# **The TAMRIS Consultancy**

Variable Annuities + GMWBs
A Review of Sun Life Elite Plus Client Brochure, Sequence of Return
and Risk Modelling

# September 2008

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## 1 September 2008 - GMWB Update & Sunwise Elite Plus

The Sun Life Elite Pus was upgraded in March 2008 to provide a lifetime guaranteed withdrawal benefit from age 65 and a simple 5% bonus for deferred withdrawals for up to 15 years.

It provides a number of different insured options in addition to the guaranteed withdrawal benefit;

- Class A 100% death benefit guarantee and 100% maturity guarantee.
- Class B 100% death benefit guarantee and 75% maturity benefit guarantee.
- Class C 75% death benefit guarantee and 75% maturity benefit guarantee.

The costs of these options for the managed portfolio options provided are noted in table 1 below.

Portfolio funds	MER	Segregated fund costs included in MER	GMWB additional cost	Total cost
Income 75/75	2.33%	0.10%	0.25%	2.58%
Income 75/100	2.44%	0.20%	0.25%	2.69%
Income 100/100	2.49%	0.25%	0.25%	2.74%
Conservative 75/75	2.59%	0.15%	0.35%	2.94%
Conservative 75/100	2.70%	0.25%	0.35%	3.05%
Conservative 100/100	3.07%	0.60%	0.35%	3.42%
Conservative balanced 75/75	2.61%	0.15%	0.35%	2.96%
Conservative balanced 75/100	2.71%	0.30%	0.35%	3.06%
Conservative balanced 100/100	3.14%	0.70%	0.35%	3.49%
Balanced 75/75	2.70%	0.15%	0.50%	3.20%
Balanced 75/100	2.75%	0.30%	0.45%	3.20%
Balanced 100/100	3.17%	0.70%	0.40%	3.57%
Balanced growth 75/75	2.60%	0.15%	0.50%	3.10%
Balanced growth 75/100	2.75%	0.30%	0.45%	3.20%
Balanced growth 100/100	3.17%	0.70%	0.40%	3.57%
Growth 75/75	2.76%	0.25%	0.50%	3.26%
Growth 75/100	3.04%	0.50%	0.45%	3.49%
Growth 100/100	3.53%	0.95%	0.40%	3.93%
Max growth 75/75	2.79%	0.30%	0.60%	3.39%
Max growth 75/100	3.14%	0.60%	0.60%	3.74%
Max Growth 100/100	3.63%	1.05%	0.50%	4.13%

Costs for additional benefits are extra. The option modelled in this document is the max growth 75/100 with annual management and insurance costs of 3.74%.

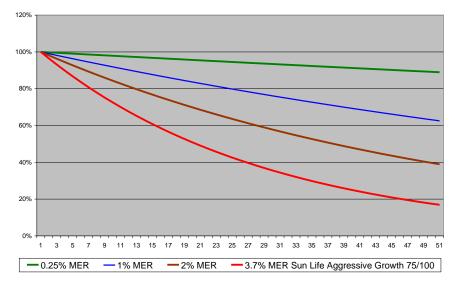
#### 1.1 Retirement do you know the risks

On page 6 of the client brochure Sun Life makes the following statement; "For many people, their personal savings will need to fill that gap in their retirement income. Typically, you will want your retirement income to equal 60% to 70% of your working income. That's why it's critical for you to protect your savings and position your portfolio for continued growth in the years before and during retirement."

Agreed: it is critical that investors position their portfolios for the onset of financial demands on their assets, as well as the need for continued growth. The problem is that high annual management and insurance costs will detract from the growth needed to position a portfolio for growth. Chart 1 shows the long term

impact of high charges on stock market returns. The red line is the impact of a 3.7% MER, which is the annual cost of the Sun Life max growth option (90% equities) relative to an 11% per annum total return on the main stock market index; the green line is the impact of a 0.25% MER for an exchange traded fund, the red a 3.7% charge on the aggressive GMWB option and the maroon the impact of a 2% charge.

 ${
m Chart} \ 1$  Positioning for growth - Impact of costs on returns



After 15 years the GMWB product only provides 61% of index returns, after a further 20 years, only 30%. This does not include the transaction costs (commissions and bid/offer spreads) of an actively managed fund that can add between 0.25% and 1% per annum in additional costs.

