TPA Service Pricing and Incentive Contracts

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ABSTRACT

This paper addresses a variety of pricing issues faced by a Third Party Administrator (TPA) whose main responsibility is claims handling for self-insured employers and self-insured groups. These issues include the development of service fees using claim closure information, the selection of service durations, and the design of incentive (either activity-based or financially-based) service contracts.

BIOGRAPHY

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1. INTRODUCTION

Self-insurance programs are designed to capture the cash flow benefits arising from loss reserves and potential expense savings. To achieve these goals, self-insured employers and self-insured groups need to carefully select a professional service provider, also known as a Third Party Administrator (TPA). TPAs have substantial experience in claims handling, and they usually have access to other supporting services such as actuarial, loss control, managed care, and return-to-work programs. Thus, a TPA is generally regarded as the centerpiece of many self-insured programs.

From a service standpoint, the most significant difference between a TPA and a claims department of an insurance company is that a TPA provides claims services with a variety of *service lengths*, ranging from twelve months to the life of the claim. The primary product lines for self-insurance are Workers' Compensation and General Liability, which are also considered long-tail lines in insurance. Long-tail claims not only complicate the pricing for TPAs, but greatly affect the TPA fee options and service lengths available on the market. Given the long-tail nature of the product lines and the variety of the service lengths, TPAs in general have difficulties in forecasting the costs and pricing their products.

One might expect that the techniques used in insurance ratemaking and reserving could shed some light on how TPA service pricing should be performed. However, the aggregate approach used in insurance regarding unallocated adjustment expenses (ULAE) is not appropriate for pricing TPA products. A more detailed approach using service level and closing ratio by claim age seems to work well in predicting claim handling costs for various service lengths. Here, we

emphasize the significance of using *claim age* in the service fee development. Specifically, service level is assumed to have a functional relationship with claim age, which in turn is related to claims closure distributions. An example will be provided in the paper to illustrate how the information can be combined in the development process.

The last pricing issue to be discussed in the paper is the design of incentive contracts. This has become increasingly important for TPA pricing, especially in the area of financial incentive contracts, due to the surging market demand. Two major types of performance measurements for incentive contracts will be discussed and a recommendation will be made after considering important factors that could impact the financial results of a self-insurance program.

When discussing TPA pricing procedures and incentive contracts, the paper will focus its attention on Workers Compensation. However, the formulas, procedures, and examples can be easily generalized to include other lines such as General Liability and Auto Liability.

The remainder of the paper is organized as follows. In Section 2, we will discuss the various service options offered by the TPA industry and their implications to TPA revenue accrual and service planning. Section 3 addresses a variety of pricing issues faced by a TPA, including the development of service fees using claims closure information and the selection of service length. Discussions regarding the design of incentive (either activity-based or financially-based) service contracts and related issues are contained in Section 4. Concluding remarks are presented in Section 5.

2. FEE OPTIONS AND SERVICE LENGTH

As far as the regulation of pricing is concerned, TPA service pricing is not as closely examined by state regulatory agencies as insurance pricing. This is due perhaps to the same reasoning that applies to reinsurance pricing where both parties are large and knowledgeable regarding the trade in which they are engaged. As a result, the pricing of TPA service contracts is extremely competitive and TPAs usually need to customize their products to fit the needs of their clients.

Typically, a TPA is expected to provide its clients with several service fee options, which include *Per Claim, Dedicated Office/Unit, Percent of Incurred,* and *Percent of Paid.* There may be one or more choices of service length associated with each of the fee options listed above, ranging from twelve months to the life of the claim. Table 1 lists the major TPA service fee options and the service lengths available for the corresponding fee option. In this section, we will discuss the advantages and disadvantages of these fee options and their impacts on pricing.

