WHY ANNUITIES ARE CHEAP

If I had a loonie for every time that I heard someone say that annuities are expensive, I'd be writing this article while sipping Château Margaux on my own private island.

With interest rates stuck at historic lows, we're at the point where the "annuities are expensive" mantra is conventional wisdom and rarely questioned. The purpose of this article is to explore this notion and quantify what "expensive" really means.

You might be surprised by the results. For the last five years, the yield on annuities has been consistently higher than the expected yield on a typical bond portfolio. Not only have annuity yields been higher, but annuities have also provided longevity and investment risk protection at no additional cost.

This is certainly a departure from traditional thinking in Canada, and should cause plan sponsors to review their asset mix and consider allocating a portion of their bond portfolios to annuities.

ANNUITIES: THE NEW SUPER BOND

From a pension plan's perspective, an annuity has a lot of the same characteristics as a bond portfolio. Both the annuity and the bond portfolio provide a stream of payments that can be used to match the liabilities of a group of plan members.

However, the annuity provides something that a bond portfolio can't: longevity risk protection and investment risk protection for the pension plan. That is, with an annuity if members live longer than expected or an investment performs more poorly than expected - the insurance company makes up the difference. For a bond portfolio these risks are still carried by the pension fund.

Plan sponsors and consultants in the United Kingdom have started referring to annuities as "super bonds" because of these properties.

Given these de-risking super powers, one might expect that an annuity would be more expensive than a bond portfolio, but this has not been the case.

COMPARING APPLES AND ORANGES

One way to determine the relative expense of an annuity is to compare the expected yield that a pension plan would get by purchasing an annuity versus investing in a bond portfolio.

Most people would expect that the yield on an annuity would be lower than a bond portfolio and that this lower yield is the cost of purchasing the longevity and investment risk protection provided by the annuity. In fact, the very opposite is true.

So how do we get an apples-to-apples comparison? Well, let's start by constructing a hypothetical group of retirees with a duration of 10 years and assuming that the liabilities for this group of retirees is supported by a matching bond portfolio with a duration of 10 years.

At December 31, 2011 the blended annualized expected yield for a DEX bond portfolio with a duration of 10 years was 2.88%. The bond portfolio will have investment manager expenses and will also have costs associated with administering the retirees (e.g., making monthly direct deposits, answering retiree questions, providing annual tax reporting, etc.). These expenses will be different for every pension plan, but for the purpose of this example let's say that the combined cost of these two items is 0.10%. This results in a net expected yield on the bond portfolio of 2.78%.

What would an annuity cost for this hypothetical group? The annuity proxy rate published by the Canadian Institute of Actuaries at December 31, 2011 was 3.31%. The annuity proxy is "one size fits all" and is derived using an outdated mortality table. Adjusting for these factors means that the yield available was actually closer to 3.51%.

So in this example at December 31, 2011, a typical pension plan could actually improve portfolio yields by over 0.70% while receiving longevity and investment risk protection for free by purchasing annuities. When viewed like this, annuities represent a new, relatively untapped asset class, capable of providing superior returns and protection compared to a typical plan's fixed income portfolio.

HOW TO COMPARE **APPLES AND ORANGES**

Comparing the expected yield on a bond portfolio with the yield on an annuity purchase requires a number of adjustments. The following table sets out these adjustments in more detail for our hypothetical retiree group.

	Hypothetical Retiree Group at December 31, 2011
Gross expected return on matching bond portfolio	**2.88%**
Investment manager and administrative expenses	**(0.10)%**
Net expected return on matching bond portfolio	**2.78%**
Annuity pricing rate (CIA annuity proxy, based on UP94G)	**3.31%**
Adjustment for duration difference (14 to 10 years)	**(0.10)%**
Adjustment for life expectancy longer than UP94G	**0.30%**
Net expected return on annuity purchase	**3.51%**

The matching bond portfolio is made up of 50% DEX long bond index and 50% DEX universe bond index, which results in a duration of 10 years. Such a bond portfolio would contain approximately 35% Canada bonds, 40% provincial / municipals bonds and 25% corporate bonds. The gross expected return is as published by DEX each month. The adjustments to the annuity pricing rate are based on Sun Life Financial's experience:

1. The adjustment for duration results from the CIA annuity proxy being based on a hypothetical plan with a duration of about 14 years.
2. The adjustment for life expectancy results from our experience that Canadians are living about one year longer than suggested by the UP94G mortality table and AA improvement scale, which means that the CIA proxy rate understates the true yield of an annuity purchase.

MONEY FOR NOTHING?

Figure 1 shows the increase in portfolio yields that can be achieved with an annuity purchase for our hypothetical group of retirees over several years.