#### 1.1.1 Longevity

Statements regarding longevity are correct; however there are many ways of minimizing risks to assets running out that do not include paying high annual costs to do so. As much of the analysis in the supporting documents state, there are alternative ways of managing risks to income and capital security.

#### 1.1.2 Inflation

"Even at the currently low level of about 2%, inflation can have a severe effect on your income over time. Many people will face a retirement of at least 20 years, so it's important to keep your savings growing to help protect your purchasing power."

Again costs will impact the ability of the variable annuity to provide inflation protection and once withdrawals are being taken, the probability of receiving inflationary increases diminish considerably. The product would have to depend on fairly high rates of return to provide an element of inflation protection and this is not explained in the brochure – this is something which advisors should be responsible for.

#### 1.1.3 Market risk & sequence of returns

The brochure discusses market risk and the impact that a significant decline in the early years can have on financial security. Additionally, page 3 of the "Market Cycles and the Retirement Risk Zone" document shows a sequence of return analysis with two scenarios: one starts with negative returns and runs out 19 years after starting; the other shows a sequence of positive returns with capital never running out. The scenario that was analyzed shows a 5% withdrawal rate increasing by 3% with no allowance for

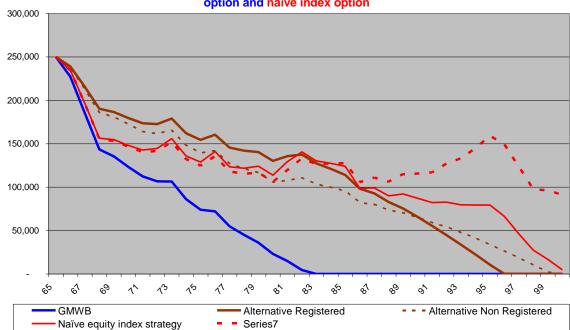
management expenses; in point of fact, in the negative return scenario a VA+GMWB would not allow for inflationary increases and the illustration is therefore inapplicable.

The following chart (negative return sequence scenario shows the performance of a (blue line) registered VA+GMWB (10% low risk/90% equities) with a 3.7% charging structure relative to a structured lower risk portfolio, with a starting asset allocation of 50% low risk cash and bonds and 50% equities, and an annual management expense of 0.75%% for the low risk assets and 1.25% for equities. The solid maroon line is the performance of the balanced structured lower risk alternative held in a registered investment plan and the dotted maroon line the performance of the same portfolio held in a non registered investment vehicle.

Chart 2

Capital Values Over Time

Alternative structured option (registered and non registered) versus GMWB option and naïve index option



No equities are sold in the non GMWB portfolio when equities are falling in value, instead lower risk assets are realised; equities are sold to rebalance the low risk portfolio once markets post a positive return.

The red line is the performance of a 100% allocation to an indexed ETF with an annual management expense ratio of 0.25% from which systematic withdrawals are taken; the dotted red line the performance of a similar non registered investment. Tax assumptions are the same as those noted in section 1.3.

Deferring equity sales on the balanced portfolios until after the second year of a market recovery further enhances the total return provided by a balanced, structured lower cost alternative posting superior relative returns to those shown above – see chart 3.

For further explanation of this type of modelling, please refer to the TAMRIS sequence of returns analysis, which assess the tougher Manulife sequence of returns. As noted in this analysis, a variable annuity with a GMWB is more likely to be impacted by its high costs, rigid structure and naïve withdrawal strategy, and that lower cost, structured approaches are not as exposed to sequence of returns risks.

Chart 3

Capital Values Over Time

Alternative structured option (registered and non registered) versus GMWB

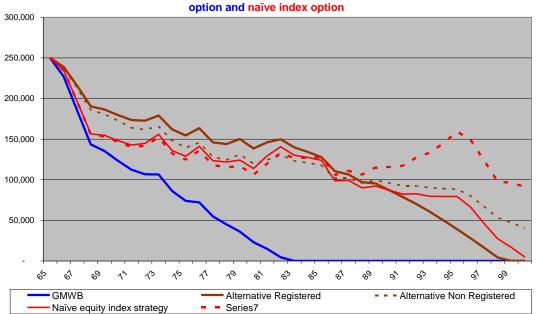


Chart 4

Capital Values Over Time

Alternative structured option (registered and non registered) versus GMWB

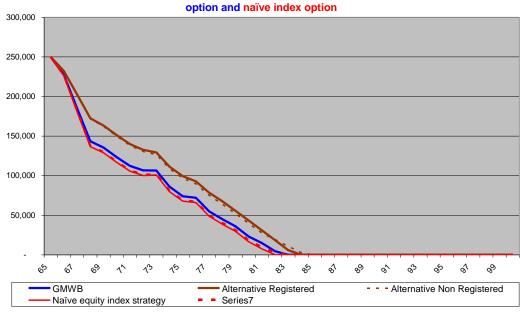


Chart 4 is a reconciliation and looks at the impact of management expenses of 3.74% on all portfolio options based on the scenario in chart 2.