Table 1: Major TPA Service Fee Options

Fee Option	Service Length
Per Claim	12 months
	24 months
	life of partnership
	life of claim
Dedicated Office/Unit	same as contract
% of Incurred/Paid Loss	usually life of claim
% of Premium	usually life of claim
% of Employees	usually life of claim

2.1 Per Claim: *Basics*

Since it is extremely flexible in service length, Per Claim has been the most popular choice among self-insureds, where service fees are based on the number of claims received by the TPA in the contract period. Under Per Claim, a self-insured client can choose from various service lengths for the claims to be serviced, such as *12-month, 24-month, Life of Partnership,* and *Life of Claim*. This diversity in service length is in contrast with the traditional insurance where insurers always service claims to conclusion.

Specifically, the fee for 12-month (24-month) claims service provides claims handling on new and open claims reported in the contract period for a period of twelve (twenty four) consecutive months. Consider an example where the contract period is from 1/1/95 to 12/31/95 and 24-month is the selected service length. A claim reported on 3/1/95 will be continuously serviced until 2/28/97, which is fourteen months after the end of the contract period. The total fee calculation is straightforward as shown in the following:

Table 2: Per Claim Fee Calculation for A New Customer

Contract Period	1/1/95 - 12/31/95
Service Length	24 months
Per Claim Charge	$250 per open claim, $550 per new claim
Number of Open Claims Known as of 1/1/95	200
Number of New Claims during Contract Period	300
Total Fee Charges Calculated on 12/31/95	$250 x 200 + $550 x 300 = $215,000

For a new customer, the charges for open claims assumed at the inception of the contract can be easily determined and billed. New claims (i.e., claims that have never been serviced by any claims administrators) are only billed when they are reported to the TPA. As a result, the total service charges under Per Claim cannot be determined until the end of the contract period. Note that the billing process can become complicated when a customer chooses different service lengths from contract to contract. Consider the following Per Claim contracts for a new customer starting in 1995:

Table 3: Sample Contracts

	Contract 1	Contract 2	Contract 3
Contract Period	1/1/95 - 12/31/95	1/1/96 - 12/31/96	1/1/97-12/31/97
Service Length	24 months	12 months	12 months

Notice that Contract 1 and Contract 2 have different service lengths. New claims reported in 1996 and 1995 will be billed as open claims in 1997 if they remain open on their first and second anniversary dates, respectively. In addition, all the open claims assumed at the inception of Contract 1 will be billed again if they are still open on 1/1/97. Since the service length for Contract 3 is twelve months, they will be available for billing again on 1/1/98 if they are not closed by then.

To make the Per Claim billing process even more complicated, a client can choose different service lengths for new and open claims by location and contract. Thus, it is obvious that in order to ensure receiving proper credits the TPA billing has to be claim-specific and should be able to keep track of the status of *individual* claims including service length and claim anniversary date. In practice, if the

current contract is not renewed, it is common for TPAs to cease servicing all claims at the end the current contract period regardless of the service length.

Life of Claim services provide claims handling until *settlement* at a fixed cost for new and open claims reported to the TPA during the contract period. *Life of Partnership* services are essentially the same as Life of Claim services except that the TPA will stop servicing all *existing* open claims if the contractual relationship between the TPA and the self-insured regarding *future* claims ceases. Due to competitive pressure, some TPAs may sell Life of Partnership service under the disguise of Life of Claim service with a lower price in hope of gaining customers. Self-insureds should carefully study the language of their service contracts regarding service length to avoid the consequences of such market misconduct.

2.2 Per Claim: *Issues*

Self-insureds can reduce claims servicing cost by choosing a service length that best fits their self-insurance program. For example, if a self-insured finds from its own experience that most of its claims can be closed within two years after the claims are first reported, a 24-month service plan may be the best choice. A tail claim service can be purchased to handle any open claims after two years of service. On the other hand, from a TPA's perspective, the longer the service length, the more uncertainty in service pricing and revenue accrual. Thus, to avoid adverse selections, a TPA needs to figure out appropriate pricing relativities between different service lengths, investigate the closure patterns of prospective clients, and impose risk charges for longer service lengths.

