CTP Premium & Market Supervision

Review of the Risk Equalisation Mechanism (REM)

July 2019

NSW GOVERNMENT

Contents

Executive Summary

This review is the first report published by SIRA on the status and progress of the REM (Risk Equalisation Mechanism) introduced by SIRA in 2017, with the primary aim of creating a more competitive Compulsory Third Party (CTP) market in NSW.

The CTP scheme is designed to enable all NSW vehicle owners to purchase mandatory CTP insurance at an affordable price. As the scheme covers a wide range of customers and vehicles, the level of risk associated with insurance coverage is equally wide-ranging. If insurers set premiums solely according to customers' risk profiles, some vehicle owners would face significantly higher premiums.

These vehicle owners would either be more likely to avoid purchasing insurance, despite their legal obligation to do so, or not be able to use the roads, which could have significant impacts for their ability to work and participate in society, or suffer a potentially significant cost of living impact associated with high premiums.

SIRA avoids these outcomes by allowing insurers to cross-subsidise some higher risk customers.

In contrast, the aim of the REM is to balance cross-subsidies for Class 1 – passenger vehicles across the whole market. This enables insurers to receive a fair premium for each vehicle while simultaneously enabling all premiums paid by vehicle owners to meet the affordability or social equity requirements of the scheme.

The REM therefore supports a customer cross-subsidisation mechanism to ensure that all vehicle owners can purchase affordable insurance. Among other methods, the REM does so by:

- Improving competition for high-risk customers by removing disincentives for insurers to underwrite these risks; and
- Reducing the ability of insurers to earn excessive profits from insuring those customers who fall in the extremely low-risk category of vehicle use.

The first section of the report explains the rationale for cross-subsidisation, outlines how the REM works and shows its scale: overall in 2018, premiums for Class 1 vehicles (before GST, levies and acquisition costs) were $1.2 billion and total REM amounts, being the amounts paid from owners of lower risk vehicles as subsidies to owners of higher risk vehicles, were $137 million or approximately 12 percent of premiums.

Introduction of the REM was accompanied by a number of other detailed amendments to the premium regime which, from SIRA's viewpoint, in conjunction with the REM create a more flexible, effective and competitive premium system.

Insurers required substantial investments in systems, administration and other aspects of their businesses to cater for the introduction of the REM. As a result, they have been obliged to examine its details in some depth and achieved operational readiness for the introduction of the REM in 2017 according to SIRA's requirements and specifications.

While insurers are still adapting to the REM, including modifying some aspects of their business strategies in efforts to improve or optimise their commercial positions, they have expressed general satisfaction with the existence of the REM and its overall design. SIRA's dialogue with insurers, individually and collectively as part of this review, elicited this overall assessment.

Some design questions and some operational questions remain regarding the REM from the different perspectives of SIRA as scheme regulator and the insurers as market participants. SIRA's assessment, however, is that on the whole, none of the outcomes to date are contrary to expectations and the REM objectives are either already being met or are at this early stage indeterminate. These aspects of the REM are explained in Sections 4, 5 and 6 of this report.

The overall conclusion of the review is that the CTP market in NSW has become more competitive since the introduction of the REM:

- The pricing and filing activities of insurers reflect direct pricing competition of a kind that has not been seen in the scheme in more than a decade.
- Although a full understanding of the competitive situation is not yet completely clear, two important factors are evident:
  - introduction of the REM: insurers no longer fear anti-selection and have been reassessing their CTP business strategies including distribution emphases accordingly
  - a new Green Slip calculator, which makes prices more visible, comparisons simpler and purchasing Green Slips easier, has increased the price sensitivity of vehicle owners.
- Excessive profits are no longer available to any individual insurer and, in particular, new vehicles formerly generated high profits, but the REM has put an end to this opportunity.
- Motorcycle subsidies are being handled efficiently within the REM by collecting a small amount of additional premium from all other vehicle classes and using the REM to distribute the appropriate amounts to the owners of motorcycles.
- The affordability and social equity requirements for customer prices, including supporting young drivers and geographical zones which exhibit high risk, have been largely maintained through the REM.
- SIRA will continue to actively monitor the REM to ensure that the objectives of the REM are achieved and balanced with the Government's broader social policy objectives. SIRA will also report on any changes made to the REM in the statutory review of the scheme which will commence in December 2020.

1. Background

Why the REM was introduced

The nature of the CTP system

As the CTP system is compulsory, it is essential that every vehicle owner be able to obtain cover from an insurer, irrespective of the risk, at a price that meets the social equity criteria of fairness and affordability. The scheme design must also protect system integrity, which includes minimising the number of unregistered vehicles. The system therefore necessarily contains cross-subsidies from lower risks that will have to be over-priced to subsidise the higher risks that will need to be under-priced, i.e. priced below cost.

The need for change

The previous system managed these cross-subsidies through requiring each individual insurer to accept every risk offered to it and to find its own balance between over-priced and under-priced risks. The onus was directly on each insurer, through the mechanism of compulsory risk acceptance, to manage its own cross-subsidies. This system worked well enough for most of the nearly 30 years of its existence, but its effectiveness had been diminishing: a key finding of the 2015 Insurer Profit Review[1] was that “risk selection is an undesirable form of competition that seeks to game or exploit the structure of the cross-subsidy rather than improve the overall outcome of the Scheme.”

An insurer that succeeded tactically in this way was rewarded with excess profits. Because such an insurer was not allowed to offer discounts of more than 15 percent, the rules delivered it higher profits than other insurers. As a result, in their efforts to optimise their own business models, insurers were investing extensively in protecting themselves against anti-selection* through structuring their premiums (within the rules), applying their chosen risk factors and managing their sales and distribution.

> ** **Anti-selection** is where customers obtain under-priced insurance in situations where the insurer does not know that the risks are under-priced or, as occurs in the CTP system, where an insurer is obliged to accept a risk on terms that it knows are inadequate.*
>
> ***Avoidance of anti-selection** is a cornerstone of successful insurance businesses.*

A related feature of this system was that it always operated to dissuade new entrants as avoiding anti-selection was not possible. Deploying an alternative pricing and distribution strategy successfully against the established participants was not feasible.

The solution

Hence a critical problem to solve in a market that demands some cross-subsidies is how to avoid anti-selection while also generating an efficient and competitive system. Accordingly, SIRA concluded in 2016 that an industry-wide risk equalisation mechanism was needed, to create a more competitive market with a level playing field for all existing licensed insurers and the potential to attract new entrants.

Such a system was difficult to design but it has been achieved. Its essence is that SIRA determines a *REM amount* for each policy, equal to its assessment of a *fair customer price*, on grounds of affordability and social equity, and a *fair risk price* for the insurer. The resulting cross-subsidies, from lower risk policies to higher risk policies, are allocated to or from insurers to

[1] Report of the Independent Review of Insurer Profit within the NSW CTP Scheme, October 2015, page viii.

achieve an industry-wide balance intended to be fair to all insurers while also delivering acceptable prices to all vehicle owners.

The system was developed in detail during 2016 and early 2017. Following extensive research by SIRA and its advisers, and extensive consultation with insurers and insurers' actuarial teams, the REM system was introduced on 1 July 2017.

Objectives of the REM and terms of reference for this review

The full terms of reference for the review are set out in Appendix 1.

