Immediate Annuity

Fixed vs. Inflation-Protected

A Cost Comparison

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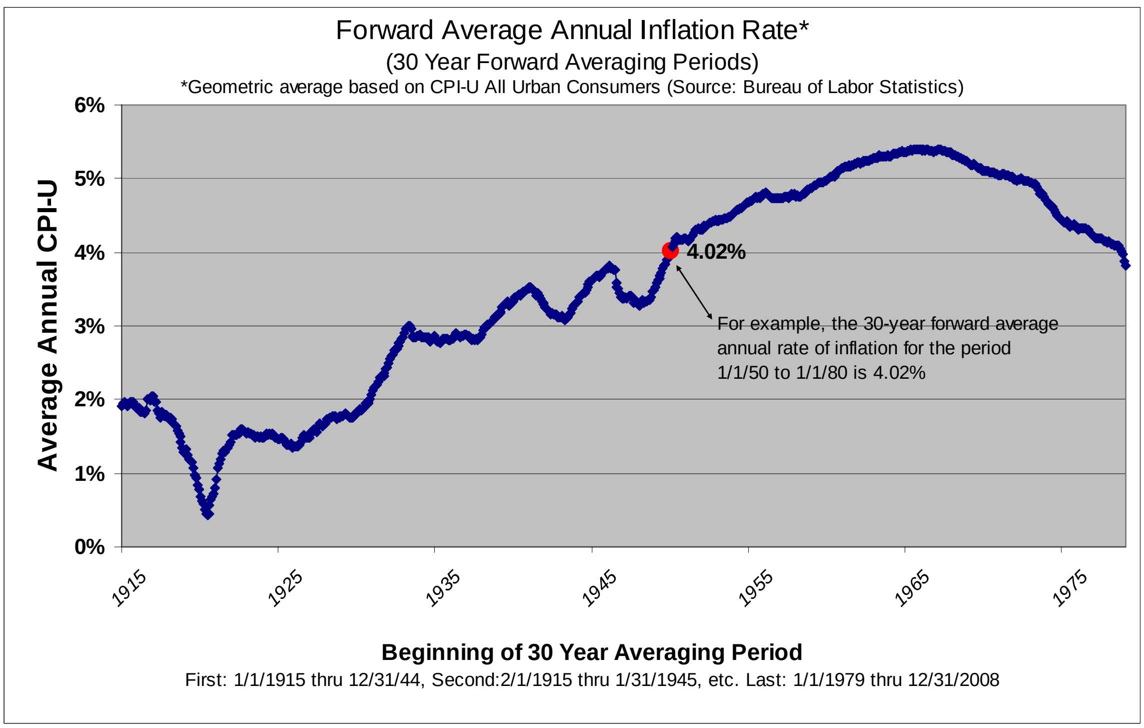
Executive Summary

We find that an analysis of historical inflation during periods of retirement indicates that retirement income plans should ***anticipate inflation rates of at least 4%***. An historical review of inflation during retirement periods dating back to 1915 is provided in the appendix and summarized in the chart below.

We illustrate that an inflation-protected income annuity may provide more value than the traditional fixed income annuity in the current environment. The key factors leading to this conclusion are:

- The disadvantage of the lower starting payment from the inflation-protected annuity begins to disappear quickly after adjusting for taxes (non-qualified purchases) and inflation, and

- In the April 2009 interest rate environment, there appears to be little difference between the fixed and the "real" interest rates insurers may be using to price income annuities.



Important Disclaimers

ELM Income Group prepared this material for educational purposes only. Although we worked diligently to produce accurate information, we cannot guarantee the accuracy or completeness of this material.

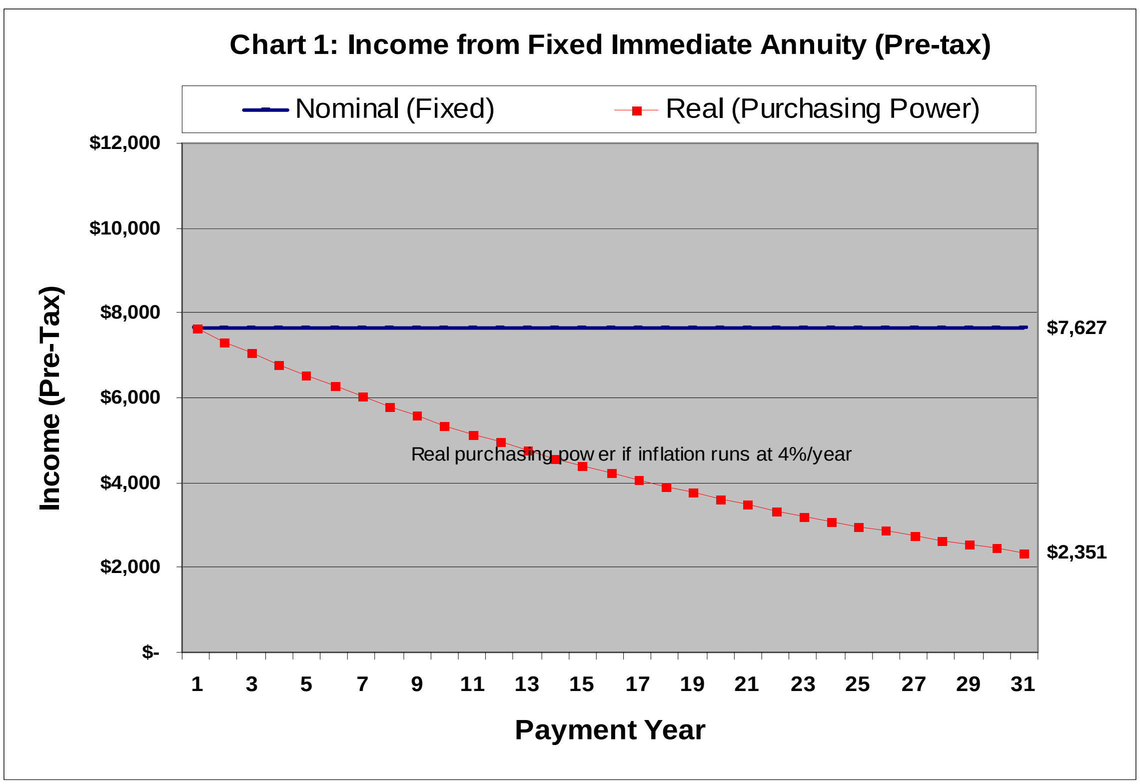
Please note that this material is not advice. It is not intended for individuals seeking financial guidance nor tax advice. Neither is it an offer to buy or sell annuities. The findings and conclusions expressed in this paper reflect the environment in April 2009.

