

Continuing  
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CORNER

*With great excitement*, the financial services industry continues to develop and promote ever-more complex guaranteed income products targeted squarely at retiring baby boomers. Yet, for a healthy market to develop, the manufacturers' promotions must be accompanied by a pensive analysis from actual producers and users. This is something which thus far has been slow to emerge.

Thus, I'm gratified to see one of our star MBA candidates at York University's Schulich School of Business, Jason Pereira, tackle these products from a distinct and analytic perspective. Jason brings a combination of in-the-trenches experience as a financial planner together with an unemotional and conceptual perspective acquired in the halls of academia. Indeed, he was one of the few souls who braved my advanced "Calculus of Retirement Income" finance course at Schulich, which is yet another sign of intellectual stamina.

As you will see from his article that follows, a new language is needed to evaluate the costs, benefits and merits of GMWBs. This is a lexicon which goes well beyond the traditional Greek of alphas and betas.

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# Income Guarantees

Advisors need to determine whether a new breed of retirement income products fit with their clients' needs.

Necessity is the mother of invention, as the proverb says. Whenever there's a need, someone will invent a device to meet that need.

While the expression generally refers to things mechanical, it's also true in the investment management market. Mutual funds,

exchange traded funds, linked notes and many other structured investment vehicles all represent innovations that were developed to meet the needs of investors and help them accumulate wealth.

Now, in response to the aging of the baby boomers, necessity is

again showing its hand by driving innovations aimed at a different need: stable retirement income. As the demographic inches closer toward retirement, its need for stable post-career income is taking centre stage and creating a new market for innovative structured products.

Guaranteed income variable annuities, and other insurance-based investment products, have been marketed in the United States for years. But the concept didn't arrive in Canada until 2006. The first products initially offered a 20-year guaranteed income from a segregated fund portfolio but later evolved to include a lifetime income guarantee, much like their U.S. counterparts. The products

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pioneered a new category of investment vehicles known as Guaranteed Minimum Withdrawal Benefits (GMWBs). In exchange for a percentage of the total account value, these products guarantee investors an income from the portfolio for a 20-year term, or life, regardless of market performance, and even if the account value hits zero.

However, advisors are required to perform due diligence, and when considering these products for client portfolios, they must ask three questions:

- Is there a need for such guarantees?
- What is the value of these guarantees?
- How does the guarantee's value compare with its cost?

To make a determination, an advisor should first examine segregated funds and assess their potential benefits, including GMWBs, and then analyze the applications for the product in a specific client's portfolio.

### Segregated Funds

On the surface they look just like mutual funds. Most seg funds are run identically like mutual funds, which bear the same name and manager, while some others offer a completely unique portfolio. The key difference is that seg funds, as insurance products, carry maturity and death benefits as well as several other optional benefits such as guaranteed life income streams. The insurance benefits are paid for by way of an annual percentage of account value fees, which are added on to the basic management fee that a client would pay for owning

a mutual fund.

While maturity benefits are common to all seg funds, despite variations in design, a seg fund's maturity benefit guarantees a minimum account value equal to a percentage of the contract's guaranteed amount at a set maturity date. Should the account value be below the guaranteed threshold, an insurance benefit is paid to cover the difference. Three components combine to make this happen:

- The guaranteed amount—this equals deposits, minus withdrawals, from the account. Often, these funds provide reset provisions, which allow an advisor or client to reset the benefit amount to the market value on the date of reset, assuming the market value is higher than the previous guaranteed amount. This allows investors to lock in gains.
- The guarantee percentage—this basically states what percentage of the guaranteed amount is, in fact, guaranteed. The two standard levels are 75% and 100%. So, if a client had a guaranteed amount of \$100,000, a 75% seg fund would guarantee an account value at maturity of no less than \$75,000 and a 100% seg fund would guarantee \$100,000. Should there be any shortfall at maturity, the difference would be made up through an insurance benefit.
- The maturity date—typically either 10 years or at age 100. However, it is worth noting that in the case of 10-year guarantees, any resets would reset the benefit period as well. Essentially a seg fund's maturity

benefit represents a put option on the account value. The payout can be expressed as follows:

$$\text{Max}(0, S - X)$$

Where: S = Account value at maturity, X = Guaranteed amount x guarantee %

The fees associated with this benefit are dependent upon the guarantee-benefit percentage.