In summary, the objectives of the REM are to:

- Increase competition among insurers by improving their price flexibility without adversely affecting affordability and social equity for vehicle owners, which will:
    - Improve competition for owners of higher risk vehicles by removing insurer disincentives to underwrite these risks. This would:
        - deter the practice of insurers trying to offer the highest price in the market, a situation which, under the premium rules in place, also increased the premiums and hence the profitability of lower risk vehicles
        - discourage insurers using other non-price strategies to avoid higher risk vehicles.
- Encourage new entrants into the market thereby increasing competition amongst insurers.

Insurers have questioned the complexity of the REM, an issue which was also mentioned at recent hearings of the Parliamentary Legislative Council Standing Committee on Law and Justice. This question primarily relates to the number of subgroups or cells used in the REM implementation.

The scope of this review of the REM is to:

- review the design of the REM against its objectives;
- review whether the REM is achieving the intended outcomes;
- consider alternatives to the current structure of the REM, applying simplicity as a design principle.

The Scale of the REM

The REM applies to Class 1 vehicles and motorcycles. For Class 1 policies and premiums written in 2018, the SIRA data for REM purposes indicates:

Regions	No of Policies** '000	Av risk Premium * $	Av customer Premium * $	Total risk Premiums * $m	Total cust. Premiums * $m
Metro	2,398	319	547	766	1,310
Non-Metro	1,858	224	398	416	740
All Class 1	4,256	278	482	1,182	2,050

* Risk premiums include claims handling expenses and the insurer profit margin but are net of policy and acquisition expenses, levies and GST. The corresponding premiums with these loadings are the customer premiums in the table.

** annualised equivalent number of policies

The REM amounts for these policies are commensurate with the risk premiums and not the customer premiums. They compare with the risk premiums as below.

Regions	**Total Premiums $m**	**Total REM Amounts $m**	**Relative REM Amounts %**
Metro	766	109	14.2
Non-Metro	416	29	6.9
All Class 1	1,182	137	11.6

* REM amounts are in and out, i.e. contributions and withdrawals, which are intended to be equal.

Hence for Metro, the total REM amounts of $109 million for 2018 were 14.2 percent of premiums but for Non-Metro at $29 million just 6.9 percent.

The difference is due largely to the requirement in Metro that cross-subsidies be made by geographic zone as well as by vehicle age and owner age. For Non-Metro there are no geographic cross-subsidies.

These and other statistics pertinent to understanding the structure of the CTP market as a whole, and the way the REM operates are set out in Appendix 2.

2. Establishing the REM

The REM commenced on 1 July 2017 and applies to all Class 1 policies that commenced on or after that date. It has now been through eight quarterly cycles. In that time, the REM amounts have been adjusted to reflect the new scheme benefits, which came into effect for claims occurring from 1 December 2017, and have also been expanded to include motorcycles.

The REM has been running at a deficit and as at 31 December 2018 the deficit was $4.8 million. The REM is targeted to operate with zero deficit or surplus annually and with periodic reviews of the contributions and withdrawals.

Other simultaneous initiatives

The new legislated benefits that came into effect on 1 December 2017 added some complications to CTP prices at that time, because of the expected reductions in future claims costs. As a result, the benefit changes also affected assessment of the initial REM amounts.

During 2017, the premium system also went through several other changes which included;

1. Mandating a 20 percent discount for new vehicles (purchased through vehicle dealers)
2. Supporting motorcycle premiums through a subsidy from Class 1 vehicles
3. Moving levies from a percentage of premium to a fixed amount for each vehicle class and zone
4. Increasing the range of the discount/loading for all other vehicles
5. SIRA setting an 8 percent profit margin as a target for assessing insurer premium filings
6. Maintaining the Elastic Gap approach
7. Allowing up to 40 percent discount for State Government Fleet vehicles.

The relationship between each of these seven items and the REM is:

1. New vehicle discount: SIRA decided to limit profits on new vehicles through this discount as an alternative to doing so through the REM. This review includes a reassessment of this approach and is covered in section 2.
2. Motorcycles were deemed to require prices below the cost of risk and are therefore subsidised through REM contributions from Class 1 vehicles and from contributions from other classes which are payable as contributions into the REM. The existence and nature of the REM facilitate such arrangements.
3. Setting levies as a fixed amount was an overdue simplification of the premium system and, while not connected with the REM, relieves SIRA of additional complexity that would otherwise have affected the REM details and its administration.
4. The permissible range of insurer discounts and loadings on filed premiums was amended to compensate for the change in the levy system from a percentage to a fixed dollar amount per policy. No material effect on customer premiums is intended.
5. The 8 percent profit margin benchmark is not connected with the REM but has the effect of standardising SIRA's approach to profit margins. It is expected to stand indefinitely irrespective of interest rates but could be reviewed in the future.
6. The Elastic Gap is a mechanism to link an insurer's lowest rate and highest rate with the aim of maintaining an insurer's pricing stance across the whole spectrum of risks. It is a vestige of the previous system and is retained because it is regarded by SIRA as a practical and effective means of limiting the maximum premiums of each insurer while also maintaining a degree of competitiveness across the pricing spectrum.

7. The Government fleet arrangements are treated as a separate portfolio from the remainder of the Class 1 vehicle population and are therefore outside the REM. This fleet, which is sizeable, is experience rated by the holding insurer who is selected by tender from time to time.

This range of initiatives was successfully undertaken simultaneously with the introduction of the REM. Taken together with the REM, these initiatives have served to create a more flexible, effective and competitive premium system, as explained in the next two sections of this report.

3. Questions of interest or concern to insurers

Questions raised and discussed with insurers as part of this review fall into three categories:

1. Overall design of the REM
2. REM parameters
3. Operational aspects of the REM.

1. Overall design of the REM

By design of the REM we refer to the concept underlying it, whereby SIRA determines a REM amount for each policy, equal to its assessment of a *fair customer price*, on grounds of affordability and social equity, and a *fair risk price* for the insurer. The resulting cross-subsidies, from lower risk policies to higher risk policies, are allocated to or from insurers to achieve an industry-wide balance intended to be fair to all insurers while also delivering acceptable prices to all vehicle owners.

Are insurers satisfied generally with the existence and overall design of the REM?

2. REM parameters

REM segmentation: should there be any adjustments made to the numbers and definitions of cells used within the REM, for example by increasing or reducing the numbers of cells, on grounds of simplicity or equity or any other grounds?

Half yearly policies: with half yearly policies representing about 20 percent of all Class 1 registrations and also exhibiting adverse claims experience relative to annual policies, should there be a new category or new cells within the REM to cater for this difference?

Non-Metro regions: there is reasonable uniformity of claims experience and REM amounts across the four regions of Outer Metro, Newcastle, Wollongong and Country. Should REM amounts be made uniform across all these regions and, if so, would that yield a simplification of the REM?

Motorcycles: is the simple approach of adding a single small amount to every REM amount to achieve the required motorcycle subsidies a suitable technique for delivering these subsidies?

3. Operational matters

Business use: Some insurers are using different definitions from others. Should there be standardisation and, if so, how should it be achieved?

The emergence of net deficits each year in the REM: Why have there been consistent deficits so far and no surpluses? And when they arise, should they be remedied over 12 months, 24 months or some other period?