Similar to unearned premium reserves in insurance, portions of the TPA

revenue from a service contract need to be deferred when the service length runs across two or more calendar years. Note that the straight-line method used in calculating unearned premium reserves *cannot* be applied to the calculation of TPA service fee deferrals. This is because one has to recognize the uneven service levels at the various development ages of a long-tail claim. In other words, the age of the claim is critical in determining the average amount of time examiners spend on the claim. As a general rule, the older the claims, the less time they need for service. The pricing procedure to be discussed in Section 3 specifically uses this premise in determining service charges for Per Claim.

Based on the above discussions, it appears that for contracts with long service length, casualty actuaries can provide valuable services in the areas of TPA pricing and revenue deferral, as these are usually unfamiliar territories to TPA executives. Most self-insureds, however, are just as uncomfortable as TPAs to enter a contract with a long service length. In practice, 12-month handling is the predominant choice by self-insureds for their TPA service contracts. This phenomenon can be attributed to the following three reasons:

--- First, since most self-insureds are conscious of cost reduction, the selection of a shorter duration service plan can further help their cash flow.

--- Second, shorter service durations make it easier for a self-insured to move its program to another TPA if it is not satisfied with the current TPA's services.

--- Third, when the service contract for *future* claims between a TPA and a self-insured is not renewed, it would not be in the interest of the self-insured to have the same TPA handle their *existing* open claims due to a lack of financial incentives on the part of the TPA. In the case of Life of Claim handling, the self-insured and the TPA need to be in close

contact regarding claims handling for many years after the termination of the service contract.

From a TPA's point of view, a contract with a short service length does have its downside. More components in a contract need to be renegotiated at the contract renewal, and renewal negotiations occur more frequently. As a result, TPA's overhead expenses may be significantly increased due to renewal activities. If the majority of the TPA contracts have short service length, it would be difficult for a TPA to project its future claim volumes and revenues.

2.3 Dedicated Office/Unit

Dedicated Office/Unit is an option where a TPA sets up a claims office or a claims unit within an office to exclusively handle claims for the client. The set-up cost and the subsequent administrative costs, as well as the TPA's overhead and profit, are fully paid by the self-insured. Under this option, the service length for all claims, regardless of age, is the same as the contract period. If the contract is not renewed, the TPA will stop servicing all the claims at the end of the current contract period. This option poses the least pricing risk to a TPA since expenses are billed as soon as they are incurred. However, this option is usually more expensive and only recommended for larger self-insureds.

To self-insureds, the major advantage of such an arrangement is that claims examiners are familiar with the self-insured and thus are able to satisfy the client's special needs in claims handling. In addition, the location of the dedicated office can be selected strategically so that most of the current and potential claimants can be in the vicinity of the claim office. This is especially beneficial to clients who are

geographically concentrated such as municipalities and school districts.

Theoretically speaking, an insurance company can minimize its total payout by allocating its resources between losses and adjustment expenses. Doing so recognizes that spending more on loss adjustment may reduce loss payments and can potentially result in a lower *overall* cost because of the better claims management. By being self-insured and choosing the dedicated office/unit option, a customer is in total control of their resource allocations and is able to dictate the degree of care and the amount of time examiners spend on each case. One can demand more claim examiners to service a fixed number of claims (i.e., a lower caseload per examiner) and thus provide better service to claimants. Others may opt for a higher caseload per examiner to save adjustment expenses. Thus, under Dedicated Office/Unit, the role of the TPA is somewhat reduced to providing the staff, computer systems, and other related technical services while the client makes the more important financial decisions and determines the extent of the claims services.

2.4 Percentage Approach

Based on a pre-determined percentage of the base figure (e.g., incurred loss) this fee option includes three major varieties: *Percent of Incurred Loss*, *Percent of Paid Loss*, and *Percent of Premium*. The service length is usually the life of the claim as it would be difficult to determine the service fee by claim age on a percentage basis. Percent of Premium is used less frequently than the other two, perhaps because this option requires far more information and insurance expertise for underwriting.