Since a 75% benefit guarantees a lower account value than 100%, the fees associated with it are lower than the 100% benefit.

Death benefits are the only other mandatory benefit attached to seg funds. They guarantee a minimum account value at death, based on the guaranteed amount (the same amount as in the maturity benefit) and the guarantee percentage. Just like the maturity benefit, the guarantee percentage is set at either 75% or 100%. The only difference between the two benefits is that instead of a maturity date, the benefit pays out at death.

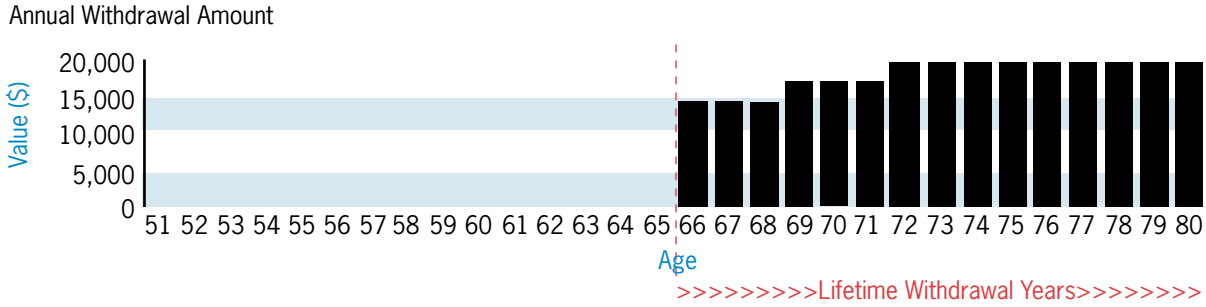
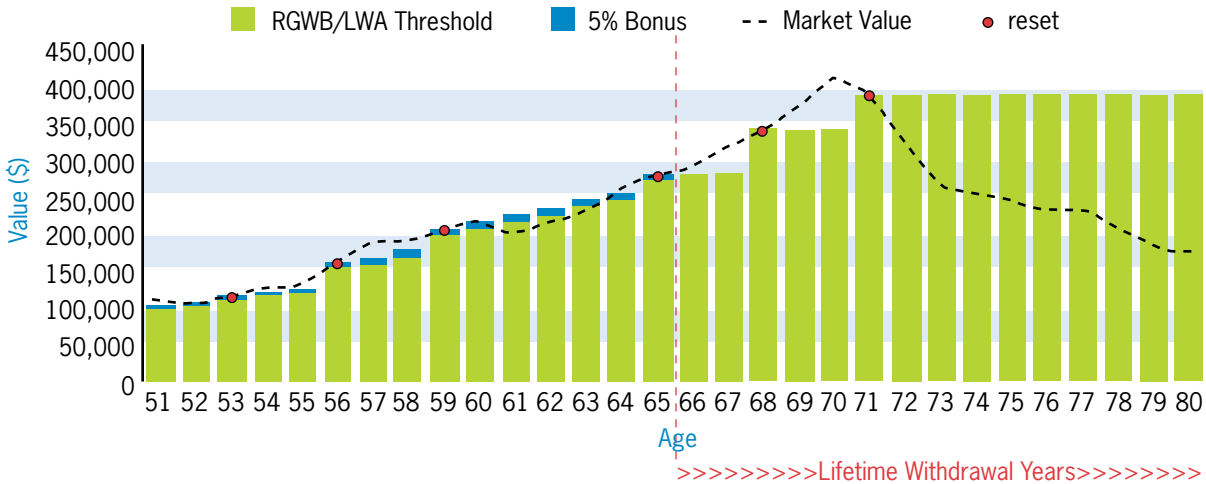
The fees associated with this benefit are again tied to the guarantee percentage, the same way the maturity benefit was.

### Guaranteed Withdrawal Benefits

The guaranteed withdrawal benefit is the first of the two GMWB guarantees available on the market today. It guarantees a minimum cash flow from a seg fund account over a period of 20 years, regardless of market value.