All Immediate Annuities Hedge Longevity Risk

Retirees can hedge away longevity risk and market risk by allocating some assets to fixed income annuity contracts. Many noted economists have documented the wisdom of doing so (Babbel, Merrill 2007). In the typical fixed immediate annuity, the issuing insurance company guarantees a constant amount each month for as long as the annuitant lives. This guarantee is, of course, subject to the credit of the insurance carrier.

Although the immediate annuity is an effective hedge against longevity risk and market risk for the assets allocated to it, inflation can erode the real purchasing power of the payments as the annuitant ages.

Chart 1 illustrates the nominal and real "pre-tax" payment stream from an immediate fixed annuity, assuming an effective annual inflation rate of 4%. With an initial premium of $100,000, the straight line shows the pre-tax monthly income payments for a 65-year-old male would be $635.56, or $7,626.72 per year (using April 1, 2009 rates available at **www.elmannuity.com**). The curved line shows pre-tax erosion of purchasing power over the year due to the assumed effective annual inflation assumption of 4%. Note that the real pre-tax purchasing power of the annuity in this example declines by about 35% in 15 years.



In the EBRI/Greenwald 2009 Retirement Confidence Survey, more retirees (93%) reported that inflation was the cause for the decline in their confidence to live comfortably in retirement than those who cited the current economic uncertainty (89%) or the decrease in their savings (35%).

Measuring the Cost of Adding Inflation Protection* (Pre-Tax) to the Annuity

The "cost" to an annuitant for the inflation protection feature is typically shown by illustrating the pre-tax difference in initial benefits payable under both a fixed and an inflation-protected annuity. The initial month's benefit payable under these annuity forms at various ages is illustrated in the following table (using April 1, 2009 rates available at www.elmannuity.com).

The benefit amounts shown are on a pre-tax basis.

Issue Age (Gender)	Initial Monthly Benefit ($)		"Cost" of Inflation Protection (% Reduction)
	Fixed	Fully Protected*	
60 (male)	$558	$392	30%
65 (male)	636	470	26
70 (male)	742	577	22
60 (female)	525	360	31
65 (female)	588	423	28
70 (female)	672	509	24

*** Adjusted annually for the cumulative increase in the cpi-u since purchase.**

The table indicates that, in the current environment, an inflation-protected life annuity guarantees "real" payments that start at 25% to 30% below the comparable fixed annuity, before we consider the effects of income taxes. But, this relationship changes over time as inflation runs its course. Chart 2 shows the comparison over time for our age 65 male example assuming annual inflation runs at 4%.

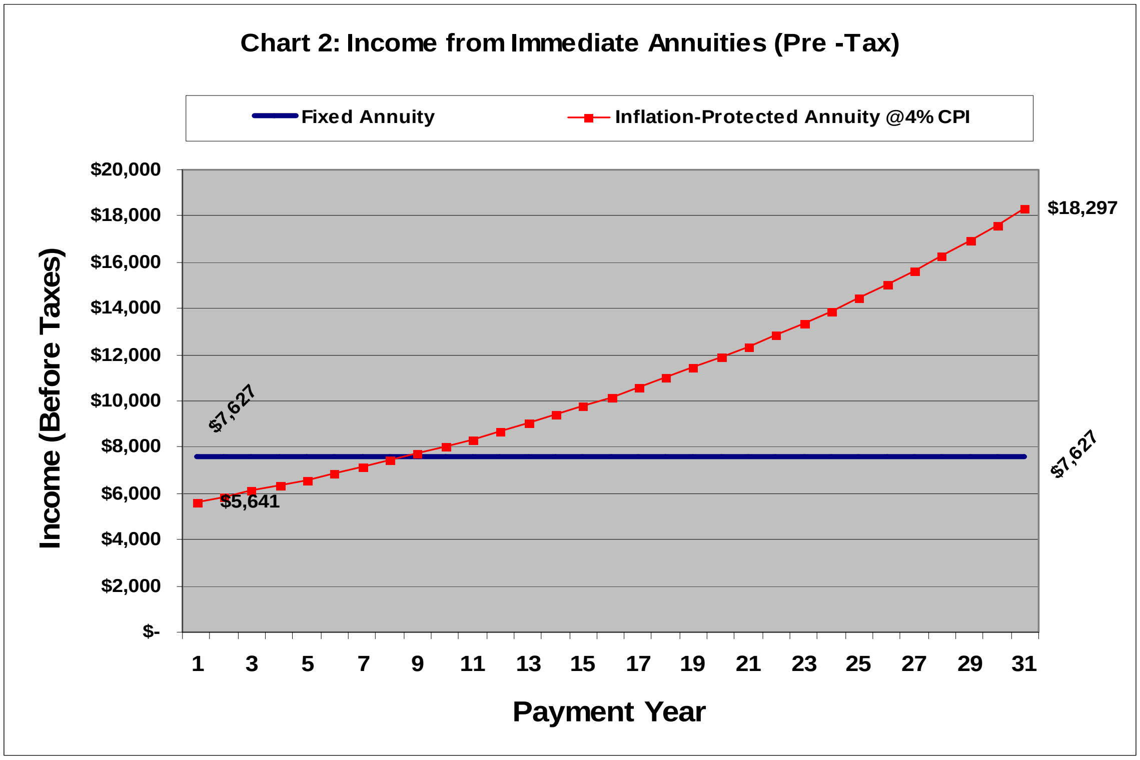


Chart 2 illustrates that the inflation adjusted annual annuity payments will start to exceed the non-inflation adjusted payments in year 9 when inflation runs at an effective annual rate of 4%.

