

# PRESS RELEASE

***CANNEX Financial Exchanges and The IFID Centre at the Fields Institute launch new statistical index to track investment returns from fixed immediate annuities.***

**Toronto, Ontario, December 15, 2003** – CANNEX Financial Exchanges together with The Individual Finance and Insurance Decision (IFID) Centre at the Fields Institute announced today the launch of a new statistical index to evaluate and monitor life annuity payouts.

As the bulk of Canadian baby boomers approach their retirement years, they are devoting greater attention to the risk of outliving their financial resources, and the need to convert their accumulated nest egg into a reliable income that will last as long as they do. To that end, payout annuities which are sold by all major insurance companies are unique in their ability to provide an income that can never be outlived. Indeed, each and every Canadian currently aged 69 must decide whether to convert their Registered Retirement Savings Plan (RRSP) into a Registered Retirement Income Fund (RRIF) or purchase a life annuity with these funds, prior to December 31<sup>st</sup> of this year.

Payout annuities are bond-like instruments that combine the *financial* stability of a fixed-income bond together with the *insurance* that the holder will receive monthly coupons for as long as they live. This is a form of longevity insurance which protects the holder against outliving their assets. According to recent statistics, for a 65-year-old couple, there is a 50/50 chance that at least one of them will live to age 90. Indeed, Canadians have taken notice of this longevity risk and during the first quarter of 2003, sales of fixed immediate annuities grew by 68% to \$542.5 million, according to the *Insurance Journal*.

Until now, individual consumers lacked a uniform and coherent way of assessing the true investment return from their payout annuity, given the fact that a portion of the monthly income was a return of principal. Unless a special guarantee was purchased, most of the asset-base was lost upon death of the annuitant.

To fill this rapidly growing need, the newly launched CANNEX - IFID Centre annuity index -- which will be tracked on a weekly basis in a variety of financial publications -- will measure the *implied life credits* (ILC) from purchasing a life annuity at the hypothetical age of 65, for both a male and a female.

For example, at the end of November 2003, this index stood at a rate of 5.74% for males and 5.30% for females. This rate exceeded the 4.79% yield on a 10-year Government of Canada bond by 0.95% for Males and 0.51% for Females. Over the last three years, the CANNEX – IFID Centre index ranged from a minimum of 5.45% to a maximum of 6.83% (for Males) and from 5.03% to 6.40% (for Females).

The interpretation behind these numbers is as follows. If a hypothetical individual at age 65 decided to *postpone* the purchase of a life annuity and instead opted to manage and invest the funds themselves and create their own income stream, they would have to earn at least 5.74% (for males) and/or 5.30% (for females) per annum over the next ten years in order to purchase a similar life annuity benefit commencing at age 75. Thus, the higher these numbers are relative to the yield on a 10-year Government of Canada bond, the greater are the implicit life credits from the payout annuity. Furthermore, since females tend to live longer than males, the implicit life credits they receive at any given age, compared to males, tend to be lower. Given current values of the CANNEX – IFID Centre index, the gap is about 0.40% (or 40 basis points) per annum.

One of the objectives in developing this index is to provide a consistent method of appreciating the fixed income portion of a life annuity – a component that is widely recognized and appreciated -- and the more subtle pooling of longevity risk that generates an additional investment return. It is anticipated that this index will also be used to compare general annuity payouts to a baseline and for consumers to locate the best timing of their annuity purchases.

According to Dr. Mike Orszag, head of research for Watson Wyatt, “Annuities are an area which consumers find difficult to understand, but they are at the same time a crucial and too often neglected component of retirement income planning. This index is a major step forward. It is easy for consumers to understand, and at the same time is technically elegant and therefore important for specialists as well”.

More details on the index and the financial methodology behind the calculations are available to the public at large in the technical report entitled: “Implied Life Credits: Developing an Index for Life Annuities” from The IFID Centre website at [www.ifid.ca](http://www.ifid.ca)

**The Individual Finance and Insurance Decisions (IFID) Centre** is a non-profit research center headed by Schulich School of Business Professor Moshe A. Milevsky, currently housed at The Fields Institute and closely associated with York University in Toronto. The broad objectives of The IFID Centre are to conduct and disseminate applied research in the field of financial risk management for individuals. The IFID Centre is supported by a variety of sponsors that provide funding for targeted research projects, graduate and post-doctoral fellowships, and an annual conference devoted to personal risk management.