The amount guaranteed is equal to 5% of the GWB base. This amount represents what is known as the Guaranteed Withdrawal Amount (GWA). The GWB base is calculated as net deposits to the

**THE EFFECT OF THE GMWB** This investor put in \$100,000 at age 51.



Source: CI SunWise Elite + Illustration Software

accounts, less any withdrawals in excess of the guaranteed cash flow. For example, if someone were to deposit \$100,000 into a seg fund account with a GWB, they would be guaranteed to receive \$5,000 (\$100,000 x 5%) for 20 years. However, if they withdrew an additional \$20,000, the benefit would be reduced to \$4,000 (\$80,000 x 5%). Should the account value be positive at the end of the 20-year period, the account is retained by the investor. Should the account value ruin before the end of the 20-year period, an insurance benefit will pay the guaranteed cash flow for the remainder of the 20-year term. Essentially this benefit

guarantees a return of principal over 20 years with no risk of ruining due to market downturn.

Like maturity and death benefits, the GWB has a reset provision. Every three years, should the market value of the account exceed the GWB base, it will be reset to the market value. To continue with the example, assume that three years into the payment period the account value is \$120,000. In such a case, the GWB base would be reset from \$100,000 to \$120,000. This would in turn increase the benefit amount from \$5,000 to \$6,000.

One last benefit of the GWB is what is known as the GWB bonus. During the first 15 years,

every year that the investor does not make a withdrawal from his or her account, the GWB base is increased by 5% simple interest. So if one were to invest \$100,000 and not make a withdrawal until the beginning of the third year, the GWB base would be increased by \$5,000 per year to \$110,000. This would in turn guarantee a cash flow of \$5,500 per year, as of the beginning of year three.

**Lifetime Withdrawal Amount (LWA)**

The second GMWB benefit on the market today is known as the Lifetime Withdrawal Amount benefit. The LWA works almost identically



the GWB base increases consistently by \$5,000 per year (the GWB bonus). By age 66, despite the fact that the account value has declined to approximately \$70,000, the GWB has increased to \$175,000, guaranteeing a lifetime income of \$8,750. Further, in this illustration we can see the account actually ruins at age 72. At that point, the LWA benefit kicks in and an insurance benefit is paid out annually to cover the \$8,750 guaranteed cash flow.

This scenario truly illustrates the benefits of GMWBs. Despite negative performance and ruin, the investor is guaranteed an income of no less than \$8,750, starting at age 66, from the day he or she invested the funds.

While constant negative scenarios are highly unlikely, volatility within portfolios can result in ruin. Therefore, on the surface, GMWBs demonstrate that they are beneficial to investors.

### Applications

A key concern in financial planning is the projection of future expenses against income and investments, which are to be used to cover those expenses. The first to be considered are the client's guaranteed sources of income such as CPP, OAS, defined benefit pensions and annuities. The gap between such expected expenses and the client's guaranteed income is known as the retirement income gap. This gap is typically filled with income from investments; however, since equity investments are volatile by nature, there's a chance the portfolio being used to cover this gap could end up

in a state of ruin. The GWA and LWA from these insurance products, though, can be utilized to fill that gap on a guaranteed basis with no risk of shortfall, making them an incredibly powerful tool in financial planning.

In order to fully understand the potential applications of the product, we must examine the two scenarios in which someone would purchase a GMWB: pre-retirement and in retirement.

Prior to retirement, the GWB bonus can play a vital role. By providing a minimum guaranteed growth of the GWB base, and therefore the LWA, a financial planner can project with 100% accuracy the size of the investment required in order to cover the income gap. For example, if someone is planning on retiring in two years and has an income gap of \$10,000, we can determine the client will need to invest \$181,818 immediately.

The GWB will increase by \$9,090 per year for every year that there are no withdrawals from the account. This means that at retirement the GWB base will be \$200,000, resulting in an income of \$10,000. In fact, this relationship can be stretched out for the life of the 15-year bonus period. In that case an investor would only have to put down 57% of the required GWB base at retirement today and be guaranteed that he or she will be able to finance the gap for life.

Meanwhile, an investor who is in retirement can eliminate all risk of financial ruin by financing his or her retirement gap through an

immediate purchase or transfer of existing investments to a GMWB account.

### Retirement Income Options

GMWBs are by no stretch of the imagination the only option (see "Income Options," page 6).

But, while there is more than one option available to investors, few combine the guarantees and flexibility of GMWBs, making them an attractive alternative.

Product A offers a 75% maturity at age 100, a 100% death benefit plus the standard GWB and LWA benefits. It is available to investors aged 80 or younger with a maximum equity exposure of 80%.