### 1.1.4 Summary risks

In concluding the risks section, the brochure states; "The SunWise Elite Plus removes the risk that you will outlive your retirement fund and allows you to plan your financial future with confidence."

It does remove the risk that you will outlive your retirement fund, but it may not allow you to plan a financial future with confidence: the costs and structure of a GMWB increases the risk that withdrawals will not keep pace with inflation (which is a real income risk and hence a real financial security risk) and increases the risks to capital security and hence impairing the accessibility of that capital.

If the income paid by the product, once capital is depleted, is subject to income tax, then the after tax guaranteed amount would also be worth considerably less than the 5% promoted in the literature; this is of relevance to non registered holdings where a competing portfolio option would only have to provide the next guaranteed withdrawal and not the gross amount.

Add in inflation and the real withdrawal amount becomes a lot less – table 1 shows the impact of 2% inflation and income tax rates on withdrawals following capital depletion. Table 2 shows the impact on a withdrawal figure deferred 15 years.

5% withdrawal Real values Income Income Income Years Inflation @ tax 30% tax 10% tax 20% 2% 15 3.7% 3.3% 3.0% 2.6% 20 3.4% 3.0% 2.7% 2.4% 30 2.8% 2.5% 2.2% 1.9%

Table 1

Table 2

8.75% withdrawal - 5% plus 15 year bonus of 75%.								
Years	Real values Inflation @ 2%	Income tax 10%	Income tax 20%	Income tax 30%				
15	6.5%	5.9%	5.2%	4.6%				
20	5.9%	5.3%	4.7%	4.1%				
30	4.8%	4.3%	3.9%	3.4%				
35	4.4%	3.9%	3.5%	3.1%				
45	3.6%	3.2%	2.9%	2.5%				

Advisors would need to communicate these risks to investors in order for them to properly assess a decision to invest in a GMWB.

#### 1.2 Guaranteed income protection for retired investors

The product literature refers to the guarantee as a lifetime income guarantee. In fact, the lifetime income guarantee only kicks in once portfolio capital has been depleted: up till that point the guarantee relates only to a withdrawal or return of capital and any returns on that capital over the period in which capital is depleted. The lifetime income withdrawal guarantee does not in any way imply a guaranteed return and it

does not say anything about the value of the eventual guaranteed income. Once capital is depleted the product does indeed provide a guaranteed income, but this income will be subject to income tax (the net income will be less than the 5% promised) and will be deflated by inflation. Moreover, the actual value of the guarantee will depend on how long the investor lives and the withdrawals that could be provided by an alternative lower cost investment structure.

It is important that advisors and clients are clear as to what the guarantee relates to, the risks of the guarantee and the benefits of the guarantee.

## 1.3 Guaranteed income protection for retired investors – page 9

The first chart of the brochure shows a negative return scenario of -2% per annum with money running out in year 16; the chart makes many omissions.

- It ignores the fact that a market has a yield and that this yield in declining markets would likely rise
  as a percentage of a declining capital base and would offset much of the small annual decline in
  the capital value of an index.
  - If the chart represents a -2% total return, then this would imply a 5% market decline in year 1, if the yield were 3%, and subsequently larger declines, if the yield were to rise as the capital value of the market fell.
- Yield from equities would not be reinvested in a declining market, but used to support withdrawals.
- It appears to ignore the costs of a VA + GMWB which is important in determining the relative attractiveness of different options; a decline in the market of 5% plus GMWB charges would see capital values deplete much earlier.
- It ignores the fact that individuals may not have a fully invested stock market portfolio, or a
  portfolio fully invested in one market, in which case the risk to income and capital security is not
  as immediate.
- A balanced portfolio would allow fixed interest investments to be consumed first along with interest and dividends, allowing equity realizations to be deferred.

