Structures - Uses & Abuses

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Introduction

Neither law school nor the bar admission course prepares lawyers for the complex technical and practical issues that surround the structuring of damage awards in personal injury cases. In this paper, we will provide an overview of discount rates, gross up of damage awards, and structures, and will discuss the practical effect of recent common law and procedural developments in the area. Our goal is to educate the reader in the basic considerations that should be taken into account in critically assessing settlement options and judgments alike.

Discount Rates and Gross ups

The "discount rate" is the difference between "gross" interest rates and general price inflation as usually measured by the consumer price index. "Gross" interest rates are those normally found on bonds or investment certificates such as federal long-term government bonds. "Discount rate" as it

applies to rule 53.09 of the *Rules of Civil Procedure* is the interest component paid in addition to inflation. For example, if inflation is 2% and gross rates are 5%, the net discount rate is approximately 3%. The discount rate is used to calculate the present lump sum values of future payments which increase with inflation. By contrast, if the future payments do not increase, the use of the discount rate is inappropriate.

To "gross up" a lump-sum award of damages is to take into consideration the tax that will be payable by the plaintiff on the income from investment of the award, and to include in the award an amount to offset this liability. In a personal injury case, a gross up should normally be made on awards for cost of future care and for *Family Law Act* awards for loss of family income or services in fatal cases. Income taxes are not taken into consideration in the usual calculation for loss of employment income, so no gross up is made. The gross up recognizes that when a lump-sum award is made on the basis of a present valuation of future losses, any lump sum that is not taxable in the hands of the plaintiff should not generate a future tax liability. However, Revenue Canada considers the income earned from the award to be taxable, so the gross up has the effect of offsetting the future tax liabilities that result. In other words, the gross up is the present value of this future tax liability on the investment income of the award.

Gross ups and discount rates are covered in Rule 53.09 of the *Rules of Civil Procedure*, which has been amended by O. Reg. 288/99 effective January 1, 2000, and further amended by O.Reg. 488/99. It should be noted that the latter amendment has only just been published as of this writing, and may not yet appear in the edited versions of the *Rules of Civil Procedure*. The new

rule, as amended, provides:

CALCULATION OF AWARDS FOR FUTURE PECUNIARY DAMAGES

53.09 (1) *Discount rate* - The discount rate to be used in determining the amount of an award in respect of future pecuniary damages, to the extent that it reflects the difference between estimated investment and price inflation rates, is,

(a) for the 15-year period that follows the start of the trial, the average of the value for the last Wednesday in each month of the real rate of interest on long-term Government of Canada real return bonds (Series B113911), as published in the Bank of Canada Weekly Financial Statistics for the 12 months ending on August 31 in the year before the year in which the trial begins, less 1 per cent and rounded to the nearest 1/4 per cent; and

(b) for any later period covered by the award, 2.5 per cent per year.

(2) *Gross up* - In calculating the amount to be included in the award to offset any liability for income tax on income from investment of the award, the court shall,

(a) assume that the entire award will be invested in fixed income securities; and

(b) determine the rate to be assumed for future inflation in accordance with the following formula:

g rounded to the nearest 1/4 per cent

Where,

$$g = \frac{(1 + i)}{(1 + d)} - 1$$

"i" is the average of the value for the last Wednesday in each month of the nominal rate of interest on long-term Government of Canada bonds (Series B113867), as published in the *Bank of Canada Weekly Financial Statistics*, for the 12 months ending on August 31 in the year before the year in which the trial begins,

"d" is,

(a) for the 15-year period that follows the start of the trial, the average of the value for the last Wednesday in each month of the real rate of interest on long-term Government of Canada real return bonds (Series B113911), as

published in the *Bank of Canada Weekly Financial Statistics* for the 12 months ending on August 31 in the year before the year in which the trial begins, less 1 per cent, and

(b) for any later period covered by the award, 2.5 per cent per year.

The structure of the new rule still sets the discount rate after 15 years at 2.5%; however, for the first 15 years the discount rate will vary depending on the current economic environment (i.e. investment returns). A comparison of the old and new rates for 2000 is shown in the following table:

Period	Old Rule 53.09		New Rule 53.09	
	Discount Rate	Inflation *	Discount Rate	Inflation
First 15 Years	2.50%	2.93%	3.00%	2.25%
Thereafter	2.50%	2.93%	2.50%	2.75%

* Based on the same Gross Interest Rate as new rates for comparison.