The program offers 23 seg funds, which break down as follows: one Money Market, three Fixed Income; nine Balanced; four Global Balanced; and six Portfolios.

The seg fund fees, charged in addition to the base MER, range from 0.10% to 0.55% of assets per year for the maturity and death benefits, dependent on the risk of the individual funds risk. The GMWB fees are also based on risk as per the following schedule:

Level 1 – Fixed Income –	0.25%
Level 2 – Conservative –	0.35%
Level 3 – Balanced –	0.55%
Level 4 – Aggressive –	0.75%

However, there is one key difference between GMWB fees and MERs/seg fund fees. While MERs and seg fund fees are based on a percentage of assets, the GMWB fees are derived as a percentage of the remaining GWB base.

All said and done, the total premium paid for GMWB funds ranges from 0.35-1.30% depending on

**INCOME OPTIONS** Few choices combine the guarantees and flexibility of GMWBs.

Benefit	GIC	Life Annuity	Mutual Funds	Bonds	Seg Funds	GMWBs
Guaranteed Lifetime Income	Interest Only	Yes	No	Interest Only	No	Yes
Potential Increase of Income	Yes	Yes	No	Yes	No	Yes
Impacted by Market Fluctuations	Yes	No	Yes	Yes	Yes	Yes
Flexibility to Change Investments	No	No	Yes	Yes	Yes	Yes
Access to Savings	Some	No	Yes	Yes	Yes	Yes

Source: Jason Pereira

the risk level of the underlying investments. It should also be noted the information folder discloses that the issuer may increase the seg fund fees and GMWB fees by up to 0.50% each at their discretion for an additional potential 1%.

Product B is much more flexible when it comes to death benefit and maturity guarantees, and offers three benefit combinations: Class A: 100% maturity at 10 years and 100% at death; Class B: 75% maturity at 10 years and 100% at death; and Class C: 75% maturity at 10 years and 75% at death.

The product also allows for 90% equity in the portfolio, and permits the investor to defer up to 15% of the account value without affecting the benefit amount. It is otherwise substantially similar to Product A.

The program itself offers 54 seg funds which break down as follows: One Money Market; Five Income; Seven Balanced; Seven Global Balanced; Seven Portfolios; Nine Canadian Equity; Five US Equity; and 13 Global Equity.

The seg fund fees, again charged in addition to the base MER, are dependent on not only the risk of the fund but also the class of seg

fund. The fees range as follows: Class A: 0.20 to 1.40%; Class B: 0.15 to 0.90%; and Class C: 0.10 to 0.45%.

The GMWB fees are also based on risk and seg fund class along the following schedule:

- Level 1 – Fixed Income – 0.25%;
- Level 2 – Conservative – 0.35%;
- Level 3 – Balanced – A: 0.40% B: 0.45% C: 0.50%; and
- Level 4 – Equity – A: 0.50% B: 0.60% C: 0.70%.

As was the case with the previous product, these fees are calculated as a percentage of the remaining GWB base.

Due to these extra options, we end up with a wider range of fees, ranging from 0.35% to 1.90%. Product B also discloses the ability to increase fees by up to 1%.

Now that two of the products available and their fees have been summarized, we can move on to valuing the benefit of GMWBs.

#### GMWB Valuation

The first step in projecting assumptions is to determine the historical return and standard deviation for each asset class over the last 20 years (see “Value Determination,”

page 7). The indexes utilized were:

- Cash: Government of Canada 90-day T-bill rate;
- Bonds: DEX Bond Index;
- Canadian: S&P/TSX Composite;
- US: S&P 500; and
- EAFE: MSCI EAFE.

We’ll make the basic assumption that fund managers will produce the same return as the index after their basic management fees (MERs). We’ll then deduct from that return the average seg and GMWB fees charged by both producers. We’ll also construct three diversified portfolios in order to analyze diversification’s impact on the probability of ruin:

- An income portfolio: 80% bonds, 10% Canadian equity, 5% US equity and 5% EAFE
- A balanced portfolio: 40% bonds, 30% Canadian equity, 15% US equity and 15% EAFE
- An all-equity portfolio: 40% Canadian equity, 30% US equity and 30% EAFE

#### Probability of Ruin

By utilizing the following formula, we are able to calculate the probability of ruin:

$$\Pr[SPV \geq w] = \text{GammaDist} \left( \frac{2\mu + 4\lambda}{\sigma^2 + \lambda} - 1, \frac{\sigma^2 + \lambda}{2}, \frac{1}{w} \right)$$

