

Why South Africans can't meet their funding needs now

South Africa | 06 June 2016 | Initiative

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The problem of scarcity

The challenge with discussing investments and investment strategy where we have to tackle multiple savings goals is that investing can only take you so far and only achieve so much without introducing imprudent risks. In a world of infinite savings goals, investment problems, like any other economic problems, require that we recognise our scarce resources and prioritise our choices.

In its simplest form, each individual has a finite amount of money to allocate across their various needs:

- > Immediate consumption needs (spending today at today's living standard)
- > Deferred consumption needs (spending tomorrow to maintain your standard of living)
- > Future risks (making provision should something happen to impact on your earnings ability or potential)
- > Aspirational needs (wanting to improve your standard of living)

An individual's resources are a combination of **human capital** (your skills that allow you to earn a salary) and **financial capital** (savings or assets). The challenge is that we never seem to have enough financial capital, while we heavily undervalue human capital or don't use it effectively. This is the classic financial adviser's dilemma – how to allocate an individual's limited resources to their financial goals.

Financial inequality

In the past few years, the World Economic Forum's global outlook report¹ has seen the 'deepening income inequality' rising to become the most important and key challenge of our time – the poorest half of the population often controls less than 10% of its wealth. This was further highlighted in the recent Oxfam report, Economy for the 1%, with the stark statistic that 62 of the world's richest people have the same wealth as half the world's population.

This is a global economic crisis which Oxfam declares as 'morally questionable'². If history repeats itself, as it does, then this could result in significant social disruption on a scale far greater than the French Revolution. It's a universal challenge for the whole world to address.

One way is to emphasise initiatives that either enhance human capital, particularly of low-income earners, or translate human capital into financial capital and create the opportunity to grow wealth across generations. Research has shown that housing and children's education are pivotal factors in providing financial security – and these in themselves are catalysts towards creating intergenerational capital, which in turn has the ability to reduce financial inequality.

Our next question is: Can savings and investments contribute to a solution? Our key focus is to review the viability of a savings programme which allows an employed individual to meet basic financial goals that can provide financial independence up to retirement, while enhancing financial and human capital.

And if we find a strategic solution, should not become an obligation for government, corporates, employers or other institutions to provide the means and resources to help develop effective sustainable frameworks to achieve this end?

The power of compounding

If you go to a financial advice seminar, it's likely that one of the sections would describe the power of compounding. This concept demonstrates that the earlier you begin to save – and therefore the longer the savings period – the greater the ultimate benefits of your savings. Assume three friends (Vusi, Nazia and Joe) want to save R1 000 every month for 10 years to buy a special gift in 30 years' time. Vusi is disciplined and starts today. Nazia, less diligent, starts 10 years later. And Joe, a serial procrastinator, starts 20 years later.

Each puts away the same amount for 10 years, yet time is the greatest differentiator to their largely diverse outcomes. Nazia would have to put away R2 010 per month for 10 years to get to the same value as Vusi in 30 years, but Joe would need to save R4 040 per month!

To solve the savings problem, we need to harness the greatest asset available to investments – time. The challenge of meeting multiple goals simultaneously, including retirement, emergency savings, housing, education and medical savings, requires as many levers in your investment toolbox as possible: time, investment strategy, portfolio design, cost management, risk controls and liability modelling.

In modelling this problem it becomes evident that the earlier you start the process, the more likely you are to meet these objectives, specifically when the available resources are scarce. **This also suggests that sequencing investment decisions for multiple goals matters.** The amount available for saving and the time you have need to work in tandem to maximise the probability of meeting your financial objectives.

