

GAP Waiver Cancellation Refund Calculation Methodology

I. Introduction

The method to calculate the amount of refund due to the consumer upon cancellation of a GAP waiver is frequently determined on a prorata basis. This prorata method determines the percent of fees to be refunded as:

number of days between the cancellation date and the waiver expiration date
divided by
duration of the waiver term.

For example, a waiver effective on 1/1/2020 for a 5 year term which is cancelled on 1/1/2021 will have a prorata refund percent of 80%, which is 4 years between the cancellation date and expiration date divided by the 5 year term.

II. Issue

Incidents which involve the total loss of a vehicle and the resulting claim payments under a GAP waiver do not occur in a uniform prorata schedule. Therefore, an inconsistency exists between the distribution of the occurrences and risk of GAP claims versus the distribution of GAP fees earned and refunded. Ideally, the earning of GAP fees should align more closely to the claim risk to which GAP coverage applies.

III. Analysis Scope

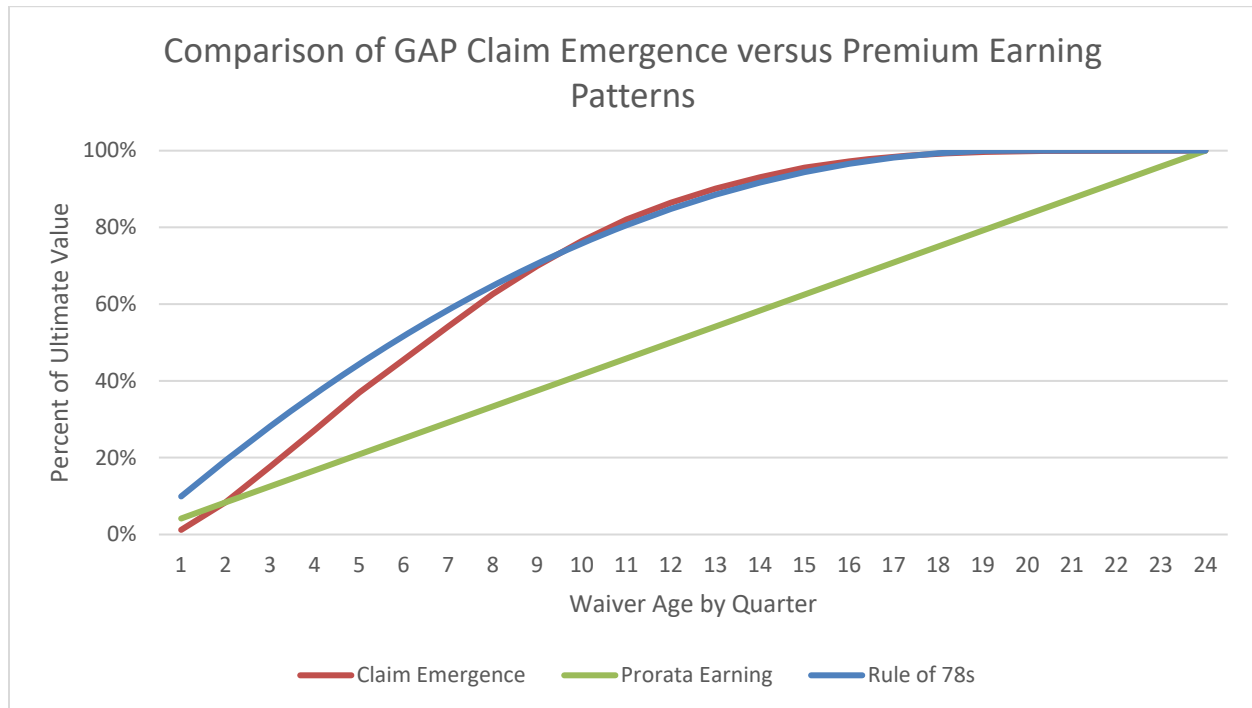
To analyze the distribution of claim risk, a relevant population of GAP waivers and their claim experience was examined. This empirical subset of nearly 700,000 contracts administered by WFI resulted in a population of over 18,500 GAP claims occurring since 2010. This robust data set reflects a sufficient volume to be fully credible, and an experience period relevant to current conditions.

IV. Results

The data demonstrates a stable and reliable pattern of vehicle total loss occurrences and GAP waiver claim payments. This pattern closely resembles a consistent and well-defined pattern generated by the method commonly known as the Rule of 78s, or the Sum of Digits method, with the term of the pattern reduced by 25%. This term reduction was made to minimize the difference between the pattern based

on empirical claim data and the resulting pattern based on the Rule of 78s (e.g. when comparing the two patterns, the average absolute difference at any given month of cancellation is 1.2%, which is well within standard levels of tolerance).

The chart below illustrates patterns for GAP waivers with a 72 month term.



V. Example

Below is a table illustrating sample refunds of waiver retail cost under each method upon cancellation of a 72 month waiver term at a common cancellation month (24).

Waiver Cost	Refund at 24 Months		
	Prorata	Rule of 78s Truncated 25%	Difference
\$300	\$200	\$91	\$109
\$450	\$300	\$137	\$163

After 24 months, one-third of the 72 month term has transpired, and two-thirds remain. Thus, a cancellation after the 24th month will generate a two-thirds refund based on the prorata method. However, about 70% of GAP claims occur within the first 24 months of the term, thus about 30% of the

claim risk remains after 24 months, and the customer is entitled to this share of a refund upon cancellation of the waiver at this time.

VI. Conclusion

When determining the amount of refund due upon cancellation of a GAP waiver, the outstanding amount refunded should reflect the amount of claim risk remaining on the waiver. The prorata method uses a uniform even distribution of claim risk over time, however, claim risk actually occurs at a different rate. Examining the historical experience of a large volume of GAP waivers and claim payments, the empirical claim risk transpires at a rate similar to that exhibited by the Rule of 78s, with the term reduced by 25%. Therefore, using the Rule of 78s as described herein is more appropriate than the prorata method when calculating the refund amount upon cancellation of a GAP waiver.

VII. Considerations

The techniques and methodology used to evaluate the refund amount upon GAP waiver cancellation are in accordance with and based upon sound principles of actuarial practice and are generally accepted within the actuarial profession. The assumptions used and the resulting actuarial estimates are, individually and in the aggregate, reasonable for the purpose of evaluating the financial determination of refund amounts, taking into consideration the past experience and future expectations for GAP waivers.

The data source for the analysis is a proprietary record of GAP waiver transactions. This data has been evaluated for reasonableness and consistency.

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