

understanding the power and pitfalls of compounding

INTRODUCTION

Most retirement planning is based on the proposition that investors should start as soon as they can, contribute regular savings into superannuation, (as much as they can afford, to take full advantage of the tax benefits), take an appropriate amount of risk with their investments and watch their nest egg grow. At the end of their working lives they will have enough to retire comfortably. That's the theory.

THE POWER OF COMPOUNDING

Much of this theory is based on the power of compounding. Compounding is simply the reinvestment of interest on earnings. Each year, if after-tax interest and earnings on the investments are positive and are reinvested, the capital base grows quicker and the subsequent years' returns grow ever larger.

The graph below shows how compounding can affect the accumulation of wealth in a retirement plan over a long period of time. Let's assume a young investor has a goal to retire at

age 63 with around a million dollars. He starts with a modest \$3,000 contribution at age 20 and every year for the next 43 years contributes another \$3,000. This is invested in a portfolio that returns 8% per year, each year. The accumulated wealth builds up slowly at first and then rises exponentially, particularly in the later years.

The \$3,000 per year in savings contributions is extremely important in the early years of the program. But as the years go by, the impact of the contributions dwindles as the compounding effect on the accumulated capital becomes more important.

In fact, the annual contributions to the pool will only total \$132,000 over the 43 years. The investment return on this contributed capital is around \$240,000, but compounding effect will add another \$700,000 to the savings pool. In other words, compounded earnings provide around 88% of the total return by the time the investor retires. The power of compounding is amazing. It is 'the last free lunch' in investing and is widely

exploited as a mechanism to accumulate wealth.

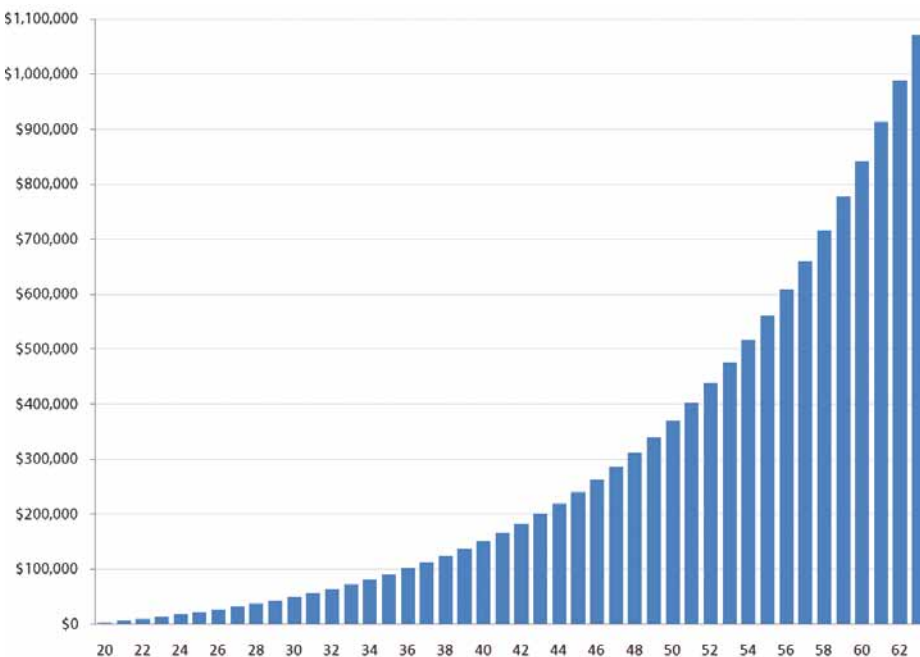
While the investor has accumulated over \$1,000,000 by the end of his working life, the chart shows that even after 33 years of prudent saving he still has less than half of the target \$1,000,000 he needed for retirement.

This means the other half of the hoped for retirement pool will only be accumulated in the last quarter of the 43 year savings program. The investor has to more than double his money in the last decade alone if he is to have any hope of achieving his \$1,000,000 retirement savings goal on time. And herein lies the risk.

THE RISK

On the face of it, it seems a pretty safe and predictable strategy to accumulate wealth. However, the reality is the process is actually a lot more speculative than we may like to think. The hidden risk of course is that the investor is absolutely reliant on the 8% annual return on his investments being maintained for the last

Graph 1: Accumulated savings vs age



This article by Patrick Bennett (above), Head of Research.

10 years of his working life. If he does not achieve that 8% per year for the last 10 years, then he will fall short, a long way short, of the target \$1,000,000.