Data quality, payment delays and other matters: Within the REM, a number of teething problems have emerged for both the clearing house and insurers. They include a range of data quality and data definition matters, delays in reimbursements from the REM and some other details. These matters all now well understood and remedies are underway.

Insurers' views and SIRA's responses to these questions after considering insurer submissions are discussed in Section 5 of this report.

4. Impact of the REM – Is it achieving its objectives?

SIRA expected insurers to change their business models following the introduction of the REM. It was also expected that customer premiums would continue to reflect affordability and social equity considerations.

The expected changes included:

1. A reduction in the selection activities employed by insurers to avoid unprofitable market segments and target profitable segments

   The basis of this expectation is that the REM amounts paid and received are designed to neutralise the main risk factors for insurers such that they should become indifferent as to which market segments they target: the REM amounts are intended to make all main market segments equally attractive:

   - Prior to the REM, approximately two thirds of all risks appeared to be attractive to insurers (either over-priced or fairly priced) and insurers would seek to avoid the remaining one third of risks which were seen as under-priced.
   - One insurer was making abnormal profits because it had succeeded in attracting a disproportionate share of over-priced risks, predominantly new vehicles.
   - A reduction in selection activities could be expected to lead to an increased interest by insurers in all segments of the CTP market, with a consequential expansion of distribution sources for CTP and a wider search for synergies with other parts of their businesses. There is limited evidence so far of such initiatives but there are some signs:
     - Insurers targeted motor dealers to optimise their profitability. Some were more successful than others. The REM negates the effectiveness of this strategy. At this stage, however, market shares have not been greatly affected.
     - Large payments have been made in the past to motor dealers to influence their placement of CTP business on new vehicles. These payments have already diminished substantially and are set to diminish further in the next two or three years.

     Conversely, some insurers continue to invest in very detailed pricing and selection models as they concentrate on selective underwriting and pricing efforts with less emphasis on distribution and synergistic initiatives.

     The picture is confounded, however, because:

     - One insurer has grown its portfolio significantly while others have lost market share. This growth appears to have arisen primarily from very competitive pricing that was instigated before the REM was introduced.
     - SIRA's Greenslip calculator now includes a direct comparison facility and a "click to purchase" for owners using it. The effect is that all insurers' prices are more visible than previously and each insurer, to maintain customer loyalty and obtain new business, is now very conscious of the price comparisons. Price elasticity of demand appears to have increased and insurers have been refiling more frequently than in the past to maintain their competitiveness.

     At this early stage it is not possible to gauge with any confidence the success or otherwise of these two different kinds of initiative (underwriting selection versus distribution initiatives).

2. The practice of insurers using a "barbell" approach to prices, whereby insurers priced competitively the well-priced risks while applying the maximum possible premium to all other risks, would diminish or even cease.

This practice continues but it appears to be less prominent than previously. It warrants regular monitoring and an investigation at a later stage.

3. The REM would reduce the primary barrier to entry of new insurers, namely the risk of anti-selection, and thereby attract one or more new entrants to the market.

   - New entrants have not as yet entered the market but that is not surprising at this early stage.
   - SIRA is aware that anti-selection has not been the only barrier to entry. A significant capital requirement arises, developing pricing and other operational capabilities is not trivial and the ability to manage injury claims effectively is another initial barrier.

4. Insurer profitability would be more even across the industry.

   It is too early to measure whether insurer profitability is more uniform or more diverse than previously but:

   - The primary source of abnormal profits by one insurer has been neutralised because its source was new vehicles. While insurer market shares of new vehicles are not significantly changed under the REM so far, we do know that, because of the REM (in conjunction with the 20 percent discount applicable to new vehicles), the profit margins on new vehicles are expected to be very similar to the margins on all other market segments.

   - The primary risk of writing a disproportionate share of under-priced risks has effectively disappeared from the system.

5. Vehicle owners would observe no particular changes from previous arrangements other than price reductions commensurate with the benefit changes after December 2017 and more competition from insurers for their business. In particular and as previously, owners would not experience price discrimination across geographical zones in the Sydney metropolitan area, maximum premiums would be limited to acceptable levels and all vehicle owners would otherwise receive fair treatment relative to others.

   - The REM design ensures the geographical requirement across the Metro region is maintained.
   - We note that maximum premiums are now around $730 compared with around $910 before the benefit changes, hence a reduction of 20 percent. Headline prices reduced from around $610 to $440, a reduction of 28 percent.

In summary, some of the objectives of the REM are already being met and some are indeterminate as yet, but there is no evidence of any outcomes that are contrary to expectations. Competitive premium activity is evident in rate filings, and insurers are no longer actively engaging in efforts to restrict others' entry into particular segments of the market. Further, distribution arrangements appear to be changing through insurers being less concerned about formerly unattractive market segments and this effect is clearly apparent in the new vehicle segment, as explained in some detail in Section 6.

5. Questions of insurers and their feedback

Insurers' views and SIRA's responses to questions raised during consultation after addressing insurers' submissions can be summarised as:

1. Overall design of the REM

The new REM as a mechanism for managing cross-subsidies is accepted by all insurers: this is SIRA's conclusion after insurer consultations, both collectively through the Insurance Council of Australia and individually, now that the REM has been introduced and been operational for a period.

Hence SIRA believes that the REM is now seen by all insurers as a worthwhile mechanism for the determination and allocation of cross-subsidies within the NSW CTP system. This is the current status incorporating feedback during the design phase.

While all working details of the REM are not fully endorsed by all insurers and SIRA is satisfied with the majority of its operating details as a system, insurers are satisfied to work within the REM and to assist SIRA to continue to refine it in the interests of the community and the insurers.

2. REM parameters

REM segmentation: There has been a debate since the REM was in its design phase as to how many cells are appropriate in order to satisfactorily meet the twin objectives of equitable cross-subsidies and complexity of administration. There are arguments for increasing the number of REM cells and arguments for reducing their number. The consensus among insurers, however, at this relatively early stage of the REM, is that it is working well enough overall and any changes to the number of cells, whether leading to an increase or a decrease, would add unnecessary complexity for now and would therefore be premature.

Non-annual policies: Despite the apparent material difference in claims experience and therefore suitable pricing for non-annual policies, insurers are agreed that the same argument applies as to REM segmentation more generally, i.e. there should be no new category or new cells within the REM to cater specifically for non-annual policies at this stage.

Non-Metro regions: There would be merit from a general simplification viewpoint in using the same REM amounts for all four Non-Metro regions. As with REM segmentation more generally, however, insurers are agreed that if this approach were to be adopted, they would probably not modify their systems or their pricing in each region. Any simplification arising would therefore be entirely administrative and would have no systems implications.

Motorcycles: The policy requirement that motorcycles are to be subsidised by other vehicles has led to a loading on all policies. It is currently $2.74 per policy and is readily accommodated within the REM.

3. Operational matters

Business use: Insurers are agreed that the formal SIRA definition of Business Use should be applied by all insurers.

The emergence of net deficits each year in the REM: Insurers have indicated a firm preference for correcting deficits within a 12-month period. The financial consequences are small for all concerned and a period longer than 12 months would add accounting complexity for insurers.

As previously noted, the aggregate deficit at 31 December 2018 was $4.8 million.

