Queensland) and five in the public sector; New Zealand also has a public sector scheme. All three private sector schemes are fault based schemes, although catastrophic claims in NSW are publicly underwritten.

In all of the Australian and New Zealand schemes compensation is available to people injured by motor vehicles; compensation is usually available for:

- Loss of income (past and future)
- Medical, allied health and rehabilitation expenses

¹ Accident notification forms – a person injured in a motor vehicle accident in NSW, may be able to immediately claim up to \$5,000 for treatment expenses and lost earnings

- Costs of necessary home and vehicle modifications
- General damages / non-economic loss (pain and suffering)
- Spousal and dependent payments upon death

In addition legal and investigation expenses are also paid by most schemes, although these payments are not provided to the claimant but are frictional costs associated with the provision of the claimant's compensation.

These benefits may be provided in the form of lump sum or periodic payments depending on the nature of the benefits and the jurisdiction in which the cover has been issued.

It is usually the case that at-fault schemes utilise the legal system (via Common Law benefits) to a greater extent than no fault schemes. This is largely due to the need to establish fault and therefore seek compensation from the party adjudged to be at-fault. Courts are more inclined to issue judgements in the form of lump sum compensation than as a string of periodic benefits. In general this leads to a greater proportion of lump sum benefits in fault based systems and inflationary pressure from changes in court awards having an impact on the affordability of the scheme. Such inflationary pressures have historically been periodic and have been mitigated through legislative changes restricting access to certain benefit types.

There have been cases in the past where schemes have changed the fault requirements that they operate under (e.g. New Zealand, Victoria). This has primarily involved a transition from a fault based scheme to a no fault scheme. Recent discussion about establishing a NDIS and our own investigations around the provision of more comprehensive cover on a no fault basis have led us to consider the issues that could arise in moving from a fault based scheme to a no fault scheme.

In this paper we provide a qualitative discussion and some quantitative analysis of the implications of moving from a fault based scheme to a no fault scheme for various key metrics; including:

- Benefit structure
- Cost impact and the relationship with benefit structure
- Stakeholder relationships
- Scheme utilisation
- Cost relativities for the various types of claims

While this is not an exhaustive list of metrics in which the impact of changing from a fault based to a no fault scheme may be observed, they do serve to illustrate a number of interesting points that need to be considered. We have also provided discussion around some other impacts that such a scheme change may give rise to.

Our discussion also illustrates that there is considerable uncertainty around the final direct and indirect impacts of any change in a motor accident compensation scheme.

Due to confidentiality requirements we have not been able to present the findings of some of our analysis. The information shown in this paper represents one possible set of outcomes that is based on the work we have done with a number of Australian motor accident compensation schemes.

2 Reasons for Fault and No Fault Schemes

Despite the fact that all schemes have the overriding aim of returning individuals injured in a motor vehicle accident to their previous quality of life (physical and economic) as quickly as possible whilst keeping costs within a reasonable bound, they differentiate in who is entitled to receive benefits. Given this, it is worth reviewing some of the perceived reasons for either type of accident compensation scheme.

Our discussion below assumes that, in general, fault based schemes require the legal determination of fault and liability and compensation is determined via common law decisions and is generally in the form of lump sum benefits. Contrastingly, no fault schemes are assumed, in general, to require no determination of liability with benefits being statutory and periodic in nature.

Some possible arguments for adopting a "fault" based scheme include:

- It could be argued that they are inherently fair, as they work on the premise that someone who injures another is responsible and should therefore provide the injured party with compensation
- Fault based schemes may have the flexibility to deal with different parties to an accident more
 equitably. That is, the benefits will vary from none for the at-fault party to full for the not at-fault
 and everything in between for those considered to have contributed to the accident in some way. No
 fault schemes may not be able to provide this form of allocation as the benefits under these schemes
 are often formulaic and broad-brush in order to cover all circumstances and to achieve economic and
 processing efficiency
- It can be easier to adapt fault based schemes to societal changes (e.g. the incorporation of a new head of damage). A legal precedent can be used to set compensation levels for a new head of damage in a fault based scheme with a common law basis. In contrast the frequency, durations and levels of payments would need to be established for a no fault scheme with periodic benefits
- A fault based system gives the genuinely aggrieved (i.e. the person injured through no fault of their own) their day in court
- While most matters do not actually go to court, the structure of court decisions and precedents is sufficient to allow informed out of court settlements. This results in few surprises in terms of the outcomes of out of court settlements. Test cases can be used to establish levels of compensation over time
- If managed appropriately a fault based scheme can lead to better cost control than can be the case in no fault schemes. The increased use of periodic benefits in a no fault scheme can result in cost creep over time with claimants receiving more treatments than are really required. The lump sums paid in a fault based scheme do not, in general, suffer from the same type of growth pressures (they have their own unique ones)
- There may be an increased behavioural incentive to avoid causing accidents as cover is not provided for the at-fault party. There may also be an incentive to settle claims quickly to limit the extent of any legal involvement (the fear factor). Furthermore, the requirement to investigate fault and liability may also reduce the risk of fraud
- There may be fewer issues around the ongoing receipt of benefits in a fault based scheme. The lump sums paid under fault based schemes usually finalise the claim thus removing the need to monitor claimants, and their ongoing entitlement to benefits, as is often the case in no fault scheme. It can also mean that people on periodic benefits might settle for a lesser lump sum amount, especially if they are not clear as to their ongoing entitlement
- The premiums under a fault based scheme should, in theory, be lower as cover is only being purchased for injuries caused to the not at-fault parties.

Some possible arguments for adopting a "no fault" based scheme include:

- They are more transparent and often more predictable as there is no dispute about the fault status of the individual parties or a need to determine contributory negligence
- The outcome reached in court is in some cases reliant on the quality of representation, not necessarily the merits of the case. In a no fault scheme there is usually much less reliance on legal proceedings to establish compensation and as such the outcomes are usually not influenced by the quality of legal representation to the same extent
- Common law settlements can lead to over or under compensation of victims (in some cases due to the quality of representation as noted above). Therefore a no fault scheme may lead to a 'fairer' allocation of scarce resources (e.g. the funds available to compensate injured parties)
- No fault schemes can have more stable cost patterns. Whereas common law access has been the cause of cost blow outs in many fault based or blended schemes, the limited access to these benefits in a no fault scheme reduces one possible source of cost growth
- Tort reform has been needed to manage costs in at-fault schemes. This can be costly and difficult to implement. There is usually a significant time lag between initiating such a reform and being able to observe its effectiveness or otherwise
- There can be long delays between injury and settlement under a common law system. Legal proceedings can be convoluted and delaying tactics can even be employed; consequently claimants may not receive any compensation until a final settlement is made. The longer the delay between injury and settlement the less likely it is that treatments will be delivered in the most effective manner. In an at fault scheme, there may also been a perverse incentive to present as poor an outcome as possible on the claimant's part to achieve the maximum benefit. Hence, there may be a disincentive for injury management and rehabilitation prior to the court case or settlement
- The tort system can be expensive and inefficient. Legal costs can end up being the majority of some compensation claims, especially for small claims, and hence a considerable proportion of premiums/claims cost is not received by claimants
- The adversarial process in a fault based scheme can create a climate of hostility rather than focussing on rehabilitation of the injured. This can lead to poorer claimant outcomes
- The very definition of 'accident' suggests that there may be little constructive scope for tort based behavioural incentives. Assuming that no one really wants to injure themselves or other in a motor vehicle accident, the additional threat of being sued for losses associated with injuries caused to third parties is not likely to make an individual drive more carefully than they were (or were not) anyway
- It can be difficult, and hence costly, to establish fault (or contributory negligence) in some circumstances. With a no fault scheme there is less requirement to do this as all parties are covered
- It is arguably easier for a no fault system to shift resources and focus on rehabilitation and return to health due to the ongoing provision of periodic benefits as apposed to the lump sum compensation often received under a fault based scheme. The continued connection provided by periodic benefits provides a link between the claims manager and the claimant that can be used to insure that rehabilitation benefits are being used to produce the best possible outcome
- The incentive for fraud might not be as great if there is no "lump sum" reward. The payment of periodic benefits reduces the incentive and also creates an ongoing requirement to maintain fraudulent behaviour. However, evidence in the social security system, which provides periodic benefits, suggests that there is still likelihood of fraud being present in periodic benefit schemes