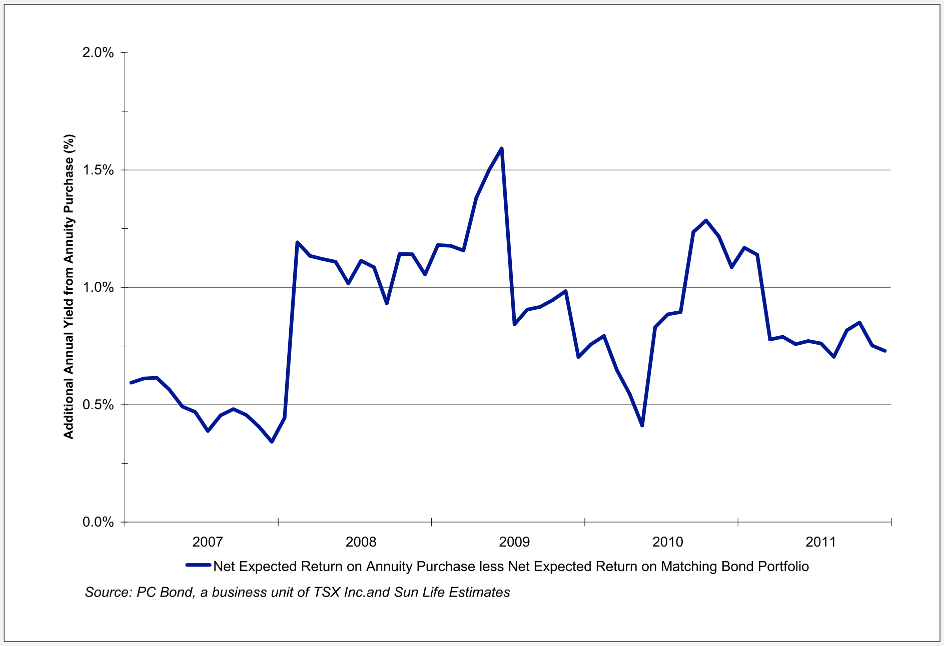

Figure 1

It is interesting to note that annuities have generally yielded between 0.50% and 1.50% more than a comparable bond portfolio, with an average additional yield of approximately 0.90%. At no point in the past five years has the yield on the annuity portfolio been lower than the expected yield on the bond portfolio.

In addition, we have seen the excess yield increase significantly above 1.00% two times during the past five years. The most recent occurrence in late 2010 represents an imbalance in the annuity market where insurer supply outstripped pension plan demand.

ANNUITY BUY-INS

Plan sponsors sometimes avoid purchasing annuities because of the additional cash contributions that are required for underfunded plans or because of the accounting implications created by the purchase.

Fortunately, both of these issues can be avoided with an annuity buy-in solution, which has all of the same risk transfer characteristics of a traditional annuity, but remains an asset of the pension plan. This solution is fairly new to Canada, but is used widely in the United Kingdom.

At first glance these results are very surprising and counterintuitive. How are insurers able to offer such high yields while providing longevity and investment risk transfer?

There are three main factors at work. First, insurers are very large institutional investors and have access to better investment opportunities than the typical pension plan. Second, insurers have highly developed risk management and governance functions that allow them to better manage and be more comfortable with investment risk than the typical pension plan. Third, unlike a typical pension plan, insurers are able to back annuities with illiquid investments, which often provide higher yields. Together these factors allow insurers to construct prudent asset portfolios that more than offset their expenses and risk charges.

These higher yields and free risk transfer are even more attractive when one considers that insurers are both highly regulated and highly rated. Also, Assuris provides an additional layer of protection to policyholders in the event that their life insurance company should fail.

WHAT DOES THIS MEAN?

The example provided in this article is for a hypothetical group of retirees, so plan sponsors should contact their pension and investment consultants for a better understanding of their particular situation, which will vary based on, among other things, the life expectancy of their retirees and the make-up of their bond portfolio.

Depending on the plan's particular situation, there are several possible consequences to the ideas presented in this article:

- **Use bonds to purchase annuities.** There has been a lot of discussion around pension plans transitioning from equities to bonds. This article supports a further transition from bonds to annuities.

- **Think of annuities as an asset class.** Annuities could be thought of as a "super bond" and included in asset mix decisions, allowing plan sponsors to better manage their risks while not giving up yield. Annuities could even be included in ALM studies and be considered when calculating a plan's optimal asset mix, keeping in mind that the decision to purchase annuities can generally not be undone.

- **Talk to insurers.** Plan sponsors may want to identify the retirees to be included in an annuity purchase and ask insurers for feedback. This allows the plan sponsor to understand how the characteristics of their retirees compare to the one-size-fits-all annuity proxy rate and understand the true cost of purchasing annuities for their plan.

ABOUT THE AUTHOR

Brent Simmons leads Sun Life Financial's Defined Benefit Solutions business, providing a wide array of customized de-risking solutions for defined benefit pension plan sponsors.

Brent has been in the pension and insurance industry for 17 years, as a consultant, strategist and executive. His experience includes the design, pricing and governance of insurance and pension products, including buy-in and buy-out annuities, GMxB products, registered pension plans, executive pension plans and group RRSPs.

For more information about how annuities might help your pension plan, contact your pension or investment consultant. For more information about Sun Life Financial's de-risking solutions for defined benefit pension plans, please contact:

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