The brochure fails to point out that the gross \$10,000 guarantee payment post depletion will be subject to income tax (if held in a non registered plan) and hence will have a lower value to the investor; registered account withdrawals are subject to income tax irrespective and the guarantee will be of equal value pre and post capital depletion.

The following reruns the analysis in the first chart of the Sun Life brochure to look at the impact of costs, yield and taxation within the GMWB (using the -2% decline as a basis for the analysis), relative to what would happen if an investor merely bough the stock market index. We look at a simple index purchase because the illustration assessed is effectively looking (albeit incompletely) at the risks of a simple indexed stock market investment.

- 1. A yield of 3.05% on the market (September 3 2008 yield on S&P TSX) with dividends declining at a rate of 50% of the market decline.
- 2. A GMWB annual cost of 3.7%; the net return for a GMWB is the yield (3.05%) less the management and insurance expense (3.7%) less a 2% capital decline in the market, resulting in a negative return of -2.65% in year 1.
- 3. An index ETF annual MER of 0.25%

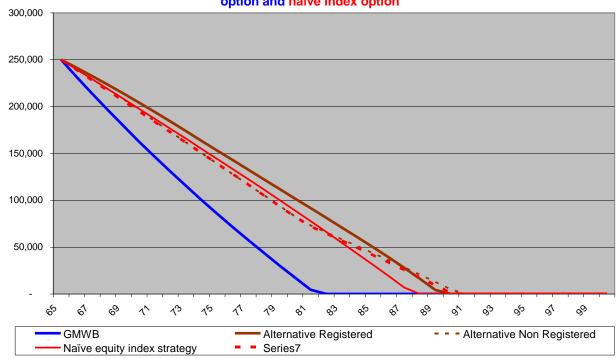
- 4. Tax rate of 33% on income, 8.14% on dividends (after dividend tax credit) and where applicable 50% of income tax rate for capital gains.
- 5. Withdrawals on the VA + GMWB after capital depletion taxed at 33%, leaving a net after tax withdrawal of \$6,703 from the \$10,000 guaranteed withdrawal in the first illustration (page 9 Sun Life client brochure) and a net after tax withdrawal of \$8,793.75 from the \$13,125 guaranteed income in illustration on page 11 of the Sun Life client brochure.

Chart 5 reassess the chart shown on page 9 of the Sun Life client brochure assuming declining dividends (dividends decline at 50% of the rate of market declines) and the alternative portfolio is 50% invested in an equity index exchange traded fund and 50% in a fixed interest exchange traded bond.

Chart 5

Capital Values Over Time

Alternative structured option (registered and non registered) versus GMWB option and naïve index option



The blue line is the outcome provided by Sun Life with an adjustment for dividends and annual costs as noted in assumption 1; this outcome is the similar for both registered and non registered investments. This depletes in year 81, more or less in line with averaged Canadian life expectancy.

The maroon line is the registered balanced ETF portfolio (non GMWB portfolio) with a management expense ratio of 0.25% per annum – dividends are reinvested in equities. This depletes in year 90, some 9.5 years past average Canadian life expectancy.

The small dotted maroon line is the non registered balanced ETF portfolio. The performance of this improves once the VA+GMWB is depleted and it no longer has to provide a net withdrawal of \$10,000, but a lower net withdrawal of \$6,703. This depletes in year 91, some 10.5 years post average Canadian life expectancy.

The thick red line is a 100% equity ETF (registered) portfolio and this runs out in year 88, some 7.5 years past average Canadian life expectancy. The dotted red line is the registered portfolio version, again this runs out slightly later due to the lower net withdrawal from the GMWB once capital is depleted.

Chart 4 shows the portfolio over lifetime of the alternative non registered portfolio. Cash and bonds are drawn down until a year buffer is retained in the portfolio, meaning that equities are only drawn down when the low risk portfolio is more or less depleted.

