

**PRICING WORKERS' COMPENSATION
LARGE DEDUCTIBLE
AND EXCESS INSURANCE**

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Pricing Workers' Compensation Large Deductible and Excess Insurance

by Michael Teng

Abstract

As the cost of Workers' Compensation insurance coverage continues to rise, many employers are looking for alternative ways to fulfill this obligation. Two products stand out in particular: Large Dollar Deductible plan, and Excess WC insurance which covers excess loss exposure for a self-insurance program. Since these products are relatively new and are usually offered to large employers only, there have been few regulations on the pricing method. This paper presents the nature of the insurance coverage in each product, and discusses possible ways of pricing them. This paper does not recommend specific pricing methods, but rather focuses on the cost drivers underlying each product, and explore ways to incorporate them in the price.

Introduction

Today, Workers' Compensation (WC) insurance coverage is an expensive product for most employers, yet this coverage is mandatory in most states. Thus, employers are looking for alternative ways to finance this obligation. Large employers, in particular, may purchase a large dollar deductible (LDD) plan or self-insure their WC exposure.

Under the traditional WC insurance, the insurer covers the insured's exposure from the first dollar of loss. An LDD plan or a self-insurance program usually requires that the insured pay losses up to a certain threshold. This threshold is often called a deductible on an LDD plan, or a self-insured retention (or just retention) for self-insurance; it is typically \$100,000 or higher. The insurer pays the portion of losses that exceed these thresholds. Many insured employers like this type of arrangement because it gives the employers more control of their losses, and saves them a potentially sizable portion of the taxes and assessments associated with the WC insurance.

Eligibility for buying an LDD plan or qualifying for self-insurance differs by state. In general, employers with more than \$500,000 of premium equivalence (the premium that the employer would have otherwise paid on a fully insured WC plan) are eligible for an LDD plan, though some states allow an eligibility level as low as \$100,000. The eligibility level for self-insurance is usually higher.

Under an LDD plan, the insurer covers the insured's excess loss exposure and provides all the services for that plan. Under a self-insurance arrangement, the self-insured may contract a service company to service the plan or service the plan internally. The self-insured is usually required by law to purchase separate Excess WC insurance from an insurance company to cover catastrophic accidents.

This paper discusses the pricing for

- a. Large Dollar Deductible Plans (This may be referred to as LDD plan, or simply LDD in the future), and

- b. Excess WC insurance (or Excess WC in brief) over a self-insurance program. Pricing of the services for the program itself will not be discussed here.

Pricing for the traditional WC coverage is usually heavily regulated by state. Pricing for LDD plans and Excess WC insurance, on the other hand, is usually not as heavily regulated. This gives the insurer a greater flexibility to price according to the nature of the covered exposures. The focus of this paper is not to recommend specific pricing methods, but rather to present the exposures underlying each product, and to explore ways to price them.

Service and Insurance Coverage

Service

Traditionally, a WC insurance policy offers services as a part of the whole insurance package. These services include claim payment, legal consultation, work site inspection, payroll audit, statistical reporting, and other insurance-related functions.

Under an LDD plan, most of these functions remain with the insurer. The insurer typically issues a regular WC insurance policy to the insured, attaching an endorsement stating that the insured is to reimburse the insurer for the losses below a specified deductible. Thus, the insurer would service the insured just as if the insured is covered under a fully insured WC plan. But, losses under the deductible will be billed to the insured for reimbursement. In fact, because an LDD plan is really a regular WC insurance policy with a reimbursement endorsement, a few states call it a "WC Reimbursement Plan".

Many employers like this type of arrangement for the following reasons:

1. Medium size employers may not qualify for self-insurance, but may qualify for an LDD plan.
2. By purchasing an LDD plan, an employer may gain many advantages associated with self-insurance, such as control over the primary layer loss (i.e., loss below the deductible) and savings on taxes and assessments, without having to file to qualify for self-insurance and arrange for a service contract.
3. If an employer is converting from a fully insured plan to an LDD plan under the same insurer, the employer is already familiar with the insurer's operation and customer service.
4. An insurer who is equipped with numerous years of experience in handling WC claims may be the best candidate to provide quality services to its customers.
5. An LDD plan is similar to a loss sensitive insurance plan (e.g., a paid loss retro plan) under which the insured may be currently

insured, where the insured funds its own losses up to a certain limit while utilizing the insurer's services. This reduces the anxiety in converting from a fully insured plan to a deductible plan. Moreover, by purchasing an LDD plan, the losses below the deductible will not generate premium. In most states, this derives significant savings on premium taxes and assessments.