Measuring the Cost of Inflation Protection (Post-Tax, for "non-qualified" annuities)

Income taxes reduce the "cost" of adding an inflation rider to an immediate annuity purchased with non-qualified assets.

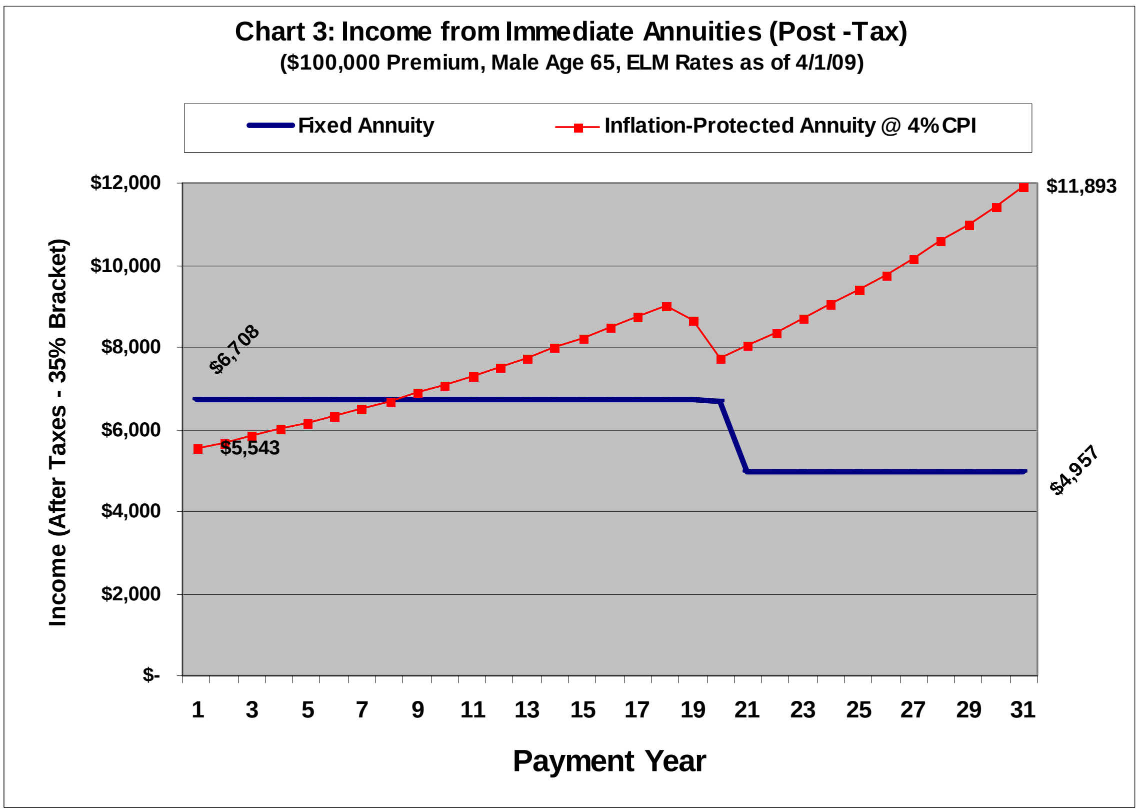
As a general rule, income received from a non-qualified fixed annuity is considered to be in part a non-taxable return of premium. The insurance carrier calculates an "exclusion ratio" according to IRS regulations and notifies the annuitant of the amount of the annual payment that is excluded from gross income because it's considered a return of premium. The remainder of the annuity payment is included in gross income for the year received. The exclusion ratio is applied until the investment in the contract is fully recovered. All annuity payments received after the investment is recovered are fully taxable.

For fixed annuities, the exclusion ratio is determined by dividing the total investment in the contract by the total expected return. The investment in the contract is generally the gross premium. The expected return is generally the total amount that the annuitant can expect to receive; and in the case of life contingent annuities, expected return is based on IRS tables. In the current environment, the exclusion ratio for a fixed annuity without inflation adjustments is in the ballpark of 65% for a male age 65 (meaning that 65% of each payment is excluded from taxation until the initial investment is recovered, usually at life expectancy).

On the other hand, for inflation-protected annuities purchased with non-qualified funds, the exclusion from gross income is determined based on a fixed dollar amount (not a fixed ratio). The dollar amount of exclusion is held constant, regardless of future inflation rates, until the investment in the contract is recovered. As payments are increased for the effects of inflation a larger and larger portion of each payment is taxed. In effect, all the inflation adjustments are fully taxable. In the current environment, roughly 95% of the first year's payment would be excluded from taxation.

The difference in the way the "exclusion" amounts are calculated for these two types of immediate annuities impacts the economics of buying inflation-protected annuities with non-qualified funds. (For annuities purchased with qualified funds, all payments are fully taxable). For example, on an after-tax basis, the difference in starting payments is far less than the 25% to 30% mentioned earlier. For buyers in high tax brackets (e.g., 35%), the difference in starting payments (post-tax) is closer to 17% in our example.

Refer to Chart 3 to see this relationship for the age 65 male example used above, assuming a 35% tax bracket and annual inflation at 4%.



Please email me at felix@elmincomegroup.com for a free interactive "calculator" that shows the year-by-year post-tax relationship. In the calculator, key assumptions can be changed by the user to estimate the impact using different issue ages, inflation rates, and annuity prices.

For an alternate view, Chart 4 illustrates the after-tax purchasing power of the income from these two contracts (i.e., we reduce the income from the contracts to reflect the erosion caused by taxes at the assumed rate of 35%, and by inflation at the assumed rate of 4%/year).