Both Percent of Paid Loss and Percent of Incurred Loss are highly

individualized pricing approaches, where service charges for any claims are directly related to the cost of the claims. A TPA needs to constantly monitor the paid or incurred amount to determine if additional billings are necessary. Consider a claim whose ultimate cost is initially estimated at $30,000. Later it is found that a medical treatment is needed for an additional $20,000. Assuming the TPA fee is set at 7% of incurred loss, the fee charge for this claim will increase from $2,100 to $3,500 due to the medical treatment.

From the outset, it appears that if the percentage is selected appropriately both methods are equitable ways to determine compensations for TPA services. However, a closer look reveals that there are serious drawbacks inherent in the methods. First, the perception of a TPA as an independent third party in claims handling could be lost since the TPA service fees are linked to the settlement amount. TPAs may be always under the suspicion of having little incentive to control claim costs. Second, it is also difficult for TPAs to manage the billing as incurred and paid amounts for individual claims change constantly. Third, although for any claims the paid amount eventually equals the incurred amount, the timing of the claim payments under Percent of Paid dictates how quickly the TPA can bill their clients. For example, most of the claims in litigation are not paid until the legal issues are resolved. At the same time, most of the handling service work on those claims has already been done. Thus, depending upon the underlying frequency and severity distributions, the use of Percent of Paid may result in significant risk-taking on the part of the TPA in terms of potential cash flow problems.

3. DEVELOPMENT OF TPA SERVICE FEES

3.1 Insurance Ratemaking and Reserving

In insurance ratemaking and reserving, unallocated loss adjustment expenses (ULAE) are estimated on an aggregate basis. For example, the provision for ULAE in insurance rates is generally assumed to be a certain percentage of the premium using the industry experience. As far as reserving is concerned, the reserves for ULAE are estimated using the ratio of the historical ULAE to loss and allocated among individual accident years by assuming that 50% of the ULAE is paid when the claim is reported, and the other 50% is paid when the claim is settled.

There have been few changes in the ways that ULAE is built into rates and how ULAE reserves are calculated. It appears there is no such need for insurance companies to establish a higher level of accuracy in the estimation of ULAE. After all, the provision for ULAE accounts for, on average, only 6% of the rate and the variations in loss generally overshadow those in ULAE.

On the other hand, since a TPA's major business is claims handling, the ability to break the cost down by claim type and service length is extremely important to the pricing of TPA services. The aggregate approach and the ad-hoc rules used in insurance ratemaking and reserving are hardly adequate for TPA service pricing. Instead, the approach using service level and closing ratio by claim age works well in predicting the claims handling costs for various service lengths.

3.2 **Per Claim**: *Pricing New Claims*

In this section, we will explore how claims closure and service level

information can be used to develop Per Claim service fees. Specifically, service level (i.e., examiner time) is assumed to have a functional relationship with claim age, which in turn is related to the claims closure distribution.

Let x be claim age measured in months and $F(x)$ be the cumulative probability distribution function for claim closure. Thus $(1-F(x))$ is the probability of a claim that will be open more than x months since reported to the TPA. Let $g(x)$ be average service time spent on an open claim at age x (e.g., number of hours examiners spend on a case at age x). The shape of $g(x)$ may take many forms depending on the line of business and the type of claims. In the case of Workers' Compensation indemnity claims, two types of service time curves are usually observed: a downward sloping curve and a humped curve with its peak in the first six months. An example of each curve is shown in the following charts.

