

## Will you outlive your money?

All Retirees need to ask themselves some fundamental questions

How much do I need to live on?

How much money can I reasonably withdraw from my capital?

How long will my money last?

How long will I (and my spouse/partner) live?

All retirees face risk in retirement

- Living Longer
- Running out of money before you or your partner die
- Poor investment returns



Few of us have enough capital to purchase a fool proof system such as government backed inflation linked bonds. The capital you would need if you were going this route would be 44 times the pre-tax income you require.

Unfortunately few have the capital to do so. Therefore, we look at draw down rates.

The question then becomes at what rate I can draw down on my capital so that I do not outlive my money.

A good indicator to start with is to look at the approximate rates that would be available from an insurance policy. These rates assume an increase of 5% p.a. in the income received. The income is guaranteed for life but the capital is used up.

<b>Age</b>	55	60	65	70	75	80	85
<b>Male</b>	5,5	6,2	7,3	8,7	10,7	13,5	17,5
<b>Female</b>	4,8	5,4	6,2	7,3	8,9	11,2	14,6

For those whom have living annuities the probability of outliving your money at various withdrawal rates. According to the model we use is as follows for a man.

<b>Withdrawal Percentage %</b>	<b>Probability of outliving your money</b>		
	<b>Male aged 65</b>	<b>Male aged 70</b>	<b>Male aged 73</b>
2.5	0.04	0.02	0.01
5.0	0.22	0.12	0.10
7.5	0.44	0.30	0.26
10.0	0.64	0.49	0.45
12.5	0.78	0.65	0.62
15.0	0.87	0.75	0.75

And as follows for a woman

<b>Withdrawal Percentage %</b>	<b>Probability of outliving your money</b>		
	<b>Female aged 63</b>	<b>Female aged 68</b>	<b>Female aged 70</b>
2.5	0.05	0.03	0.01
5.0	0.26	0.19	0.09
7.5	0.50	0.41	0.23
10.0	0.70	0.61	0.39
12.5	0.83	0.76	0.54
15.0	0.91	0.86	0.67

These probabilities would depend upon age, average appropriate life expectancies and anticipated returns on investments.

A very important consideration is how investments are divided between growth investments and fixed interest investments.

The Association for Savings and Investments (ASISA) provide a very useful table that shows the expected withdrawal period in years depending on investment returns and taking into account inflation.

Years before your income will start to reduce						
		Investment return per annum (before inflation and after all fees)				
		2.50%	5.00%	7.50%	10.00%	12.50%
Annual income rates selected at inception	2.50%	21	30	50+	50+	50+
	5.00%	11	14	19	33	50+
	7.50%	6	8	10	13	22
	10.00%	4	5	6	7	9
	12.50%	2	3	3	4	5
	15.00%	1	1	2	2	2
	17.50%	1	1	1	1	1

Source: ASISA Standard on Living Annuities

What I like about this table is that it takes into account inflation at 6% per annum.

The investment return required per annum is a very important consideration. Historically equities give better returns than bonds or cash. The allocation of the growth investments looking at historical performance is very important. As the table below shows

#### Expected withdrawal period (years)

Asset Allocation	0%	25%	50%	75%	100%
Withdrawal rate	Equity	Equity	Equity	Equity	Equity
2.5%	38	>40	>40	>40	>40
4%	25	29	33	38	>40
6%	17	19	20	21	22
8%	13	14	15	15	15
10%	10	11	12	12	12
12%	9	9	10	10	10
17.5%	6	7	7	7	7

Just remember however, that equity returns do not come as a nice smooth average and they don't grow in a straight line.

Indeed, if you look at the United States there were three 20 year periods where the market produced near zero returns over the period, 1900 to 1920, 1929 -1949 and 1966 to 1984. Nevertheless, the likelihood of a balanced portfolio of 60% local equity, 15% foreign equity, 15% in local bonds and 10% in cash outperforming inflation is pretty good, as the table below shows.

Period	Diversified Portfolio
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1 Year	72%
3 Year	85%
5 Year	89%
10 Year	95%
20 Year	100%

In 1994 a US financial adviser, William P Bengen researched the subject in depth. He looked at historical investment performance, asset allocation and withdrawal rates.

From his research he concluded that:

- If you withdraw 4% p.a.
- Increase (or decrease) the absolute cash value of your withdrawal only by inflation each year.
- Maintain at least 50% of your portfolio in equities

You will enjoy inflation – adjusted income for at least 30 years in nearly all circumstances.

This has become known as the 4% rule and has been researched in many countries.

Although the exact withdrawal rate varies slightly from country to country the general rule works.

However, some have argued that in view of the low interest rate environment the figure should be reduced. Personally I accept this argument for overseas investors but South Africa is not a low interest rate environment. Consequently I think the 4% rule is still valid for South Africa.

Allan Gray tested this rule for South Africa by creating 84 30 year periods starting in 1900. They concluded that if you had used 55% equity exposure, started your annual withdrawal and 4% and only increased by inflation each year, your income would have lasted for at least 30 years, 93% of the time.

If the withdrawal rate was increased from 4% to 5% the success rate dropped to 64%.

What would happen if instead of thinking for 30 years we think of a life span of only 20 years. The success rate increases to 80 %.

From this you can see that how long you are still going to live is very important.

A 65 year old male can expect to live, according to the averages to 82. But there is a 6% chance of living to 95 years.

A 65 year old woman can expect to live to 85, but there is a 12% chance of living to 95.

For a couple, one can expect to live to 89, and there is a 18% chance of one of them living to 95.

What can one learn from this?

Firstly, when investing take a longer term view than 1 to 3 years, 5 to 10 years is more appropriate.

Secondly, if you do not allocate money to growth assets, such as equity and rental property, your chances of outliving your money is increased.

I would suggest that at least 30% - 40% should be in growth assets.

Thirdly, while you need to take a long term investment view you need to regularly look at your withdrawal rate and if necessary adjust it.

Finally, realize that fund values will fluctuate, but if your original thinking was sound, stay the course.

Kind regards  
Brian