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Managing Non-Life Insured Products Sold Through Auto Dealers

Part I - Vehicle Service Contracts

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Introduction

Auto Dealers offer several insurance and insured products through their finance and insurance (F&I) departments other than credit life and credit A&H. Vehicle service contracts, gap and financing are three other products offered by the F&I department that are often insured by property & casualty insurers. We will examine each of these products separately in a three-part series. This first installment covers vehicle service contracts or VSCs.

Product Basics

Coverage

VSCs are a contractual promise to repair certain mechanical breakdowns which occur during the contract term. Coverage has two general forms — listed component and exclusionary. Listed component coverage specifies which parts, by component system, are covered. This type of coverage may range from powertrain coverage (engine, transmission & drive axle) to a comprehensive coverage including all component systems in the car. Exclusionary coverage, better known as "bumper-to-bumper," covers anything not excluded by the contract. Many VSCs include coverage for ancillary services such as roadside assistance, towing and rental car that are required because of a covered breakdown.

What is a breakdown?

A breakdown is often defined as the failure of a covered part to perform its function. A more liberal definition of breakdown is the failure of a covered part to perform within the manufacturer's specifications. Either definition also includes a list of what is not a breakdown. Typical entries on this list are:

- Regular maintenance as specified by the manufacturer
- Body & interior damage
- Failure caused by a pre-existing condition (used cars)
- Failure due to lack of proper maintenance as prescribed by the manufacturer
- Failure due to property damage (storm, collision, fire, etc)
- Breakdown during commercial use
- Repairs covered by the manufacturer

Term

For new and nearly new (used cars still under manufacturer's warranty) vehicles, the term generally runs for a specified number of years from the in-service date (the date when the vehicle was first sold) or until the odometer reaches a specified mileage, whichever occurs first. Some providers will extend the calendar portion of the term from the VSC purchase date rather than the in-service date for nearly new vehicles. Typical terms, in months and miles, are 36 months / 50,000 miles, 60 months / 75,000 miles, and 72 months / 100,000 miles. The term for used vehicles is the lesser of a specified number of months and miles from the VSC purchase date. Typical terms are 3 months / 3,000 miles, 12 months / 12,000 miles, 24 months / 24,000 miles, 36 months / 36,000 miles, and 48 months / 48,000 miles.

Coverage for nearly new cars is often called Extended Eligibility. This term indicates that the coverage may be purchased at a date later than the vehicle purchase date subject to certain conditions, such as at least 1 month and 1,000 miles remaining before expiration of the manufacturer's warranty.

Who is insured?

When sold a VSC by an auto dealer, the consumer gets a promise by either the dealer or a claims administrator to pay for covered breakdowns. He does not have an insurance contract. However, the obligor (i.e. the entity promising to pay) usually purchases insurance to pass this obligation to an insurer. Some states require that an auto dealer be the obligor for a VSC. If a VSC is sold by an entity other than an auto dealer in one of these states (e.g. lenders, internet sites and auto service centers), the VSC may be an insurance contract known as Mechanical Breakdown Insurance or MBI.

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Rates

VSCs are generally sold for a single premium which is either paid or financed at the time the vehicle is purchased. The price charged by the dealer is made up of 3 components - (1) insurance premium paid by the obligor, (2) administrative fees and (3) dealer markup. It is important to note that the total price charged is unregulated in most states. It is also important to note that component (1) is the only portion that is paid to the insurer. Components (2) and (3) are not paid to the insurer, nor are they included in premium for purposes of calculating premium tax or risk-based capital.

Refunds are calculated pro-rata based on remaining months or miles of coverage, whichever is less.

Deductibles

The most common deductible amounts are $200, $100 and $50 per claim, although some VSCs charge a separate deductible for each component system involved in the claim with a maximum of two or three deductibles per claim. Many insurers offer a $0 deductible and/or a disappearing deductible that is waived if the vehicle is brought back to the selling dealer for service.

Reserves

Since this product is usually sold as single premium, there are two primary reserves held — unearned premium and claims in course of settlement. Claim records are generally initiated when a vehicle goes in for service, so IBNR is not material and often not held. The longer the contract term, the greater the relative importance of unearned premium. For a typical book of VSCs, unearned premium is 10 to 20 times as large as the claim reserve. Also, claim reserve estimates based on unpaid amounts for open claims are usually accurate because all claims are known and there is little development.