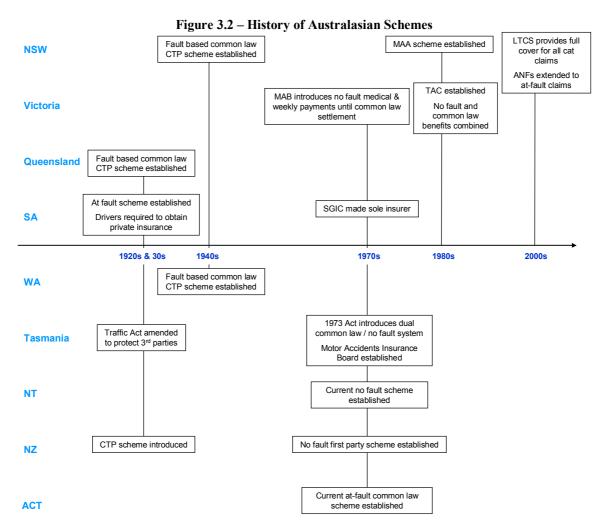
As is evident from the above comments, there are strong arguments for both fault and no fault based schemes and these should be considered when considering the approach to adopt. As discussed in the Section 1, it should also be noted that many accident compensation schemes around the world cannot be uniquely classified as either "fault" or "no fault", there are a range of blended schemes which take on some features of a fault based scheme and some features of a no-fault scheme. An example of this is the NSW CTP scheme.

3 History of Motor Vehicle Personal Injury Schemes in Australasia

The current state of the schemes across the major Australasian jurisdictions are summarised in the following diagrams.



The following timeline illustrates that several Australasian Schemes have historically moved from either atfault to not at-fault or vice versa.



We note that all the no fault schemes are public monopolies.

4 Impacts of Moving from Fault to No Fault Based Schemes

Over time there have been discussions within the Australian jurisdictions that have compulsory motor vehicle personal injury schemes around moving from fault based schemes to no fault schemes. Any such discussion requires an analysis of the likely impacts of such a move on the ability of the scheme to continue achieving its intended objectives and on its various stakeholders.

Some of the main areas where the impact of moving to a no fault scheme could be observed include changes in the:

- Benefit structure of the scheme
- Cost impact and relationship with the benefit structure
- Stakeholder relationships
- Scheme utilisation
- Cost relativities for the various types of claims

The remainder of this section provides discussion around these key metrics and the possible changes in them given a move from a fault based scheme to a no fault scheme.

4.1 Benefit structure

A key decision to be made when moving from a fault based scheme to a no fault scheme is the benefit structure that will be adopted under the new scheme. There are two distinct elements of the benefit structure that may be impacted as a result of such a move; these are:

- The benefit delivery method
- The benefit design

These two elements are interdependent as the change in one will directly impact the other.

The benefit delivery represents how benefits will be provided under the new scheme. A decision will have to be made regarding whether benefits should be provided as lump sums or annuity payments and whether benefits will be common law based or statutory. All Australian at-fault schemes are common law based with some allowance for initial medical expenses. However, in a no fault scheme there will be no at-fault party to take legal action against; this would make the delivery of benefits via common law difficult and may result in the benefit delivery model needing to be reviewed. Alternatively, the legal system could still remain a part of a no fault scheme to possibly determine the quantum of compensation at least for the not at-fault claimants (e.g. the limited access to common law benefits in Victoria and other schemes).

Other aspects of benefit delivery that may need to be reviewed are the role of medical panels, legal representation and how access to benefits is determined. For example, in the Northern Territory TIO Scheme where injuries have resulted in a permanent impairment of 5% or more, the injured person may be paid a lump sum benefit. If a change to a no fault scheme was considered, the extent to which the benefit delivery method would need to be reviewed may depend on how extensive the benefit design changes are; a number of options for these changes are discussed below

The potential changes in benefit design can be broadly classified as:

- 1. Provide all the benefits provided to the not at-fault parties to the at-fault parties in a no fault scheme
- 2. Provide some of the benefits (i.e. certain payment types / heads of damages) provided under the at-fault scheme to the at-fault parties in a no fault scheme
- 3. Review and possibly revise the existing benefit structure and provide this revised benefit structure to all claimants in a no fault scheme

The choice between these three options will depend on the objectives of the scheme change and the associated costs. Ideally, all stakeholders will want the scheme change to be implemented as smoothly as possible. Before adopting any of these options it is worth discussing the impact of each option.

Option 1 may be considered as the most "equitable" option as it involves an extension of the existing benefits to an additional pool of claimants. There is likely to be less opposition, if any, to this benefit structure than the other two from claimant representative groups (e.g. lawyers, consumer groups) and hence it should be quicker to implement. This option also represents minimal disruption for the insurers (either public or private) as it will merely represent an expansion of the operations they would be currently undertaking. Besides the additional claims cost, the most significant impact on insurers will be the increased volume of claims and thus the need to expand their claims management operations accordingly. Underwriters should be able to use existing claims information to assess the additional premium associated with the change in cover. However, the suitability of this option will be subject to the benefit design issues discussed earlier.

Option 2 represents a possible means of transitioning from the current fault based scheme to the benefit structure proposed under Option 1. It is a benefit structure that some Australasian schemes have considered, and in some cases adopted, in the past. It provides a transition in terms of both the expected increased claims cost incurred by the scheme, if the existing benefit delivery methods are maintained and claimant/injured party behaviour towards a no fault scheme. This option may generate some opposition from claimant representative groups (e.g. lawyers, consumer groups) who may consider it an inequitable benefit structure. Insurers will still to have identify the at-fault party so that the benefits that at-fault parties are entitled to can be delivered to the appropriate claimants. This option represents an effective means by which the scheme administrator/regulator can gauge both the expected increase in costs for Option 1 as well as expand the social benefits of compulsory motor vehicle personal injury insurance. Once again, the appropriateness of this option will be impacted by the choice of benefit design. For example, if this transition phase only involves the extension of medical benefits, which tend to be provided periodically as and when they're incurred by the injured party, there will be minimal need to review the benefit delivery mechanism as the existing method can be easily extended to at-fault claimants.