The new rule will produce **lower** present values before gross up and **lower** gross up values for the year 2000. Gross up values vary by too many parameters to provide any useful table of factors; however, the new discount rates for calculating present lump sum values without (or before) gross up will produce values to age 65 and whole life as set out in Appendix A.

Regulation 488/99 specifically provides that the former Rule 53.09 will continue to apply with respect to actions in which the trial commences before January 1, 2000. As shown in the above table,

for trials beginning from January 1, 2000 to December 31, 2000, the discount rate will be 3.00% for the first 15 years, and 2.50% thereafter. From January 1, 2001 forward, the rate will be adjusted each year, and will calculated in accordance with the formula expressed in the rule. Practitioners should note these changes, and should check to ensure that the appropriate discount rate is being used for cases going to trial after January 1, 2000. It is also important to note that it is still possible to argue for a different discount rate based on actuarial evidence of general productivity, wage indexing, promotion, seniority, merit and the expenses of investment, and the precedent value of *Ligate v. Abick* (1996), 28 O.R. (3d) 1 (C.A.) is undiminished.

The cost of a gross up can be considerable. Depending on the rates of return, the tax payable on the income from investment can be staggering. Attached at Appendix B is a simplistic model comparing present value lump sums that do not account for tax, and that take tax into account. The example shown in the appendix shows that in order to put an annual payment of $10,000 net after-tax dollars into the hands of a 40-year-old male plaintiff, a gross-up in the amount of $61,458, or approximately 25%, is required.

Structures

With a structured settlement or damage award, the plaintiff is compensated by periodic payments over time instead of a single lump sum payment. The payments are funded through an annuity purchased from a life insurer. Structures can be used in negotiated settlements, or can be imposed by the court in certain cases. They can be applied to the whole of an award, or to only part

of it. They can be crafted to provide for periodic variation or constant fixed payments, depending on the particular needs of the plaintiff, but the structure itself cannot be varied once fixed. Although it is outside the scope of this paper, it should be noted that different considerations may apply to structures in the tort context and structures in the accident benefits context.

Revenue Canada Requirements

Provided the structure meets certain criteria, the payments generated by it will be tax-free in the hands of the plaintiff, thereby eliminating the need for a gross up. Interpretation Bulletin IT-365R2 sets out Revenue Canada's requirements, which are:

(a) a claim for damages must have been made in respect of personal injury or death,

(b) the claimant and the casualty insurer must have reached an agreement under which the latter is committed to make at least periodic payments to the claimant for either a fixed term or the life of the claimant,

(c) the casualty insurer must

(i) purchase a single premium annuity contract which must be non-assignable, non-commutable, non-transferable and designed to produce payments equal to the amounts, and at the times, specified in the agreement referred-to in (b),

(ii) make an irrevocable direction to the issuer of the annuity contract to make all payments thereunder directly to the claimant, and

(iii) remain liable to make the payments as required by the settlement agreement (i.e. the annuity contract payout).

Although there was initially some concern that in order to meet the above requirements, the structure had to arise from a settlement of the action, Revenue Canada has taken the same approach in respect of court-imposed structures.

It should be noted that IT Bulletin 365-R2 also addresses income from property received by a taxpayer under 21 years of age, which is treated as non-taxable until the end of the taxation year in which the taxpayer attains the age of 21 years. This would not affect the cost of a structure, but would affect the calculation of the gross up for plaintiffs under 21 years of age.

Courts of Justice Act - Section 116

Section 116 of the *Courts of Justice Act*, R.S.O. 1990, c. C.43, makes a structure mandatory in most cases when a gross up is requested, unless the plaintiff demonstrates that a structure is not in his or her best interests. It provides:

SECTION 116

Periodic payment and review of damages

116.--(1) In a proceeding where damages are claimed for personal injuries or under Part V of the Family Law Act for loss resulting from the injury to or death of a person, the court,

(a) if all affected parties consent, may order the defendant to pay all or part of the award for damages periodically on such terms as the court considers just; and

(b) if the plaintiff requests that an amount be included in the award to offset any liability for income tax on income from the investment of the award, shall order the defendant to pay all or part of the award periodically on such terms as the court considers just.