Under a self-insurance program, the employer (the self-insured) may contract with a Third Party Administrator (TPA) to service the program or, alternatively, service the program itself if feasible. This type of arrangement differs from an LDD plan in that:

1. The insurer would no longer service the program. Instead a TPA or the self-insured itself would perform these functions. Thus, the employer must take additional steps to ensure that the quality of service is not eroded by going self-insurance.
2. Moreover, the expenses paid by a self-insured to a TPA will not be treated as WC premium, as would in most LDD plans, this implies savings on the taxes and assessments.

Like an LDD plan, however, losses funded by the self-insured under the retention would not be treated as WC premium, thus providing savings on the taxes and assessments.

Excess Loss Coverage

Under an LDD plan, since the insured is really purchasing a full WC coverage with a deductible endorsement, it actually has the excess loss coverage as a part of the package. The nature of the excess coverage depends on the way losses are to be reimbursed to the insurer. For example, if a particular LDD plan states that the first \$100,000 of losses on every accident is to be reimbursed by the insured, then that plan is actually providing a per-occurrence excess coverage over \$100,000. And if a plan states that the total amount of losses to be reimbursed by the insured will not exceed \$500,000, then the plan is providing an aggregate excess loss coverage over \$500,000.

Under a self-insurance program, most states require the self-insured to purchase an Excess WC insurance from a licensed insurer to guard against catastrophic claims. Similar to an LDD plan, Excess WC

insurance may provide excess coverage on a per-occurrence basis, on an aggregate basis, or both. Unlike traditional WC coverage or an LDD plan, the coverage provided by Excess WC insurance is not regulated in most states, thus providing the insurer wide latitude to design a coverage that suits its customer's needs.

Pricing

Large Dollar Deductible

Most states grant wide pricing flexibility on the LDD plans. However, the pricing formula usually has to be approved by the state. There are generally two ways of pricing an LDD plan. One way is to calculate a credit to be subtracted from the full-coverage premium. The credit would equal the expected amount of losses and expenses under the deductible that would be reimbursed by the insured. In other words,

$$\text{LDD premium} = \text{Full-coverage premium} - \text{Expected reimbursable loss and associated taxes and expenses.}$$

This method assumes that the full-coverage premium is adequate. However, in many states this may not be true. In these states, the pricing formula has to contemplate a factor to adjust for the overall rate adequacy.

Another way is to calculate and sum up the different cost components associated with an LDD plan. This approach explicitly lays out every cost component in the pricing formula, and is generally more justifiable and appealing to the customers. The major cost components associated with an LDD plan are:

1. Excess loss cost: This may include per-occurrence excess loss or aggregate excess loss, or both, depending on the contract. Allocated loss adjustment expense (ALAE) may or may not be rated with loss.
2. Loss adjustment expense: Since an LDD plan is a regular WC policy with a reimbursement endorsement, the insurer is responsible for adjusting all claims regardless of whether they penetrate the excess layer. Thus one cost component would be the overhead expense incurred for adjusting the claims, or, according to the traditional actuarial terminology, the unallocated loss adjustment expense (ULAE).

ALAE, which is primarily attorney fees and case management expenses, is usually included in the loss when calculating the

reimbursement amount. Though ALAE may also be included as a separate expense component, more and more employers and insurers are including them with the loss because of their growing size with respect to the loss.