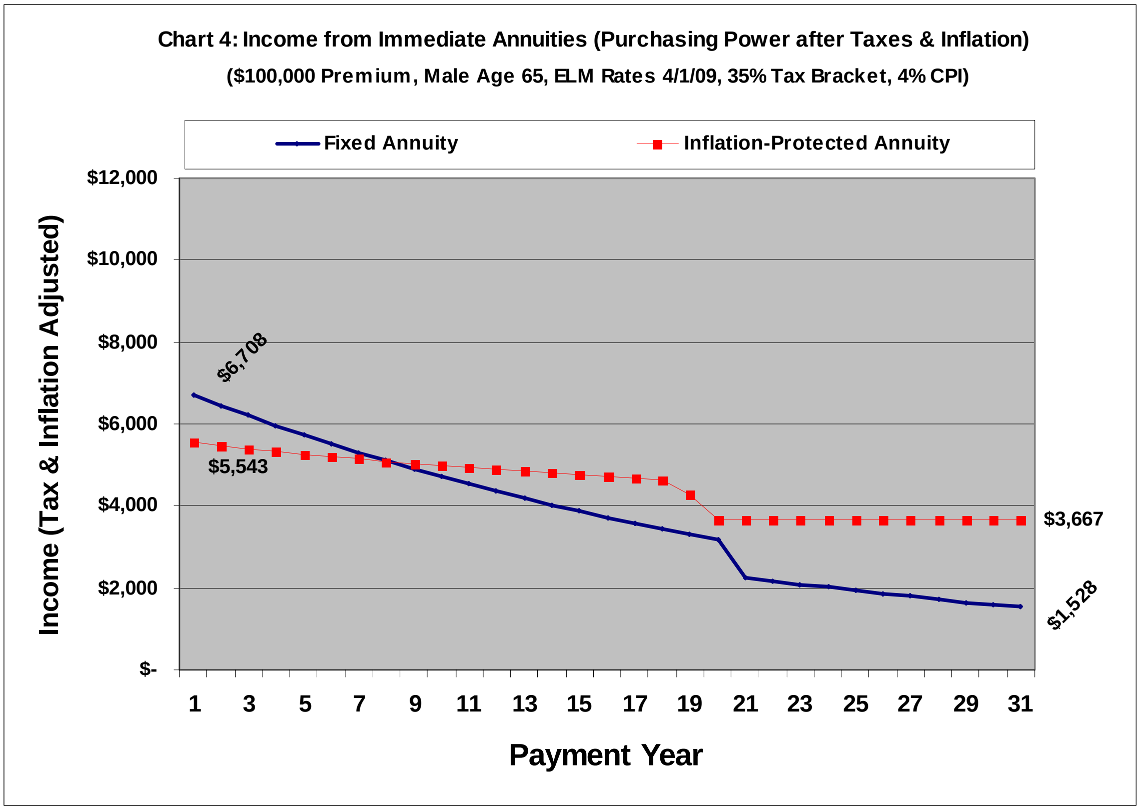
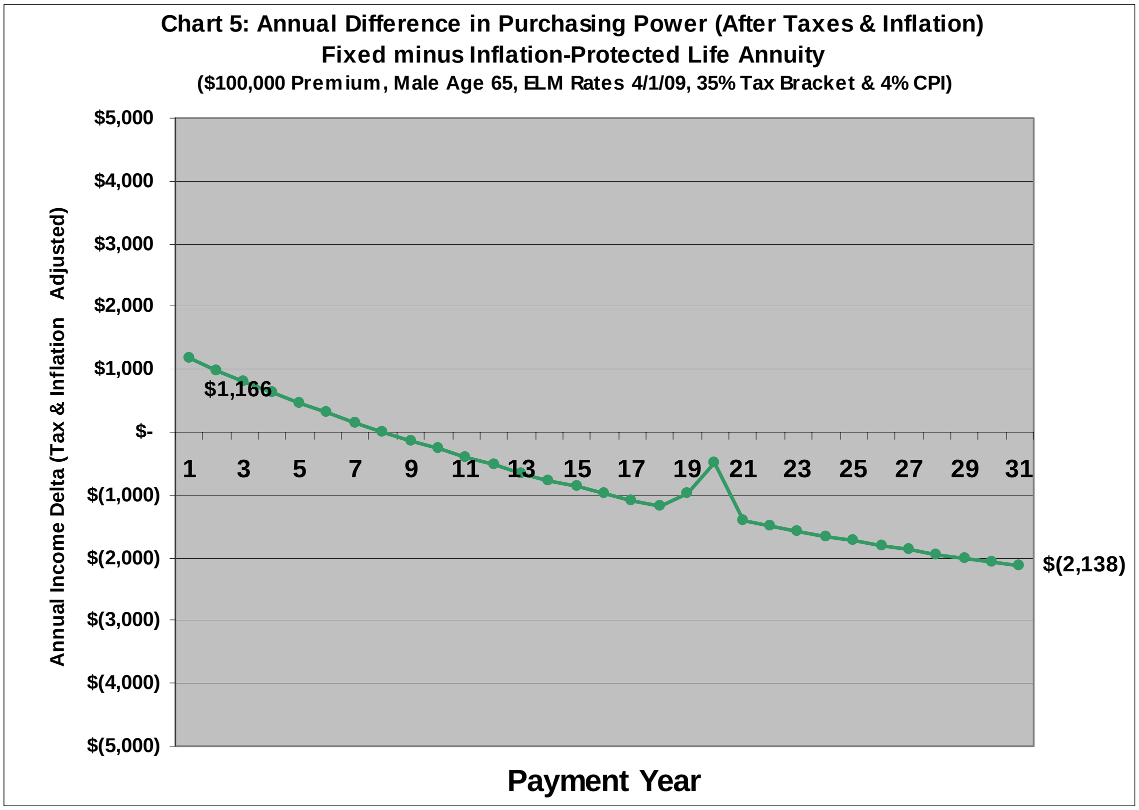
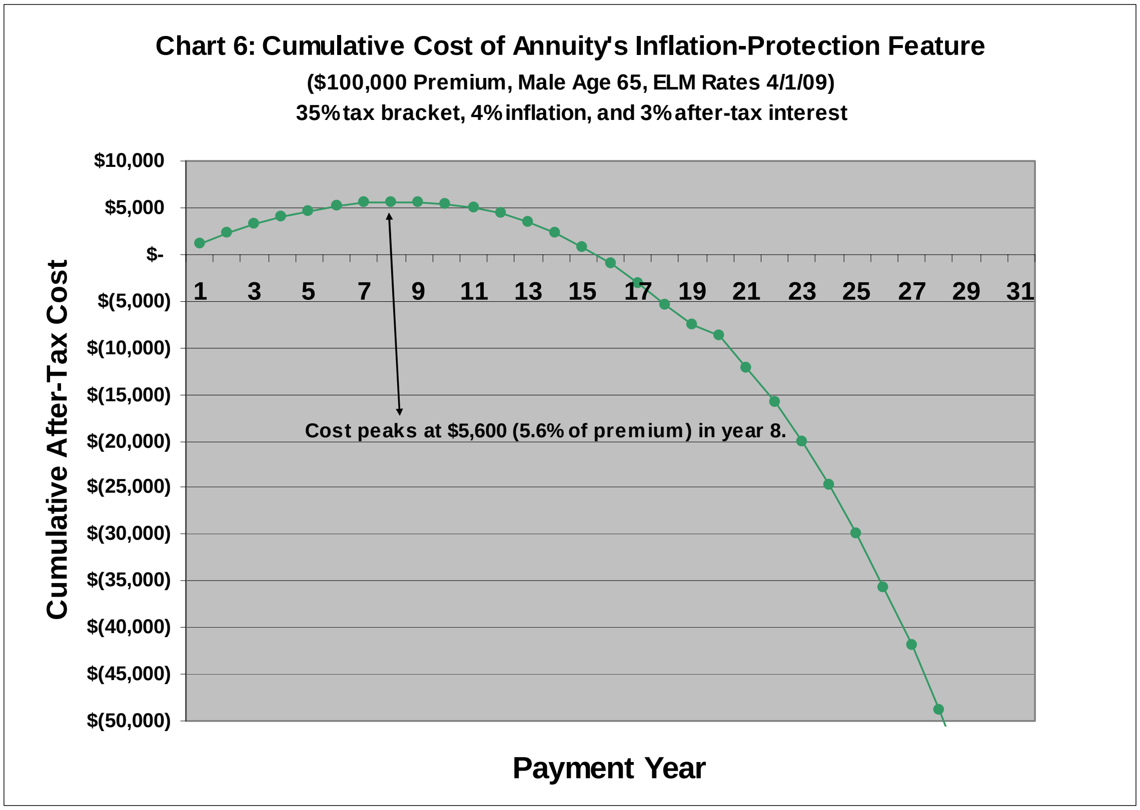