No order

(2) An order under clause (1)(b) shall not be made if the parties otherwise consent or if the court is of the opinion that the order would not be in the best interests of the plaintiff, having regard to all the circumstances of the case.

Best interests

(3) In considering the best interests of the plaintiff, the court shall take into account,

(a) whether the defendant has sufficient means to fund an adequate scheme of periodic payments;

(b) whether the plaintiff has a plan or a method of payment that is better able to meet the interests of the plaintiff than periodic payments by the defendant; and

(c) whether a scheme of periodic payments is practicable having regard to all the circumstances of the case.

Future review

(4) In an order made under this section, the court may, with the consent of all the affected parties, order that the award be subject to future review and revision in such circumstances and on such terms as the court considers just.

Amount to offset liability for income tax

(5) If the court does not make an order for periodic payment under subsection (1), it shall make an award for damages that shall include an amount to offset liability for income tax on income from investment of the award. R.S.O. 1990, c. C.43, s. 116(2-5).

R.S.O. 1990, c. C.43, s. 116; S.O. 1996, c. 25, s. 1.

In 1995, the Ontario Court of Appeal considered s. 116 of the *Courts of Justice Act* in the case of *Wilson v. Martinello* (1995), 23 O.R. (3d) 417 (C.A.). At the time, s. 116(1)(b) was badly drafted, and has since been amended to the wording shown above, in accordance with the Court of Appeal's decision. The court held that the determination of whether a structure should be imposed is to be approached using a two-step procedure:

1. Damages must first be assessed in the conventional manner;

2. If the plaintiff requests a gross up in respect of the award, and there is no consent to a structure, the court must impose a structure "unless the plaintiff can satisfy the court that the one proposed by the defendant is not in the plaintiff's best interests."

Section 116 of the *Courts of Justice Act* as interpreted by the Court of Appeal in *Martinello* represents a departure from the common law, as it deviates from the normal rule that a plaintiff is entitled to a lump-sum award. However, it must be emphasized that the mandatory imposition of a structure **only** applies in cases in which a gross up is requested. Where no gross up is requested by the plaintiffs [for example, see *Chow (Litigation Guardian of) v. Wellesley Hospital*, [1999] O.J. No. 279 (Gen. Div.)], the court need not consider whether a structure would be in the plaintiff's best interests, and would not appear to be willing to impose a structure against the plaintiff's wishes.

Advantages and Disadvantages of Structures

Structured settlements are not without their shortcomings. There is a risk, however remote, that the casualty and life insurers underwriting the structure will fail. Structures are marvelously flexible when they are being created, and can be fine-tuned to meet the particular care needs of each plaintiff; however, once set in place the structure is completely rigid, leading to the concern that a plaintiff will be unable to pay any unexpected care costs. The risk of inflation is borne by the plaintiff, but can be addressed in part using a fixed escalation or consumer price-indexed structure.

The advantages and disadvantages of structures were usefully summarized as follows by O'Brien J. in his decision in *Roberts v. Morana* (1997), 37 O.R. (3d) 333 (Gen. Div.):

> The advantages may be summarized as: eliminating gross-up and management costs; reducing or eliminating the risk the plaintiff will live longer than predicted; reducing the risk of dissipation of the award by a plaintiff; fixed payments establishing certainty

> in the plaintiff's life; flexibility in anticipating future needs and the ability of plaintiff to take part in establishing the scheme; and inflation protection which is built into the defendants' proposed structure, in this case using consumer price indexing.
>
> The disadvantages are lack of flexibility once the scheme is established; uncertain future needs and expenses which a structure may not meet; theoretical financial risk of financial failure of casualty and life insurer (very remote in this case), and lack of flexibility because the structure cannot be assigned or transferred.

Notwithstanding the potential disadvantages, it would appear that the risks are sufficiently remote that a plaintiff who has been awarded an amount for future care will find it very difficult to argue that such risks will be grounds for avoiding a mandatory structure under section 116 of the *Courts of Justice Act*. In *Valliant v. Powell*, [1996] O.J. No. 5100 (Gen. Div.), Karam J. applied the decision in *Martinello* in a case involving two seriously brain-injured plaintiffs who were attempting to avoid a mandatory structure in respect of their future care costs. In *Valliant*, significant actuarial and economic evidence was led pertaining to the risks of inflation, the potential business failure of insurers liable to pay under a structure, and the illiquidity of a structure. In the result, the plaintiffs were unable to demonstrate that a gross up was more in their interests than a consumer price-indexed structure, and the court ordered the latter. The court dealt with the various arguments as follows:

i) *The effects of inflation*

> One of the most significant concerns raised by the plaintiffs...was the disastrous effect that inflation could have on the periodic payments provided by a structure. This problem is largely resolved by the use of a consumer price-indexed structure, which ensures that the periodic payments made to the plaintiffs reflect the actual consumer price index. Essentially, the only difference between such a structure and a structure with a fixed annual factor is that the payments will be predicated upon the Consumer Price Index increase for each year and, therefore, will change accordingly from year to year, thereby largely protecting a recipient from the effects of inflation. Although Murray Segal, an actuary called on behalf of the plaintiff, Michael Valliant, testified that even this protection leaves the plaintiff vulnerable to the effects of wage inflation, both Professor James Pesando,

for the defendants, and Professor Jack Carr, for the plaintiffs, seemed satisfied that, generally, such a structure would constitute sufficient protection against inflation.

ii) *The risk of failure of the insurers*

...the plaintiffs faced the risk that both the life insurer and the casualty insurer might default at some point, while the obligation to pay continued. It must be remembered that the default of both insurers would have to occur. There was no specific evidence that either the life insurance company or the casualty insurer, each of which, the court was advised, is an international corporation, with a substantial asset base, presents a risk of default. Rather, the argument was made, on a general basis, without reference to the specific insurers but premised on the potential of long lifetimes ahead of the two plaintiffs. Reference was made by both Mr. Segal and Professor Carr to the Confederation Life failure, and the possibility that a similar experience could reoccur sometime in the future. Even if I were sympathetic to this argument, faced with the mandatory language of s. 116, it is not open to this court to ignore the requirements of the section without at least the benefit of specific evidence relating to the danger of default by the particular insurers involved. The plaintiffs' concern was not shared by Professor Pesando, whose view, which I adopt, was that such a risk is extremely slight.
Accordingly, after considering the argument and evidence regarding the stability, or potential lack thereof, of the insurers, I have no hesitation in concluding that this is not a realistic concern. Naturally, one would hope that structured payments could be guaranteed beyond any risk of default whatsoever no matter how slight, but that of course, is not possible.

iii) *Illiquidity of the structure*

It was argued that in the event of the necessity for payment at any given time of a greater amount of money than would be available through periodic payments, the plaintiffs might be unable to access new improved treatment or equipment. Professor Carr testified that the advantage of having a lump sum available would be that assets from the fund could be liquidated to finance such an expenditure. Again, in my view, it is more important that the plaintiffs be protected against the use or misuse of their funds for purposes which might result in depletion. Regardless of good intentions, this might happen through unwise or inappropriate liquidation of financial assets for what may appear to be justifiable purposes. The very strength of a structure, in these circumstances, is the very same illiquidity which safeguards the plaintiffs against unwise investment or the squandering of their funds. Assuming the existence of a very valuable and important new treatment, or similar opportunity, which would be of great benefit to the plaintiffs, I take solace in the fact that the substantial amount of money awarded for their respective losses of future income and general damages remain available for such an emergency.

As may be seen, the court in *Valliant* placed a great deal of emphasis on the protection and certainty that a structure offers, and in particular, the protection of the plaintiffs from their own improvident depletion of the award. Although it is possible that different facts may lead to a different conclusion about the plaintiff's "best interests", the approach followed by Karam J. will likely carry significant persuasive weight in favour of the mandatory structure in most cases in which a plaintiff seeks a gross up, especially where the damages at issue are for the cost of future care. In *Wilson v. Martinello, supra*, the defendant failed in its bid to impose a structure of an award for future loss of housekeeping services under the *Family Law Act*, where the plaintiff's wife and daughter had been killed in an accident. As of the date of this writing, there do not appear to be any cases decided since *Wilson v. Martinello* in which the court has found that a gross up, as opposed to a structure, was in the plaintiff's best interests. Although the test is the same in cases where the defendant seeks to structure an award for cost of future care, and in cases where the award is for *Family Law Act* damages arising from a fatality, it would seem that the plaintiff in the former case will have more difficulty satisfying the court that a gross up is preferable than will the latter plaintiff. The plaintiff seeking to avoid a structure, especially in the former case, should be prepared to lead substantial evidence demonstrating a solid financial plan in favour of the lump-sum award.