3. General overhead expense: This cost component covers the insurer's overhead expenditures on such functions as general management, underwriting, policy production, statistical and actuarial, and information systems.
4. Acquisition expense: This includes sales commission and sales office expenses.
5. Risk load for credit risk: Most states require the insurer to advance loss payments to the claimant (the injured worker) and seek reimbursement from the insured afterward. This places the ultimate burden of payment on the insurer. There is the possibility that the insured becomes financially unable to reimburse the losses under the deductible, thus placing the entire burden of loss payment on the insurer. This risk should be reflected in the pricing, the amount of which depends on the financial stability of the insured as well as the amount of collateral held on behalf of the insured.
6. Tax and assessments: This includes state taxes and assessments levied based on loss or premium.
7. Profit and contingency for writing the business.

A formula for calculating the LDD plan premium is as follows:

LDD Premium =

$$\frac{[EL \times (XL + ULAE + LBA)] + [SP \times (GO + CR)]}{1 - A - T - P}$$

where:

- EL = Expected total loss. If ALAE is included in the loss when calculating the deductible, EL should be loaded by an ALAE factor.
- XL = Expected excess loss as a percentage of total loss. Excess loss can be on a per-occurrence or aggregate

	basis. This factor may be different when ALAE is included with loss than when ALAE is not included.
LBA =	Loss based assessment factor. Though losses under the deductible are usually not coded as premium for the premium-based tax and assessments, many states still require the insurer to pay second injury fund assessments on this portion of the loss. LBA is used to pass these assessments to the insured.
ULAE =	Ratio of ULAE to loss.
SP =	Standard premium.
GO =	Ratio of general overhead expense to standard premium.
CR =	Compensation for credit risks, stated as a ratio to the standard premium.
A =	Acquisition expense as a percentage of the net LDD premium.
T =	Tax and assessment rate based on the net premium.
P =	Profit and contingency as a percentage of the net premium.

This is one way of summing up the various cost components. There are, of course, other ways to do it. It is important to understand the factors influencing each cost component, to evaluate the impact of these factors on the final price, and to incorporate them in the pricing formula. Some of the factors to be considered are discussed below:

1. Excess loss cost

The excess loss cost has two components: one for losses exceeding a per-occurrence deductible, and one for losses exceeding an aggregate deductible. Because of the flexibility in pricing, there is more than one way to estimate these costs.

The approach presented in the formula above is based on manual rating values. It multiplies the expected total loss by an excess loss pure premium factor (ELPPF) to estimate the per-occurrence excess loss, and by an insurance charge to estimate the aggregate excess loss.

The ELPPF represents the expected amount of loss above a per-occurrence deductible level as a ratio to total loss. NCCI and various state rating bureaus calculate them for the

retrospective rating plans. They are derived by looking at industrywide loss experience on the excess layers as a ratio to total loss. For each state, the ELPPFs are listed by deductible level and by WC Hazard Group.

The Insurance charge represents the expected amount of loss above an aggregate deductible level as a ratio to total loss. These may be found in the Table of Insurance Charges that NCCI and the state rating bureaus publish.

These book rating values may be a good starting point for estimating the excess loss. However, published ELPPF and insurance charge reflect industry wide experience and may not be entirely suitable for a particular insured. One should consider the following insured-specific information:

- a. The nature of the insured's business. Since the ELPPF is only classified by Hazard Group and deductible level, this scheme may not adequately reflect the excess layer loss exposure for a particular insured. Thus, further refinement on the ELPPF may be necessary to tailor it to a particular insured's exposure. The manual insurance charge values may also need adjustment if the insured has an unusual business concentration in a particular location, or if the insured is undergoing a major down-sizing (down-sizing usually requires laying off workers, which tend to generate workers' compensation claims).
- b. Insured's prior loss history. The insurer should pay particular attention to the frequency of serious injuries since they are the ones that are likely to exceed the retentions. Frequency of the less serious injuries is also important because the more claims there are, the more likely there will be a serious one.
- c. The insured's attitude toward workplace safety, and access to cost containment measures such as managed care. Well administered loss prevention and managed care programs are very effective in containing large claim costs.
- d. Overlap between the ELPPF and the insurance charge. If the pricing model uses ELPPFs and insurance charges to

calculate the expected excess loss, then the overlaps in these two charges should be eliminated. A popular approach to eliminate this overlap is the Insurance Charge Reflecting Loss Limit (ICRL) procedure. One may also use a collective risk model or simulation technique to estimate the overlap. The discussion on these techniques is outside the scope of this paper.