Chart A: Average Service Time Per Claim By Claim Age

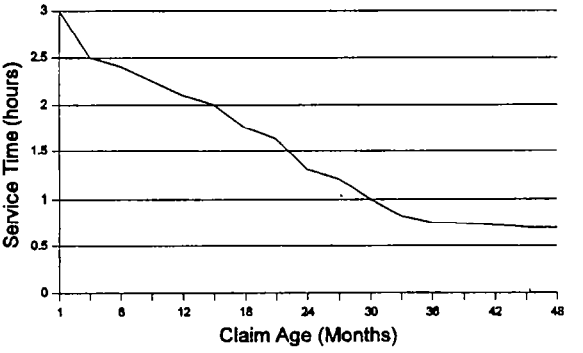
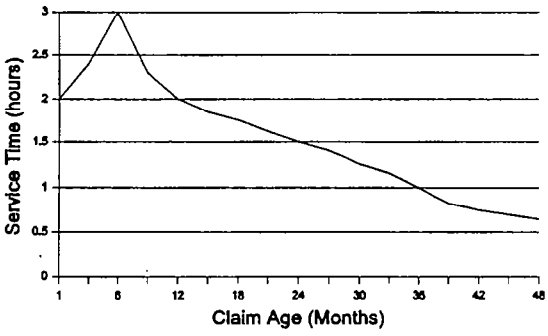


Chart B: Average Service Time Per Claim By Claim Age



Both curves indicate that most of the service time for an average claim is spent in the first 18 months. This may be contrary to the common belief that older claims require more service time per month to settle than those claims that are settled early and quickly. However, experience has shown that the two most time-consuming activities of claims adjusting are the investigation of injuries to determine compensability and the coordination of medical treatments which include surgeries and rehabilitation. Since these activities occur more frequently in the early stage of the claims, $g(x)$ is usually a downward sloping curve or a humped curve for Workers' Compensation indemnity claims.

The expected value of the total discounted service time for a *new* claim to be handled to settlement can be expressed as:

$$\sum_{x=1}^{\infty} \beta^{x-1} g(x)(1 - F(x))$$

in discrete time where the Greek letter beta is the discount factor. A discount factor can be selected by the TPA to suit its own need. For simplicity, all subsequent formulas will be expressed in discrete time format.

The next step is to figure out the unit cost of examiner time at the *middle* of the contract period including salary, benefits, overhead, and profit. For example, assume that the annual salary and benefits for an examiner are given at $50,000 while overhead and profit account for 50% of the cost. Given that the total working hours in a year are 2,000 (250 working days and eight hours per working day), the unit cost of examiner time can be set at $50 per hour [($50,000/0.5)/2,000].

Let $P(m, n)$ be the price for handling a claim from age m to age n and let c be the unit cost of service time at the middle of the contract period. Then the Per Claim service price for the life of the claim can be shown as follows:

$$P(1,\infty) = c \sum_{x=1}^{\infty} \beta^{x-1} g(x)(1 - F(x))$$

Similarly, the *new* claim service prices for 12-month and 24-month handling can be calculated using the following formulas, respectively:

12-Month $$P(1,12) = c \sum_{x=1}^{12} \beta^{x-1} g(x)(1 - F(x))$$

24-Month $$P(1,24) = c \sum_{x=1}^{24} \beta^{x-1} g(x)(1 - F(x))$$

Note that there is no explicit assumption for the increase in service unit cost c over the service period. Such an assumption can be imbedded in the discount factor chosen by the TPA. The following example shows how service time and claim closure information are combined to develop the service fees for Per Claim. The

example can be generalized to use other time units, e.g., quarter, for the measurement of claim age.

Table 4 : An Example of Fee Development for Per Claim

Claim Age	Service Time(g(x))	Closing % (f(x))	Cumulative Closing % (F(x))	Open % (1- F(x))	g(x) * (1- F(x))
1st Month	10 hrs.	10%	0%	100%	10 hrs.
2nd Month	14 hrs.	14%	10%	90%	12.6 hrs.
3rd Month	15 hrs.	12%	24%	76%	11.4 hrs.
4th Month	13 hrs.	11%	36%	64%	8.32 hrs.
5th Month	10 hrs.	10%	47%	53%	5.3 hrs.
6th Month	8 hrs.	9%	57%	43%	3.44 hrs.
...	...	...			
12th Month	3 hrs.	2.5%	74%	26%	0.78 hrs.
...	...	...			
24th Month	1 hr.	1.2%	90%	10%	0.1 hr.
...	...	...			
36th Month	0.5 hr.	0.7%	95%	5%	.025 hr.
...	...	...			