Where:

- M = Mean
- $\sigma^2$  = Standard Deviation
- $\lambda$  = Mortality Factor
- $1/w$  = % of investment withdrawn

The average rate of return ( $\mu$ ) and standard deviation ( $\sigma$ ) were entered into the formula along with the mortality rate ( $\lambda$ ) at various ages (see “Calculating Ruin,” page 9). This shows how if one started withdrawing 5% of one’s total wealth per year at any one of the given ages, what the probability of ruin would be over their remaining lifetime, based on the asset class the person is investing in. For example, an 80-year-old will on average live 7 more years, and if he or she had 100% of the portfolio invested in a balanced portfolio, the chances of running out of money before death are 1.04%. A 65-year-old will live on average 18 more years, and if invested 100% in US Equity, would face an 8.09% probability of ruin prior to death.

This probability table clearly follows a pattern of increase with the more risky asset classes, and decreases with age and through

diversification. So it shows there is a very real possibility of ruin and therefore a potential need for GMWBs.

In order to value the GMWB benefit, we will use the following method (see “GMWB Value,” page 9):

- A Monte Carlo analysis was run projecting out 1,000 sequences for each asset class/portfolio;
- A notional amount of \$100 was used as an initial investment for each asset class/portfolio;
- The cash flows were projected for each asset class terminating at different ages; and
- The value was calculated to be the discounted deficits from any ruin scenarios, summed and divided by the number of trials to calculate the average present value of the income paid by the GMWB’s insurance.

The calculations were arrived at using the outlined assumptions. The table provides the value of the guarantees to a 65-year-old, should he or she live to the designated age. The ages of 83, 88 and 96 were chosen for this analysis as they rep-

resent the ages where 50%, 75% and 95% of the population of 65-year-olds would have passed away. For example, a 65-year-old, who lives to age 88 and invests 100% in U.S. equity can expect to receive an average GMWB insurance payment of \$12.66 in today’s dollars for every \$100 invested by age 88. This does not mean that every 65-year-old who makes it to 88 will have ruined and received benefits totalling \$12.66 in today’s dollars, it is simply an average of all payments made to each investor.

In summary, this analysis found there was almost no value to the money market, bond and income guarantees and very low values for the balanced portfolio. This is not surprising given the very low probability of ruin put forth previously. As for the three equity categories and the all-equity portfolio, all of them had ruin scenarios with values per \$100 invested that increased over the different terminal ages.

Here the benefits of diversification can be seen again (see “Cost of the Guarantee,” page 10). Previously, diversification was shown to result in a lower probability of ruin, and here it translated into

**VALUE DETERMINATION** Historical return and standard deviation (SD) for each asset class.

	Cash	Bond	Can	US	EAFE	Income	Balanced	All Equity
Return	6.00%	8.00%	10.00%	10.00%	10.00%	9.00%	9.00%	9.00%
Less: Seg Fee	0.15%	0.20%	0.85%	0.90%	0.90%	0.30%	0.30%	0.90%
Less: GMWB	0.25%	0.35%	0.65%	0.65%	0.65%	0.50%	0.50%	0.65%
Net Return	5.60%	7.45%	8.50%	8.45%	8.45%	8.20%	8.20%	7.45%
SD	3%	6%	15%	17%	20%	6%	9%	9%

Source: Jason Pereira

lower guarantee values. In all three cases the values of the guarantees on the portfolios were less than the weighted averages of their components.

Not surprisingly, the values were larger in the asset classes that had higher levels of volatility. And these values became significantly more pronounced with longevity. Specifically, equity investors who live to 96 can expect a very large average value, ranging from \$20-32. From this, we can determine GMWBs carry a quantifiable value for portfolios that include equities. However, these values are reduced through the risk-minimizing attributes of diversification; yet increased through longevity.

#### Cost vs. Benefit

Now that we've established a present value for the GMWBs, we can compare it to the cost of obtaining such guarantees (see "Premium Versus Values, page 10). That requires calculating the present value of fees collected over the course of the timeline; examined based on \$100 of invested assets; and then compared to the prior results in the value analysis. For the purposes of this analysis, we'll consider only the GMWB fees and not the seg fund fees. While it is true that one cannot invest in a GMWB fund without paying the seg fund fee, these fees are designed to provide other benefits that have nothing to do with guaranteed income. Therefore, in order to analyze the cost versus the benefit of these fees, we'll look only at the marginal cost associated with acquiring them.