The deficits have arisen from changes in the size and distribution of the motor vehicle population relative to assumptions made by SIRA and its advisers when assessing each period's REM amounts. The motor vehicle population changes that can affect the REM assessments are changes in the distribution across each region of the vehicle ownership ages, the vehicle ages and the geography of garaging.

The deficits are relatively small and can be corrected by adjustments to the REM amounts each year or each half year.

On the basis of insurer feedback, SIRA will aim to correct deficits and surpluses within 12 months of their emergence.

Data quality, payment delays and other matters: The teething problems that have emerged are generally well understood and are either already resolved or are in the process of resolution by insurers and the clearing house, in consultation with SIRA.

6. New vehicles, motor dealer incentives and the 20 percent discount

Background

Experience has shown that on average owners of new vehicles have a much better claims record than owners of older vehicles. For this reason, prior to the REM, insurers would deliberately target motor dealers as a source of profitable business from new vehicle sales.

To attract motor dealers, insurers were paying upfront fees for multi-year contracts in which the dealer would issue the chosen insurer's CTP policy on nearly all the new vehicles sold through the dealership. In addition to these payments, the dealer would also receive a 5 percent commission on every CTP new policy sold and on any subsequent renewals.

Recent developments

The situation is now changing rapidly as a result of the REM, which acts to ensure that new vehicles have similar profitability to older vehicles. The number of dealer contracts reduced by nearly two` thirds from 2016 to 2018 and is likely to continue to decline. This trend is highly desirable because it reduces costs in the system without detracting from competition. It indicates one of the positive impacts of the REM and the early achievement of one of the goals of the REM.

The 20 percent discount

With motor dealer incentives now being contained and diminishing rapidly, it is appropriate to review the 20 percent mandatory discount on new vehicles in the context of the maturing of the REM.

The discount at present operates as follows: a 20 percent discount is applied by each insurer against its average filed Class 1 premium without regard for the owner's age and not, as might be expected, against the premium for older vehicles in the owner's same age band. The outcome is that all new vehicles are priced the same irrespective of the owner's age. On SIRA's REM basis, the following results emerge –

1. Metro - average premium $544

Owner age	**Vehicle age 0 $**	**Vehicle age 1-4 $**	**Increase 1st renewal - $**	**Increase 1st renewal - %**
17 – 22	485	745	260	54
23 – 26	485	726	241	50
27 – 54	483	514	31	6
55+	484	481	Negligible change	Negligible change

2. Country - average premium $396

Owner age	**Vehicle age 0 $**	**Vehicle age 1-4 $**	**Increase 1st renewal - $**	**Increase 1st renewal - %**
17 – 22	351	532	182	52
23 – 26	350	519	169	48
27 – 54	350	371	21	6
55+	352	345	Negligible change	Negligible change

These results for young drivers are anomalous because they give a very high discount to young drivers who choose to buy new cars, giving them the same price as for all older owners and also leading to substantial price rises for the same owners at their first renewal. Although they have contributed to achieving the goal of eliminating excessive profits on new vehicles, they are not in keeping with the pricing objectives of the REM because it does not take account of the owners' risk profiles or the social equity considerations in a manner that is consistent with all other REM cells.

SIRA has considered two solutions to this problem. The first is to retain the general idea of a 20 percent discount for new vehicles but to relate the 20 percent not to the average premium across all vehicles, but to the premium for the owners' age band for either 1 to 4year old vehicles or 5 to 12year old vehicles.

The second solution is to reduce or eliminate the 20 percent discount across all new vehicles and replace it with a REM contribution such that owners of new vehicles pay a premium which is similar to owners of older vehicles.

The first solution would eliminate the young driver anomaly. The second would go further and increase the REM contributions from new vehicles so as to maintain consistency with older vehicles. It would also have the side effect of adding to the subsidies to owners of higher risk vehicles, thereby reducing the REM contributions of all other owners of lower risk vehicles.

There are a number of options for SIRA to consider, some of which are;

1. maintain the status quo (new vehicle prices independent of driver age), or
2. adjust the 20 percent discount so that it applies relative to 1 to 4-year-old vehicles or 5 to 12-year-old vehicles for the owner's age instead of to the average of all vehicles, or
3. reduce the 20 percent discount in favour of maintaining consistency on a risk basis or a customer basis with owners of older vehicles.

The effect of the third option would be to see prices for new vehicles at the younger ages increase, to a level of about 15 percent to 20 percent below the level of 1 to 4-year-old vehicles, no change for owner ages 27 to 54 and price reductions for owner ages 55+ of 15 percent to 20 percent.

Because of the flexibility of the REM, the actual percentages can be nominated by SIRA and the REM amounts would then adjust to give insurers the correct risk-rated REM amounts.

SIRA will be undertaking a comprehensive review of these options to assess how each option achieves the scheme objectives of maintaining affordability of premiums and competition in the market balanced with government's broader social policy objectives.

7. REM: Operational Performance

Insurer Data Issues

In the first 18 months of operation, SIRA has encountered a number of issue regarding the accuracy and completeness of data, some of which have been resolved after discussion with insurers, and others from time to time to which no permanent solution has been found.

As an example, insurers submit their policy data to SIRA, SIRA checks the quality (missing values, incomplete fields etc) and notifies the relevant insurer. The insurer has until the 20th of the first month following the REM quarter to correct the data. Shortly after the 20th SIRA creates an extract of the policy data which is used by the Clearing House (Taylor Fry) in the REM calculations.

As a penalty, any policy records with incomplete data which would impact the REM are assigned a maximum REM Contribution in the calculations. This was introduced to ensure the provision of correct and complete data by insurers.

Insurers have responded by ensuring their data is complete in the majority of cases and to date, the number of policies impacted is very small (typically less than 20 policies per quarter).

This issue has been resolved.

Data delays affecting the Clearing House

There have been instances where an insurer has submitted the policy data late or the initial submission was incomplete, and the remainder of the records were submitted several weeks later. These problems have also occurred with the Universal Claims Database (UCD).

SIRA now receives reports on the timeliness of insurer submission of data and insurers are sent a reminder on delays in submission in addition to monitoring and reporting on delays. SIRA also notifies the Insurance Council of Australia (ICA), which insurers receive or are due to make REM payments. When the REM Clearing House has been completed, the ICA confirms with SIRA and the insurers that all payments have been made.

SIRA is continuing to work with the insurers to rectify these issues.

Switching insurers after registration

In CTP it is possible to cancel a policy after it has been used to register a vehicle. This occurs when a vehicle owner initially purchases CTP from one insurer, registers the vehicle and shortly after decides to be insured by another insurer (mainly because the second insurer’s Green Slip was cheaper). RMS removes the original insurer’s policy from the registration and adds the new insurer to the registration record. There can be a time delay in the insurers being notified so the rules around the REM data and how the Clearing House treats them have been modified to allow for these cases.

This issue has been resolved.

Business use definitions

Each insurer has their own approach when determining if a vehicle is Business Use. In the lead up to commencing the REM SIRA was concerned that REM results may be distorted by this as insurers may try to game the definition to extract a better REM outcome. SIRA and the insurers agreed, as an interim step, a “hybrid” definition be used. It is timely to review this approach to assess if it is having any effect on the REM outcome.

This issue is covered in more depth below.

