

COMPOUNDING by the numbers

BOTH ARE RETIRING ON 01 JANUARY 2000 AND HAVE R1M RETIREMENT CAPITAL. INVESTOR A INVESTS IN THE XYZ'S MONEY MARKET FUND, INVESTOR B IN XYZ'S EQUITY FUND, WHICH INVESTS SOLELY IN DIVIDEND YIELDING SHARES. THE TABLE BELOW SUMMARISES THEIR EXPERIENCE TILL 31 DECEMBER 2012.

| | Investor A | Investor B |
|-----------------------------|------------|------------|
| Income earned in 1st year | R91 570 | R26 100 |
| Income earned in 10 years | R981 003 | R1 151 383 |
| Income earned till end 2012 | R1 083 095 | R1 500 245 |
| Capital value of investment | R1 000 000 | R4 505 765 |

This case study demonstrates the impact of compounding quite dramatically. Despite Investor B earning about a quarter of the income Investor A earned *in the first year*, B earned close on 50% more income *over the 12-year period* ended 31/12/2012. The reason is that when you draw income from a money market fund, there is no compounding effect – income that is earned is

paid out. Income from the money market is based on prevailing interest rates, so if rates go up so does income and vice versa. However, dividends from shares tend to grow over time resulting in a compounding effect, which becomes powerful with time. Investor A is better off for a full nine years (until January 2009), at which point the benefits of compounding really

kick in and Investor B starts earning far more than Investor A. Since 2009 A earned R256 000 income while B earned R663 300 income. A is likely to earn around R55 000 in 2013 while B reasonably expects to earn over R250 000 this year. Even more depressing for Investor A is that his capital is still worth R1 000 000 in nominal terms, but with inflation averaging 6.8%/year over the period, this has the buying power of R450 000 in the year 2000. The buying power of B's capital has gone from R1m to R2.03m over the same period.

This scenario is based on actual performances from existing unit trust funds. We have difficulty getting retired clients to commit a portion of their capital to the equity fund because of the capital volatility associated with this fund (it lost 40% of its value during the financial crisis), however, retirement is about income and about the long term: If they were able to grasp the concept of compounding this would be an easier conversation and the fund would get a lot more investments. ■

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WHY DOES THIS MATTER?

Ever tried to sell a business in South Africa? We would be surprised if you genuinely got more than a seven times earnings multiple for an unlisted business. Understanding current (or discounted) cash-flow means in the Shoprite example that you can triple your wealth.

“Sooner or later an entrepreneur will

get around to raising capital, selling shares, borrowing money, buying another business or selling their own firm. Each time they do this, the valuation of the business will be a core part of the pricing of the transaction,” says Gareth Ochse from Valuationup.com. It may sound like a crass conclusion but this is why this is the most important financial article you will read:

Once you understand how the anticipated cash flows of investment stack up into the future using compound interest, it's useful to ask what that's worth in today's terms. To achieve this you need to understand how inflation and other risks erode these returns. Since we're now talking about risk or reduction of potential returns instead of multiplying by the interest for each period we now divide by the risk. We do this calculation for each period and similarly add up each period to get to our total current value of the investment, in today's terms. Since we can do this for any investment, compounding and DCF valuations allow us to compare not just two seemingly identical firms with each other, but any investment choice we have. Simply put, this allows us to more accurately invest our capital and to take advantage of people too lazy to think about the future or do the basic maths involved. ■

Definition, measurement and categories of financial vulnerability

| Financially vulnerable | | Financially exposed | | Financially secure | |
|---|-----------------|---|----------------|---|------------------|
| 0 - 20 | 20 - 39.9 | 40 - 49.9 | 50 - 59.9 | 60 - 79.9 | 80 - 100 |
| Extremely vulnerable | Very vulnerable | Very exposed | Mildly exposed | Very secure | Extremely secure |
| Cash flow affected to such extent that it creates an actual experience and/or sense of being financially vulnerable and unable to cope. | | Cash flow affected to such extent that it creates a high risk of becoming financially vulnerable or secure. | | Cash flow is under control with little threat of becoming financially very exposed or vulnerable. | |

Source: UNISA bureau of market research