Unearned premium, however, requires much more effort and judgement to estimate. The NAIC requires that the aggregate reserve held equal or exceed the larger of three quantities for each year of issue (3 year-old and older contracts can be aggregated): (1) the amount of insurance premium refundable to contract holders, (2) premium times future expected claims and expenses, divided by total expected claims and expenses, and (3) the present value of expected future claims and expenses. Several papers in the *CAS Forum, Fall 1999,* discuss this reserve calculation. These papers may be found at *http://www.casact.org/pubs/forum/99fforum/99fftoc.htm.*

Managing VSCs

The keys to managing a portfolio of VSCs are:

- Unbiased estimates of the emergence of claims by coverage and term
- Knowledge about the dealers and agents selling the VSCs
- Flexible program that can be adjusted by dealer in order to reflect the risks generated
- Knowledgeable and accountable claims personnel using appropriate administrative systems

Since the term of a VSC can extend 6 or more years and the entire premium is paid up front, an unbiased estimate of the emergence of claims enables the VSC actuary to make reasonable projections of ultimate losses and profitability of a book of VSCs. An insurer could go several years without making necessary rate increases or may cancel profitable accounts if a biased claim emergence pattern is used for these projections.

The typical patterns used by insurers before the NAIC reserve requirements (effective with 1998 statements) were pro-rata for used car coverages and reverse rule-of-78s for new car coverages. Pro-rata factors tend to underestimate early claims for used vehicles and overstate loss ratios because many purchasers drive more than the pro-rata number of miles per month. Thus their coverage expires based on miles before the time limit and claims decrease at the end of the coverage period. Any simple derivative of reverse rule-of-78s for new car coverages will also miss the mark. New car coverage claims are effectively zero, with the exception of ancillary benefits, until the first manufacturer's warranty expires. Claims then increase until the manufacturers' warranties expire on all covered vehicles, and finally decrease near the end of the term as some VSCs expire based on mileage. It is impossible to track this pattern with any simple calculation. See the sidebar — Vehicle Service Contracts, Some Actuarial Techniques — for a deeper look at this calculation.

The use of simple earnings methods often masked serious pricing problems. Over the past 20 years, many companies have entered the VSC market because of low entry barriers and the lure of rich single premium cash flows. Many of these companies left the market because they unknowingly offered under-priced coverage (remember the unlimited mileage plans of the early 80's) and sold too many VSCs before the problem was apparent.

Knowing the track record of dealers and the general agent (if any) that "controls" their business is essential in this business. Unlike a life or disability agent, the dealer can directly influence claims in a number of ways. Some examples are:

- Reconditioning – selling a VSC on a used car that was not adequately maintained, checked and serviced prior to sale
- Service bay sales – selling a VSC under an extended eligibility option because the vehicle has already had a number of problems
- Betterment – diagnosing and performing "covered" repairs when a true breakdown (failure of a covered part) did not occur.

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Vehicle Service Contracts, Some Actuarial Techniques

For the VSC actuary, the most critical and most difficult task is to develop good estimates of the emergence of claims by coverage and term. This task is critical because pricing decisions are based on this estimate. It is difficult because the data may be inadequate, incomplete or biased. Nonetheless, the actuary must make an estimate, carefully study results, and adjust the estimate as the studies indicate. Following are some techniques that may help in this process.

The earnings factor for a given contract month is an estimate of the ratio of claims paid through that contract month to the ultimate claims paid by the end of the contract. This is the most common expression of the emergence of claims. Ultimate expected claims for a book of VSCs are estimated by dividing incurred claims as of the study date by an earnings factor.

There are a number of techniques for estimating earnings factors, most of which are based on claim triangles. The first step is grouping the contracts into relatively homogenous cells, such as by type of coverage, vehicle group (e.g. Asian / domestic / European), term and initial mileage. Within these cells, VSCs are grouped by effective calendar quarter. Then contract counts and claims are summed by contract quarter for each effective quarter in each cell. These sums are the claim triangle data required for the calculation. Two methods of calculating earnings factors from this triangle, the Periodic Cost Method and the Link Ratio Method, are described below.

In the Periodic Cost Method, average claims per VSC exposed are calculated for each contract quarter. These average costs are projected using trend so that they represent estimated averages for a VSC issued on the study date. The earnings factors as of the end of the quarter are calculated as the ratio of accumulated costs through the end of the quarter divided by total costs through the end of the VSC.