Differences in insurer systems

Each insurer’s policy database works in slightly different ways when updating records. Most insurers’ systems record changes to a record by noting the effective date of the change and the date of the transaction. One insurer’s system, however, is slightly different. It over-writes the effective date with the transaction date. The REM is potentially impacted by transactions that occur at the end of a REM period which are effective at the beginning of the next REM period. This could have an effect when the REM contributions/withdrawals change.

On examination, SIRA has concluded that the impact on the REM is minimal and that this issue is not worth pursuing further.

This issue has been resolved.

8. Correcting a REM deficit or surplus

SIRA anticipated that a zero balance in the REM at the end of each quarter is unlikely because of the estimations inherent in assessing REM amounts.

The agreed approach is that any deficit or surplus in the REM from the previous quarter would be the first item paid out or paid in in the new quarter. This way insurers only carry the debt for one quarter. A similar approach is used in dealing with any surplus.

The REM deficit as at 31 December 2018 was $4.81 million and is expected to increase by a further $2.0 million during 2019.

The deficit has occurred because the individual REM amounts were based on historical mixes of business. During 2018, however, there was a notable downturn in new vehicle sales, which contributed significant amounts to the REM. Also, there were higher than expected numbers of older vehicles and vehicles in the south-west of Sydney, both of which withdrew large amounts from the REM. The deficit is the net effect of these factors and other smaller variations.

SIRA's goal is to maintain the REM at or near a zero balance and to clear deficits and surpluses within a reasonable time after they emerge.

Correcting a deficit or surplus over one year is the approach preferred by insurers. SIRA is satisfied to take this approach.

As part of SIRA's regular review of REM parameters, SIRA will create a framework to correct the accumulated REM surplus or deficit, which would include:

1. ***SIRA to assess the cumulative REM surplus or deficit since the previous review of the REM parameters.***
2. ***SIRA to correct for the surplus or deficit over a twelve-month REM collection period by adjusting the REM contributions or withdrawals to meet that target, commencing from an effective date as notified to insurers (e.g. when SIRA requests all insurers to submit rate filings due to premium parameter changes issued by SIRA).***
3. ***The technique for making the adjustments to be the subject of further consideration (eg considering the merits of a simple overall adjustment applied to all policies versus recognition and adjustment of those cells that are believed to have given rise to the surplus or deficit).***

9. Reviewing REM design details

Business Use Definition – is it impacting the REM outcome

Currently there is no consistent definition across all insurers of a “Business Use” vehicle. Each insurer uses its own approach to decide if a vehicle is considered business use.

Currently insurers use:

- RMS Vehicle Use field, or
- RMS Owner Type, or
- if a Date of Birth is present on the RMS database the insurer assumes Private Use, or
- ask the vehicle operator if they are Business or Private and accept their answer, or
- a combination of some of the above approaches

When designing the REM, SIRA was concerned that if the insurers’ definition was used insurers may manipulate their own definition to minimise REM contributions or maximise REM withdrawals. To prevent this problem it was agreed to adopt a common SIRA definition which is a hybrid of the definitions used by insurers.

The SIRA definition uses RMS data (an independent source) and is determined by;

- Owner_type = P (person), and
- Veh_use = PRIV, PRIL, PNSR or PNIC (private or pensioner usage)

If the vehicle operator satisfied both these conditions it is classified as “Private Use” and if either one is not satisfied then it is classified as “Business Use”. Appendix 3 contains the full list of valid values of Owner_type and Veh_Use.

As part of this review a comparison was made between the SIRA definition of Business Use and each insurer’s definition to determine if there was any significant distortion of the REM result of each insurer.

Overall the differences between SIRA’s definition and each insurer’s definition are relatively small in terms of policy count and dollar impact on the REM.

SIRA has decided that the current approach to and definition of Business Use in the REM be maintained and applied uniformly by all insurers.

REM amounts based on claim frequency or average claims cost

The analysis behind the determination of the REM amounts should be based on average claim costs but in practice are relying on claim frequency for each REM cell. The claim frequency is measurable much earlier than claims costs and also stabilises. Reliable estimates of average claims costs will take up to 10 years to develop.

It is an actuarial matter to estimate the average claims costs for REM purposes. To date SIRA’s actuary has elected to use claim frequency as a proxy for average claims cost per policy. SIRA expects generally to rely on the actuary’s judgment as to whether any adjustments to claims frequency are appropriate for estimating average claims costs.

SIRA has concluded that the current approach of using claim frequency as a proxy for average claims costs when determining individual REM amounts should be maintained or modified in the future according to the judgment at the time of SIRA’s actuary.

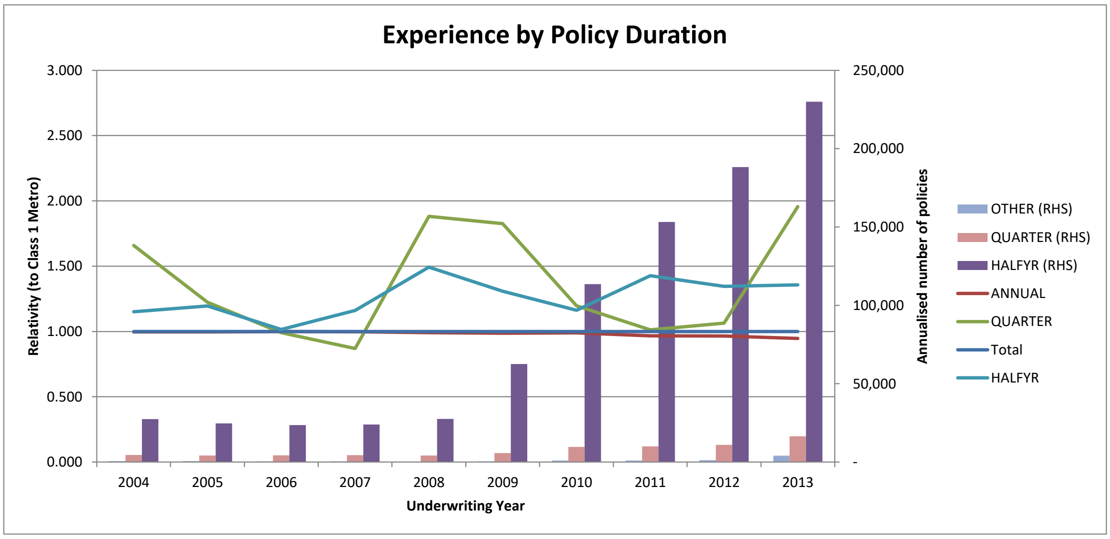
Six and twelve-month registration and policy periods

During the development phase of the REM there was evidence that the risk premium of six-month registrations (on an annualised basis) was approximately 40 percent higher than 12-month registrations. This is based on the claim frequency experience. Average claims costs for 6-month policies are 10 percent higher than that of 12-month policies.

The distribution of 6-month policies is not even across all insurers with NRMA and Suncorp being over-represented in this segment.

SIRA initially proposed including policy duration as an additional REM variable but insurers unanimously rejected the proposal even though it would have been to the benefit of two insurers and more equitable for all insurers. As insurers were interested in limiting the REM variables, SIRA decided not to include it as a REM variable.

The results by policy duration have been updated and they still show the 6month policy experience as 40 percent worse than 12-month policies.