The cumulative closing percentage at the beginning of the first month is zero. By the end of the month, there is a ten percent probability that the claim can be closed and the service time rendered in the month is ten hours. Thus, the *expected* service time for the first month is ten hours as indicated in the last column of the table. Note that $g(x)$ is the average service time for claims open at age x. Since the probability of being open at age x is $(1-F(x))$, the expected service time at age x for each claim is $g(x)(1-F(x))$. For the second month, $g(2)$ is 14 hours and $(1-F(2))$ is 90%. Therefore, the expected service time in the second month is 12.6 hours. It is straightforward to calculate the expected service time for the remaining months.

Shown below are the estimated Per Claim prices for 12-month, 24-month, and Life of Claim using the sample data in Table 4.

$$\textit{12-Month} \qquad P(1,12) = c\,[10 + \beta\,12.6 + \beta^2\,11.4 + \ldots + \beta^{11}\,0.78\,]$$

$$\textit{24-Month} \qquad P(1,24) = c\,[10 + \beta\,12.6 + \beta^2\,11.4 + \ldots + \beta^{23}\,0.1\,]$$

$$\textit{Life of Claim} \qquad P(1,\infty) = c\,[10 + \beta\,12.6 + \beta^2\,11.4 + \ldots + \beta^{23}\,0.1 + \ldots\,]$$

For Life of Partnership handling, a subjective probability distribution has to be included to indicate the possibility of cancellation. In general, it is assumed that the average time of a contractual relationship between a self-insured and a TPA is three to five years. Consequently, the variations in Life of Partnership pricing among TPAs can be significant, depending critically on the expectation and the risk tolerance level of the TPA.

In establishing claim closure distributions, a TPA needs to consider segregating its experience into more homogeneous groupings. Long-tail lines usually exhibit very distinctive closing patterns compared to other product lines. Even within a long-tail line, it is usually beneficial to subdivide experience by claim type. For example, in Workers Compensation, most medical-only claims can be closed within six months while some indemnity claims can linger for more than five years.

There is no doubt that the procedure discussed here can establish only a baseline for pricing while much of the pricing decision has to be based on the underwriting characteristics of the customers. One needs to examine, among other things, the claim closing patterns of the prospective clients in order to determine the deviation of their experience from the TPA's own experience, and adjust the price accordingly.

3.3 Per Claim: *Pricing Open Claims*

Using the same notations as in 3.2, the service fees for an *open* claim at age k can be calculated as follows:

$$\textit{12-Month} \qquad P(k+1,k+12) = c \sum_{x=k+1}^{k+12} \beta^{x-k-1} g(x)(1-F(x))$$

$$\textit{24-Month} \qquad P(k+1,k+24) = c \sum_{x=k+1}^{k+24} \beta^{x-k-1} g(x)(1-F(x))$$

$$\textit{Life of Claim} \qquad P(k+1,\infty) = c \sum_{x=k+1}^{\infty} \beta^{x-k-1} g(x)(1-F(x))$$