Chart 6

Non registered alternative portfolio - Cash and Bond life cycle asset allocation

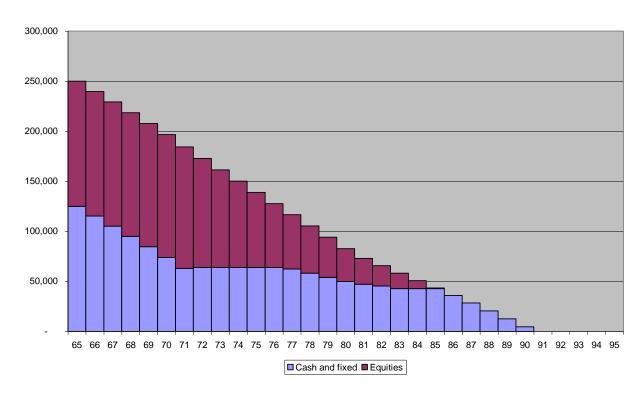


Chart 7 shows what would happen if the market succumbs to a recovery in year 16, after 15 years of a bear market. Let us assume that there is a 5% capital return and a 3.5% yield, providing a total gross return of 8.5% per annum before management and insurance expenses.

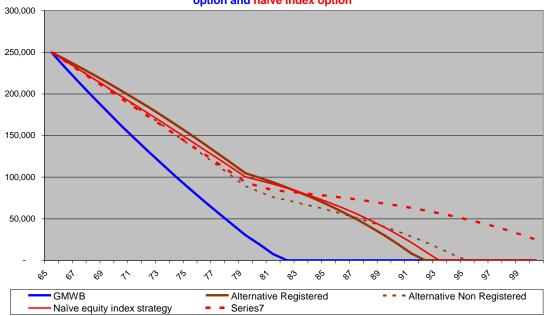
What if we reduced the expenditure requirement to 4% or \$11,250 a year on the alternative portfolio, as shown in chart 8, with the same passive indexed portfolio charging structure (0.75%/1.25%) – withdrawals on the GMWB would be kept at the same level. Reducing withdrawals provides a) opportunity to access capital if necessary, b) higher levels of capital available for estate planning, and c) should markets recover, the opportunity to increase withdrawals later on in life.

Chart 9 shows the net income received from both a VA + GMWB (full 5% withdrawals) and an alternative lower cost portfolio (4.5% withdrawals) both held in non registered accounts. Once the VA + GMWB is depleted, the income guarantee is subject to income tax whereas a large part of the alternative portfolio withdrawals is a return of capital.

Chart 7

Capital Values Over Time

Alternative structured option (registered and non registered) versus GMWB option and naïve index option



Capital Values Over Time

Alternative structured option (registered and non registered) versus GMWB option and naïve index option

Chart 8

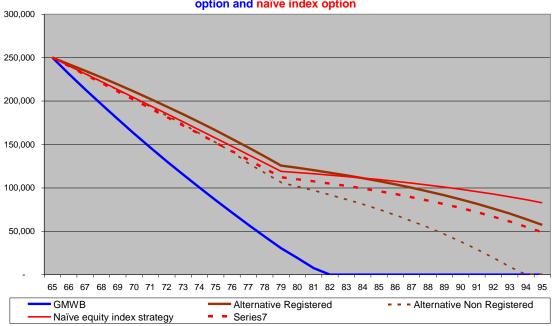
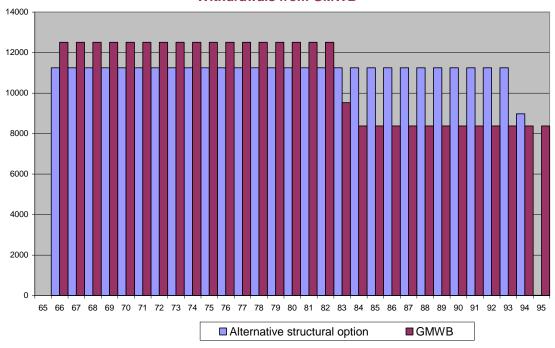


Chart 9

Non registered - Withdrawals from alternative structure V
Withdrawals from GMWB



The above is intended to provide a comparative assessment of the simple Sun Life illustration and is not intended to represent an expected return outcome. It shows that the illustration provided by Sun Life is biased towards presenting the need for the VA+GWMB type product. In fact, low cost solutions that incorporate higher fixed interest allocations and flexibility with regard to withdrawals provide superior outcomes, based on the .

## 1.4 Is your retirement income guaranteed to grow – page 10

Again, reference is made to a guaranteed income and in this instance a growing guaranteed income.

A guaranteed income will only be paid once capital is depleted from the plan, until then the withdrawals are made from portfolio capital and will be comprised of a return of capital and a return on capital (if any). In this context the guarantee reduces capital security by enforcing capital withdrawals irrespective of market conditions.