SIRA recognises the insurers' request to keep the REM simple and will seek their input on whether they are interested in adding a new REM variable.

SIRA has decided not to give recognition to policy duration within the REM at this time but the question is to be reconsidered at the next review of the REM.

REM Variables and the numbers of sub-groups and cells

There are currently three variables that are used to determine the amount to be contributed or withdrawn from the REM. These variables are:

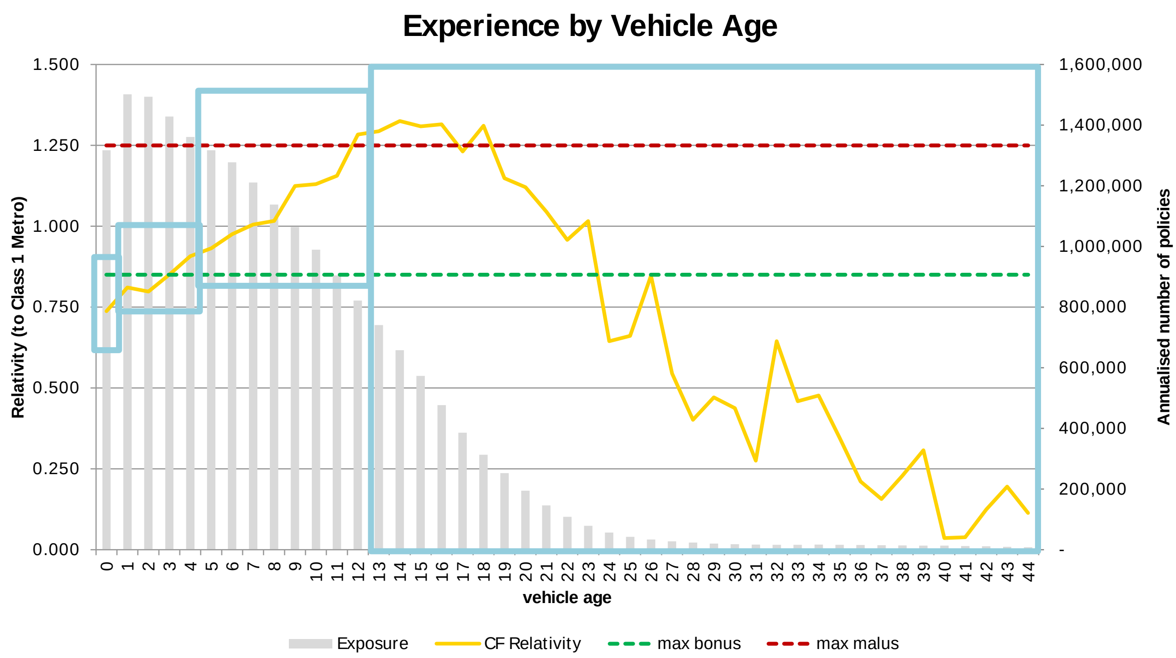
- **Vehicle Age** – There a four sub-groups of vehicle age, new vehicles, 1 – 4 years, 5 – 12 and 13+.
- **Owner Age including Business Use** - There a five sub-groups of owner age, 17 – 22 years, 23 – 26, 27 – 54, 55+ and Business Use. Because Business Use vehicles typically do not have an owner age they have been assigned the same contributions/withdrawals as 27 – 54 years old.
- **Geographic Zone** - The Sydney Metro area has been broken up into 5 sub-zones to reflect their relative risk. The areas outside the Sydney Metro area eg. Newcastle, Wollongong, Outer Metro and Country are not subdivided and are consistent with the current Premium Relativity zones.

These variables yield 100 cells (5 x 4 x 5) in the Sydney metro area, and 20 cells (5 x 4) in each of the non-metro zones.

The following charts relate to Class 1 (passenger Vehicles) garaged in the Sydney Metropolitan area. They show the distribution of policies by each REM variable and the claim frequency relative to the overall average. The results shown are presented on a one-way basis for simplicity.

Vehicle Age

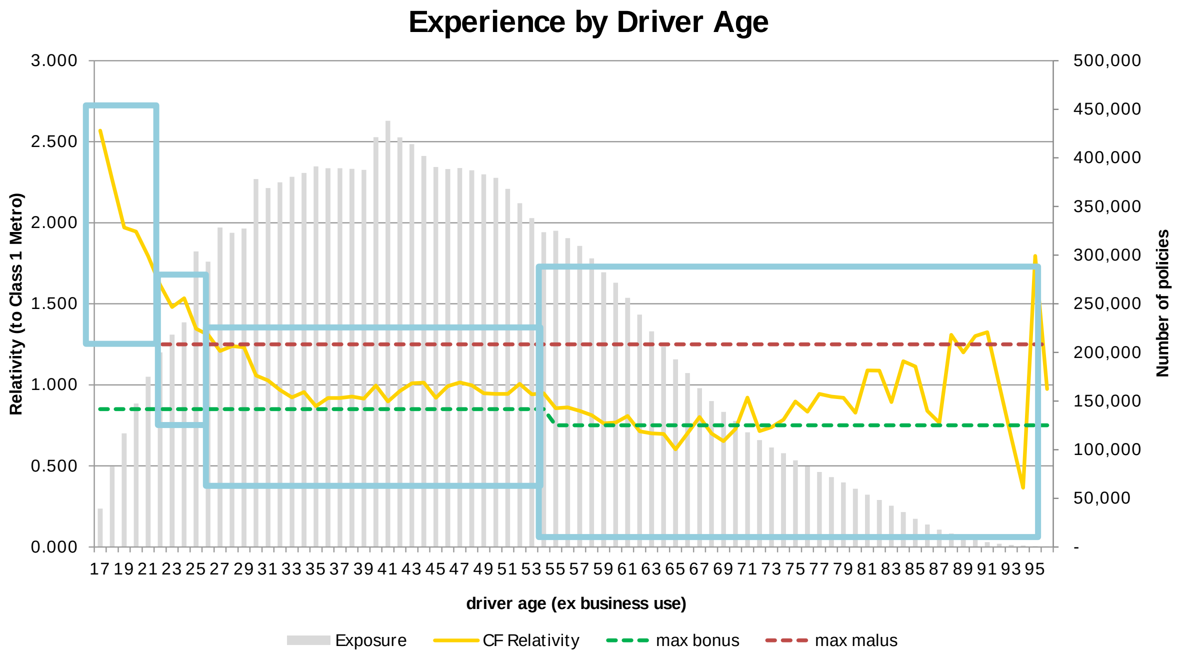
There is a clear increase in the claim frequency by vehicle age up to 12 years, then the frequency levels off for several years and thereafter there is a steady decline. In the current REM there are four subgroups which reflect the risk (these are indicated by the boxes in the below diagram). Based on 10 years of data for example, new vehicles are 30 percent below the average, vehicles 1 – 4 years are 10 percent better than the average, vehicles 5 -12 years are 7 percent above average and older vehicles, which have a very small amount of exposure, are 15 percent higher than average.



Owner Age

The claim frequency for young drivers is notably higher than average but it rapidly reduces by owner age until age 30, after which the experience is consistent with other vehicle owners up to 54 years of age.