**CANNEX Financial Exchanges** facilitates the purchase and sale of a variety of financial products in Canada, the United States, Australia and New Zealand. One of the services CANNEX provides is a Canadian annuity exchange. This operates by having each of the financial institutions that sell Canadian annuities provide CANNEX with its unique method of calculating annuities. CANNEX reprograms these formulae onto its server and provides each company with a method to maintain its rates. Agents and brokers that sell annuities use the CANNEX System to obtain comparative surveys of the annuity market, specific to their individual clients, with annuity quotes generally guaranteed by the issuing company.

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# Understanding the Implied Life Credits (ILC) Index

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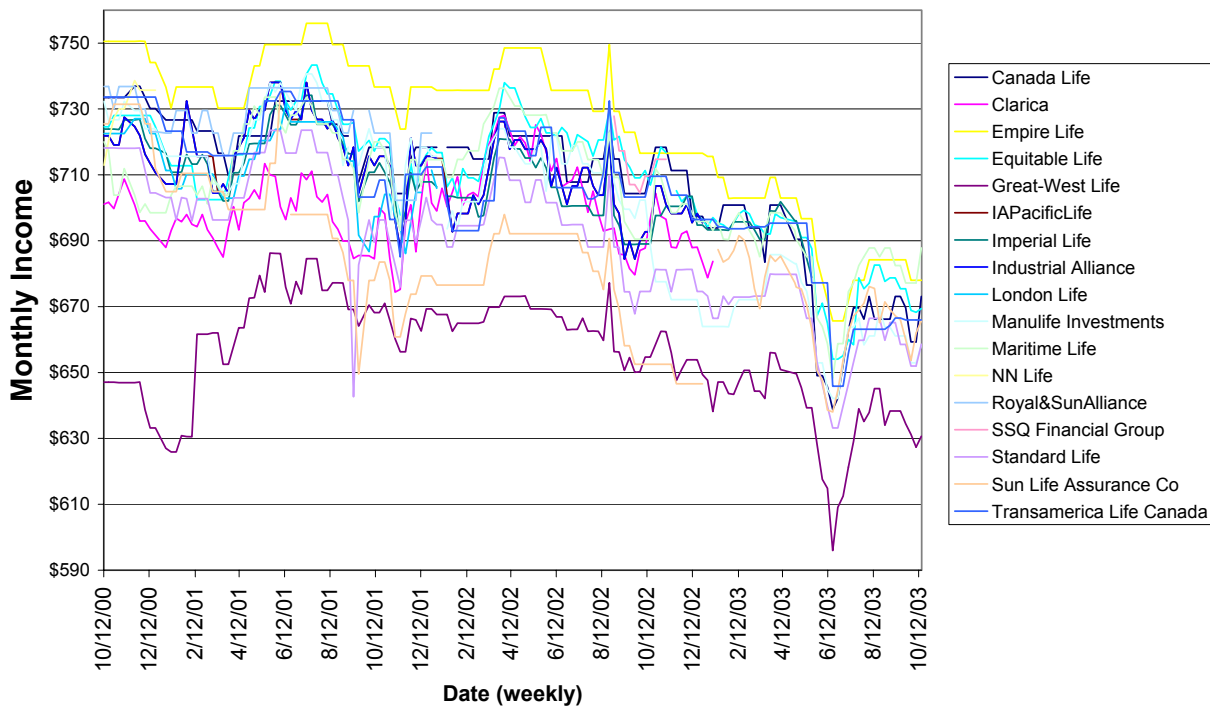
CANNEX Financial Exchanges and The IFID Centre have launched a new index to track and monitor payouts from life annuities. To understand the theory behind the Implied Life Credits (ILC) index, we start with a stylized example.

On Wednesday November 26, 2003 a 65 year-old male would have been able to convert a \$100,000 RRSP into a life annuity by going to a number of insurance company. According to data compiled by CANNEX Financial Exchanges and the IFID Centre, these companies would have quoted him a payout ranging from a high of \$690 per month (Empire Life) to a low of \$633 per month (Great West Life). These particular numbers assumed he was interested in acquiring 10 years of guaranteed payments, and that the remaining payments would continue as long as he lived. If he wanted a longer guarantee period, or perhaps payments to go a spouse in the event of his death, the monthly payout would be lower. Vice versa, if he was willing to settle for a lower guarantee period, he would receive more income per month. The 10 years of guaranteed payment is a common request amongst retirees, according to most insurance companies.