Option 3 represents a systemic overhaul of the scheme's benefit design and an opportunity for the scheme administrators/regulators to address any perceived shortcomings in the current benefit design. A change in the benefit design could involve either the addition or removal of certain payment types / heads of damage or accessibility restrictions to certain payment types / heads of damage; it could also be coupled with a switch between periodic and lump sum benefits. The most likely catalyst for such a change would be to improve the cost efficiency of the scheme, i.e. the proportion of premiums/claim payments that are ultimately delivered to the claimant. For example, in our review of Australian schemes we have found that the legal and investigation cost for some smaller claims are at least equal to if not greater than the benefit amount that the claimants' receive. This represents a considerable inefficiency as the cost to the scheme of indemnifying the claimant is more than the entitlement that the claimant receives. A potential solution to this would be to restrict access to the legal head of damage for small claims; this may reduce the incentive for lawyers to get involved using the common "no win, no pay" approach towards small claims. This option will require extensive consultation with key stakeholders in order to garner support from all parties. It is likely that it will represent significant challenges for insurers as they may have to overhaul their claims management and underwriting procedures depending on how extensive the benefit redesign is.

The greater the changes in the benefit structure the longer and more complex any consultation process will most likely be.

4.2 Cost impact and the relationship with the benefit structure

A change from a fault based scheme to a no fault scheme will most likely represent additional costs for a number of the key stakeholders (e.g. scheme administrators, claims managers, policyholders, etc.). In an absolute sense, this cost increase will be experienced both in terms of additional claims cost and business/overhead costs for insurers/schemes. Such costs would most likely then be passed onto policyholders via increased premiums/levies.

The additional claims cost incurred in the scheme will obviously be impacted by any changes to the benefit design and benefit delivery mechanisms. Of the three benefit design options discussed in Section 4.1, and based on the expected increase in the number of claims and assuming there is no change to the benefit

delivery mechanisms, Option 1 possibly represents the greatest increase in absolute claims cost, followed by Option 3 (assuming there aren't any significant reductions or expansions in benefit design) and then Option 2. However, it is unlikely that the benefit delivery mechanism would be left unchanged and hence the cost impacts under the three benefit design options could be different to that we have suggested.

The additional claims cost will also be dependent on the claim profile of the new at-fault claimants entering the scheme. Our review of Australian schemes has revealed that persons injured in at-fault vehicles have:

- A higher rate of hospitalisation (and hence potential for making a claim)
- Higher utilisation of scheme benefits
- Higher injury severity and hence related claims cost

This is discussed further in Sections 4.4 and 4.5. As a consequence of these relationships, moving from an at-fault scheme to a not at-fault scheme may increase the claims costs by more than the proportional increase in the number of claims, all other things remaining unchanged.

Whilst there will most likely be an absolute increase in the claims cost, there is potential for cost savings (on a per claim basis) to be achieved for certain payment types / heads of damage depending on the change in benefit design and delivery method. Moving to a no fault scheme may reduce the cost per claim of the investigation and legal payment types. Savings under investigation could be achieved if there is no requirement to prove the at-fault party – as would be the case for Option 1 and possibly Option 3. Legal costs could be reduced for all three options by restricting access to this head of damage for small claims; this may reduce the incentive for lawyers to get involved with small claims. In our analysis, restricting access to legal benefits has also been shown to have the flow on effect of reducing the non-legal claim costs. Claims with legal representation have can have an average claim size that is four to five times higher than claims without legal representation despite being of the same injury severity; lawyers may use this as an argument for their ongoing involvement. Legal costs per claim may also reduce during the initial transition phase into the new scheme as the legal fraternity takes time to adjust to the new benefit structure and attempts to identify the most profitable cases under the new scheme design.

Implementing the move to a no fault scheme may represent significant one-off costs for insurers. Within the claims department there may be a need to increase the number of claims managers to deal with the potential increase in claims volume that would result from extending cover to the at-fault parties. Claims managers may also have to be retrained to bring them up to speed on the new benefit structure. The underwriting department may have to review their pricing model(s) and policy conditions to recognise the additional costs associated with covering at-fault claimants as well. The actuarial department may also have to invest in revising their models depending on how the benefit structures change. However, these one-off costs may be offset by greater economies of scale, particularly in the claims department. It is unlikely that the fixed costs within the claims department will increase in direct proportion to the increase in the claims volume; hence, a lower claims administration cost per claim should be achievable.

Depending on the benefit structure there may also be cost transfers into or out of the new no fault scheme. Parties injured in a motor vehicle accident may seek compensation through various options, including:

- The state or territory:
 - Motor accident compensations scheme
 - o Workers' compensations scheme
 - Public health system
- Private health insurance
- Private personal injury insurance
- Various federal schemes including social security

Injured parties will usually pursue their claim through the avenue that entitles them to maximum compensation within a relevant timeframe. There may also be other factors that influence the claimants decision regarding where to seek compensation such as the certainty of any potential payments under the various avenues of compensation. The new benefit structure may make the motor accident scheme more or

less attractive to those seeking compensation than other existing avenues and hence may result in a transfer of costs to or from these other avenues. Consequently, the change in benefit structure will most likely directly (or indirectly) affect parties other than just the key stakeholders. This is discussed further in Section 5.

4.3 Stakeholder relationships

As identified briefly in Sections 4.1 and 4.2 the change to a no fault scheme, and particularly how the benefit structure is designed and how the benefits are delivered, will affect the stakeholders differently and could also change the relationship between the stakeholders. They key stakeholders in a motor vehicle personal injury scheme include:



All these parties will be uniquely affected by the move to a no fault scheme. The government authority/administrator will be relied upon to provide clear communication of the changes planned, the reasons for these changes and what support they will be providing. Policyholders and claimants will insist that insurers fully, and on a timely basis, implement any benefit changes implemented. Injured parties in an accident may also react differently as they will have additional potential sources of compensation available to them.

The move to a no fault scheme could potentially improve the relationship between claimants and insurers. With the requirement to identify the at-fault party removed, and depending on the new benefit structure, the interests of claimants and insurers may become more aligned towards delivering the quickest injury recovery for claimants. This situation is most likely to eventuate in a complete no fault system without access to common law.

As alluded to in Section 4.1, a change in benefit structure may result in a reduced role for lawyers in a new scheme. If this is the case, the legal fraternity may feel aggrieved at being left out of the system and hence may seek new means of extracting a similar income stream from the scheme as had previously been attained.

4.4 Scheme utilisation

Scheme utilisation is the extent to which road casualties lead to claims. Any expansion in a scheme, such as moving to a no fault scheme, will obviously increase the absolute utilisation rate. This change in the utilisation will also depend on the new benefit structure implemented and societal attitudes towards obtaining benefits via the scheme.

The hospitalisation rate is the proportion of road casualties that are hospitalised². Assuming that hospitalisation is an indicator of injury severity, then a higher hospitalisation rate for a given category of injured party (i.e. at-fault, not at-fault, single vehicle, multiple vehicle) would imply the potential for a higher utilisation rate and a higher average severity. The following graph shows the hospitalisation rate in NSW for various demographics, these being the fault status of the vehicle in which the injured party was travelling in and whether or not they were involved in a single or multiple vehicle accident.