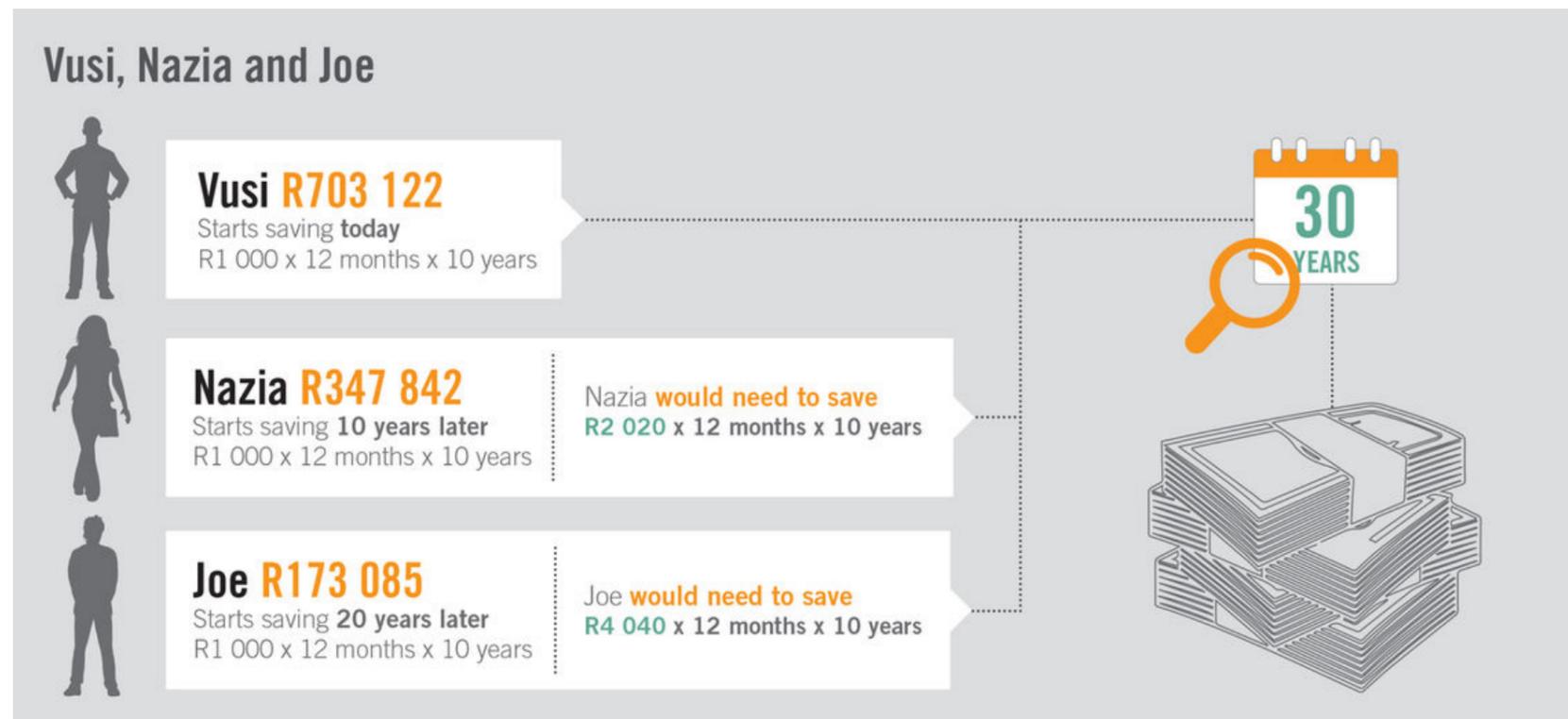


Figure 1: The power of compounding, assuming a 7% interest rate

Reviewing the savings problem

The research conducted through this section of Benefits Barometer outlines core savings challenges individuals and households face. A significant part of the problem is structural, but behavioural elements also play a large role. An investment strategy can only be stretched so far before it falls apart. At that point, problems require different solutions, which can be structural, legislative, paternalistic or even behavioural.

