



Optimising drawdown rates

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The need for perspective in a lower return environment

Our reading of current investment conditions is that investors should prepare for a lower return environment in the foreseeable future. This belief is primarily informed by the weak outlook for the global economy, resulting in continued very low interest rates and deteriorating fundamentals for local financial markets. With expected annualised long-term real returns from local equities in the 3% to 5% range (compared to 11% achieved over the past decade) and around 2% for bonds (versus 4% historically), the margin for error in the making of investment and financial planning decisions is likely to become much smaller than most of us are used to.

The situation is particularly acute for retirees with diminished opportunities to earn an income through working. They need to make ends meet from an existing asset base unlikely to be replenished through further contributions. Most retirees are electing to provide for their retirement income through living annuities. The income withdrawal (or drawdown) rate from these market-linked and tax-advantaged products is determined by the investor and their advisor, with the current range allowable being between 2.5% and 17.5% of capital. One of the key planning challenges in this context is to select a withdrawal rate that is high enough to maintain an appropriate standard of living, but low enough to be sustainable over an uncertain life expectancy.

While initial drawdown rates above 7% can be justified using historic return patterns, it would be less than prudent to consider much above 5% given our current outlook for financial market returns.



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Part of the solution to this trade-off is to optimise asset allocation as far as possible. An appropriate balance between investing for growth in the long term and capital protection in the short term must be achieved. This is the key objective of both our Capital Plus and Balanced Defensive funds.

Another approach aiding sustainability of retirement income plans without unduly compromising on current living standards is to consider the introduction of more dynamic spending rules. The advantage of applying rules is that they create a more formal and dispassionate framework within which to make potentially complex and often emotionally fraught trade-offs.

Spending rules

Most academic work on drawdowns assumes that the retiree wants to grow income annually by inflation to maintain constant purchasing power (sometimes referred to as the standard withdrawal rule). The inherent 'problem' with this approach is that each year increases are granted regardless of the investment return earned on the underlying portfolio. The spending pattern is thus set without regard for

affordability and its impact on sustainability. If as a retiree you want to fully protect yourself against running out of capital in virtually any circumstance over an approximate 30-year period, you need to start with a very low initial withdrawal rate (4% or less). Formal spending rules can help to make higher initial drawdown rates (5% – 6%) more sustainable, while still allowing higher current income. One US study, conducted in 2007, found that sustainable withdrawal rates could be more than doubled without significantly increasing the risk of running out of money late in retirement, by applying a combination of the rules discussed below.

In practice, investors are likely to be advised to moderate their income requirements after tough return periods to enhance stability of their plans. Setting formal spending rules up front is also an attempt to make the application of this form of self-regulation more consistent and easier to implement.

Two rules can be used to protect the investor against running out of money:

The modified withdrawal rule: Withdrawals increase annually with inflation except when the retirement portfolio produced a negative return in the prior year, and when the current year's increased rate is higher than the initial withdrawal rate. There is no catch-up for missed increases in later years.

The capital preservation rule: If the increased withdrawal rate in a given year exceeds the initial withdrawal rate by more than a certain percentage (say by 20%), the withdrawal rate is cut by a predefined percentage (say by 10%). This rule is only applied in the first half (around 15 years) of retirement.

As an example, assume you retire with R5 million in capital and choose an initial withdrawal of R250 000, or 5%. Assume that five years later your portfolio is worth R5.5 million and your inflation-adjusted withdrawal is calculated to be R340 000. This withdrawal rate represents 6.2% of your capital which is 24% higher than your initial withdrawal rate. Because it exceeds the pre-defined percentage of 20%, the required withdrawal is cut by 10% to R306 000.

This approach aims to protect the future portfolio value and thus enhances plan sustainability, but at the cost of only a moderate income cut in the present.

This spending rule could be further refined (at the expense of giving up some safety) by adding a **prosperity rule**: If the withdrawal rate would fall by more than a pre-set percentage (say 20%) below the initial withdrawal rate, the withdrawal is increased by a defined percentage (say 10%).

To continue our example: Assume you retire with the same R5 million and 5% withdrawal rate (as used earlier). If you are lucky enough to experience a period of low inflation and high investment returns, you may end up five years later with a portfolio value of R8 million and an inflation-adjusted income requirement of R300 000. Because your new withdrawal rate of 3.75% is 25% less than your initial rate, you can afford a 'raise' of 10%, taking your income to R330 000.

A combination of these spending rules with reasonably defined trigger, increase and decrease variables can significantly increase the sustainability of a living annuity, while moderating the impact of cuts in living standards caused by tougher than anticipated market conditions.


It is important to note that sustainable withdrawal rates are typically lower when assets are more expensive than normal (when 10-year PE multiples for equities are high and bond yields are low), and higher when assets are priced at below average values. For a retiree, valuation levels at the point of retirement and during the immediate decade thereafter are likely to play a significant role in outcomes. Studies show that 80% of the variation in safe withdrawal rates for different retirement years can be explained by:

- the portfolio value remaining on the tenth anniversary of the retirement date, and
- the rate of inflation experienced over the first 10 years of retirement.

It is therefore imperative that investors and their advisors appropriately moderate income expectations during the initial phase of retirement to ensure long-term sustainability of their income plan. The rules defined above could be



further augmented by applying a 'valuation discount' to initial withdrawal rates in periods where asset class valuations are stretched.

Even though you have reached retirement, an element of delayed gratification remains part of the planning equation. 

SAFEMAX is a term used in academic studies to define the maximum drawdown rate that would have provided a sustained, inflation-adjusted retirement income over the length of retirement, measured from every possible starting year of the historical period reviewed. In other words, it is the rate of income that would have protected you against running out of money late in retirement if you were unlucky enough to retire in the worst possible year to do so. It is the most conservative indication, based on historical data, of what an ultra-safe initial drawdown rate should be.

If you assume that the retirement planning period is 30 years, the SAFEMAX drawdown rate, considering 110 years of asset return data, is 3.84% for South Africa. The worst historical year to have retired (when this was the highest sustainable income rate) was 1937. This can be contextualised by noting that there was a 1 in 10 chance that, assuming a 5% initial withdrawal

rate, your retirement income would not have sustained over 30 years for all retirement dates between 1900 and 1981. Unfortunately, we don't have the full data yet to determine what would be the experience over a full retirement period starting later than this date.

South Africa's SAFEMAX rate is similar to many other economies, with countries such as Switzerland, the UK, US, Canada, Australia, Denmark and Sweden all ranging between 3.6% and 4.4%. It is notable that many countries experienced their lowest sustainable drawdown rates in 1969 or 1970, at the end of an extended bull market period.

Countries with even lower SAFEMAX rates have typically been affected by major social upheaval and war, explaining why Japanese citizens retiring in 1940, or Germans retiring in 1915, could only sustain a 0.5% and 1.1% income withdrawal rate respectively.