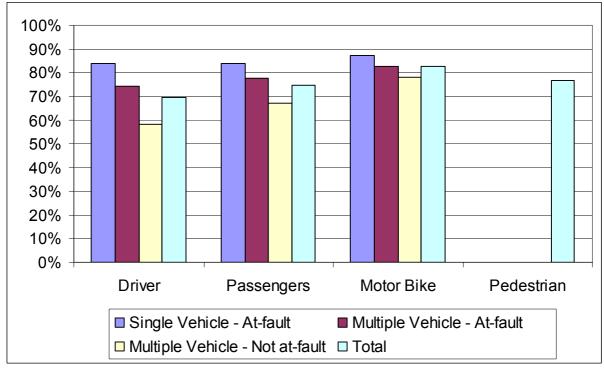


Figure 4.1 – Hospitalisation rates for various categories of injured party

Source: NSW RTA data for 1999 – 2006. Please refer to Appendix A for further description

The above graph clearly illustrates that parties injured in at-fault vehicles experience higher hospitalisation rates which we have assumed could lead to higher utilisation rates; it also indicates that being in a single vehicle accident further increases the potential for hospitalisation. Based on analysis of these hospitalisation rates, the following graphs show how the mix of claims could change if moving from an at-fault scheme to a no fault scheme.

_

² Casualties from a road traffic crash who have been transferred to a known hospital for treatment or admission

33%

Not at-fault motor vehicle drivers (mult veh)

Not at-fault motorcycle drivers

Passengers

Pedestrians

Other

Figure 4.2 - Breakdown of hospitalisations under a fault based scheme

Source: NSW RTA data for 1999 - 2006. Please refer to Appendix A for further description

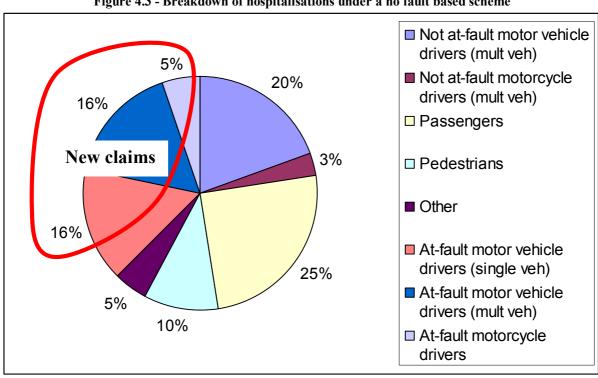


Figure 4.3 - Breakdown of hospitalisations under a no fault based scheme

Source: NSW RTA data for 1999 – 2006. Please refer to Appendix A for further description

Based on this analysis, moving to a no fault scheme could potentially increase the volume of claims by around 60%. Our review of Australian schemes and the relationship between the hospitalisation rates for various categories of claimants shows that moving to a no fault based scheme could increase the utilisation rate for drivers from 35% to between 85% and 90%. The 35% figure is the ratio of the number of claims from not at-fault drivers to the total number of injured drivers regardless of their fault status. The final utilisation rates are likely to vary across the various claimant categories as shown in the following graph.

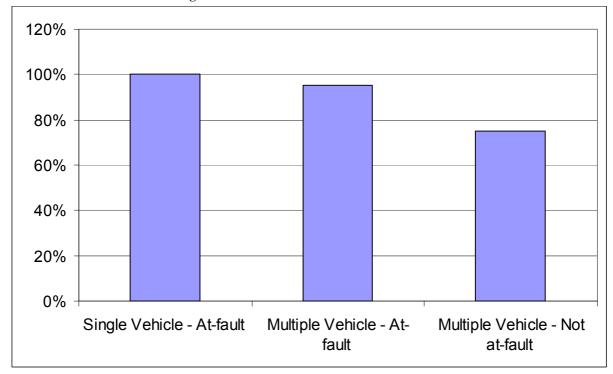


Figure 4.4 – Illustrative driver utilisation rates

The above graph shows that in a no fault scheme it is likely that driver utilisation rates will vary depending on the claimant's characteristics. Based on our analysis it appears that all drivers injured in single vehicle accidents may make a claim whilst fewer than 80% of the not at fault drivers in multiple vehicle accidents may claim. We have estimated the utilisation rates for at-fault drivers based on the ratio of the hospitalisation rates between at-fault and not at-fault drivers.

In our opinion the increase in utilisation will not necessarily be due to the introduction of at-fault claims in the scheme alone; it may also arise from existing claimant categories that are already entitled to benefits. With an expansion in scheme coverage we expect that there will be some form of public awareness campaign run by the government administrator; this will increase public awareness of the ability to claim. Our review of Australian schemes has identified that, in at-fault schemes, there may be significant underreporting of passenger claims from vehicles deemed at-fault in an accident; this is especially apparent in multiple vehicle accidents. Our analysis suggests that up to 20% of passenger claims are not currently being reported under at-fault schemes. As passengers are often either family or friends of the driver, we hypothesise, that this underreporting is due to attitudes towards who is penalised when a claim is made. Such an attitude may be based on the following rationales (and there may be others):

- Passengers believe that since they were in the at-fault vehicle they are not entitled to any benefits and in fact are considered part of the at-fault party
- Passengers believe that making a claim against the driver of their vehicle, who has been identified as being at-fault, will directly penalise the driver

Our analysis of the injury severity of claims shows that it is primarily the most severe (and therefore expensive) claims from at-fault vehicles which are raised as claims for passengers. The extent to which any underreporting of passenger claims may be reduced will depend on the change in the benefit structure. If common law settlements are maintained then passengers may still consider this as directly penalising the driver in their vehicle and hence may not make a claim. If benefit delivery is changed to periodic payments then such a perception will be less likely and passenger claims may increase.

In our comparison between an Australian at-fault scheme and an Australian no fault scheme it is also apparent that the issue of underreporting is not restricted to just the aforementioned passenger claims but also

^{*} This is an illustrative example based on our review of Australian motor accident compensation schemes

claims from motorbike riders and pedestrians based on their lower utilisation rates in the at-fault scheme. This may be in part due to benefit design and 'perceived' access to be benefits by the claimants and their advisors (lawyers). Consequently, any form of scheme expansion and subsequent public awareness campaign may lead to increased utilisation across several claimant categories. This observation assumes that the same thresholds will apply to at-fault and not at-fault claimants; if these thresholds differ than any potential change in utilisation may be different to that suggested above.

4.5 Cost relativities for the various types of claims

As identified in Section 4.2, our analysis of Australian schemes has identified a distinct difference in the average size of claims from at-fault vehicles. Consequently moving from a fault based scheme to a no fault scheme will most likely result in an increase in the scheme costs above and beyond the increase in claim volume. As discussed above, the claims cost is also significantly affected by whether or not a claim receives legal representation.

Our analysis shows that, in an at-fault scheme, the average claim cost of the driver claims from the not at-fault vehicles are around 25% lower than the average claim cost for the entire scheme. An example of claims cost relativities between the various claimant categories in an at-fault scheme is shown in the graph below.

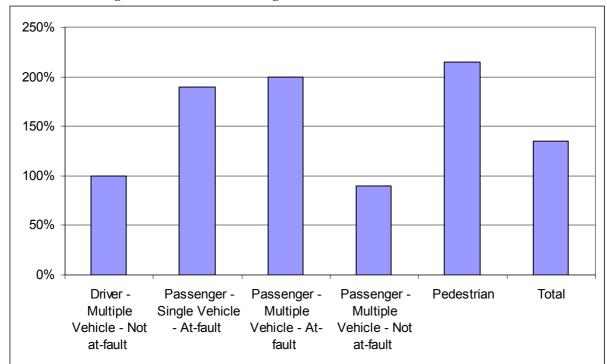


Figure 4.5 – Illustrative average claim size relativities – at-fault scheme*

The above graph clearly highlights the significantly higher average claim size (and underlying severity) of the passenger claims from at-fault vehicles. This is because the small claims (i.e. those with lower severity and hence lower claim size) do not appear to be being reported and hence it is only the high injury severity and hence high cost claims entering the scheme.