Our starting point is to assume that the following liabilities will need to be covered and will use up people's capital over time:

- 1 Funding retirement
- 2 Dealing with emergencies
- 3 Buying a house (which enhances financial capital of the household)
- 4 Educating yourself and your family (enhancing human capital for the household)
- 5 Healthcare (maintains human capital, but also can be a major source of financial risk)
- 6 Funding risk benefits (protecting your income)

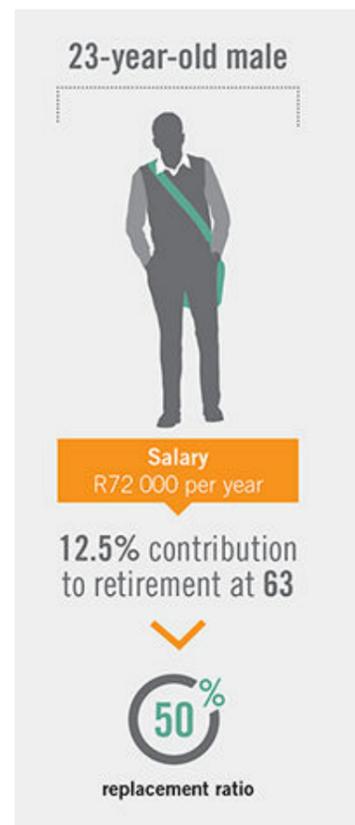
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CAN AN APPROPRIATELY DESIGNED SAVINGS PROGRAMME GET A PERSON ACROSS THE LINE?

As standalone goals, each of these problems seems relatively easy to achieve, especially when you use a simplified assumption set. In particular, the contribution for each individual goal is not considered significant.

Let's review the impact of each individual goal: We use a 23-year-old male starting out with a R72 000 per year salary – we apply the Alexander Forbes salary and annuitisation assumptions in modelling the problems. The models are built using real returns.

Retirement funding: The replacement ratio (RR) estimates the percentage of the final pensionable salary earned that will be replaced by a guaranteed inflation-linked annuity in retirement. If your pensionable salary is R10 000 per month, then a 50% RR implies that you will receive R5 000 pension per month. We assume a post-retirement interest rate of 3.25%, five years full pension guaranteed, with 50% pension reverting to the spouse on death. The investment portfolio is assumed to achieve a flat real return of 4% net of costs for the period.



If your pensionable salary is R10 000 per month, then a 50% retirement ratio implies that you will receive R5 000 pension per month.

The contribution rate is the total contribution (individual + employer) allocated to retirement savings. The projected RRs for each 2.5% contribution differential can yield vastly different outcomes – approximately 10% difference in income during retirement. A 12.5% contribution from age 23 to retirement at 63 should allow an individual to retire on a 50% RR, which is considered acceptable (even though it's on the low side). Contributions of less than 10% are unlikely to create a meaningful retirement outcome.