- e. Whether or not ALAE is rated with loss. The proper ELPPF to use in pricing may be different when ALAE is included in the loss than when it is not. Traditionally the NCCI and state rating bureaus have calculated ELPPF excluding ALAE. Recently, due to the introduction of the flexible retro rating programs, these bureaus are now calculating ELPPF both on an ALAE-included and ALAE-excluded basis.

2. Expense

In an LDD plan, ALAE is typically included in the loss in computing losses under the deductible.

ULAE and general overhead expense are usually charged based on the entire pre-deductible exposure, since the insurer handles all the claims and services as if under a fully insured plan. In fact, the expense on an LDD plan may actually be higher than on a fully insured plan for several reasons:

- a. The insurer has to seek reimbursement from the insured for losses under the deductible.
- b. Data reporting becomes more complicated. Most states require that the insurer segregate and exclude LDD data from financial data reporting. Some states require the insurer to file the LDD experience separately.
- c. The insurer has to produce the LDD endorsement.
- d. The insurer has to upgrade the existing computer system to handle the processing of deductible policies and claims.

The acquisition expense load depends on each insurer's sales compensation structure. Some insurers compensate their sales

staffs based on full-coverage equivalence premium, while others offer commission as a percentage of the net deductible premium. The proper acquisition expense load depends on which sales compensation structure is in place for the LDD plan.

The insurer usually pays premium taxes and assessments on the net LDD premium, and loss based assessments on the net excess losses. Some states require insurer to pay loss based assessments on the losses under the deductible. These have to be factored into the pricing formula as well.

Since the marginal cost of servicing an account decreases with the account size, the expense load should be graded by the size of account.

3. Risk and Profit Margin

For the insurer, an LDD plan is a riskier product than a fully insured plan for several reasons.

- a. The insurer covers excess loss rather than total loss, and excess loss is harder to estimate than total loss.
- b. An LDD plan has a longer average loss and expense payout period than a fully insured plan. On a fully insured plan the average duration of loss and expense reserve is about 2 years. On an LDD plan the average duration of the reserve is 4 to 5 years, since LDD premium consists of service fees, most of which are paid out during the first 2 years, and excess losses, which are paid out, on the average, over 10 years. Thus, an LDD plan is subject to higher interest rate risk than a fully insured plan.
- c. An LDD plan may have higher credit/default risk than a fully insured plan. This was discussed before. The insurer may either build a margin in the price for this risk, or, alternatively, require placement of proper security to assure collection of the reimbursable losses.

Risks may be included in the price through profit and contingency provision or an explicit risk margin. Calculating profit and risk margin is a separate topic and will not be

discussed in this paper. Of course, for a competitive product like LDD where there are relatively few state regulations, any profit load is subject to market acceptance.

When the LDD plan was first introduced to the market, it was usually prospectively rated. As such there is the potential that the premium collected for the expenses does not adequately cover the actual expenses. To deal with this uncertainty, recently many insurers have offered retrospectively rated LDD plans where the expense charge varies with the actual reimbursable loss. This not only provides the insurer a more stable stream of income for the services it provides, it also enhances equity in the expense charge among insureds.

Excess WC Insurance Over a Self-insured Program

Pricing Excess WC is also flexible. An Excess WC insurance policy is often viewed as an excess liability policy covering WC exposure. Since "A" rating of excess liability policies is permitted in most states, so would this flexibility apply to Excess WC.

Excess WC differs from LDD in the following ways:

1. Under LDD, the insurer pays the injured worker first and then seeks reimbursement from the insured for the portion of losses under the deductible. Under Excess WC, the insured pays the claimant first and seeks reimbursement from the insurer on the excess losses. This puts the ultimate burden of paying losses on the insured, not the insurer.
2. LDD offers excess loss protection as well as services for all claims. Excess WC offers excess loss protection only. Thus, there is little loss adjustment expense on the insurer's part.
3. LDD is usually issued as an endorsement to a regular WC policy. Excess WC is written on a stand alone policy.