Recall that an annuity with a ten-year (payment certain) guarantee can be broken into two components. The guaranteed portion is similar to a coupon-bearing bond. The other portion makes payments to the annuitant after the end of the payment certain period only if the annuitant survives the guaranteed period. Implied in the pricing of the life annuity is a probability that the annuitant will die within the ten year guaranteed period. Should this occur, the annuitant's estate would not receive payments after the guarantee period is over. Insurance companies pool risk and -- as a direct result of the possibility the individual will not receive a full return of their original payment -- the actual payments will be higher to annuitants that survive the guarantee period. The Implied Life Credits measures how much higher those payments would be.

Figure #1 provides a comprehensive display of the payouts (per month) for all the insurance companies quoting such annuities – on a weekly basis -- during the last three years. Notice the wide dispersion between companies, part of which can be attributed to the credit rating of the company (higher rated companies pay less) and part can be attributed to the general *appetite* of the company for taking on more annuity business. Thus, for example, Empire Life tends to show-up at the top of most income comparisons, but the company is ranked a solitary 'A' by A.M. Best. In contrast, Great West Life appears on the bottom, but has a coveted 'A++' credit rating. This relationship is quite robust.

**Life Annuity Payouts per \$100,000 premium**  
*Male 65 with 10yr Payment Certain*



Nevertheless, if we (arbitrarily) take the average of the five highest annuity payouts quoted to a 65-year-old male with a \$100,000 premium, we get approximately \$678 per month. On November 26<sup>th</sup>, this consisted of Empire Life (\$690), Maritime Life (\$679), Desjardins (\$679), Equitable Life (\$672) and Transamerica Life (\$669). Remember the \$678 number. It will form the basis of our index.

Interestingly, on the same Wednesday November 26<sup>th</sup>, 2003, a 75 year-old male would have been able to convert a \$100,000 premium into a much higher monthly payment ranging from \$1,002 per month (Empire Life) to \$948 per month (Sun Life). In this case, the average of the five best quotes was \$977 per month. Stated differently – and this is the key to the implied life credits index – if a 75 year-old male wanted to purchase a life annuity with a zero-year guarantee paying the original \$678 per month, he would only have to pay  $(\$678/\$977)*\$100,000 = \$69,396$  or roughly 70% of the original cost. The same annuity would be cheaper, if purchased later.

Just to make this clear, let's go over this one more time. A 65 year-old requires a \$100,000 premium to generate \$678 for life (with 10-years of certain payments), while a 75 year-old requires only \$69,396. Why is that? Well, this is a direct result of the much shorter life expectancy. The less the individual is expected to live, the greater is their annuity payment.

Now we get to the interesting question. What would happen if the 65 year-old male decided to forgo the purchase of a life annuity and instead invested the \$100,000 in a well-balanced (low cost) mutual fund and then withdrew the same exact \$678 per month for the next 10 years? This will be recognized as a systematic withdrawal plan (SWiP). More importantly, what would be the required portfolio return needed to be able to withdraw \$678 per month AND still have \$69,396 at the end of ten years to purchase an identical annuity, if he so desired?

Well, this number can easily be calculated with the help of a spreadsheet and is precisely what we call the *Implied Life Credits at age 65* (for a male). In the above example the number works out to 5.74%. In other words, if the 65 year-old can earn a compound annual return of 5.74% they will be able to purchase (in expectation) the exact same life annuity at age 75 as they could of at age 65. If we go thru the same exact calculation for a female, it would approximate to 5.30%. As a means of comparison, the ILC values were greater than the yield on the 10-year Government of Canada Bond, but not by much. On November 26<sup>th</sup> the bond yield was 4.79%.

**How can this number be used?** There are a number of important uses to such a metric and good reasons for it to be computed. First, the ILC should help consumers understand (and decompose) exactly what they are getting when they purchase a life annuity. A fraction of the annuity income consists of a fixed-income component, and a fraction consists of *other people's money*. In other words, when people die the remaining principal is captured by the survivors. This risk-pooling is at the heart of longevity insurance.