Projected replacement ratio for different contribution rates

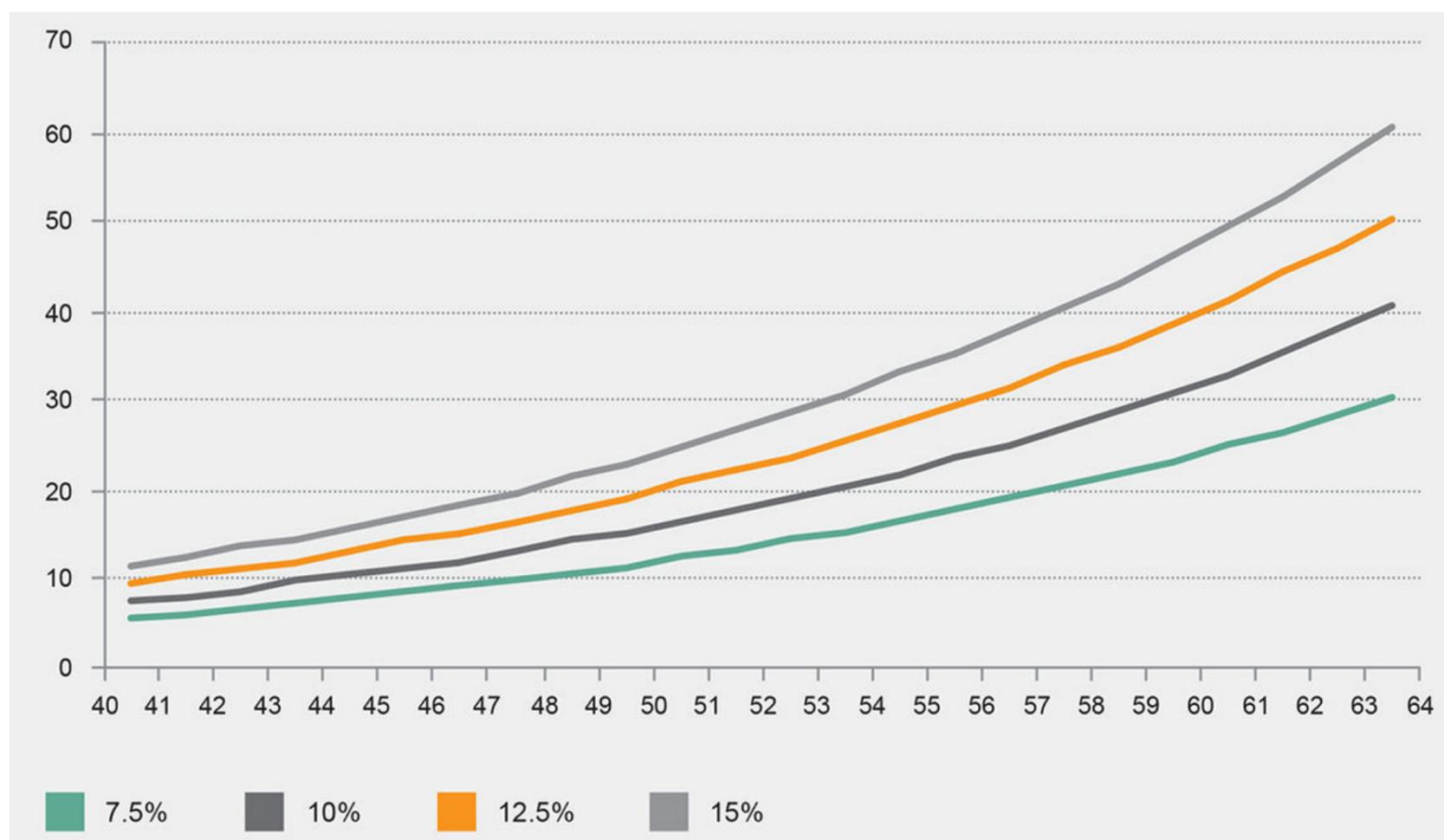


Figure 2: Projected replacement ratios for different contribution rates

A 12.5% contribution from age 23 to retirement at 63 should allow an individual to retire on a 50% replacement ratio which is considered acceptable (even though it's on the low side).

Emergency funding: It's generally agreed that we need an emergency fund of between one-and-a-half to six months' worth of salary. When you have no funds, the task of balancing how much you save and the time it takes to get you to your safety net is arduous. The investment strategies that underlie emergency funds are usually more defensive to create certainty. **We assume a real return of 2% net of costs.**

Saving 5–10% of your salary takes you to one-and-a-half month's salary between one and two-and-a-half years later. Reaching three months of salary will take more than five years if the total contribution is 5%. For the newly employed, salary increases generally exceed investment returns, making the timeframe slightly longer. An employer who matches the individual's contribution, creating a total contribution of 10%, would get an employee to a three-month salary reserve within three years. Depending on how emergencies arise, maintaining the reserve would be similar.



Figure 3: Time required to save targeted emergency funds for different contribution rates

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Housing: House ownership does not just represent the creation of financial capital but has use beyond other investments. Therefore, it also elicits an emotional connection to the decision to purchase. Most people would want to maximise the value of the home they buy. This can be quantified within a rational affordability framework – the relationship between a house price and income earned. **In South Africa the price-to-income assumption is 3.3, which implies that R100 000 of income should afford a house with a total cost of R330 000.**

Assuming the contributions are invested in the original 4% real return after costs portfolio, our 23-year-old young man should be able to buy a starter home of R250 000 cash by age 34, by saving 15% of his monthly earnings. This purchase date can be reduced by almost two years if he saves 19%. The problem is that he needs to fund his accommodation expenses for those 11 years out of his remaining disposable income.