Savings from a Structure

In relative terms, the one-time cost of a structure is less than the one-time cost of a lump-sum payment plus gross up to achieve the same result in the current market. In fact, the premium required

to purchase a structure may even be less than the present lump-sum value **before** gross up, even after considering commissions. In a settlement discussion, all counsel should consider this factor as part of the overall negotiation, and should consider that a structured settlement can be used in respect of any part of the settlement, whereas the court will only order a structure for those portions of an award in respect of which a gross up has been requested, or in respect of which the parties have consented to a structure. Tactically, both structures and gross ups have advantages and disadvantages for both plaintiffs and defendants as set out above, and like every other aspect of a negotiation, it is up to the parties to determine how they will divide any savings that may be realized. In a case involving a large settlement for future losses, the potential "savings" can represent a great deal of money, and is therefore no less an important consideration than the principal amount of the claim. Where a structure is being considered for losses that otherwise would not be grossed-up, such as future loss of employment income, the premium for the structure should not be less than the net before tax lump sum present value of the damages.

When the court imposes a mandatory structure after a request for gross up, it would appear that the entire amount of the future care award as assessed by the court (before gross up) is available to put into the structure. The "savings" are therefore reaped solely by the plaintiff. The only case to date that appears to have considered this issue expressly is *Roberts v. Morana, supra*, which is currently under appeal. In *Roberts v. Morana*, O'Brien J. considered the approach mandated by the Court of Appeal in *Wilson v. Martinello, supra*, and considered two subsequent decisions [*Valliant v. Powell, supra* and *Peddle v. Ontario*, [1997] O.J. No. 2830 (Gen. Div.), since upheld, [1998] O.J. No. 5265 (C.A.)]. In the *Wilson* decision, the court had set forth a two-step procedure whereby the

damages are assessed first, and then the structure is considered if the plaintiff requests a gross up. In *Valliant* and *Peddle*, the court had required the entire lump sum awarded for future care to be used to finance a structure, but the argument that a cheaper structure could be purchased to meet the plaintiff's needs does not appear to have been raised by the defendants in either case. In the result, O'Brien J. concluded that where a structure is imposed upon an unwilling plaintiff after a request for gross up, the defendant is not entitled to submit a structure which reduces the amount payable by it. This should be considered by all counsel not only during the course of a trial, but also during negotiation.

Other Considerations

Briefly, there are other basic considerations that counsel should keep in mind when considering structures, and considering the best interests of the plaintiff. A sizeable unstructured award, with or without gross up, will generally result in management expenses which may be recoverable from the defendant (see *Wilson v. Martinello, supra*). Similarly, the commission payable on setting-up a structure is generally recoverable against the defendant if the structure is imposed by the court. This issue has been considered in *Roberts v. Morana* and *Valliant v. Powell, supra*, and the court has held that while the commission in a structured settlement is a matter of negotiation and might be paid by either party, the commission will be payable by the defendant if the court imposes the structure against the plaintiff's wishes. The reversionary interest, or who will receive the payments from the annuity if plaintiff dies before the policy expires, is an issue that should be addressed in negotiation and in assessing any proposed structure. Competition between structuring

brokers means that there is some ability to compare and ensure that the most effective and efficient structure is being purchased. Finally, in order to protect the plaintiff against the possibility of high inflation, it is important to consider the possibility of indexing the structured payments by linking them to the consumer price index or otherwise.

Conclusion

Structures are a powerful tool in the personal injury lawyer's kit. Like any powerful tool, they can be used skillfully with superb results, or they can do more harm than good if the appropriate precautions are not taken. To advise one's clients appropriately, one must have an awareness of the basics of structuring, and must appropriately employ experts such as structuring firms, actuaries, accountants and economists to provide advice as required. In all cases, there must be a thorough consideration of whether a structure can serve the best interests of the plaintiff, and if so, the structure must be carefully crafted to serve those interests.