In the case of a 15 year deferral, it may be a very long time before a retiree will be able to benefit from the guarantee provided, by which time inflation and taxation (in the case of a non registered plan) will have reduced its comparable value.

In a non registered plan withdrawals from capital are not taxed, whereas withdrawals that are wholly comprised of income are subject to income tax; this will result in a lower net withdrawal from a non registered GMWB once capital is depleted. Withdrawals from registered GMWB plans are subject to income tax pre and post depletion and there would be no change in net withdrawals.

11

Life expectancy also impacts the value of the guarantee meaning that individuals will need to live well in excess of average life expectancy to benefit from the income guarantee. Since high charges and poor investment returns would result in early capital depletion, investors in these circumstances are effectively

purchasing an annuity where access to capital is exchanged for a fixed yield; the trouble is traditional annuity rates are higher than the guaranteed withdrawal rates provided by GMWB variable annuity.

With regard to the bonuses, until capital has fully depleted, the guaranteed annual 5% bonuses do not provide a guaranteed increase in income given that withdrawals are taken from portfolio capital until depletion.

A 5% simple bonus is equivalent to a guaranteed annual compound increase of 3.25% per annum. If the GMWB is held in a non registered account, the value of the guaranteed income once capital is fully depleted is further reduced by the impact of taxation. Once the capital within the product has run out, the income provided by the life company is likely to be treated as income taxable at the full marginal rate. A summary of the impact of taxation of income on withdrawals (once capital is depleted is provided in tables 1 and 2 and discussed further below.

## 1.5 15 year deferred modeling – page 11

A \$7,500 guaranteed income withdrawal is increased by 75% to \$13,125 if withdrawals are deferred for 15 years. As stated, the guaranteed income is only received once capital invested is fully depleted, a factor made more likely by the high costs.

After adjusting for income tax of 33%, net withdrawals from a non registered account based on a \$13,125 guaranteed withdrawal would be worth \$8,793.

If we gross this up to allow for dividend taxation of 8% (there would be no capital gains in a declining market) that would be paid on withdrawals from the index option, the actual value of the withdrawal once capital is depleted would be \$9,563. This is equivalent to a guaranteed annual bonus of 1.6% per annum over the 15 year deferred withdrawal period, a much lower figure than the headline 5%.

Page 11 provides an example of an investor who defers withdrawals for 15 years and runs out of capital at age 71, 21 years after taking out the policy. The chart noted below provides the same analysis as for the section 1.3.

The blue line is a 100% equity VA+GMWB with an adjustment for dividends and annual costs (-2% capital loss, plus dividends of 3.05% less annual costs of 3.7%) and is more or less the result provided by Sun Life in their chart on page 11.

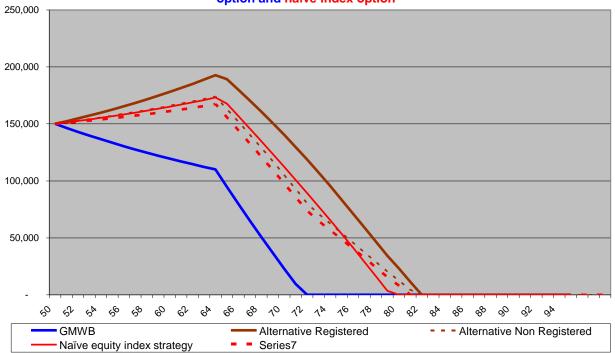
The red line is the registered index ETF investment with a management expense ratio of 0.25% per annum and the dotted red line the non registered index ETF investment adjusted for dividend taxation.

The maroon line is the registered balanced (50% bonds/50% equities) alternative investment (0.75% fixed interest costs and 1.25%): the dotted maroon line is the non registered investment.

Chart 10

Capital Values Over Time

Alternative structured option (registered and non registered) versus GMWB option and naïve index option

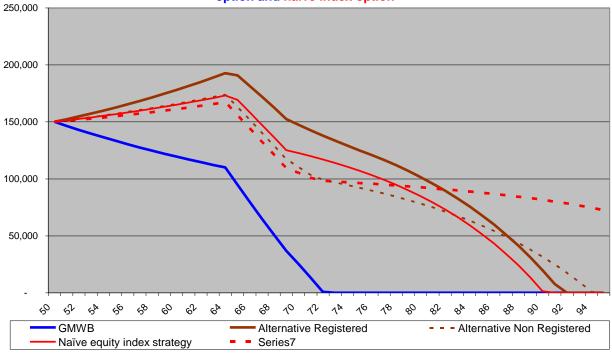


The above chart shows capital running out some 2.5 years post average Canadian life expectancy. The trouble is this assumes a 33 year bear market.