One formula for pricing Excess WC is as follows:

Excess WC Premium =

$$\frac{[EL \times XL \times (1 + ULAE)] + [SP \times GO]}{1 - A - T - P}$$

where:

- EL = Expected total loss. EL should be loaded by an ALAE factor if ALAE is a part of the excess loss reimbursement.
- XL = Excess loss as a percentage of total loss. Excess loss can be on a per-occurrence or aggregate basis.
- ULAE = Ratio of ULAE to loss.
- SP = Standard premium.
- GO = Ratio of general overhead expense to standard premium.
- A = Acquisition expense as a percentage of the net Excess WC premium.
- T = Tax and assessment rate based on the net premium.
- P = Profit and contingency as a percentage of the net premium.

Factors to consider are discussed below:

1. Excess Loss Cost

Excess WC, like LDD, covers excess loss. However, under an LDD plan, both primary and excess losses are handled by the same insurer. Therefore on an LDD plan, the insurer can control the losses excess of the deductible by managing the underlying claims.

Excess WC, on the other hand, covers excess layer exposure for claims handled by a TPA, which may or may not be affiliated with the insurer. Therefore, the insurer's excess loss exposure relies heavily on the prudence with which the TPA handles the underlying claim. This adds uncertainty for the insurer. In fact, the self-insured may change its TPA during the course of settling a claim, which adds even more uncertainty to the excess loss exposure.

2. Expense

In LDD, ALAE is usually rated together with loss. In Excess WC, ALAE is usually prorated between the insurer and the insured according to the split of loss by retention.

Since Excess WC does not cover services for the underlying claims, its ULAE and general overhead expense would be charged on excess claims only, and are much lower than the expense charges under an LDD plan.

Premium for Excess WC is not subject to the residual market assessments. Also, the tax rate charged on the Excess WC premium is usually a General Liability premium tax rate rather than a WC premium tax rate, since most states treat Excess WC as an excess liability policy.

3. Risk and Profit Margin

Excess WC does not have the credit risk because the insured pays the claim first and then seeks reimbursement from the insurer.

Because of the flexibility in its coverage and pricing, Excess WC market is just as competitive as the LDD market, if not more. In LDD, the insurer competes on excess coverage price as well as the quality of the services. In Excess WC, however, there is very little service involved. Therefore, the insurers compete almost exclusively on price, and this usually drives down the profit margin.

Nevertheless, risks on the excess layer must be considered in the pricing. The prospect of a catastrophe (e.g., a major fire, earthquake in a particular work site) should be considered, because they can be very costly. Paraplegic, quadriplegic, serious burn, head injury, and even back injury cases may also run up losses in millions due to heavy medical expenditure, and these cases do occur regularly. These examples illustrate that risk on the excess layer is significant, particularly when the excess insurer has no control over the underlying claims. Besides incorporating a risk margin in the pricing formula, reinsurance would also help minimize the impact of catastrophic losses on any single insurer.

The average loss and expense payout period for Excess WC is considerably later than for LDD. This is because most of the Excess WC premium covers the excess loss, which has a long average payout period (average to over 10 years), where as LDD premium is split roughly half in expense, which is paid out quickly, and half in excess loss. This implies a significant interest rate risk in Excess WC. Claim notification for Excess WC is also considerably longer than LDD because the excess insurer is dealing with a TPA rather than with its own claims department.

Examples of Pricing

Large Dollar Deductible

The first example prices an LDD plan for an insured with \$1,000,000 of standard premium and \$700,000 of expected loss and ALAE. The LDD endorsement states that the insured will reimburse the insurer for losses and ALAE up to \$250,000 per accident, but will reimburse no more than \$1,000,000 for the policy period. This is an LDD plan which offers services for all claims, a per-occurrence excess loss coverage over \$250,000, and an aggregate excess loss coverage over \$1,000,000.