In practice, service charges for claims open more than twelve months are seldom based on individual claim age as it would be tedious to calculate the fees. A weighted-average charge is applied to each open claim regardless of its age. Assuming the claim volume from year to year is stable, the formulas for the weighted average charges can be shown as:

$$\textit{12-Month} \qquad c \frac{\sum_{y=12}^{\infty} [(1-F(y)) \sum_{x=y+1}^{y+12} \beta^{x-y-1} g(x)(1-F(x))]}{\sum_{y=12}^{\infty} (1-F(y))}$$

$$\textit{24-Month} \qquad c \frac{\sum_{y=12}^{\infty} [(1-F(y)) \sum_{x=y+1}^{y+24} \beta^{x-y-1} g(x)(1-F(x))]}{\sum_{y=12}^{\infty} (1-F(y))}$$

$$\textit{Life of Claim} \qquad c \frac{\sum_{y=12}^{\infty} [(1-F(y)) \sum_{x=y+1}^{\infty} \beta^{x-y-1} g(x)(1-F(x))]}{\sum_{y=12}^{\infty} (1-F(y))}$$

where $(1-F(y))$ is the probability weight used for the y*th* month.

3.4 State-Group Relativities for Per Claim

For a TPA with clients in multiple states, there is a need to differentiate service costs among states. To calculate Per Claim charges by state, one can establish state-group relativities, which are similar to those used in class ratemaking in insurance pricing. Once state-group relativities are established, updates of the base price for each state can be performed easily.

The criteria to divide states into state-groups with similar claims handling costs can be based on the TPA's internal claims closure experience and cost by state, supplemented by statistics from national or state rating bureaus. For Workers' Compensation, important statistics include the percentage of serious cases and the per claim severity, which may differ significantly by state. In addition, the degree of state regulation which is always an important contributing factor to TPA's service costs, can also help determine the makeup of the state-groups.

As far as the values of state-group relativities are concerned, specific actuarial techniques and much more data are needed to establish credible estimates. Even a national TPA may not have enough information in all claim categories for all states. Thus for local or regional TPAs it is believed that state-group relativities can only be set judgmentally based on the TPA's internal cost and published information from state rating bureaus.

4. INCENTIVE CONTRACTS

The last pricing issue to be discussed in the paper is the design of incentive contracts. There has been a strong interest among self-insureds to establish a relationship between service fees and TPA performance in order to monitor the effectiveness of TPAs in controlling claim costs. Essentially, an incentive program requires that a certain percentage of the service fees be set aside for a bonus or penalty based on several performance measurements of the TPA services. The results of the performance measurements valued as of pre-determined dates are compared to negotiated targets for the calculation of the bonus or penalty.

Before discussing any specific performance measurements, it is useful to set some common-sense criteria to evaluate their feasibility. The following provides a reasonable checklist for such purposes:

--- First, the TPA has sufficient control over the performance measurement.

--- Second, the value of the performance measurement can be objectively determined, and both parties have the ability to track results.

--- Third, there exists reliable benchmark data for comparison.

4.1 Basics

In general, there are two major types of performance measurements: *activity-based* and *financial* measurements. Popular measurements of TPA performance are usually activity-based such as number of claims closed by age, timely bill payments, timely claim processing, and reserving adequacy. The usual financial measurements for incentive programs include paid loss and incurred loss.

Clearly most activity-based measurements can easily satisfy the three criteria. Take timely bill payments and claim processing as examples. An incentive program can stipulate that claim bills should be paid by the TPA within two business days after receiving the bills, or claimants should be contacted within twenty four hours after the claim is reported. The data for calculating such performance measurements should be available from the TPA's system and the results of the measurements can be easily determined. Therefore, the implementation of such an activity-based incentive program is usually straightforward.

4.2 Financial Incentive Contracts

The TPA industry has been experiencing more demand for financially-based measurements, such as comparing actual and target incurred/paid amounts for claims incurred within the service contract period. In general, TPAs are hesitant to accept financial based measurements as it may appear they are taking insurance risk in which they have insufficient knowledge and little interest. However, given that financial-incentive contracts have gained considerable popularity in recent years, the TPA industry was forced to come up with measurements that are mutually agreeable to the claims administrator and the self-insured.