This example uncovers an in-

teresting phenomenon. Based on the current fee structure, the expected payouts on all-equity are significantly higher than the fees expected to be collected. This is due to their higher probabilities of ruin and the fact that once the ruin period has begun, no further fees are collected. This suggests that individual equity funds are currently underpriced.

In the case of Money Market, Bonds, Income, Balanced and All Equity portfolios, we can see that GMWB benefits cost substantially more than their expected payouts. However, it begs the question: Is \$9.99 at age 65 worth a guarantee that even if your portfolio of Canadian stocks is ruined, you will continue to receive \$5 per year?

Another interesting point to be witnessed from this is that the longer the lifespan of the investor, the lower the differential becomes as the value increases at a faster rate than the costs.

Lastly, it's necessary to comment on the power of diversification. The income, balanced, and all-equity portfolios demonstrated the poorer value for cost tradeoffs. There seems to be a very large variance between value and cost. This would suggest a mispricing in all categories, specifically an underpricing of equity and an overpricing of fixed income and diversified portfolios.

#### Valuation

Given the probability of ruin and expected payouts and values, it appears the guarantees provided by GMWBs are of real value to equity investors. However, their value in income and balanced investments

is significantly lower than equity.

Perhaps one of the best ways to look at GMWB guarantees is in the context of insurance. We purchase insurance in order to indemnify ourselves against worst-case scenarios: death, disability, critical illness, accident, fire, etc. In essence, portfolio ruin is another worst-case scenario and there is a very real possibility of disastrous results to the investor's livelihood. In that context, is \$7-to-\$10 over the course of 20-to-30 years too much to pay for protection? Given all the other benefits of GMWBs, including potential for market upside and liquidity, these are likely acceptable costs. And the products do present risks to the companies providing them, including:

- Overestimation of return/Underestimation of standard deviation/Underpricing of premium. Any of these would result in greater than expected levels of ruin, resulting in higher than expected payouts;
- Lapse Rates—in rising markets, more investors would be likely to opt for lower fee investments, reducing collected fees. Also, in falling markets, the guarantees become more valuable and investors are more likely to keep them and/or take them on;
- Moral Hazard—the elimination of downside risk might make investors more risk-seeking, thereby increasing their equity content and probability of ruination on a greater portion of the total portfolio; and
- Anti-Selection—investors with a family history of longevity and good health would be more like-

**CALCULATING RUIN** What is the probability a client will run out of money?

Age	Median years to death	Mortality Rate	Money Market	Canadian			Foreign			
				Bond	Equity	US Equity	Equity	Income	Balanced	All Equity
65	18	0.0385	5.71%	2.76%	5.12%	8.09%	12.04%	1.86%	2.75%	6.70%
70	14	0.0495	4.34%	2.28%	3.96%	6.14%	9.10%	1.60%	2.25%	5.07%
75	10	0.0693	2.83%	1.64%	2.64%	3.96%	5.81%	1.22%	1.61%	3.29%
80	7	0.0990	1.67%	1.06%	1.59%	2.29%	3.28%	0.83%	1.04%	1.92%
85	4	0.1733	0.62%	0.45%	0.61%	0.82%	1.11%	0.38%	0.44%	0.77%
90	2	0.3466	0.14%	0.12%	0.14%	0.18%	0.22%	0.10%	0.12%	0.16%
95	1	0.6931	0.03%	0.02%	0.03%	0.03%	0.04%	0.02%	0.02%	0.03%

\* Median age calculated using RP-2000 unisex (50% male) tables

Source: Jason Pereira

**GMWB VALUE** Investment diversity lowers the probability of ruin.

Age	Remaining Population	Money Market	Money Bond	Can Eq	US Eq	Fgn Eq	Income	Balanced	All Equity
83	50%	-	0.01	1.78	3.54	5.36	-	0.13	1.95
88	25%	-	0.07	3.86	6.23	8.35	0.03	0.71	4.33
96	5%	0.40	0.55	6.38	8.77	10.57	0.19	2.16	7.22

Source: Jason Pereira

ly to purchase such a product, while investors in poor health or family history of less than average lifespan would have less incentive to purchase them. If investors pick up on this, it could result in greater than expected insurance payouts since the probability of ruin increases with longevity.