Assuming that the ELPPF at \$250,000 is 0.10, this means the expected per-occurrence excess loss is $\$700,000 \times 0.10$, or \$70,000. The expected loss under the deductible, or the expected reimbursable loss, is \$630,000.

Since the \$1,000,000 aggregate stop-loss applies to the \$630,000 reimbursable loss, the insurance charge should cover losses in excess of 1.6 times the expected loss ($\$1,000,000$ aggregate deductible / $\$630,000 = 1.60$). This example assumes that the corresponding insurance charge is 0.05 (ratio to total loss).

The following are the expense assumptions:

- ULAE as a ratio to loss and ALAE = 0.07
- Loss based assessment as a ratio to loss and ALAE = 0.05, assuming loss based assessment is to be paid on total loss, not just excess loss.
- General overhead expense as a ratio to the standard premium = 0.05
- Compensation for credit risk, expressed as a ratio to the standard premium = 0.04
- Acquisition expense as a ratio to the net premium = 0.05
- WC premium based tax and assessment rate = 0.08
- Profit and contingency as a ratio to the net premium = 0.025

Using the notations and the formula in the previous section,

EL = \$700,000.
 XL = ELPPF + insurance charge = 0.10 + 0.05 = 0.15.
 LBA = 0.05
 ULAE = 0.07
 SP = \$1,000,000.
 GO = 0.05
 CR = 0.04
 A = 0.05
 T = 0.08
 P = 0.025

The LDD premium equals:

$$\frac{[EL \times (XL + ULAE + LBA)] + [SP \times (GO + CR)]}{1 - A - T - P} =$$

$$\frac{[700,000 \times (0.15 + 0.07 + 0.05)] + [1,000,000 \times (0.05 + 0.04)]}{1 - 0.05 - 0.08 - 0.025}$$

$$= 330,178$$

Note the following:

1. This premium is much lower than a comparable fully insured plan premium. A fully insured plan premium may be estimated at

$$\frac{700,000 \times (1 + 0.07 + 0.05) + 1,000,000 \times 0.05}{1 - 0.05 - 0.08 - 0.025}$$

$$= 986,982$$

In this example the LDD premium is roughly 34% of the full-insurance premium. The difference is primarily the reimbursable loss and the associated expenses.

2. The expense part of the 330.178 LDD premium is:

330,178 x [0.05 + 0.08]	Tax and acquisition expense
+ 700,000 x 0.07	ULAE
+ 700,000 x 0.05	Loss Based Assessment
+ <u>1,000,000 x 0.05</u>	General Overhead
176,923	

This implies an expected expense ratio of 177/330, or roughly 54%. This is high compared to that of a fully insured plan which is usually around 25% to 30%.

The expected loss ratio underlying an LDD plan's premium is usually much lower than that of a fully insured plan. In this example, the expected loss ratio in the LDD plan is

$$700,000 \times 0.15 / 330,178 = 32\%.$$

Excess WC

Assume the excess loss coverage in the previous example is offered with an Excess WC insurance policy. This second example prices such coverage. The following rating values will be used:

$$EL = \$700,000.$$

$$XL = ELPPF + \text{insurance charge} = 0.10 + 0.05 = 0.15.$$

$$ULAE = 0.07$$

$$SP = \$1,000,000.$$

$$GO = 0.02$$

$$A = 0.05$$

$$T = 0.03$$

$$P = -0.15$$

Note the following changes:

1. The profit load is -0.15 in Excess WC, not 0.025. In Excess WC, since little service is involved, the competition is almost exclusively in price. This tends to drive down the profit margin. The LDD market is usually not as price-competitive as the Excess WC market, because much of what the insurer sells in an LDD plan is the quality of the service.
2. The tax rate is 3% in Excess WC rather than 8%, because the insurer does not have to pay residual market assessment and other taxes associated with administering the WC system.
3. The ULAE load will apply to excess losses only, because only the excess claims will be serviced by the insurer.

4. The general expense load is lower under Excess WC (0.02) than under an LDD (0.05) because of fewer insurance related functions to be performed by the insurer.