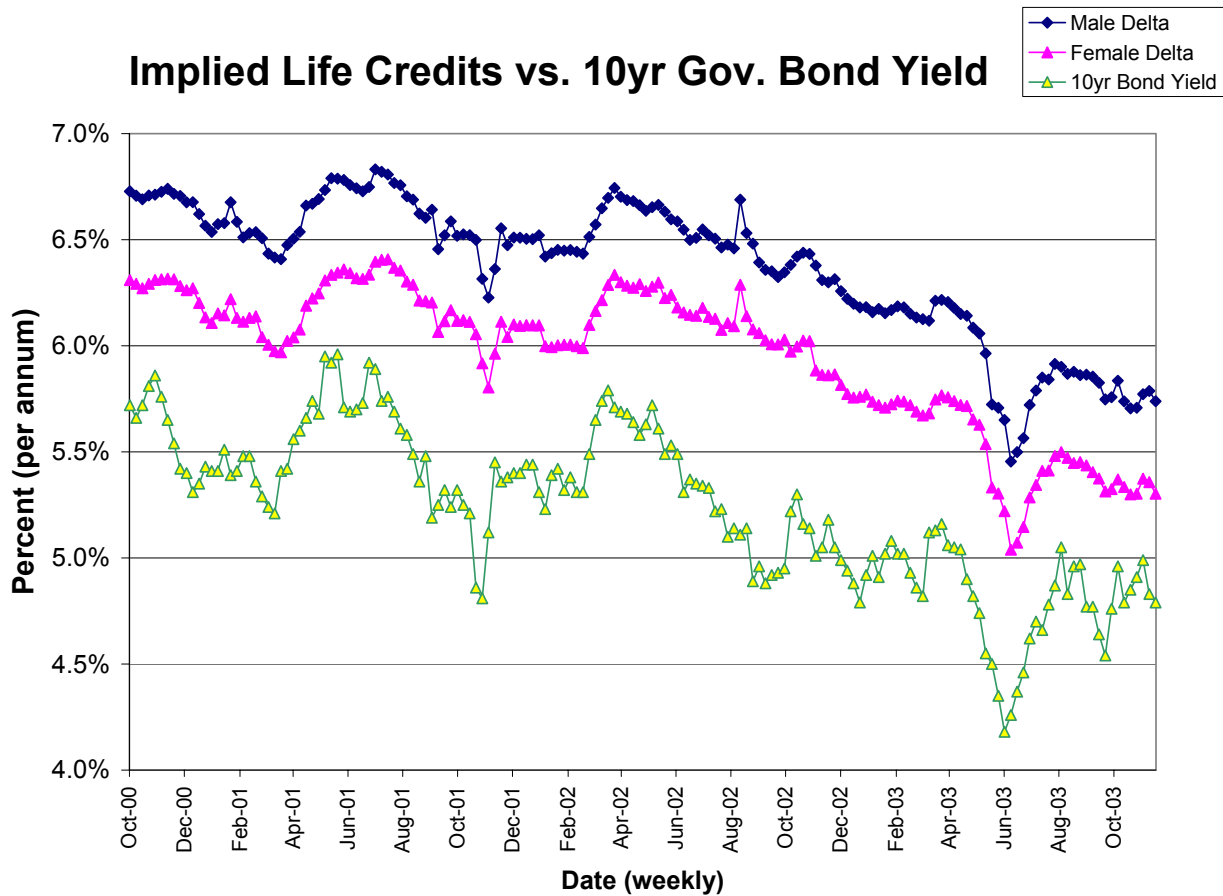


Figure #2 displays the value of the Implied Life Credits (ILC) -- using the above-described methodology -- over the last three years, in comparison to the yield on a 10-year Government of Canada bond. The general trend in the ILC values tends to move with interest rates and has correspondingly declined over time. Note that females have a consistently lower ILC value compared to males; by about 40 basis points for the age 65 group.

As explained above, this is because females live longer and therefore the required return to 'beat' the life annuity is not that high. One way to interpret this fact is that males must earn a higher investment rate of return on their portfolio – compared to females by about 40 basis points per annum – to justify not annuitizing.

Indeed, one can obtain ILC values using the same algorithm to compare any two ages. Thus, for example, one might compute the ILC for someone aged 70 or 75 who is contemplating purchasing a life annuity. In the same manner, consumers can compute the ILC from a Defined Benefit pension at any age; one that provides an income akin to a life annuity.

As a general fact, the older the age group the higher these implied life credits become. In fact, in the mid 80s these numbers can get quite high, which implies that the insurance + financial return from these instruments far exceed the investment return available from a Government Bond. Or, vice versa, it will be very hard to beat the returns from life annuity using any other financial instrument.

In sum, we believe the Implied Life Credits – and the new index – has the potential to both increase awareness of the value of longevity insurance and payout annuities, but at the same time will enable consumers to disentangle the bond-like elements from the insurance component. Consumers who purchase an irreversible life annuity should understand what they are *getting* (enhanced income relative to a bond) in exchange for what they *giving* (liquidity and estate value).