To mitigate that risk, issuers have the following tools:

- **Adjustable Fees**—the fees associated with seg funds and GMWBs can be increased at any time up to the contracted maximum;
- **Equity Maximums**—the maximum allowable equity allocation can be reduced at any time;

- **Fund Closure**—funds of higher volatility can be closed off to new investors in order to limit exposure to that risk;
- **Derivative Contracts**—the issuers can enter into derivative contracts with counterparties to hedge their risk; and
- **Reinsurance**—risk can be passed off to reinsurers in exchange for a premium from the issuer.

**Examples of Applications**

Client A is a 50-year-old divorced woman with no children who wants to retire at age 65. She has no debt, is risk-averse, and has little to no savings outside of her company's defined benefit pension plan. Her

mother has just passed away and left her a \$500,000 inheritance. While designing her financial plan, you find she has a retirement income need of \$50,000 per year at age 65, yet her pensions will only provide about \$36,000, leaving a \$14,000 gap. Because of the client's risk aversion, you decide a GMWB seg fund is probably the best way to go. So in order to meet the \$14,000 per year shortfall, you determine she'll need a GWB value of \$280,000 at retirement (\$14,000/.05). In order to guarantee that GWB, you recommend the client invests \$159,600 (\$280,000 x 57%) in the GMWB seg fund. Now she will receive a GWB bo-

**PREMIUM VERSUS VALUES** The expected payout on all equities will exceed the fees collected.

Age	Remaining Population	Money Market	Money Bond	Can Eq	US Eq	Fgn Eq	Income	Balanced	All Equity
83	50%	2.62	3.86	5.98	5.24	4.85	6.03	5.24	5.37
88	25%	2.89	4.32	6.41	5.54	5.07	6.91	5.79	5.66
96	5%	3.15	4.82	6.79	5.79	5.26	8.01	6.36	5.88

Source: Jason Pereira

**COST OF THE GUARANTEE** Expected fees of the client's lifetime

Age	Remaining Population	Money Market	Money Bond	Can Eq	US Eq	Fgn Eq	Income	Balanced	All Equity
83	50%	2.62	3.85	4.20	1.70	0.51	6.02	5.11	3.42
88	25%	2.89	4.25	2.55	0.70	3.28	6.88	5.08	1.33
96	5%	2.75	4.27	0.41	2.98	5.30	7.82	4.21	1.31

Source: Jason Pereira

nus of no less than \$7,980 per year (\$159,600 x 5%). After 15 years, the GWB base will be no less than the required \$280,000. The remaining \$340,400 could then be invested in mutual funds or other investments, which carry lower fees.

Let's contrast her with Clients B & C, a 60-year-old married couple looking to retire next year. Their required retirement income is approximately \$80,000 and their combined pension income is approximately \$60,000. Currently they have \$2 million in balanced investments across several accounts. At first glance, it may be tempting to apply the GMWB fund solution from the client A scenario. But there is actually little benefit to this, since the annual withdrawals will total approximately 1% of net investible assets and, given that these funds are invested in a bal-

anced portfolio, the probability of ruin of this couple's portfolio is very low. Therefore, they don't need the guarantee GMWBs provide.

Then there are Clients D & E, who are identical to B & C with one exception: they have stated a desire to leave the largest possible estate to their family, and to charity. Here GMWB seg funds can actually perform two roles. The first is to divide the portfolio into two distinct segments aligned with the couple's goals. To do that, an advisor would start by investing \$400,000 into a GMWB seg fund for the clients. This would guarantee the \$20,000 per year shortfall would be financed for life. Then the other \$1.6 million could be managed or given to the eventual beneficiaries. The second role played by the GMWB is actually one provided by regular seg funds. Should there be any account

value remaining in the GMWB seg fund at the time of the second death, the remaining account value can be paid out to the beneficiary without attracting probate.

Given the demographic shifts facing Canada, GMWBs are likely to not only remain present in the marketplace, but to thrive and spawn new issues. For the right clients, these products provide a real value—the peace of mind and certainty that they provide investors. That security does, however, come at a price and advisors need to weigh the need versus the cost before recommending them to clients.

#### LAST TIME

And, if you missed our last CE Corner, be sure to read "Lifelong Income" and pick up your credits.