The cost of moving from an at-fault scheme to a no fault scheme, under Option 1 from Section 4.1 and without any change to the benefit delivery mechanism, can be estimated by using the relativity between hospitalisation rates, utilisation rates and existing average claims sizes. Allowing for the higher average claim size of at-fault driver claims and the "true" cost of passenger claims (i.e. reduced following the inclusion of a number of smaller less severe claims) from at-fault vehicles we can estimate the average claim size of the new scheme. This average claim size can actually be lower than of the existing at-fault scheme. This is because:

^{*} Relative to the average claim size for not at-fault drivers in multiple vehicle accidents

^{*} This is an illustrative example based on our review of Australian motor accident compensation schemes

- The majority of the additional claims are at-fault driver claims; their cost is estimated as a proportion of the existing driver not at-fault claims which are 25% lower than the existing scheme average
- The influx of low severity low cost passenger claims which were previously being underreported.

We recognise that the conclusion may differ depending on how the factors mentioned above vary but this illustration shows that, despite what intuition may suggest, moving to a no fault scheme can reduce the average claim size under a particular benefit delivery /design scenario.

Based on the above illustration, the average claim size of the various claimant categories in the new scheme are shown in the following graph.

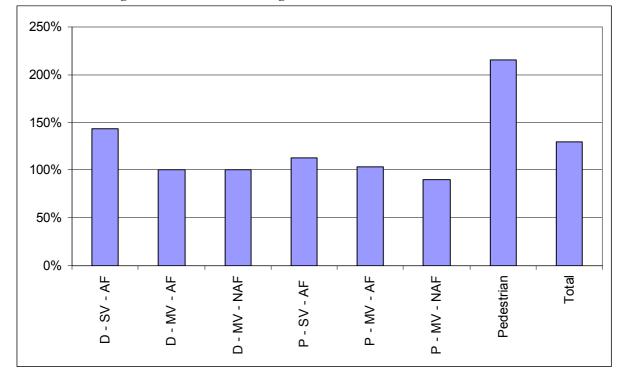


Figure 4.6 – Illustrative average claim size relativities – no fault scheme*

The above graph illustrates a significant reduction in the average claim size relativity for passenger claims from at-fault vehicles (approximately 195% in an at-fault scheme and approximately 110% in a no fault scheme) and also a reduction in the overall average claim size relativity (approximately 135% in an at-fault scheme and approximately 130% in a no fault scheme). However, as we have indicated earlier there is considerable uncertainty regarding the extent to which additional passenger claims will be reported under a no fault scheme. Under some of the alternative scenarios that we have tested, the average claim size of passenger at-fault claims could be up to 20% higher than the scenario presented in Figure 4.6.

Moving to a no fault scheme may also change the mix of payments between various heads of damage. Given our earlier discussion regarding the higher severity of at-fault claims it is reasonable to expect that a no fault scheme will have a higher proportion of care cost for example. The following graph illustrates the potential breakdown by payment type for the key claimant roles within a fault based scheme.

^{*} Relative to the average claim size for not at-fault drivers in multiple vehicle accidents

D = driver

^{*}P = passenger

^{*} SV = single vehicle

^{*}MV = multiple vehicle

^{*} AF = at-fault

^{*} $NAF = not \ at-fault$

^{*} This is an illustrative example based on our review of Australian motor accident compensation schemes

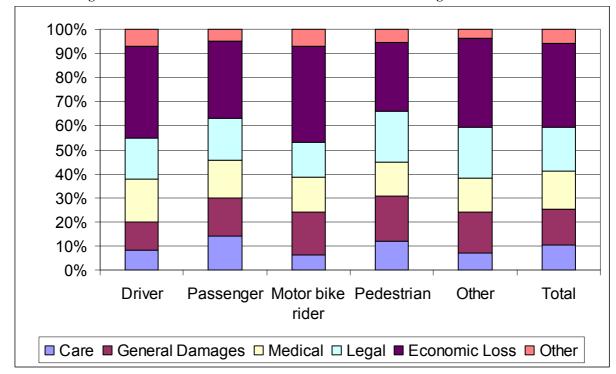


Figure 4.6 – Illustrative claims cost mix between heads of damage – at-fault scheme

The above graph shows:

- That driver and motorbike rider claims have a lower share of care, general damages and medical benefits compared to the rest of the scheme. Possible reasons for this result include:
 - These benefit types are normally associated with higher injury severity claims
 - o These claims are from not at-fault claimants which generally have a lower average injury severity than the scheme
- That passenger and pedestrian claims have a higher share of care and general damages benefits compared to the rest of the scheme. Possible reasons for this result include:
 - o They have a higher average injury severity than the scheme
 - For passenger claims, this is attributable to the presence of claims from at-fault vehicles which have a higher average injury severity than from not at-fault vehicles. Part of this is explained by the underrepresentation of the small passenger claims discussed earlier.
- That driver and motorbike rider claims have a higher share of economic loss benefits compared to the rest of the scheme. Possible reasons for this result include:
 - Oriver and motorbike rider claimants are on average more likely to be employed and hence would have past and future economic loss components
 - Contrastingly, passenger, pedestrian and other claimants will include people, including children, who are more likely to not be earning an income.

The above discussion illustrates that moving to a no fault scheme may significantly increase the cost of motor accident personal injury insurance. One method of reducing the financial burden on policyholders, and thus improving the chance of garnering their support, could be to reduce the frictional costs present within the scheme and thus reduce the cost of existing claims. Such frictional costs may be mitigated by establishing eligibility criteria for certain payment types, e.g. legal, general damages, or by changing the benefit delivery mechanism.

^{*} This is an illustrative example based on our review of Australian motor accident compensation schemes

5 Other Considerations

There are a number of other aspects of the scheme and the environment in which it operates that should be considered in conjunction with any proposed changes to scheme structure. A number of these aspects are considered below.

5.1 Social costs/benefits

No personal injury scheme operates in isolation. There are relationships between the scheme and the wider health and insurance markets as well as social welfare systems and the economy as a whole. Any change to a personal injury scheme will have consequences for the external systems that it interacts with.

In a fault based scheme the at-fault parties' injury costs are not covered by the scheme. As such the costs of treating and rehabilitating these individuals must be met by other private insurance, through the public health systems (both federal and state), via social security systems or workers' compensation schemes, where the injured party is eligible. The injured parties may also have to bear the cost out of their own pocket. This can result in:

- Claimants having difficulty determining who should be paying for their treatment the injured party
 may not be clear which avenue of compensation they should be pursuing. This confusion will most
 likely cause delays in them receiving the necessary compensation and they may not receive any
 compensation if there is a time limit on entitlement
- Complex cross-claims involving a number of different parties if the injured party is unsure of who should be paying for their treatment they may pursue their compensation claim through various avenues. Once the correct compensation system is identified the other systems which provided compensation will seek recoveries; this will increase related administrative costs and may leave some compensation providers unfairly out of pocket
- Delays in treatment while liability for the cost of treatment is decided this may significantly impact the ability of the claimant to fully recover from their injury and further exacerbate any financial hardship they are facing. If there is a delay, and the claimant eventually receives compensation through another source, then the cost of their claim may have significantly increased because treatment was not provided in a timely manner
- Pressure on the public health system the cost of treating non-compensable claimants will fall to the public health and social security systems
- Financial hardship of the claimant unless they have private salary continuance benefits they may not be able to claim for loss of earnings and care and other needs (allied health, motor vehicle and home modifications) may not be available to the extent needed under social security, state health systems, etc

Another consideration is the intent of the scheme. Has the scheme been set up as a form of insurance or is it intended to be more of a social benefit. This has implications for the benefit design, premium rating and claims management of the scheme.