Some suggested using total policy year paid or incurred loss by development age as a performance measure for a risk-sharing program. Specifically, paid or incurred loss by development age is measured against an index such as policy year payroll before it is compared to a pre-determined goal. Using the criteria described at the beginning of this section, it is clear that the amount of paid or incurred loss by development age *per se* can be easily determined. However, the TPA does not have sufficient control over the measures as any total losses are affected by, among other

things, frequency, exposure, and inflation. In addition to the extreme volatility of paid and incurred losses, it is difficult to find reliable data for benchmarking purposes. Although these drawbacks may seem obvious to casualty actuaries, many self-insureds insist on using changes in paid-to-date or incurred-to-date loss as a performance measurement.

4.3 A Suggestion: *Use Averages*

Take Workers' Compensation as an example. There are four factors that could significantly change the financial results of a self-insured program, namely: exposure(payroll) changes, state benefit changes, claim frequency changes, and inflation. It is quite obvious that a TPA should *not* be responsible for variations due to changes in exposure, frequency, and benefit level since none of these factors can be effectively controlled by a claims administrator. For example, higher frequency in reported WC claims can be the result of a layoff, which is beyond the control of the TPA.

To eliminate the impact of frequency changes on loss, it seems appropriate and much more equitable to use *incurred per claim severity* as a performance measure for a financial risk-sharing plan. By eliminating the variations in frequency and exposure, per claim severity usually exhibits stable development patterns, given sufficiently large claim volumes. Additional benefits of using per claim severity as a performance measure are:

--- First, there is no need to compare per claim severity to payroll or number of employees for incentive contract purposes.

--- Second, the industry average cost per claim by state is available from state rating bureaus. Consequently, benchmarking should be easier and

the results should be much more reliable.

--- Third, by comparing to an industry average, the variations due to changes in benefit level can be eliminated. Thus, attention can be focused on per claim severity which can be managed and partially controlled by the TPA.

It is suggested that as a performance measurement, per claim severity should be used on an ultimate basis. Only when the baseline for comparison is established on an ultimate basis can the loss experience of a policy year be truly evaluated. The results can be very misleading if one is merely looking for the incremental changes between two development ages, which are subject to the timing of claim payments and reserve recording.

Ideally, an incentive contract can look and operate in a way similar to retrospective rating plans. To establish a baseline for a policy year, the usual actuarial methods can be applied to loss data in the estimation of the ultimate severity. This can be done six months after the end of the policy year, the same time when retrospective rating plans start to evaluate policy year experience. The main difference is that in retrospective rating the target incurred loss is revised every twelve months thereafter until the final settlement of the policy year, while in incentive contracts a baseline (i.e., estimated ultimate severity) is determined six months after the end of the policy year for benchmarking purposes at later dates. A bonus or penalty can be calculated based on the deviation of the projected ultimate per claim severity at a later evaluation date (e.g., thirty months after policy inception) from the baseline. A subsequent computation/adjustment can be carried out every twelve months until both parties agree that the latest computation shall also be the final one for the policy year.

5. CONCLUDING REMARKS

One important component that is noticeably missing in TPA pricing is self-insurance database support. Self-insured entities do not report loss, payroll, or other relevant experience data to state rating bureaus. To meet their pricing needs, TPAs always have to rely on their own experience or purchase data from state rating bureaus, which may or may not be appropriate for the self-insurance purposes. The National Council on Compensation Insurance has recently initiated a program for collecting loss data on self-insured groups. This may be a good start towards a more complete and reliable database for TPA pricing.

With the introduction of managed care organizations (MCOs) in many states, the role of TPAs in the business of claims handling may soon be fundamentally changed. Judging from developments over the past few years, TPAs and MCOs may have to share, in the near future, the responsibilities in medical cost containment, rehabilitations, and return-to-work programs. On the other hand, TPAs may be in an excellent position to launch their own medical networks and merge these two functions into one. It will be interesting to see how these changes will impact the pricing of traditional TPA services and the expanded services provided jointly by a TPA and an MCO.

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