Saving for Retirement

Should I make use of approved retirement funding vehicles such as retirement annuities, or should I use my own discretionary investments?

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1. Methodology

Example 1:

Say a person's gross taxable income is R500,000 that place her in a 35% marginal tax rate bracket. Assume she opts to use an approved retirement annuity product – a maximum of 15% of her contributions are tax-deductible – i.e. of her R75,000 contribution, she will save R26,250 in income tax per annum. Alternatively, if she did not use an approved RA product, she would be liable for an extra R26,250 income tax, i.e. she would have that amount less available to make a contribution to her retirement plan.

Let us assume her investment portfolio in the RA product earns a real yield of 5% per annum for the next 35 years (no tax implications – taxable interest, dividend tax, capital gains tax). Her contributions remain, after accounting for inflation, at R75,000 per annum. After 35 years, the accumulated savings in her retirement fund amounts to R7.1 million and at the time she elects to withdraw an annuity of R426,763 per annum, equivalent to a withdrawal rate of 6% per annum.

The annuity is 100% taxable and at retirement her marginal rate of tax is 30%. After accounting for income tax, her net cash flow amounts to R298,734 per annum.

Alternatively, if she did not make use of a RA product and rather followed her own discretionary investment plan – same contributions less the tax savings forgone – and she wants to receive the same after-tax retirement income per annum. Whereas the growth in the RA portfolio accumulates tax free in her hands, the discretionary portfolio is subject to taxable interest, dividend tax and capital gains tax.

At retirement she restructures her investment portfolio and 40% of her gross income (as opposed to 100%) is taxable at a marginal tax rate of 30 percent. After tax, her net cash flow, as before, amounts to R298,734.

Now, what real, after-tax return should her discretionary investment yield per annum over the investment period to end up in a similar after-tax position than by using a RA product?

Thereby the discretionary investment should outperform the RA investment product by 0.9% per annum (5.9% - 5%) over the 35-year period.

Taxable Income		500,000		
Marginal Tax Rate		35%		
Max Contribution	15%	75,000		
		RA		***Discretionary***
Premium		75,000		48,750
Tax savings		26,250		0
Real return per annum		5.0%		
Term (years)		35		35
Future value		7,112,724		5,657,841
Retirement income (65)	6.0%	426,763		339,470
Taxable income	100%	426,763	40%	135,788
Net Taxable		426,763		135,788
Marginal tax rate at retirement	30%	128,029	30%	40,736
Net cash flow		298,734		298,734
Real after-tax return per annum required by discretionary investment				5.9%

Example 2:

Again, a similar example, but with lower taxable income (R250,000) and different marginal rates of income tax at retirement. At these assumptions the RA product is marginally superior to a discretionary investment where the contributions are not tax deductible.

Taxable Income		250,000		
Marginal Tax Rate		25%		
Max Contribution	15%	37,500		
		RA		***Discretionary***
Premium		37,500		28,125
Tax savings		9,375		0
Real return per annum		5.0%		
Term (years)		35		35
Future value		3,556,362		2,792,949
Retirement income (65)	6.0%	213,382		167,577
Taxable income	100%	213,382	25%	41,894
Net Taxable		213,382		41,894
Marginal tax rate at retirement	25%	53,345	18%	7,541
Net cash flow		160,036		160,036
Real after-tax return per annum required by discretionary investment				5.2%

2. Scenarios

The methodology and calculations described above are repeated for 20-year, 30-year and 40-year periods. In all cases it is shown by how much the discretionary investment should outperform (after taxes) the RA investment at different marginal income tax rates.