Any change in the scheme as it pertains to the coverage of at-fault individuals needs to be made with the underlying intent of the scheme in mind. For example, while it may be that opening up the scheme to all injured parties regardless of fault is more in keeping with the social benefit intent, the implications in terms of costs and consequently premium rates may result in a less inclusive scheme overall.

5.2 Access to compensation

While cover is usually provided on a fault or a no fault basis there is no reason why this should be exclusively the case. For instance, as mentioned in the introduction, the current NSW compulsory third party motor vehicle insurance scheme is such that most coverage is provided via a fault based system, coverage for

catastrophically injured parties is provided on a no fault basis. The structure of the cover has to be considered to ensure that it remains accessible

It may be that the increased cost (in terms of premiums required) may make cover unaffordable for some people. Given the compulsory nature of this form of insurance some form of compromise is required. One possible option would be to retain the compulsory third party component of the at-fault scheme while introducing an optional first party extension to this cover. The question would then become what would the incentive be to take out the optional first party cover given that private health insurance may provide similar benefits in more circumstances; although first party cover may provide benefits not available under private health insurance such as economic loss (which may be provided by income protection insurance). There is also the potential for this to introduce an element of anti-selection, although the conditions that must be satisfied to have a claim accepted under a personal injury cover usually limit the extent of any anti-selection. We note that insurers have tried such products in the past but they have not been successful. Additionally, individuals are able to purchase personal accident cover from private insurers which will provide similar coverage.

It could also be that capped coverage is provided or offered as an option. For example, first party coverage up to a specified dollar limit may be an option. Another option could be to provide first party cover for acute treatment but only third party cover for longer term benefits. Different benefits could be offered on different bases. For instance, medical costs could be on a first party basis while income replacement could be provided to third parties only.

Transitions between a fault based scheme and a no fault scheme (or visa versa) may be made easier by gradually changing the cover over a period of time. This would also potentially limit the one off shock in the premium rate as gradual changes could be made to premium rates in line with the gradual changes in cover. This also provides an opportunity to test various aspects of the proposed new scheme prior to moving completely to it. If it was apparent that the new approach was not going to be acceptable then reversing the changes would be simpler if only a few of them had been made.

There is a strong connection between the cover offered and the intent of the scheme (as discussed in Section 5.1). There are probably more options in terms of the cover provided in an insurance based scheme than there would be in a social welfare based scheme. Any decision about a change in cover therefore needs to be made with the underlying principles of the scheme in mind.

5.3 Reinsurance

Any reinsurance arrangements that are in place may need to change following any change to the scheme structure. Expanding the cover offered by the scheme, by allowing at-fault parties access to benefits, may necessitate the purchase of additional reinsurance. Depending on the market and the type of cover required this may be difficult to get at an acceptable price or even at all.

Changing the fault status of the scheme may have flow on effects for the benefits provided. A movement from a fault based scheme to a no fault scheme may result in periodic benefits replacing lump sum compensation. This has implications for the types of reinsurance arrangements that may best provide the required cover. Gaps in the reinsurance protection could arise as a result of changing the scheme structure and the reinsurance arrangements leading to unexpected liability exposures.

Moving to a blended scheme could result in the case where the existing reinsurance arrangements need to be complemented with new arrangements for the changed component of the scheme. Making sure adequate protection remains for the portion of the scheme that has not changed may be difficult especially if there are any unexpected impacts arising from the change to other parts of the scheme, for example a correction in the underreporting of passenger claims discussed in Section 4.4.

5.4 Rating structures

The way in which premium rates are set may need to change following a change in the scheme structure. Again this is closely linked with the intent of the scheme as discussed in Section 5.1.

The premium rating structure under an insurance based scheme is likely to be detailed thereby providing a good differentiator between different risks. However, this may make this form of insurance unaffordable for some people. This is not tenable in a compulsory scheme and as such cover options may need to be introduced. On the other hand a social benefits based scheme is likely to have few rating factors thereby increasing the degree of cross subsidisation between participants of the scheme. While this may make the scheme more affordable on average, it is arguably less fair and cost inefficient.

If access to the scheme is being opened up through the provision of cover to at-fault parties, it may be the case that more detailed rating structures are required in order to more fairly allocate the costs of benefits based on individual risk factors. On the other hand the rating could be simplified to allow the scheme to remain affordable for all parties; that is through cross subsidisation. A balance is likely to be required between affordability, incentives to drive safely and minimising cross subsidisation between policy holders. The intent of the scheme is likely to drive the weight given to each factor. The issue of whether the insurance cover is attached to vehicles or individual drivers will also have to be considered.

The governing legislation may also impact the rating structures available to the scheme. In some cases the rating factors that may be applied may be specified in legislation and therefore may be difficult to change. In other cases the range of premium rates may be controlled thereby limiting the extent to which cross subsidisation can be minimised.

Options such as no claims discounts could be considered as a means to incentivise safe driving and possibly increase the affordability of the scheme. Since the costs associated with bodily injury cover are dominated by low frequency high cost claims, a no claims discount system is unlikely to be effective.

It may be that the rating structures adopted to price the material damage component of motor vehicle insurance policies could be leveraged to provide a guide to the rating of bodily injury cover. This comparison would be particularly applicable for a no fault scheme, as similar to the material damage policy, the policyholder can also be the claimant (this situation would not eventuate in a fault based scheme). While this could only be utilised for policyholders that have motor vehicle material damage cover, it is an option where limited data may exist for some parties covered under a new scheme structure.

5.5 Catastrophic claims

The impact on the number and type of catastrophic claims needs to be considered when any changes to the scheme are considered. For example, moving from the lump sum compensation that usually characterises atfault schemes to the periodic benefits more common in no fault schemes may greatly increase the average duration of these types of claims and hence the scheme. This has implications for reserving, claims management, capital coverage and the investments required to support these longer term liabilities in both publicly and privately underwritten schemes.

As discussed in Section 4, our review indicates that at-fault drivers are more severely injured on average. Moving from a fault based scheme to a no fault scheme may therefore result in a disproportionate increase in the number of catastrophic injuries covered in the future. Given the cost of these injuries relative to non-catastrophic injuries, this may have an adverse impact on the position of the scheme if not appropriately allowed for.

In Australia, three of the five fault based schemes are privately underwritten. Moving from a fault based scheme to a no fault scheme is likely to significantly increase the cost of the scheme if there is no change to the benefit structure and access to compensation. If catastrophic claims shift from lump sum to periodic benefits, for both not at-fault and at-fault claims, they may represent a significant capital burden for the insurers as the scheme matures. It may also represent an inefficient structure for servicing catastrophic claims if all private insurers are managing their claims individually with inconsistent approaches to care.