Excess WC premium equals:

$$\frac{[EL \times XL \times (1 + ULAE)]}{1 - A - T - P} + [SP \times GO] =$$

$$\frac{[700,000 \times 0.15 \times (1+0.07)]}{1 - 0.05 - 0.03 + 0.15} + [1,000,000 \times 0.02]$$

$$= 123.692.$$

Note the following:

1. Excess WC premium is only a third of the LDD premium. The difference is primarily the credit risk load that is unique to an LDD plan due to its reimbursement feature, and the service fees for the claims that an LDD plan provides but an Excess WC does not.
2. The expense portion of the Excess WC premium is

700,000 x 0.15 x 0.07	ULAE
+ 1,000,000 x 0.02	General Overhead
+ <u>123,692 x [0.05 + 0.03]</u>	Tax and Acquisition
37,245	

So the expense ratio is 37/124, or roughly 30%, which is more in line with that of a fully insured plan. The expected loss ratio in this example is

$$700,000 \times 0.15 / 123,692 = 85\%.$$

The expected loss ratio and expense ratio add up to 115%, implying a -15% profit provision. This is consistent with the profit assumption in the formula. It is expected that because of the long payout period of the loss, the insurer will be able to recover enough investment income from the reserves to offset this -15% underwriting loss and, on top of that, to make a reasonable profit.

3. Finally, the appropriate excess loss factor used in pricing an Excess WC should probably be higher than that used in pricing an LDD plan offering the equivalent excess loss coverage. As mentioned before, since Excess WC covers claims that are handled by a TPA, the excess insurer may have very limited control of the underlying claim costs. This often increases the excess layer loss exposure for the insurer. Such a difference is ignored in this example, but should be considered in a real world application.

Conclusion

In today's tough Workers' Compensation environment, with heavy regulations, burdensome assessments, high medical inflation and utilization, and increasing fraud, insurers may offer Large Dollar Deductible plans or Excess WC insurance over a self-insurance program as alternatives to serving their large customers' needs. Since these means require the insured to share a significant portion of the actual incurred loss, it gives the insured a great incentive to control losses. The incentive derives not only from the savings in losses, but in the associated taxes, assessments, and expenses as well.

For the insurer, the savings that their customers realize may translate into smaller taxes and assessments on their book of business. The less stringent regulation of these alternative products implies more intense competitions on the price and service than the traditional WC products. This benefits the customers, as well as the insurers that reward those who are committed to loss control with the best price and service.

The challenge to the actuary lies in the product design and pricing. As the political, economic, and regulatory environment change continuously, customers constantly demand products that suit their needs, at a price that they perceive to be reasonable. It is worth noting that the major goals of a Workers' Compensation system are to encourage a safe work environment, to guaranty financial security to the injured workers, and to provide incentive to return to work early. These goals must be embedded in the coverage design as well as the pricing. This is the challenge.

The attached Appendix summarizes the main points discussed in this paper.

Appendix

	Large Dollar Ded.	Excess WC
Coverage	Service on the entire WC policy, and excess loss coverage.	Excess loss coverage only.
Net premium as a % of Full-coverage Premium	Roughly 25 to 50%, depending on the deductible selected.	Roughly 10 to 30%, depending on the retention selected.
Expense Ratio in the Premium	Usually over 50% because of significant service fees for all underlying claims.	Usually less than 20% because the services is limited to excess claims only.
Expected Loss Ratio in the Premium	Usually less than 50%, depending on the deductible selected.	Usually greater than 70%.
Credit Risk	Exists.	Does not exist.
Average Duration of Loss and Expense Reserve	4 to 5 years	Over 10 years
Tax and Assessment	WC tax and assessment rates are applied to the net deductible premium. Some states also charge loss based assessments or premium taxes on what would have been the reimbursable loss portion of the premium.	Not subject to WC residual market assessments, loss based assessments, or taxes associated with administering the WC system. Excess WC premium is usually taxed as a General Liability product, not a WC product.
Profit Allowance	Usually determined by the market. A few states do mandate specific profit loads.	Determined by the market.
Pricing Flexibility	Flexible in most states.	Flexible in most states.