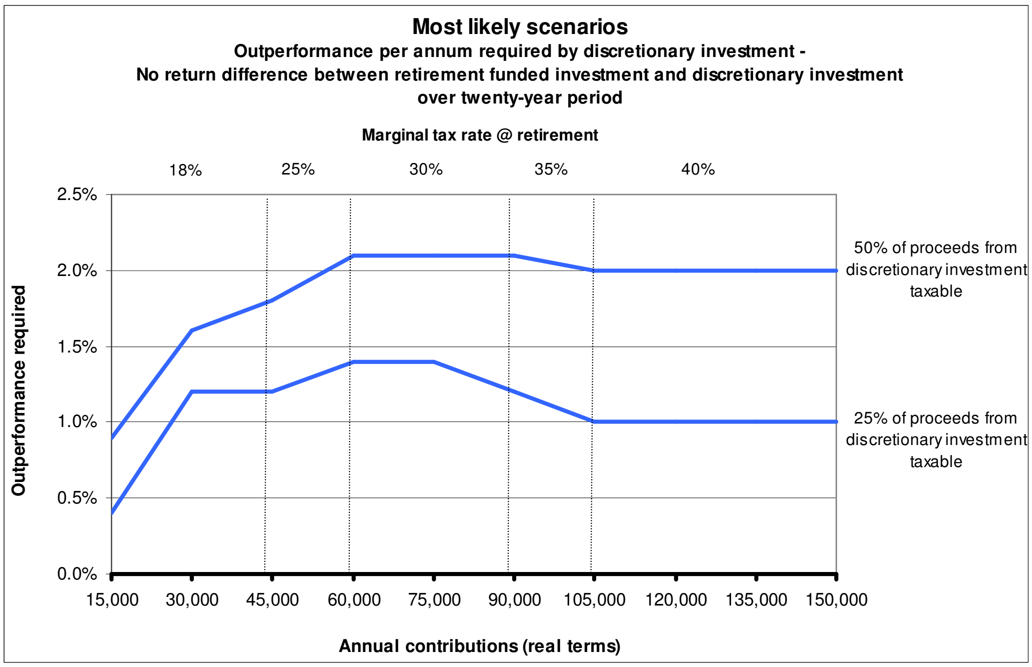

Chart 1:

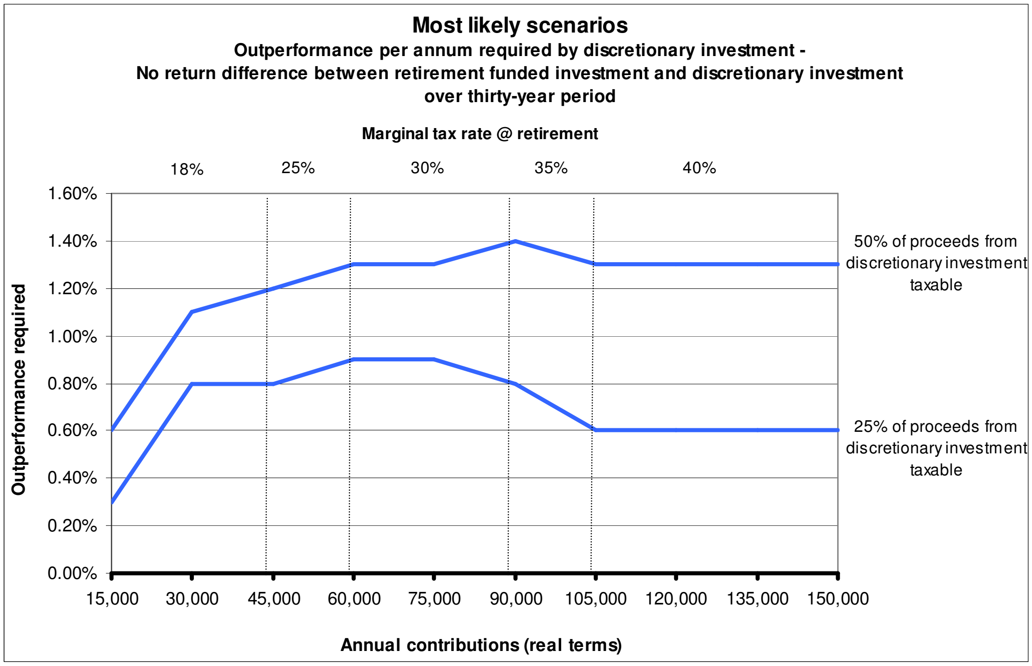

Chart 2:

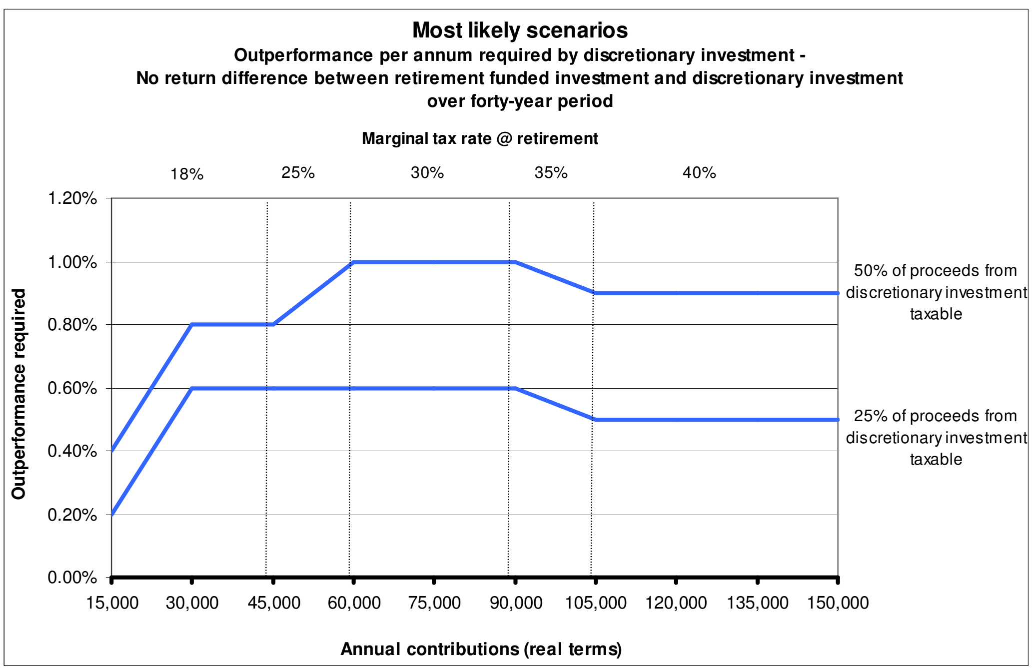

Chart 3:

3. Alternative Scenario

What if the discretionary investment option by default, i.e. lower cost structure, has a one percent return per annum after-tax advantage over a retirement annuity product?

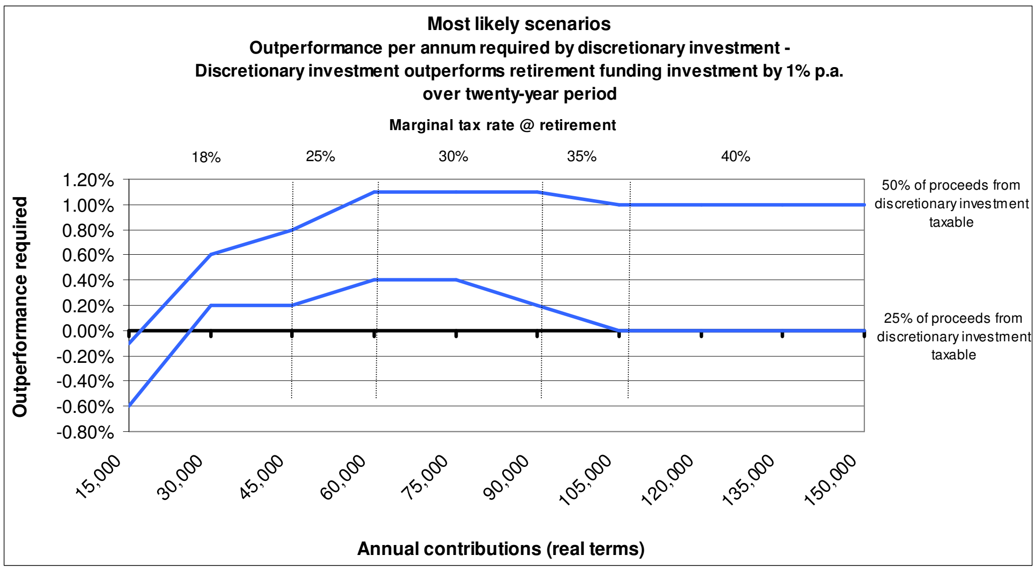

Chart 4:

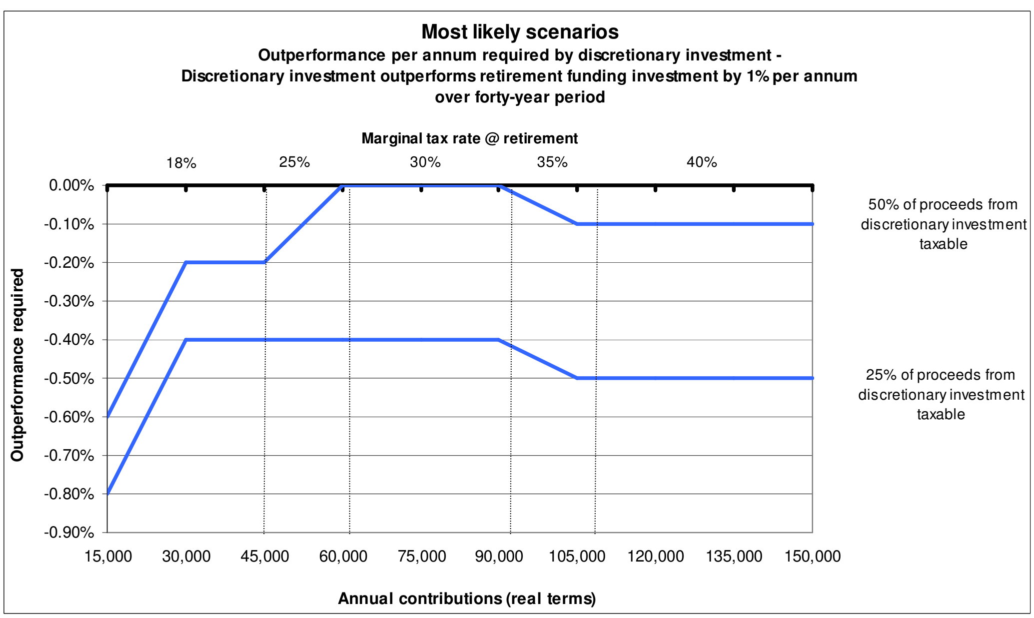

Chart 5:

4. Considerations

- New-generation versus traditional retirement annuity products – the latter typically expensive and inflexible – not recommended!

- Investment strategies – consider low-cost, index-tracking strategies as part of your portfolio as opposed to a 100% actively-managed portfolio.

- Irrespective of the outcome of quantitative comparisons between RA and discretionary investment options, perhaps the most important, non-quantifiable aspect to consider is that the discipline of a retirement annuity structure will invariably protect yourself against your own fallible investment behaviour as you will experience the roller coaster of investment emotions over time!

- By far the majority of people will benefit greatly by saving for retirement by using an approved retirement funding structure such as a retirement annuity product. In only exceptional circumstances people with considerable wealth may be better off after tax by structuring their own discretionary investment portfolio, yet additional factors such as potential estate duties must be carefully considered.

Investment Trivia: Compounding

What does, for example, a 0.5% per annum difference in return between two investment options, imply?

R100,000 lump sum investment is equal to Rx amount over period

	Period (years)				
RATE	20	25	30	35	40
0.10%	102,019	102,530	103,044	103,560	104,079
0.20%	104,077	105,122	106,177	107,243	108,320
0.30%	106,174	107,776	109,403	111,054	112,729
0.40%	108,311	110,495	112,723	114,995	117,314
0.50%	110,490	113,280	116,140	119,073	122,079
0.60%	112,709	116,131	119,657	123,290	127,034
0.70%	114,971	119,052	123,278	127,653	132,184
0.80%	117,276	122,043	127,004	132,166	137,538
0.90%	119,625	125,106	130,838	136,833	143,102
1.00%	122,019	128,243	134,785	141,660	148,886
1.10%	124,458	131,456	138,846	146,653	154,898
1.20%	126,943	134,745	143,026	151,816	161,146
1.30%	129,476	138,114	147,327	157,156	167,640
1.40%	132,056	141,563	151,753	162,678	174,389
1.50%	134,686	145,095	156,308	168,388	181,402
1.60%	137,364	148,711	160,995	174,293	188,690
1.70%	140,094	152,414	165,817	180,399	196,263
1.80%	142,875	156,205	170,779	186,712	204,132
1.90%	145,708	160,086	175,884	193,240	212,308
2.00%	148,595	164,061	181,136	199,989	220,804

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Investment Research

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