One approach to addressing these issues may be to overlap the no fault scheme with an external catastrophic claim schemes (e.g. the Lifetime Care and Support scheme in NSW); this type of arrangement has a number of advantages. Any arrangement with an external catastrophic claims scheme may significantly reduce the capital burden and increase the attractiveness of the residual scheme for private insurers. However, such an

overlapping arrangement may create tensions between the main scheme and the catastrophic claims scheme because there may be an incentive for insurers in the main scheme to have claims categorised as catastrophic so they can be transferred to the catastrophic claims scheme and thereby reduce their costs. Clear rules for the classification of claims need to be put in place to prevent this from happening.

5.6 Impediments to change

It is possible that there may be both internal and external factors that create barriers to any change in scheme structure. Some examples include:

- Systems/data/pricing it may be that the claims management or policy administrations systems are not set up to cope with the proposed revised scheme structure. For example, a scheme moving from a no fault basis to a fault based system may not be set up to capture details of the fault status of the claimants. In addition, if this information has not been collected on past claimants then it will be difficult to price the new cover. Moving from a fault basis to a no fault basis may be even more difficult as there may be no information on the party at-fault in the past data (given that they were not covered by the scheme).
- Legal involvement the extent of any legal involvement is likely to be lower in a no fault scheme. As such, should a scheme propose transitioning from a fault basis to a no fault basis, there may be significant resistance from the legal profession.
- Political changes to schemes can result in some stakeholders becoming dissatisfied. As it is often the case that the decisions about these schemes are linked to political parties (e.g. through a governing Minister) any dissatisfaction can have an impact come the next election. Changes often take a period of time that is longer than the average election cycle to work though. This can reduce the political appetite for scheme changes.
- Staffing changes to a scheme may result in changes to the required number of staff working for the scheme. For instance, moving from a fault based scheme to a no fault scheme will increase the number of claims therefore increasing the number of claims managers required. It may not always be possible to change staffing levels to meet the new requirements in the short term. This may impact costs as staffing excesses or temporary contractors are managed. Staff may also have to retrain.
- Cost transfers as discussed in Section 4.2, moving to a no fault scheme may result in unintended cost transfers between the new motor accident compensation scheme and other compensation providers. The most significant cost transfer in Australia is likely to be between Federal and State. Under a fault based scheme, at-fault claimants must rely on the social security/welfare system and the public health system which are partially federally funded, if they do not have any personal insurance; creating a no fault scheme will transfer these cost to the state.

5.7 Compliance with the scheme requirements

A 11

Despite being a compulsory form of insurance, there is inevitably an element of non-compliance. Any changes in the scheme, particularly those that impact premium rates, are likely to have a flow on effect for the extent of any non-compliance.

As all schemes have a Nominal Defendant³, which is funded by a levy on premiums, non compliance will have minimal impact on the scheme as whole. However, non compliance does directly impact the levy charged to those that do comply. As discussed in Section 4, moving to a no fault scheme could considerably increase the claims costs to the scheme and thus the premiums charged to policyholders. If existing rates of non compliance continue then the nominal defendant levies will most likely increase in line with the increase in the pre-levy premium charged to policyholders; this will represent an additional cost to complying policyholders.

³ The Nominal Defendant is a statutory body established for the purpose of compensating people who are injured as a result of the negligent driving of unidentified and/or uninsured motor vehicles

Trends in material damage policies may provide an early warning indicator of potential changes in the non-compliance rates. As material damage cover is voluntary it will tend to be discontinued (or have the level of cover reduced) before compulsory cover is dropped. Increases in the material damage lapse rates may therefore provide a warning that non-compliance with compulsory covers may also be about to increase. This would, in general, not be a good time to change the scheme in a manner that would increase premium rates as it may further perpetuate the increase in non-compliance.

5.8 Confounding factors

Any changes in scheme experience need to be considered in conjunction with other changes that may also impact the experience. A good example of this is improvements in motor vehicle safety. Changes in safety standards or the introduction of a new safety measure/device in new vehicles may, if it coincided with a change to the coverage offered by the scheme, be mistaken for the impact of the scheme change.

Changes in driving habits or improvements in roads and road safety education may also make interpreting changes in experience difficult. Recent economic conditions have impacted the amount of driving people are doing and hence it could be expected that the number of accidents would reduce. Offsetting this could be a reduction in vehicle maintenance leading to a higher proportion of unsafe vehicles on the roads. As discussed in Section 5.7 above, an increase in unregistered vehicles could lead to expectations of reductions in exposure that are not matched by reality on the roads.

There are many potential confounding factors that need to be allowed for when examining the potential or actual impact of any changes to the structure of a scheme. These factors can effect the costing of any potential change and, if treated inappropriately, lead to unexpected financial outcomes as a result of any change to the scheme.

6 Conclusion

There has been recent discussion in the Australian community about establishing a NDIS. Given the various accident compensation schemes already in existence one option could be to harmonise the benefits provided under these schemes. However, a NDIS would need to provide benefits to all injured parties; this is not currently the case for all motor vehicle accident schemes. In order to harmonise the benefits provided under these schemes it may be necessary to first transition fault based schemes to a no fault structure.

There are advantages and disadvantages to both fault based and no fault schemes. In most cases it is the intent of the scheme (i.e. to provide personal injury insurance or as a form of social welfare) that will determine the most appropriate structure, although the cost of funding the scheme plays a role in this decision as well. There is no "best" structure and the key to an effective and sustainable scheme is sound management rather than the fault structure of the scheme. If a change of scheme structure is being considered there are a number of areas that need to be examined.

A review of the scheme's benefit structure may be performed alongside a change (or proposed change) in the fault structure of the scheme. Various options may be considered and costed before the option that presents the best balance between the desired outcomes and stakeholder requirements is adopted. The intent of the scheme will also play a key role in determining any changes to the benefit structure.

While most costs would be expected to increase when a scheme is opened up to at-fault claimants, there may also be some cost efficiencies. For example, legal and investigation costs may be reduced if there is no longer a requirement to establish fault and hence determine cover.

Scheme utilisation will change following a change in the parties covered. Some of these changes will be obvious (e.g. the inclusion of at-fault drivers in a move to a no fault scheme), while the extent of other changes may be unexpected (e.g. an increase in the number of claims from passengers in at-fault vehicles). If the unexpected changes are not allowed for, any pricing of the proposed change runs the risk of being inappropriate. This has the potential to adversely impact the financial performance of the scheme.

From our analysis of Australian schemes there appears to be a significant under representation of passenger claims from at-fault vehicles, motorbike riders and pedestrians in at-fault schemes. Any public awareness campaign associated with a change in scheme structure has the potential to draw out these under reported segments. This is especially likely if the change to the scheme involves the removal of the stigma of fault.

It is possible that expanding the coverage of the scheme (e.g. moving from a fault based scheme to a no fault scheme) may actually reduce the average size of some claims. For example, the under reporting of passenger claims noted above tends to be concentrated in the lower cost claims. That is, it is the smaller claims that tend not to be reported. Correcting this under reporting may result in a lower average claim size for passenger claims as these smaller claims get reported.

Offsetting the potential reduction in the average size of passenger claims would be the increased cost of covering at-fault drivers and motorcycle riders. Our analysis of Australian schemes has suggested that at-fault claimants tend to be more severely injured on average relative to their not at-fault counterparts (based on an analysis of hospitalisation rates). As increased severity is usually linked to higher costs in most heads of damage, covering the at-fault parties is likely to increase the cost of the scheme by more than just the increase in the number of claims.