Chart 5 illustrates the annual difference in after-tax purchasing power for the same example. In other words, it represents the difference between the fixed annuity payments represented in Chart 4 and the inflation-protected annuity payments also in Chart 4.



As these Charts illustrate, the after-tax relationship can be quite complex. In our example, the reduction in starting payments is 17% post-tax (instead of 26% pre-tax).

Please note that by accumulating the yearly differences in the after-tax annuity payments, we can calculate the cumulative cost of buying the inflation-protection feature. In our example, accumulating the payment differences at an after-tax interest rate of 3%, and an assumed effective annual inflation rate of 4%, **the maximum accumulated cost is $5,600 (5.6% of the premium). That happens in year eight** (see Chart 6); thereafter the cumulative cost starts to diminish, eventually turning to gain. For retirees seeking to maximize “real” purchasing power for life, the inflation-protected annuity appears to provide good relative value if inflation runs at or above 4%/year.



However, these results are quite sensitive to the assumed inflation rate, and the sensitivity to the inflation assumption is illustrated by Charts 7 and 8.

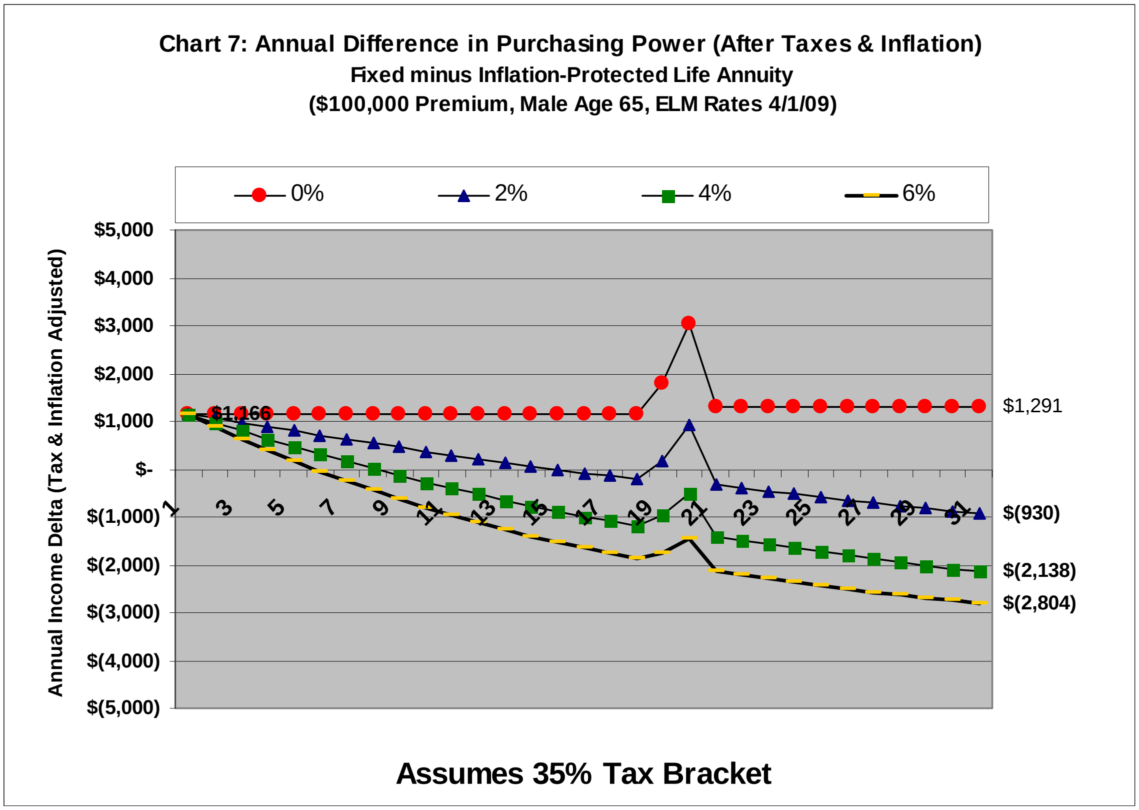


Chart 7: Annual Difference in Purchasing Power (After Taxes & Inflation)
Fixed minus Inflation-Protected Life Annuity
($100,000 Premium, Male Age 65, ELM Rates 4/1/09)
0%
2%
4%
6%
Annual Income Delta (Tax & Inflation Adjusted)
$5,000
$4,000
$3,000
$2,000
$1,000
$-
$(1,000)
$(2,000)
$(3,000)
$(4,000)
$(5,000)
$1,166
$1,291
$(930)
$(2,138)
$(2,804)
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Assumes 35% Tax Bracket

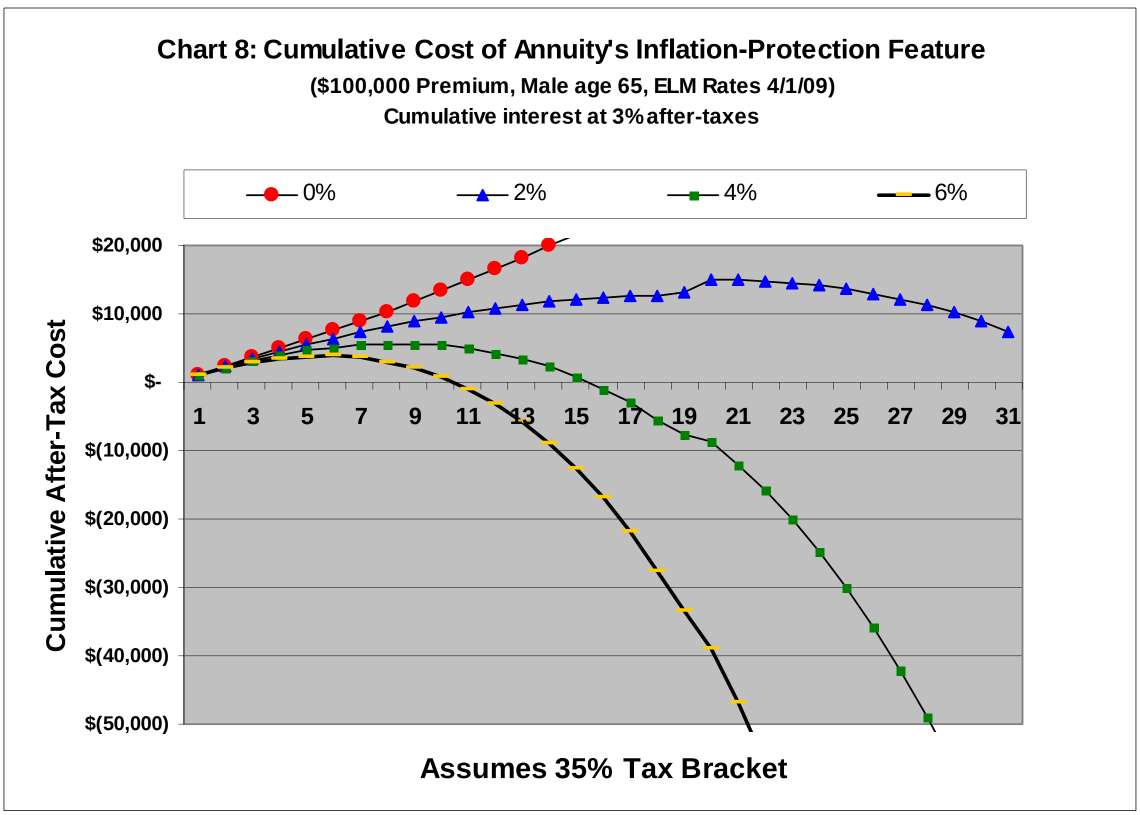
Chart 8: Cumulative Cost of Annuity's Inflation-Protection Feature
($100,000 Premium, Male age 65, ELM Rates 4/1/09)
Cumulative interest at 3% after-taxes
0%
2%
4%
6%
Cumulative After-Tax Cost
$20,000
$10,000
$-
$(10,000)
$(20,000)
$(30,000)
$(40,000)
$(50,000)
1
3
5
7
9
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17
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Assumes 35% Tax Bracket