APPENDIX A

LIFE EXPECTANCIES AND PRESENT VALUES

OF $1 PER YEAR

AT PRESCRIBED RATES

FOR THE YEAR 2000

Compiled by Woods & Associates

Life Expectancy and Annuity Factors for $1 Per Year at a Net Discount Rate of 3.00% for the First 15 Years and 2.5% Thereafter *

Age	Life Expectancy		Annuity Factor for $1/Year			
			Male		Female	
	Male	Female	To Age 65	Whole Life	To Age 65	Whole Life
20	55.58	61.67	24.8126	27.9078	25.2677	29.4058
21	54.64	60.69	24.5069	27.6829	24.9556	29.1986
22	53.71	59.71	24.1939	27.4529	24.6355	28.9862
23	52.77	58.73	23.8732	27.2175	24.3074	28.7684
24	51.83	57.75	23.5443	26.9762	23.9711	28.5453
25	50.89	56.77	23.2069	26.7286	23.6265	28.3169
26	49.94	55.80	22.8603	26.4742	23.2734	28.0829
27	49.00	54.82	22.5047	26.2131	22.9116	27.8433
28	48.05	53.84	22.1397	25.9452	22.5410	27.5981
29	47.11	52.86	21.7656	25.6708	22.1612	27.3470
30	46.17	51.89	21.3823	25.3899	21.7722	27.0900
31	45.22	50.91	20.9896	25.1024	21.3736	26.8270
32	44.28	49.94	20.5875	24.8084	20.9654	26.5578
33	43.34	48.96	20.1757	24.5078	20.5475	26.2828
34	42.39	47.99	19.7541	24.2005	20.1197	26.0017
35	41.45	47.02	19.3224	23.8865	19.6820	25.7148
36	40.51	46.05	18.8807	23.5659	19.2342	25.4220
37	39.58	45.09	18.4285	23.2384	18.7760	25.1232

* Based on Canada Life Tables 1990-92 published by Statistics Canada and the net discount rate for the year 2000.

Life Expectancy and Annuity Factors for $1 Per Year at a Net Discount Rate of 3.00% for the First 15 Years and 2.5% Thereafter *

Age	Life Expectancy		Annuity Factor for $1/Year			
			Male		Female	
	Male	Female	To Age 65	Whole Life	To Age 65	Whole Life
38	38.64	44.12	17.9657	22.9039	18.3073	24.8184
39	37.71	43.16	17.4918	22.5621	17.8275	24.5072
40	36.77	42.20	17.0063	22.2126	17.3363	24.1894
41	35.84	41.24	16.5088	21.8552	16.8333	23.8647
42	34.91	40.28	15.9997	21.4905	16.3187	23.5337
43	33.98	39.33	15.4790	21.1189	15.7923	23.1965
44	33.06	38.38	14.9469	20.7410	15.2541	22.8534
45	32.14	37.44	14.4033	20.3573	14.7041	22.5049
46	31.23	36.50	13.8482	19.9679	14.1420	22.1511
47	30.32	35.57	13.2814	19.5733	13.5674	21.7920
48	29.42	34.64	12.7027	19.1737	12.9801	21.4278
49	28.53	33.72	12.1116	18.7690	12.3795	21.0580
50	27.65	32.80	11.5076	18.3594	11.7650	20.6826
51	26.77	31.89	10.8889	17.9451	11.1346	20.3016
52	25.90	30.98	10.2539	17.5268	10.4863	19.9151
53	25.04	30.08	9.6022	17.1051	9.8198	19.5236
54	24.19	29.19	8.9330	16.6807	9.1341	19.1271
55	23.35	28.30	8.2453	16.2537	8.4284	18.7257

* Based on Canada Life Tables 1990-92 published by Statistics Canada and the net discount rate for the year 2000.

Life Expectancy and Annuity Factors for $1 Per Year at a Net Discount Rate of 3.00% for the First 15 Years and 2.5% Thereafter *

Age	Life Expectancy		Annuity Factor for $1/Year			
			Male		Female	
	Male	Female	To Age 65	Whole Life	To Age 65	Whole Life
56	22.53	27.42	7.5381	15.8247	7.7016	18.3194
57	21.71	26.55	6.8103	15.3944	6.9530	17.9086
58	20.91	25.69	6.0605	14.9638	6.1813	17.4936
59	20.12	24.83	5.2872	14.5336	5.3853	17.0743
60	19.35	23.96	4.4882	14.1045	4.5633	16.6509
61	18.59	23.15	3.6609	13.6769	3.7138	16.2234
62	17.85	22.32	2.8023	13.2511	2.8350	15.7921
63	17.13	21.49	1.9089	12.8274	1.9248	15.3578
64	16.42	20.68	0.9764	12.4053	0.9807	14.9204
65	15.72	19.88	-	11.9846	-	14.4798
66	15.04	19.09	-	11.5653	-	14.0362
67	14.37	18.31	-	11.1482	-	13.5904
68	13.72	17.54	-	10.7344	-	13.1430
69	13.08	16.78	-	10.3246	-	12.6944
70	12.46	16.03	-	9.9184	-	12.2438
71	11.85	15.30	-	9.5163	-	11.7919
72	11.27	14.57	-	9.1194	-	11.3400
73	10.70	13.87	-	8.7291	-	10.8900
74	10.15	13.18	-	8.3461	-	10.4430
75	9.61	12.50	-	7.9703	-	9.9989