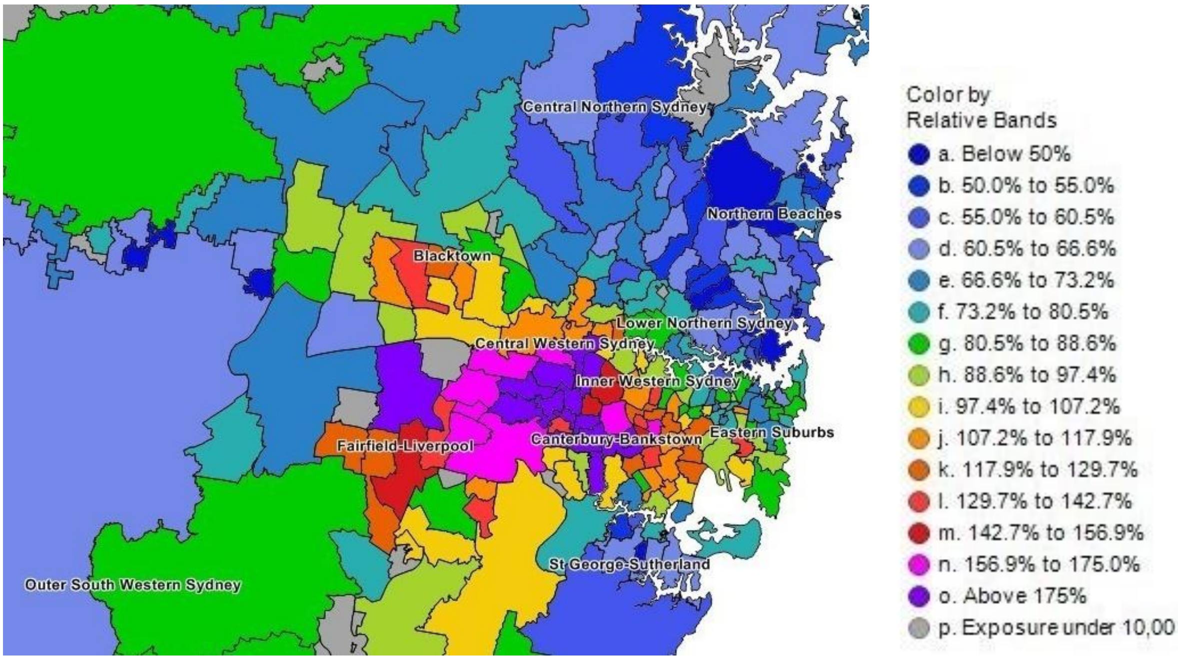
Young car owners' claim experience is 120 percent above average, 23 – 26 years old are 60 percent above average, 27 – 54 are average and older drivers (55+) are 15 percent below average.



Sydney Metro Area

The experience by postcode varies significantly with a large number of postcodes north of the Harbour and south of Botany Bay showing experience similar to country NSW, at more than 30 percent less than the Metro average. At the other extreme, some parts of Sydney's west and south-west have experience which is over 80 percent higher than the Metro average.

When the REM commenced in 2017 there was considerable discussion with insurers regarding how many subgroups should be created in the metro area. SIRA initially proposed six subgroups, but at the request of insurers this was reduced to five.



The existing subgroups have vastly different experiences and any further reduction in the number of subgroups would run the risk of compromising the integrity of the REM. It should be noted that the very low risk areas cover large contiguous areas of Sydney. At the other extreme the high risk areas are centred around Sydney's south west. The slightly above average, average and slightly below average risk areas together span the area from inner west out to the Penrith and surrounding suburbs.

Subgroup	Relative Experience
A – North of Harbour & South of Botany Bay	30% below average
B – Eastern Suburbs & Southern Shore of Harbour	20 % below average
C – Blacktown and further west	average
D – Inner West, Campbelltown	20% above average
E – South Western Suburbs	80% above average

SIRA recommends that all existing subgroups be retained for at least the next two years. No changes are evident to date in the experience that would require a change, whether up or down, in the numbers or the bands of subgroups and cells. Furthermore, insurers have indicated that they accept the current arrangements at this stage because any changes would create administrative costs and some disruption which they do not see as justified.at this time.

SIRA has decided to retain the existing cells and subgroups for each of the REM variables (Vehicle Age, Owner Age & Metro Area). The matter is to be reconsidered at the next full review of the REM.

Retaining four separate zones for Non-Metro?

Within the four Non-Metro regions, namely Outer Metro, Newcastle, Wollongong and Country, the risk relativities by vehicle age and owner age are very similar and arguably could be treated as the same for pricing and REM purposes. Their level of risk, however, is different. The averages net of loadings and showing Metro for comparison, are –

Metro	$319
Outer Metro	$208
Newcastle	$191
Wollongong	$232
Country	$242.

A modest degree of insurer administrative simplification may occur if the REM amounts for each of the four Non-Metro regions were the same. Inequities would arise, however, because of the different average premiums in each region. There is therefore no good reason at this time to treat all the regions the same for the purpose of either setting premiums or determining the REM.

SIRA has decided that the determination of REM amounts in the Non-Metro regions should continue to be made separately: although the risk relativities within each region are essentially the same by age of vehicle and age of owner, the average risk and hence average premium in each region diff.

Appendix 1

Terms of Reference for a review of the NSW CTP Risk Equalisation Mechanism (REM)

Commissioned by SIRA December 2018

Background

The Risk Equalisation Mechanism (REM) was developed (throughout 2016) by the State Insurance Regulatory Authority in collaboration with insurers and actuarial consultants to address deficiencies within the previous premium system.

The objective of the REM is to:

- Increase the competition in the market by improving price flexibility without impacting affordability which will:
  - Improve competition for high-risk customers by removing disincentives to underwrite these risks. This would:
    - Deter the practice of insurers trying to position themselves with the highest malus premium to avoid the high-risk customers. Historically, this encouraged competition between insurers to have the highest price, which in turn increased the premiums of low-risk customers.
    - Discourage insurers using other non-price strategies to avoid high-risk customers, which may adversely affect customers' policy purchase experience.
  - Reduce the ability of insurers to earn excessive profits on extremely low-risk segments.
- Manage the cross subsidies of motorcycle premiums which has resulted from relativities not reflecting the true risk from the addition of at-fault benefits in the new scheme. Without the relativity restriction, some motorcycle premiums would be unaffordable or prices would increase beyond publicly acceptable levels to reflect the true risk.
- Encourage new entrants into the market thereby increasing competition amongst insurers.

The REM commenced on 1 July 2017 (applied to all policies that commenced on or after that date) and has been through four cycles. In that time, the REM amounts have been adjusted to reflect the new scheme and have also been expanded to include motorcycles.

The new scheme has increased benefits for motorists who are at fault in an accident and the premiums do not fully fund the increased liability. In respect of motorcycles, SIRA expects riders to utilise the at-fault benefit provisions at a higher rate than other vehicle classes (similar to the prior scheme experience), however premiums payable by motorcycles have been capped at 1999 Scheme levels for affordability reasons. The REM has been used as a tool to manage this cross-subsidy between vehicle classes.