The mix of costs by head of damage have been observed to vary for claimants with different characteristics (e.g. drivers, passengers, those at-fault, those not at-fault, etc.). Therefore, changing the cover offered by the scheme may lead to changes in the overall mix of costs by head of damage. This can have implications for claims management under the new structure as well as the reserves required to achieve the desired level of solvency. Another important decision will be the delivery method of the benefits. While lump sums may work well in a fault based scheme there may be practical difficulties in maintaining this benefit structure in a no fault scheme.

The nature of insurance is such that uncertainty associated with future outcomes is an inherent aspect of any scheme. This makes estimating the impact of any change in a scheme's structure more complicated. There are many factors that need to be considered prior to making a change to scheme structure. Many of these factors will be inter-related and will therefore need to be considered together to avoid unexpected outcomes in one area as a result of changing another area. Any change to a scheme needs to balance stakeholder needs and expectations and will almost definitely involve some degree of compromise between conflicting requirements. Achieving the optimal structure is not always going to be easy and it may be that a number of adjustments are required before the final structure is settled on. Regardless of the structure adopted, be it fault based, no fault or a blended scheme, there will be pros and cons.

One argument for establishing a NDIS is that it would be the fairest, most efficient and most equitable way to reform Australia's failing disability system. The proposed NDIS would cover all disabilities, including those due to a catastrophic injury - and so, as part of its introduction, there would need to be reforms to current catastrophic injury arrangements. This is because the states, which are responsible for accident compensation, have developed different compensation laws and scheme structures. National coordination is therefore required to better align current motor vehicle schemes, and in particular to introduce no-fault motor vehicle accident compensation schemes in all states.

Given the current interest in the NDIS, now is probably a good time for scheme managers and administrators to consider the structure of their schemes. The issues highlighted in this paper may provide some guidance in this area.

7 References

- Kirsten Armstrong & Daniel Tess, *Fault versus No Fault Reviewing the International Evidence*, Institute of Actuaries of Australia 16th General Insurance Seminar 2008
- Transport Accident Commission (Vic) on behalf of the Heads of CTP, Australian CTP Comparison Table (January 2003)
- NSW RTA data for 1999 to 2006, supplied 2008
- Scheme websites
- National Disability Insurance Scheme webpage http://www.ndis.org.au/index.php

8 Appendix A – RTA data

The RTA has supplied data on all traffic accidents between the 1999 and 2006 calendar years inclusive. This information was in the form of three data sets:

- Accident data containing one record per accident recorded
- Vehicle data containing one record per vehicle involved in each accident
- Persons data containing one record per person injured or killed in each accident as well as a record for the controller of each vehicle

It should be noted that an accident is only captured by the RTA if it results in an injury or a vehicle being towed.

The data provided has been reconciled against the published reports prepared by the RTA and no material discrepancies have been noted. Internal consistency between the three data sets has also been checked and again this did not reveal any material inconsistencies.

The primary fields used in our analysis of the RTA data were:

- Accident data
 - Date of accident
 - Key vehicle
 - o Number of traffic units
 - Number killed
 - Number injured
- Vehicle data
 - o Traffic unit number
 - o Type of traffic unit (car, bicycle, etc.)
 - Number of occupants
 - o Age of controller
- Persons data
 - o Degree of casualty (limited to killed or injured)
 - o Class of road user (driver, passenger, pedestrian, etc.)
 - o Casualty position (front seat, back seat, etc.)
 - Age of casualty
 - o Hospital (indicator of hospital person was taken to)

In addition to the listed fields we made use of the fields that linked the three data sets. That is, using the data it was possible to place every person in a vehicle and link that vehicle to the accident it was involved in.

In order to apply the data we needed to identify the number of vehicles involved in each accident and the vehicle responsible (or at-fault) in the accident. Both of these required some assumptions and are discussed below.

8.1 Number of vehicles involved

We needed to identify the single vehicle accidents within the RTA data. This was done by producing a list of accidents with each of the associated traffic units involved. If the traffic unit number of the last vehicle involved an accident was 1, then we concluded that this was a single vehicle accident.

It should be noted that pedestrians are never classified as traffic unit 1 in the RTA data and as such this does not limit our analysis. It is possible that only a single vehicle is identified for a given accident even though a second vehicle was involved, e.g. a hit and run. This would impact our estimate of the number of single vehicle accidents however we do not expect this to be material.

8.2 At-fault vehicle

The RTA does not identify the vehicle at-fault in a crash.

The traffic unit number and the class of road user have been used to establish the fault status of each person involved in an accident. Essentially traffic unit 1 has been assumed to be the at-fault traffic unit in all cases. The class of road user has been used to insure no pedestrians or passengers are classified as being at-fault.

By identifying the at-fault vehicle controller for each accident the one-to-one link between people and vehicles can be used to establish the at-fault vehicle.

The RTA has advised us that the use of the traffic unit number to identify the at-fault vehicle will not be appropriate in all cases. The traffic unit number is more closely related to the role of the vehicle in the impact. That is, traffic unit 1 is, in general, the vehicle that causes the impact. So for example, in the case where a vehicle runs a red light and is struck by another vehicle which has passed through a green light, the vehicle causing the impact (the one that has passed the green light) would be classified as traffic unit 1. However in this case the vehicle that has run the red light is the at-fault vehicle.

While not perfect we believe that the use of the traffic unit number as a means of identifying the at-fault vehicle in each accident will be reasonable in the majority of cases. An independent source against which this could be verified was not available but comparisons between the RTA data and the data supplied by the Schemes we have reviewed have given us some comfort that the approximation used to establish fault status is not unreasonable.

We have also checked the results of our analysis against the "key vehicle status" field which was recommended by the RTA as a field that could be used to identify the at-fault vehicle.

8.3 Severity of injury

In addition to the numbers of vehicles involved in each accident and the fault status of each vehicle we also wished to estimate the severity of the injuries for those involved. The RTA data only breaks the injuries into 'not injured' (vehicle controllers only), 'injured' or 'killed'. For those injured but not killed we wanted to determine the severity of the injuries.

Based on the data provided by the RTA, the only field available to estimate the injury severity was the hospital field. This field contains a hospital code for the hospital that each person was transported to. Based on the assumption that, in general, injuries requiring hospital treatment are more severe than those that do not we have used this field as a proxy for injury severity.

The RTA has informed us that the reliability of this field is somewhat questionable. We have cross checked the numbers of hospitalised accident victims in the RTA data which reports published by the NSW Department of Health. While the numbers do not match exactly they are close enough to give us comfort in the use of the hospital field.

There are other obvious issues with using the hospital field in the way that we have such as it not always being a good proxy for injury severity. For example, a person with very minor injuries may be transported to hospital if their vehicle has been immobilised and there are no more sever casualties to transport. However, we believe that, in the absence of other information, the hospital field is a reasonable proxy for injury severity in general.

8.4 Conclusion

Overall the RTA data demonstrated a high degree of internal consistency and reconciled with the published reports prepared by the RTA. The information in the data also compared reasonably well with other sources external to the RTA.

While some assumptions were required in order to estimate the number of single vehicle accidents and the fault status of each vehicle, the results of our analysis appear reasonable and we have no reason to believe

there is any systemic bias in the analysis. The assessment of injury severity is somewhat more subjective but again, not unreasonable in our opinion.