In the Link Ratio Method, the cumulative incurred claims as of each calendar quarter are calculated and the ratio of successive quarters is determined. These ratios are Link Ratios and are the building blocks for estimating earnings factors by this method. When the VSC is fully earned (usually at the end of the term), its earnings factor is 1.00. The earnings factor as of the previous quarter-end is estimated by dividing the final factor by the weighted-average link ratio for the final contract quarter. The earnings factor for each earlier quarter is estimated as the next earnings factor divided by the corresponding weighted-average link ratio.

Both of the above methods are subject to bias as a result of underlying changes in the programs. For example, if the mix of vehicles changes from vehicles with low maintenance costs to vehicles with high maintenance costs (or vice versa) during the study period, the Period Cost Method will overstate (understate) the portion of claims incurred in the early durations. This overstatement is a result of using average costs for the early durations based on the more recent high-cost vehicles and average costs for the later durations based on the lower-cost vehicles. The link ratio method is not subject to this bias if the underlying claims emergence pattern is the same over time, even if the mix changes. However, it is subject to bias if the underlying claims emergence pattern changes. Possible causes include parts and labor inflation and longer manufacturer powertrain warranties on newer models (up to 10 years / 100,000 miles on some makes). To the extent these biases are known and can be quantified, the earnings factors should be adjusted accordingly.

A typical problem in estimating earnings factors is lack of data. If the program is relatively new, it may be impossible to estimate earnings factors from the program data. In particular, at least 3 years of experience is required before the claim results of a new car program are credible, because early breakdowns are covered by the manufacturer's warranty. Even if the program is mature, there may be new coverages or terms without seasoned data and there may be several cells with statistically insignificant data. Furthermore, there is not an industry experience database for VSCs. As in life and health insurance, a partnership with a knowledgeable reinsurer is a prudent way to operate in the absence of sufficient experience data.

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In addition, the dealer can influence claims indirectly through anti-selection. If the dealer has access to more than one VSC provider, the one offering the lowest rate for the desired make, model and term/coverage combination is selected for each VSC sold.

VSCs have been marketed for over 20 years and most dealers have experience that can and should be reviewed before setting them up on a program. Each new dealer should pass an underwriting screen that includes review of the following:

- Claim and Loss Ratio experience with prior carrier(s) for the past 5 – 7 years
- Number of contracts sold per month, with breakdown between new, used and extended eligibility
- Reason(s) for switching or adding carrier
- Number of programs currently offered

The dealer screen should be more stringent for high-volume dealers because they tend to be more sophisticated in dealing with insurers and there is more risk (i.e. greater potential profit or loss). Dealer participation in underwriting profits via experience commissions or reinsurance is a common method used to encourage high volume dealers to think of the insurer as a partner and increase program profitability for all.

Once a dealer is on a program, sales and claim results must be monitored regularly to detect the need for corrective action. Particular attention should be given to low volume or unusual concentration by term (anti-selection), excessive early claims on used cars, high average claim, high loss ratio and high frequency of claims. If the program has a flexible rate chart (most states that review rates allow a deviation up to +/– 30% for objective differences), rates may be adjusted. Other corrective actions include:

- Limiting extended eligibility to the sale date of the vehicle
- Limiting availability of longer term and/or exclusionary coverages
- Requiring used car inspections prior to coverage
- Imposing a 30 day (or longer) elimination/wait period before a claim can be made on a used car
- Limiting sales on non-franchise vehicles (e.g. used Fords sold by a GM dealer)

The ultimate corrective action is cancellation if all else fails or if the situation is so bad that the chance of sufficient improvement is low.

A well-designed administrative system facilitates the job of paying the right claims by verifying coverage, estimating costs for parts & labor, and providing easy access to claims information on the same vehicle or at the same shop.

However, it is easy for a repair shop to perform and provide documentation of a covered repair even if the repair was not needed, and it is much easier to pay a claim than to challenge one. Therefore, the claims personnel must be accountable for results because there is additional administrative cost to inspecting a vehicle with a questionable claim. Furthermore, the claims personnel must understand auto repairs in order to detect potential abuse in the first place. Use of an independent inspector and requiring pre-authorization approval will help avoid problems.

In summary, an insurer must develop appropriate expertise in underwriting, claims administration and actuarial in addition to marketing in order to build and manage a profitable book of VSC business.

Next installment: GAP

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