In fact, if the return on the investor's portfolio falls to an average 4% p.a. over the last decade, then he will be \$330,000 short of his target, leaving him with just two thirds of what he thought he was going to have to retire on.

Even worse, if the investor fails to achieve the 8% p.a. return during any of the first three decades in his working life, then he will have to achieve a substantially higher return in the last decade to catch up.

This may encourage the investor to

invest in more risky assets in pursuit of higher returns, precisely when he should be beginning to think more about capital preservation.

How likely is this to happen? As the chart of returns from global shares over the past 30 years shows, returns from markets are anything but consistent.

Over some periods, returns have been stellar, but over others they have been quite poor. For example, the median rolling annual return from global shares over the past decade has been just 0.4% per annum. All asset classes have some volatility in their returns, to a greater or lesser degree.

This makes it very risky to extrapo-

late a fixed compounding rate of return out into infinity and then base a whole retirement strategy on that assumption. It is especially dangerous to assume the critical part of the compounding curve will kick in and double the savings pool exactly when most needed – towards the end of the investor's working life. This is not something you should rely on.

GOALS BASED INVESTING

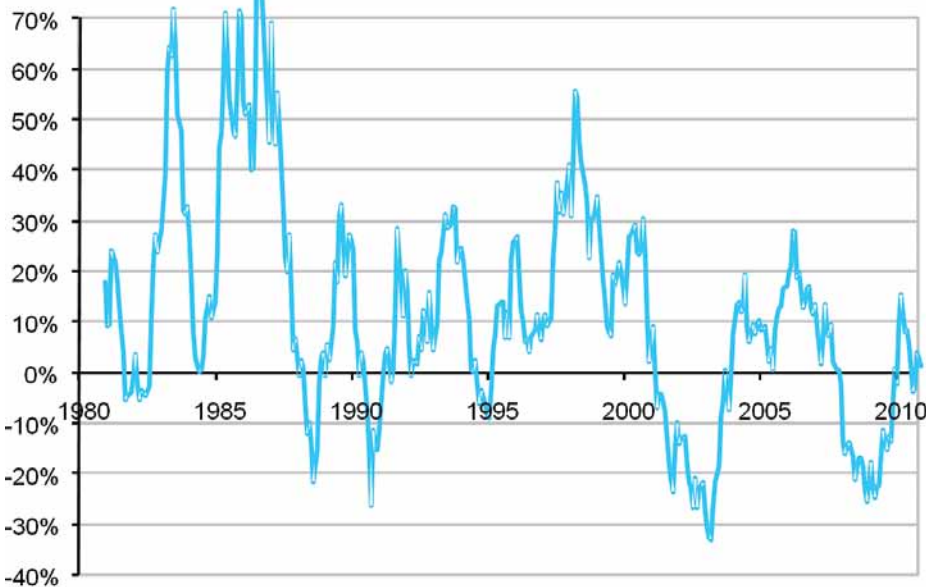
This is where our Goals Based Investing approach to financial planning comes into its own. We do not assume a static investment return forever in our retirement planning process. We are able to analyse in great detail an array of different possible returns for each asset class: the long term average, the best 1, 3, 5 and 10 years; and the worst 1, 3, 5 and 10 years and see what would happen to a retirement plan under combinations of these scenarios.

This allows us to 'stress test' the plan and anticipate actions that could be taken to improve the potential for a successful retirement.

Most importantly, this analysis can be reviewed each year and the retirement plan modified to ensure that it stays on track, as market returns shift.

While compounding is a powerful mechanism for growth, we do not believe it is sensible to have to rely on compounding alone to provide the capital accumulation needed. It is better to take a long hard look at reality and plan accordingly.

Graph 2: MSCI World Accumulation Index Net Div A\$ (%pa rolling annual return)



Shadforth Financial Group

To contact us call 1300 308 440
or visit our web site at www.sfg.com.au



Disclaimer

This information flyer has been prepared as general information only and does not take into account your investment objectives, financial situation or personal needs. Before making any financial decision based on this information, you should consider speaking to a financial adviser and assess whether the information is appropriate to your specific needs, objectives and circumstances. The information contained in this publication has been given in good faith and is believed to be accurate and reliable. Neither The Shadforth Financial Group, or its affiliated entities, employees, officers or directors gives any warranty of accuracy or reliability nor accepts any responsibility or liability for any errors or omissions or for loss or damage suffered by any person as a result of any inaccuracies or omissions.