The REM has been running at a deficit and as at 31 December 2018, the deficit was $4.8 million. The REM is targeted to operate with zero deficit/surplus annually (allowing for seasonal patterns) and with periodic reviews of the contributions and withdrawals. The first review since implementation will take place in coming months with the aim of having revised figures in place by third quarter 2019. These changes are intended to return the REM to a zero surplus/deficit in the long term.

Insurers have raised concerns about the complexity of the REM, an issue which was also mentioned at recent hearings of the Legislative Council Standing Committee on Law and Justice. The concerns with the complexity of the REM primarily relate to the number of subgroups. In the next few months SIRA intends to conduct a review of this aspect and will consult with insurers and actuaries.

Draft Terms of Reference

SIRA is seeking input on the design of the REM in regard to;

- Review of the design of the REM against its objectives;
- Review whether the REM is achieving the intended outcomes;
- Review alternatives to the current structure of the REM, applying simplicity as a design principle.

Some of the potential issues to consider:

- As the number of subgroups is large, could the number be reduced without compromising the integrity of the REM?
- Should REM contributions and withdrawals be based on both claim frequency and average cost and not based only on frequency, as it currently is for vehicle age and owner age.
- Data definitions are inconsistent between insurers in a small number of variables. Should a unique definition be adopted by all parties?
- Data definition and standardisation of “Business Use” by insurers. In the current REM, a hybrid definition for “business use” has been used. SIRA will review this use to confirm if a standard definition would achieve a simpler design.
- Data submissions and quality from insurers has been inconsistent and has led to delays in running the Clearing House and settlement of the REM.
- Effectiveness and efficiency of the current clearing house process and administration.
- Are there other ways the REM could be modified to improve the process?

Any changes to the REM design that result from the review would be implemented at the same time as revised contributions and withdrawals.

Approach

SIRA convened a series of workshops with insurers, actuaries and other stakeholders as part of its investigations for this report.

Appendix 2

Industry statistics and REM statistics

1. The Class 1 vehicle population by REM category

Metro

-	-	Jun-16 '000	Dec-18 '000	Increase '000	Increase %
Total	-	2,256	2,398	141	6.3
Geographical	**Below 70%**	745	797	52	7.0
	70% - 85%	467	476	9	1.9
	85% - 105%	275	300	25	9.1
	105%- 150%	458	487	29	6.3
	Above 150%	312	338	26	8.5
Owner age	**17-22**	47	47	-0	-0.8
	23-26	88	94	6	7.4
	27-54 & bus	1,436	1,499	62	4.3
	55+	685	758	73	10.7
Vehicle age	**0**	151	172	21	13.8
	1-Apr	651	674	23	3.5
	5-Dec	952	1,001	49	5.2
	13+	502	550	48	9.7

* Calculations have been performed based on figures before rounding

Non-Metro

-	-	Jun-16 '000	Dec-18 '000	Increase '000	Increase %
Total	-	1,773	1,858	85	4.8
Geographical	**Outer Metro**	116	127	11	9.5
	Newcastle	523	556	33	6.4
	Wollongong	110	117	7	6.0
	Country	1,024	1,058	34	3.3
Owner age	**17-22**	58	61	2	4.0
	23-26	70	75	6	8.2
	27-54	898	919	21	2.3
	55+	747	803	56	7.5
Vehicle age	**0**	81	95	14	17.3
	1-Apr	415	408	-7	-1.7
	5-Dec	732	760	29	3.9
	13+	546	595	49	8.9

* Calculations have been performed based on figures before rounding

2. REM Statistics Overall

The scale of the REM is set out in the Background section and repeated here to give context to some further detail on the composition of REM amounts across the industry.

The REM applies to Class 1 vehicles and motorcycles. For Class 1 policies and premiums written in 2018, we have –

Regions	No of Policies** '000	Av risk Premium * $	Av customer Premium * $	Total risk Premiums * $m	Total customer Premiums * $m
Metro	2,398	319	547	766	1,310
Non-Metro	1,858	224	398	416	740
All Class 1	4,256	278	482	1,182	2,050

* Risk premiums include claims handling expenses and the insurer profit margin but are net of policy and acquisition expenses, levies and GST. The corresponding premiums with these loadings are the customer premiums in the table.

** annualised equivalent number of policies

The REM amounts for these policies are commensurate with the risk premiums and not the customer premiums. They compare with the risk premiums as below.

Regions	Total Premiums $m	Total REM Amounts $m	Relative REM Amounts %
Metro	766	109	14.2
Non-Metro	416	29	6.9
All Class 1	1,182	137	11.6

* REM amounts are in and out, i.e. contributions and withdrawals, which are intended to be equal.

Hence for Metro, the total REM amounts of $109m for 2018 were 14.2 percent of premiums but for Non-Metro at $29m just 6.9 percent.

The difference is due largely to the requirement in Metro that cross-subsidies be made by geographic zone as well as by vehicle age and owner age. For Non-Metro there are no geographic cross-subsidies.

3. REM statistics by REM variable

We can now look at the above REM numbers by REM variable –

A. By geographical zone for Metro ($m)

-	<70%	70-85%	85-105%	105-150%	>150%	Total Metro	Non-Metro	Grand total
Contributions	74.2	26.2	5.9	0.2	-	106.5	28.3	134.7
Withdrawals	-0.2	-0.8	-3.0	-31.2	-73.3	-108.6	-28.6	-137.2
Net	74.0	25.4	2.9	-31.0	-73.3	-2.1	-0.3	-2.4

As is to be expected, the contributions to the REM all come from the lower risk zones, especially the two lowest, and most of the subsidies go to the two highest risk zones.

B. By owner age

Metro	17-22	23-26	27-54	55+	Total
Contributions	0.1	4.9	64.0	37.5	106.5
Withdrawals	-12.2	-8.5	-63.5	-24.4	-108.6
Net	-12.0	-3.6	0.4	13.1	-2.1

Non-Metro	17-22	23-26	27-54	55+	Total
Contributions	0.0	0.5	7.2	20.6	28.3
Withdrawals	-11.9	-3.5	-13.1	0.0	-28.6
Net	-11.9	-3.1	-5.9	20.6	-0.3

The experiences in Metro and Non-Metro are different from each other. For Metro, the 27-54 age band is in balance and for 55+ there are significant withdrawals whereas, for Non-Metro, the withdrawals for 27-54 greatly exceed contributions and there are no withdrawals for 55+. In both regions, the 55+ age band is a net contributor while the two youngest age bands are, as expected, net receivers of subsidies.

C. By vehicle age

Metro	0	1-4	5-12	13+	Total
Contributions	9.6	32.0	37.2	27.5	106.5
Withdrawals	-2.2	-17.4	-54.8	-34.1	-108.6
Net	7.4	14.6	-17.6	-6.5	-2.1

Non-Metro	0	1-4	5-12	13+	Total
Contributions	3.3	11.1	3.1	10.8	28.3
Withdrawals	-0.8	-0.8	-7.3	-19.6	-28.6
Net	2.4	10.3	-4.2	-8.8	-0.3

Overall the newer vehicles in both regions subsidise the older vehicles but there are also substantial net contributors among the older vehicles.

The fact that some new vehicles receive subsidies despite their superior claims experience arises from the way that the 20 percent mandated discount on new vehicles operates, as explained in Section 6.

Motor Accidents Insurance Regulation, Level 6, McKell Building, 2-24 Rawson Place, Sydney NSW 2000

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