What if the market were to start recovering after 20 years, increasing by 5% per annum from that point on with a dividend yield of 3.7%? This is shown in chart 11 where the alternative portfolio life expectancies are 92. The outcome for the non VA+GMWB portfolio could be improved by starting out with a lower withdrawal requirement and increasing as market and economic conditions improved, something which the VA+GMWB would not be able to do.

Chart 11

Capital Values Over Time
Alternative structured option (registered and non registered) versus GMWB option and naïve index option



### 1.6 Guaranteed income protection with automatic resets

This section of the client brochure models the outcome of a portfolio invested 90% equities and 10% bonds with a 7.1% total return after 3.5% annual management expenses and insurance costs. A 10.6% return is close to the average long term nominal return from the Canadian stock market. As all previous TAMRIS analysis shows (sequence of returns analysis and the original historical simulations), short term sequence of returns risk and significant market and economic risks can be better managed by low cost structures focussed on managing risks to withdrawals over time.

Investors must realise that this is a brochure and that an advisor must be able to provide a comparative analysis if these illustrations are to be used to support a product recommendation.

"Since Michael's income was locked in, he didn't have to worry about market volatility, or the effect it may have had on his retirement plan": in fact, the underlying capital is affected by volatility to a greater degree because of the high charges; as such capital security and accessibility and the level of inflation protection afforded by capital are all impacted.

#### 1.7 Guaranteed income protection provides RRIF payments for life – page 15

Up till age 70 minimum annual payments are below 5% of the market value of a RRIF; by age 70 it reaches 5% and at 71 the minimum annual payment is 7.38%. The 7.38% is not equivalent to a 5% guaranteed minimum withdrawal. In the risk scenarios assessed in pages 9 and 11 the minimum annual payments (MAPs) would be lower than the 5% guaranteed minimum withdrawal. By the time you reach age 71, the 7.38% withdrawal rate plus plan costs would mean that the hurdle rate of return for resets rises to some 11% (14% in total by age 80), with an annual management and insurance expense of 3.7% (per the 75/100)

option noted in section 1). This means if returns are strong, the higher withdrawals dictated by MAP will limit the opportunity for upward resets of the guaranteed minimum withdrawal benefit.

#### 1.8 Principal Protection

Investors should remember that the cost of providing additional capital guarantees limits the return potential of assets held in a VA+GMWB. Once we enter the realm of "insurance rider heaven" comparisons with lower cost investment options and/or traditional annuities become even more important to the decision making process. These are insurance products and many advisors may be restricted to recommending only insurance based products: if so, the illustrations and arguments used in the Sun Life client brochure cannot provide the necessary perspective required to fully understand a purchase decision.

#### 1.9 Principal Protection Resets

If you are at greater risk of depleting capital within these withdrawal based insurance products it would seem counter intuitive to pay a premium to guarantee capital more likely to be consumed.

#### 1.10 4% Annual Automatic Death Benefit resets

Again, as per the above, why pay for a capital guarantee when the higher fee only increases the risk of depleting capital and leaving the capital guarantee itself worthless?

## 1.11 Earnings enhancement benefits

If investors are concerned about running out of capital and of inflationary risks then they would be better served by keeping costs to a minimum.

#### 2 Sun Life PowerPoint

Slide 6 of the Sun Life PowerPoint points out 3 risks: market risk, longevity risk and inflation risk. In fact a VA+GMWB only manages the risk of running out of capital with a fixed withdrawal requirement; it does not manage market risk, since capital invested is still exposed to market risk, and it does not manage inflation risk unless returns exceed costs and withdrawals by a margin sufficient to mitigate inflation.

#### 2.1 Market risk slide 7, 8

It is important to note that a GMWB does not provide a guaranteed return irrespective of market volatility; capital invested is just as exposed if not more so because of the higher costs. A VA+GMWB only provides a guaranteed income once capital in the plan is depleted. Market risk impacts the value of the capital held in the plan as well as the ability to provide the returns needed to mitigate inflation risk. As the sequence of returns analysis shows, a VA+GMWB is not a vehicle best able to manage sequence of returns risk.