Real value of home that can be bought at age 35

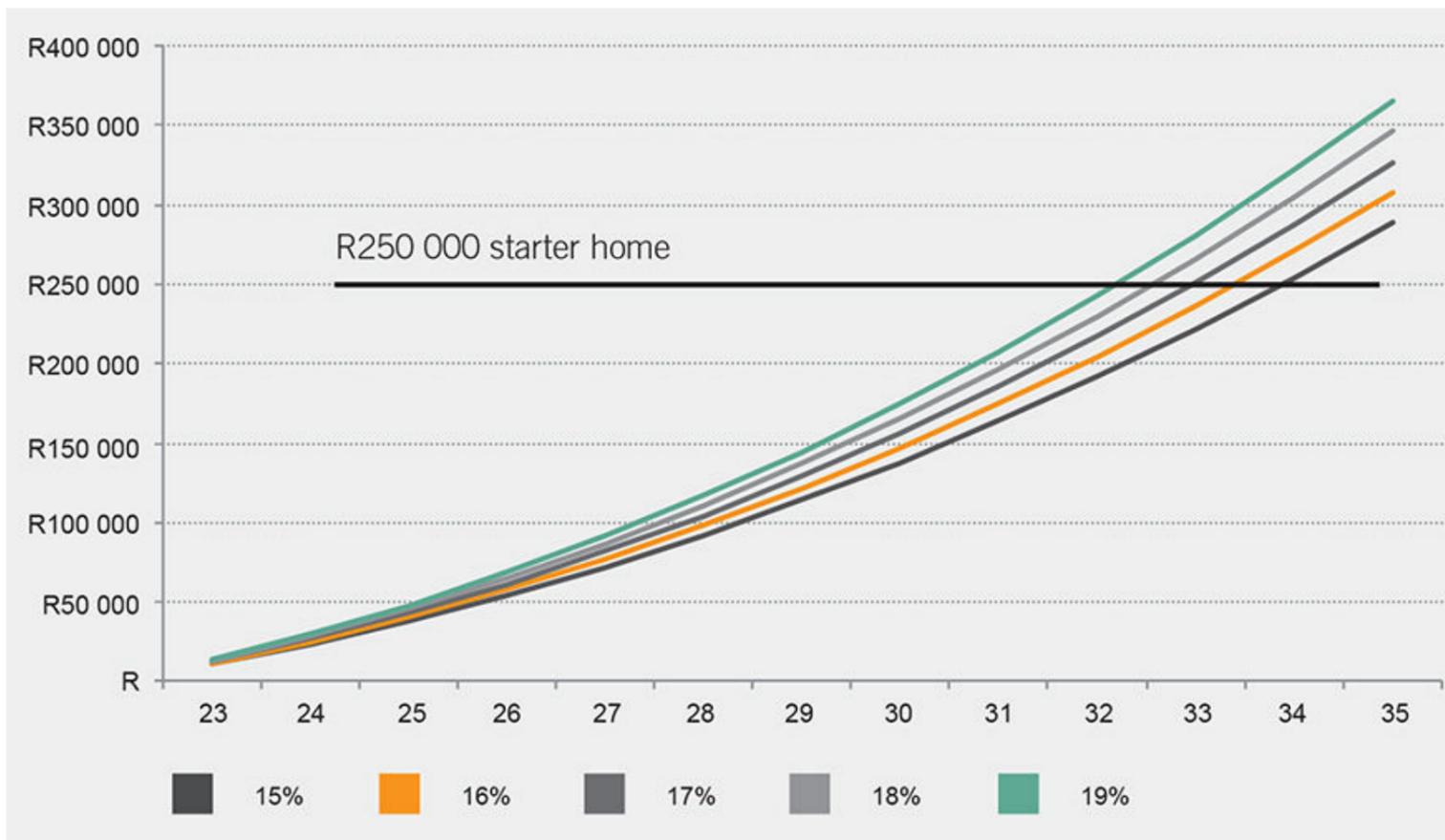


Figure 4: Real value of savings for different contribution rates at each age



We therefore need to expand the understanding of the housing problem. We explore three scenarios to funding a starter home of R250 000:

- 1 Buy a starter home using a 100%-funded 20-year home loan (debt only).
- 2 Save money for three years, improve creditworthiness, use savings for a deposit and pay a 17-year home loan, while renting a starter home (debt and savings).
- 3 Rent a starter home until enough money is saved to buy one (savings only).

Other scenarios are simply variants of these three, with house price, savings period and rental type being the key elements that can improve outcomes or make them more severe. In extended families, staying at home can delay the need for rental and accelerate the savings process. We also recognise that a 23-year-old just starting work is unlikely to be accepted for a home loan on a R72 000 annual salary, or will receive such a loan on highly unfavourable terms. In the following example we penalise the interest rate received by 2% per year to reflect this. **We assume that the initial rent is 70% of a standard 20-year bond repayment and increases by inflation annually.** We further assume that interest rates remain stable through the period. We use a 15% contribution rate for housing savings. In all three scenarios the individual lives in the R250 000 starter house for the entire period.

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In all three scenarios, the expected percentage of salary used on housing would be about 45%, decreasing over time as real salary increases and the real value of the repayment decreases (the home is paid off by age 43 in the debt scenarios). A savings-only solution of 15% would require 15–30% additional funding towards rent until age 34, with the house being paid for completely. The total expense consumed by housing costs is highest in a savings-only model (if you rent the house that you could buy). This is because rentals increase by inflation while bond repayments stay the same if interest rates remain stable. The other models reduce the cash flow burden on the individual quickly, freeing up cash for other uses: after eight years they reduce below the original 15% contribution rate. However, in many instances the debt-only option is not available or is started on terms that make the savings-only option more attractive. Understanding this profile and variants thereof can assist in structuring effective pension-backed loans and other housing assistance schemes.

Proportion of income used R72 000 (per year)



Figure 5: Examining the effect of housing payments against salary

Education savings are complex: as the cost is the same for everyone but it cannot be directly linked to an individual's earnings. Of course, different schooling systems have different associated costs, which will drive the final education decision. Additionally, there are fee exemptions and funding programmes that apply to families below a certain threshold. But for our purposes here we use the assumptions made in earlier chapters: that the real cost of putting a child through primary and secondary school will be R29 000 a year, with tertiary education costing R50 000 per year growing by 3% annually. We use a male aged 23 earning R72 000 per year, who has a child at age 25 and another at age 27.

Education costs

Starting annual salary	Expected contribution every year	
	1 child	2 children
R72 000	20.6%	38.0%
R90 000	16.5%	30.4%
R108 000	13.8%	25.4%
R126 000	11.8%	21.8%
R144 000	10.3%	19.0%
R162 000	9.2%	16.9%
R180 000	8.3%	15.2%

Assuming a 4% real return on the investment, he will need to contribute 20.6% of his annual salary from the day he starts working, for 23 years if he had one child, or he would need to save over 38% from day one for 25 years if he had two children! This would be when his children graduate from university, and these obligations would no longer exist!

Fundisa

This is a government initiative enabling you to save towards an accredited qualification at either a public college or university. You are paid an annual bonus on the investment, which can be up to 25% of the money you save annually up to a maximum of R600 per child. If you save R100 a month (R1 200 a year), you will get another R300 a year. To receive the maximum bonus of R600, you have to save R2 400 a year. The bonus can only be used by a learner from a household earning less than R180 000 a year, although anyone can contribute. You can withdraw the money you contributed, but you will then lose the bonus.