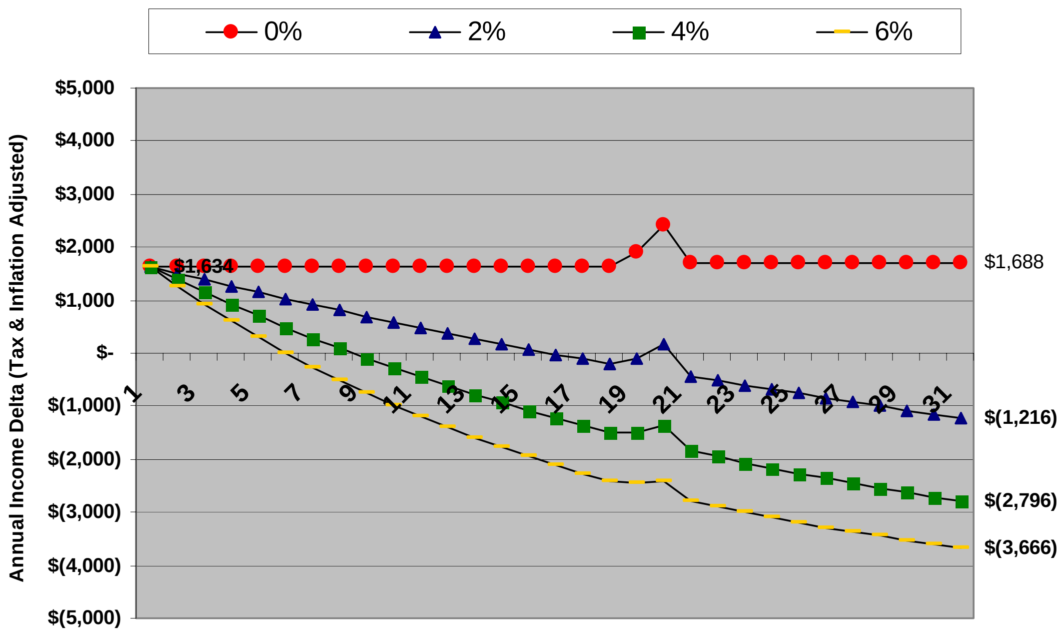
Major Conclusions

In general, in the current environment, an inflation-protected annuity appears to provide better relative value than the traditional fixed annuity, if purchased with non-qualified assets and assuming inflation runs at or above 4%.

For buyers in a 35% tax bracket, the conventional fixed annuity can be expected to show an income advantage (in terms of post-tax purchasing power) in low inflation environments (e.g., inflation well below 4%/year). At 2% inflation, the fixed annuity "wins" (post-tax) for a very long time. If inflation runs at or above 4%, the fixed annuity's advantage disappears quickly.

Similar results are seen at lower tax rates (for example, 15%). These points are illustrated in the next two Charts.

Chart 7A: Annual Difference in Purchasing Power (After Taxes & Inflation)
Fixed minus Inflation-Protected Life Annuity
($100,000 Premium, Male Age 65, ELM Rates 4/1/09)



