Net Replacement Ratio
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Introduction
It is important for each investor to save enough money during his working life in order to provide for life after retirement. This makes logical sense, but how do you judge whether you are saving enough? There is more than one way to calculate how much you need to save to be able to retire, but the tool that we are focusing on in this article is the “Net Replacement Ratio” (NRR). We explain how the ratio is calculated and what insight you can gain from the ratio.

Definition
The Replacement Ratio is one way of measuring whether current retirement savings will be adequate to provide for retirement. The Replacement Ratio is the projected pension at retirement expressed as a percentage of final salary.

There are two different definitions of the Replacement Ratio. The Gross Replacement Ratio is the projected pension at retirement expressed as a percentage of final gross salary before any company deductions or income tax. The Net Replacement Ratio (NRR) is more generally used and outlines the projected pension at retirement expressed as a percentage of final net salary after company deductions and income tax. The net salary represents the ‘take home’ salary which the investor actually receives each month. Therefore, the NRR is the important ratio to consider.

The NRR indicates how close the investor will get to replacing his net salary at retirement.

How is it calculated?
The two components of this ratio is the numerator which is the projected pension at retirement and the denominator which is the projected final salary.

The projected pension at retirement is determined by the contributions made to the current retirement fund or savings vehicle, the returns earned on these contributions and the term of the investment. The larger the contributions, the longer the term of the investment and the higher the investment return, the larger the projected pension at retirement.

The projected final salary depends on assumptions on annual salary increases and the final tax rate. It is important to keep in mind that the salary does not include bonuses and performance incentives because the aforementioned is usually discretionary and not determinable in advance. Should one receive a guaranteed 13th cheque and you have no intention of changing jobs, one can include such extra income in the calculations. In our opinion, it is best to take a conservative approach when doing the calculation.

Global NRR figures
The Organisation for Economic Co-operation and Development (OECD) conducted a study in 2011 “Pensions at a Glance” in which they calculated the NRR per country. The average NRR across OECD was around 69%. The OECD includes all the developed countries. The NRRs for non-OECD countries varied considerably between countries with Saudi Arabia at the top with 108% while South Africa only achieved 12%.

The non-preservation of retirement benefits when an employee changes employment, is one of the biggest contributing factors to the low NRR’s in South Africa. Many employees elect to receive their retirement savings in the form of a cash payment rather than re-invest the retirement savings into another investment.

“The Net Replacement Ratio (NRR) is more generally used and outlines the projected pension at retirement expressed as a percentage of final net salary from which income tax and contributions have been deducted.”
What is the most appropriate NRR?

There is much debate as to the most appropriate NRR to target. Should you aim to receive 75% of your final salary as a pension or do you only need 60% or should you aim for your full salary as pension?

The NRR depends largely on the lifestyle you want to maintain once retired. If you plan to travel and live an expensive lifestyle compared to a simple life at home, you will have to save more. It is commonly believed and quoted that a pension of 75% of final salary is required to sustain the same lifestyle enjoyed up to retirement. There is no quantitative research that supports such and one should be careful to suggest a blanket NRR for all investors ignoring their individual needs and circumstances. Don’t be consumed by “the number”.

Below we discuss three different scenarios each with different NRR results.

Scenario 1: James is a single young male, with no children and an annual salary of R350,000.

James currently rents an apartment but plans to buy a house in a couple of years. He has no major expense. He plans to buy a yacht on retirement and spend his retirement years traveling the world. His employer currently pays his medical aid which will terminate upon retirement.

In this scenario, James would likely carry a mortgage though his retirement years, will need extra money for a yacht and traveling and will have to pay for his own medical expenses upon retirement. He will likely need to replace 100% or more of his final salary in order to meet his expected retirement lifestyle.

Scenario 2: Jonathan and Susan is married, with children and both earn annual salaries in excess of R1 million.

Jonathan and Susan have major expenses including a mortgage, vehicle financing and paying the children’s university fees. They plan to have the mortgage and vehicle financing paid off at retirement, no other debt and no university fees. They don’t expect major expenses after retirement and plan to enjoy a modest retirement gardening, going to the theatre and traveling to the coast occasionally.

In this scenario, Jonathan and Susan do not expect major expenses after retirement and might only require 60% or less of their final salaries in order to meet their expected retirement lifestyle.

Scenario 3: Chris and Mary is married, no children and both earn annual salaries of R500,000.

Chris and Mary have moderate expenses including a mortgage and vehicle financing. They plan to have the mortgage and vehicle financing paid off at retirement. Their employers currently pay their medical aid premiums which will terminate upon retirement. They don’t expect major expenses after retirement and plan to enjoy a modest retirement involved in the local community with some light traveling.

In this scenario, Chris and Mary do not expect major expenses after retirement but will have to pay for their own medical expenses upon retirement. They might need to replace 75% of their final salaries in order to meet their expected retirement lifestyle.

It is clear that it will not be appropriate to apply the same NRR for each of these savers. An NRR therefore depends on the investor’s current circumstances and expected lifestyle after retirement.

Summary

The one piece of advice that is constant is the earlier and the more you start saving, the better your chances of having a comfortable and care free retirement. Plant a tree early so that you can sit in its shade when you are older. Also, when meeting with your financial advisor make sure that you understand the assumptions used to calculate the NRR and the methodology used as we have found that there are various ways which financial advisors conduct the NRR calculation.