Healthcare and medical savings: In the earlier healthcare chapter, the requirement to save for medical costs in retirement was discussed. Medical costs have a substantial impact on overall wellness, more so in retirement where the overall cost of managing your health can be considerable. Because health costs carry risk (unknown timing, unknown cost), saving to pay your medical aid contributions over this period may prove more advantageous than trying to save to cover actual costs as they arise.

23-year-old male

According to the article the medical expenses for different levels of cover would be:

Level of cover	Monthly contributions			Lump-sum present value of savings	Expected 40-year savings rate
	Medical scheme contributions	Out-of-pocket expenditure	Total savings		
High	R3 631	R37	R3 668	R889 000	5.3%
Medium	R1 983	R115	R2 098	R509 000	3.1%
Low	R1 476	R1 165	R2 641	R639 000	3.8%



Salary

R72 000 per year

merit-based salary scale
40-year period

3.1%

savings rate required to
pay for medium-cover plan
in retirement

We will use our 23-year-old male earning R72 000 a year on a merit-based salary scale to model the savings rate required as a percentage of his salary over a 40-year period. Clearly, it pays on multiple levels to remain healthy as a medium-cover plan requires only a 3.1% savings rate compared with a 5.3% savings rate for the high-cover plan.

Medical expense coverage up to retirement is considered a living expense and is therefore not considered part of an investment savings strategy.

Risk benefits are less about savings and accumulation and more about protecting your income. Still vital to overall financial wellbeing, we assume for our purposes here that a **pension fund member allocates around 3% on average to life and disability cover.**

Making a 3% assumption to allocate towards life and disability cover is a fairly safe assumption simply because risk benefit allocations tend to be something of a tick-box affair. The employer proposes what they think might be required - often based on what other companies in their sector are doing. This would seem to be a reasonable strategy from the employer's perspective. Remaining competitive means making sure you are not offering less than your competitors. But there are three competing forces here that are worth noting that invariably lead to the outcome that the allocation to risk benefits is often a grudge purchase and therefore given inadequate consideration.

To begin with, boards of trustees or management companies often place a primary focus on hitting replacement ratio targets. Every 1% of an employee's contribution to risk benefits is 1% that won't be allocated to the investment strategy that funds that replacement ratio. Over a 40 year time frame that would be the equivalent to adding another 1% of investment cost drag to performance. Considered in that regard decision-makers may well feel the inclination to minimize the allocation to risk benefits, particular in industries where those costs may be high.

Employees themselves can be the problem because they look at those costs for risk benefits as deductions from their take home pay. In truth, few employees are able to understand what exactly those risk benefits translate into in terms of financial value to themselves or their families. As such, here is another reason why, if given a choice, many employees would likely forgo the risk coverage in return for increasing their takehome pay.

But a third factor that contributes to risk benefits being a grudge purchase is that they have only a limited relationship to what employees and their families actually need over the course of their financial lives. Employers solve for the "average" employee when decisions are made about coverage. Cross-subsidization between a full spectrum of employees is what makes these costs "on average" cheaper than what the "average" employee could source internally. But the reality is that most individuals experience a life cycle of risk coverage needs. That means that at certain points they will be paying too much for risk coverage. This is typically when they are young and as such most inclined to find a way to get out of having to shoulder the costs. Then later in life, when they now have families and need this coverage most, it's often unlikely they will go out and seek the additional coverage that they now require.

This leads us to one important insight. As with our broader savings problem, risk benefits solutions work best when we can integrate a life cycle dimension that can ensure that we are always getting maximum value for the money we are spending.

Concluding thoughts

Let's understand what we've done to our Vusis, Nazias and Joes by trying to solve for each of these goals independently.

Managing each goal independently would consume more than 73% of income. Add the 30% additional requirement for housing at the beginning and it's exceedingly clear that a low-income earner would not even be able to survive from day to day.

Meeting primary financial goals is practically impossible if we continue to define them as independent financial goals.

In the next few sections we set out exactly how, through a complete rethink of the problem, we can actually go an astonishing distance to solving our challenges.

References

1 World Economic Forum, 2015

2 Oxfam, 2016