Assumes 15% Tax Bracket

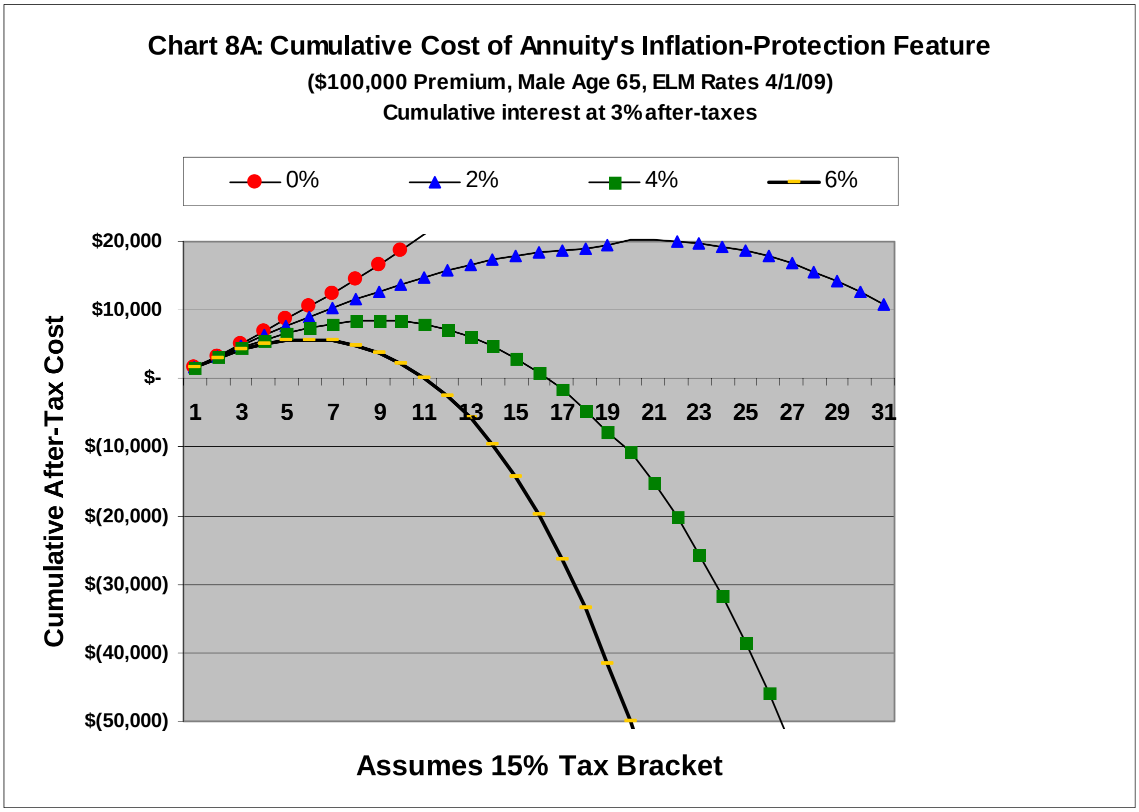


Chart 8A: Cumulative Cost of Annuity's Inflation-Protection Feature
($100,000 Premium, Male Age 65, ELM Rates 4/1/09)
Cumulative interest at 3% after-taxes
0%
2%
4%
6%
$20,000
$10,000
$-
$(10,000)
$(20,000)
$(30,000)
$(40,000)
$(50,000)
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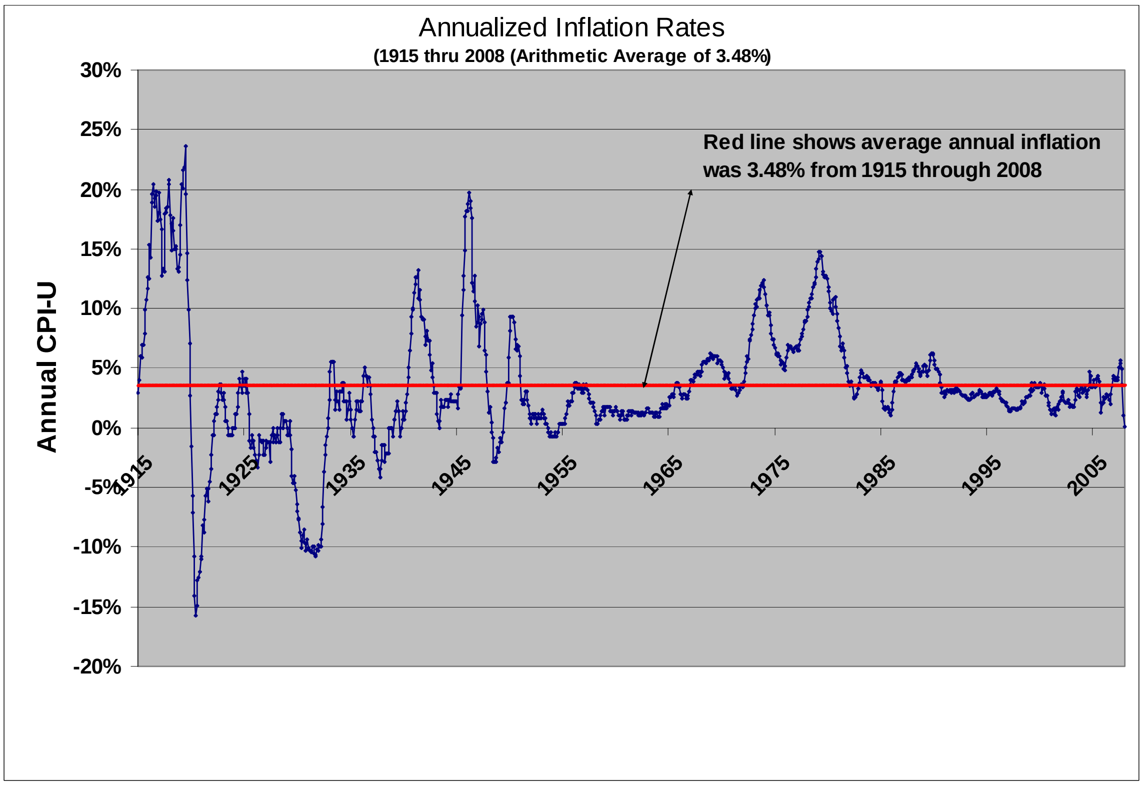
Cumulative After-Tax Cost
Assumes 15% Tax Bracket

APPENDIX

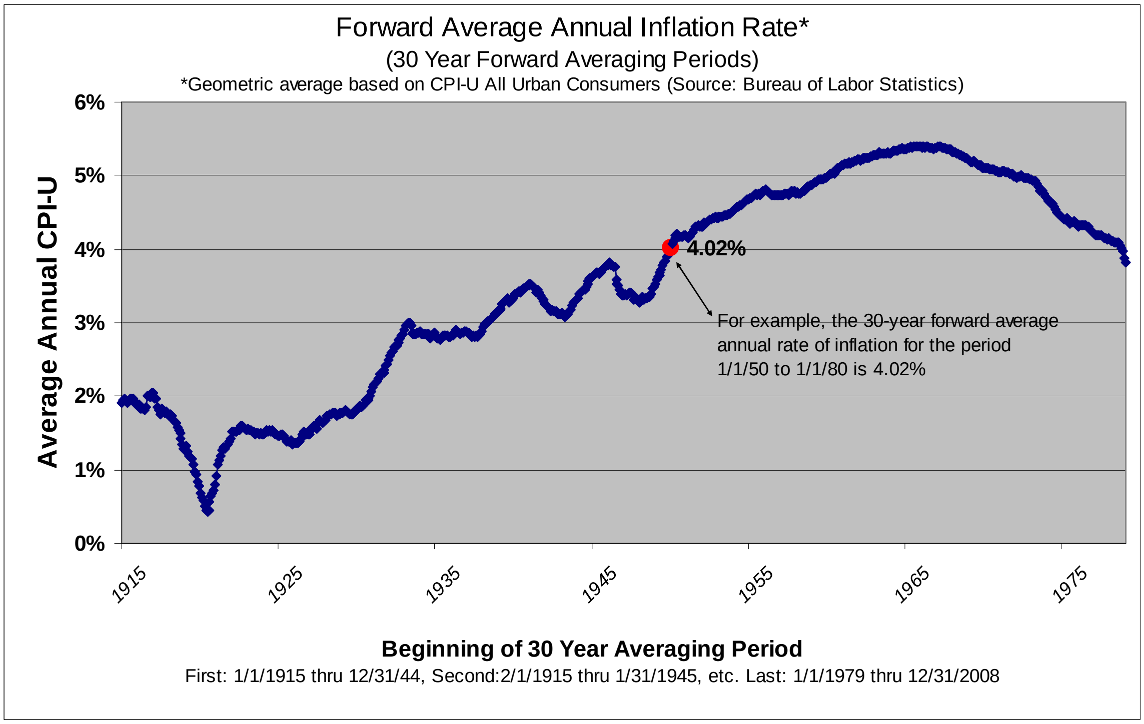
Historical Inflation Rates & Retirement Income Planning

Historical rates of inflation during retirement have been much higher than people may realize, in part, because too many calculators often default to a “standard” 3% inflation assumption. The following Chart illustrates that from 1915 through 2008 annual inflation rates in the U.S. have averaged well above three percent (actually 3.48%).



However, the actual inflation rate experienced by a retiree planning on 30-35 retirement years could be very different from the historical average. For example, to coincide with our retiree’s planning period, let’s look at U.S. inflation rates in thirty-year increments going back to 1915. Starting a new retirement every month beginning January 1915 produces 768 such periods in the intervening 94 years through the end of last year. We now find that the effective average inflation during these 30-year retirement periods would have been above three percent for 64% of the 768 periods, and above 4% for 45%. In addition, all of the 30 year periods at or below three percent actually began before 1939!

Here are these results in chart form:



Conclusion

If history is any guide, it would be prudent to base retirement income plans on an inflation assumption of at least 4%.