* Based on Canada Life Tables 1990-92 published by Statistics Canada and the net discount rate for the year 2000.

APPENDIX B

SIMPLISTIC MODEL - GROSS UP

INTEREST = 6.00%
INFLATION = 3.50%
DISCOUNT RATE = 2.50%

MALE = AGE 40
PAYMENT(ANNUAL) = $10,000

PERIOD	YEAR	MID-YEAR PAYMENT	PRESENT VALUE	NO TAX FUND BEGINNING	AFTER TAX FUND BEGINNING	GROSS UP FUND BEGINNING
1	2000	$10,000	$9,713	$241,535	$241,535	$302,993
2	2001	$10,350	$9,484	$245,732	$242,324	$306,584
3	2002	$10,712	$9,260	$249,820	$242,790	$309,980
4	2003	$11,087	$9,042	$253,780	$242,908	$313,162
5	2004	$11,475	$8,828	$257,592	$242,847	$316,105
6	2005	$11,877	$8,620	$261,233	$241,978	$318,785
7	2006	$12,293	$8,417	$264,679	$240,868	$321,177
8	2007	$12,723	$8,218	$267,904	$239,282	$323,253
9	2008	$13,168	$8,025	$270,879	$237,183	$324,984
10	2009	$13,629	$7,835	$273,574	$234,534	$326,338
11	2010	$14,106	$7,651	$275,957	$231,292	$327,283
12	2011	$14,600	$7,470	$277,991	$227,415	$327,783
13	2012	$15,111	$7,294	$279,639	$222,857	$327,801
14	2013	$15,640	$7,122	$280,860	$217,567	$327,297
15	2014	$16,187	$6,954	$281,610	$211,496	$326,230
16	2015	$16,753	$6,790	$281,841	$204,589	$324,554
17	2016	$17,340	$6,630	$281,503	$196,787	$322,223
18	2017	$17,947	$6,473	$280,541	$188,029	$319,185
19	2018	$18,575	$6,321	$278,896	$178,252	$315,389
20	2019	$19,225	$6,172	$276,506	$167,387	$310,777
21	2020	$19,898	$6,026	$273,302	$155,361	$305,290
22	2021	$20,594	$5,884	$269,214	$142,099	$298,865
23	2022	$21,315	$5,745	$264,164	$127,520	$291,434
24	2023	$22,061	$5,610	$258,069	$111,539	$282,928
25	2024	$22,833	$5,477	$250,840	$94,067	$273,271
26	2025	$23,632	$5,348	$242,382	$75,008	$262,384
27	2026	$24,460	$5,222	$232,593	$54,264	$250,183
28	2027	$25,316	$5,099	$221,366	$31,727	$236,581
29	2028	$26,202	$4,979	$208,584	$7,287	$221,482
30	2029	$27,119	$4,861	$194,123	($19,173)	$204,789
31	2030	$28,068	$4,747	$177,850	($47,777)	$186,398
32	2031	$29,050	$4,635	$159,623	($78,657)	$166,197
33	2032	$30,067	$4,525	$139,291	($111,949)	$144,070
34	2033	$31,119	$4,419	$116,693	($147,799)	$119,894
35	2034	$32,209	$4,314	$91,655	($186,359)	$93,541
36	2035	$33,336	$4,213	$63,994	($227,792)	$64,871
37	2036	$34,503	$4,113	$33,512	($272,267)	$33,742
38				($0)	($319,963)	$0
	TOTAL	$734,579	$241,535			$302,993

PRESENT VALUE BEFORE GROSS UP $241,535

PRESENT VALUE AFTER GROSS UP $302,993

GROSS UP $61,458