If anything market volatility is an argument for a well structured and managed portfolio as opposed to a high cost, inflexible insurance solution.

### 2.2 Cannot control market cycles – sequence of returns

The TAMRIS Sequence of Returns analysis showed that sequence of returns risk was more likely to have negative consequences for a VA+GMWB than for a well structured, planned and managed lower cost portfolio. Again, as with the illustration provided by Manulife, the Sun Life illustration assesses an impractical situation; a 9% withdrawal rate could not be met by a VA+GMWB and a portfolio structured to meet financial needs is unlikely to be invested wholly in equities. If anything the sequence of returns risk is an argument for well structured, planned and managed, flexible lower cost investment structures.

#### 2.3 Inflation risk – Slide 12

"In retirement you need to have an income that will grow and stay ahead of inflation, so that you can continue to maintain your living"

There is no guarantee that a VA+GMWB will provide inflation protection, and the withdrawal provided by such plans are not wholly return, but will be comprised to greater or lesser extent of return of capital. The only time the withdrawal is 100% income is when capital is depleted.

Some would state that equity returns are comprised of inflation, real GDP growth and yield. If inflation is 3%, real GDP growth 2.5% and dividends 3%, total return will be 8.5%. Withdrawals of 5% and costs of 3.7% would result in withdrawals being unable to increase at all to mitigate inflationary risk. Inflationary risk is actually an argument for lower costs and sensible withdrawals rates.

#### 2.4 Benefits

"Sunwise Elite Plus provides predictable sustainable guaranteed income for life by eliminating market and longevity risks, and mitigating inflation risk."

As stated, the product does not eliminate market risk since the investor is still exposed to the consequences of market risk via a number of avenues. It cannot mitigate inflation risk unless returns exceed withdrawals plus expenses.

Clearly, individual investors need to understand just what they are giving up in exchange for managing longevity risk.

### 2.5 Summary

Slide 27 is correct in that retirement brings a new set of financial risks that need to be managed, that investments must provide both security and potential for growth to help lessen these risks and that you need flexibility to meet your financial needs.

The trouble is that by taking on a VA\*+GMWB you exchange the risk of running out of capital for a number of other risks; higher costs reduce returns, eating further into capital in down markets, limiting the potential for growth and hence inflation protection.

One of the main drivers of the VA+GMWB argument is that it supports a much higher equity allocation, thereby violating the need for a balance of assets that provide security and growth potential. Ongoing income and capital security outside the longer term "income guarantee" is actually impaired within a VA + GMWB; there is little or no rationale for holding lower risk assets within the plans because the high costs of the plans impair the income and capital security offered by these investments.

As regards flexibility, many of the touted benefits are not exactly what they appear. Investors who take withdrawals early (before age 65) and who are then able to lock into a lifetime guarantee at 65 are exposed to market risk and the impact of costs and market risk in the interim; there is no protection in reality offered to those who take withdrawals prior to age 65. Likewise the RRIF minimum annual payment provisions are also not as valuable as portrayed. Flexibility is provided by lower cost structures that do indeed provide a structure capable of managing short term risks to return and planning that is able to a) set more sensible withdrawal rates or b) adjust withdrawals rates as necessary to accommodate ongoing market and economic conditions. Flexibility should enhance liquidity, income and capital security at a point in time and over time.

### 3 Conclusion

The brochure made a number of claims: these were that during periods of significant market declines investors may well run out of capital well within their life expectancy. This is always a risk if portfolios are not properly structured, if costs are too high and if withdrawals from the portfolio are too high for the market and economic conditions of the time.

Just as longevity risks raise the chance of running out of money, the length of time that many will spend in retirement also provides opportunities for lower cost traditional portfolio options to manage the risk of running out of capital: there is the flexibility, the lower cost and the opportunity for sensible withdrawal management that can manage the risk of running out capital.

If we look at lower cost alternatives we can see that there are strong alternative arguments for not using VA+GMWB investments, and that advisors need to be cognizant of these arguments, and be able to communicate the realities of different investment options to clients. The brochure on its own is insufficient to satisfy advisor responsibility to communicate the information necessary for an advisory client to make an informed decision.

Recent market turmoil has pointed out the risks of stock market investment; however these risks have also hit the providers of guarantees for VA+GMWB products, most notably AIG which has since been taken over by the US government.

In short, as noted in the sequence of return document, transferring the risk of running out of capital to an insurance company with this product involves accepting other very important risks.