OUR TWO CENTS

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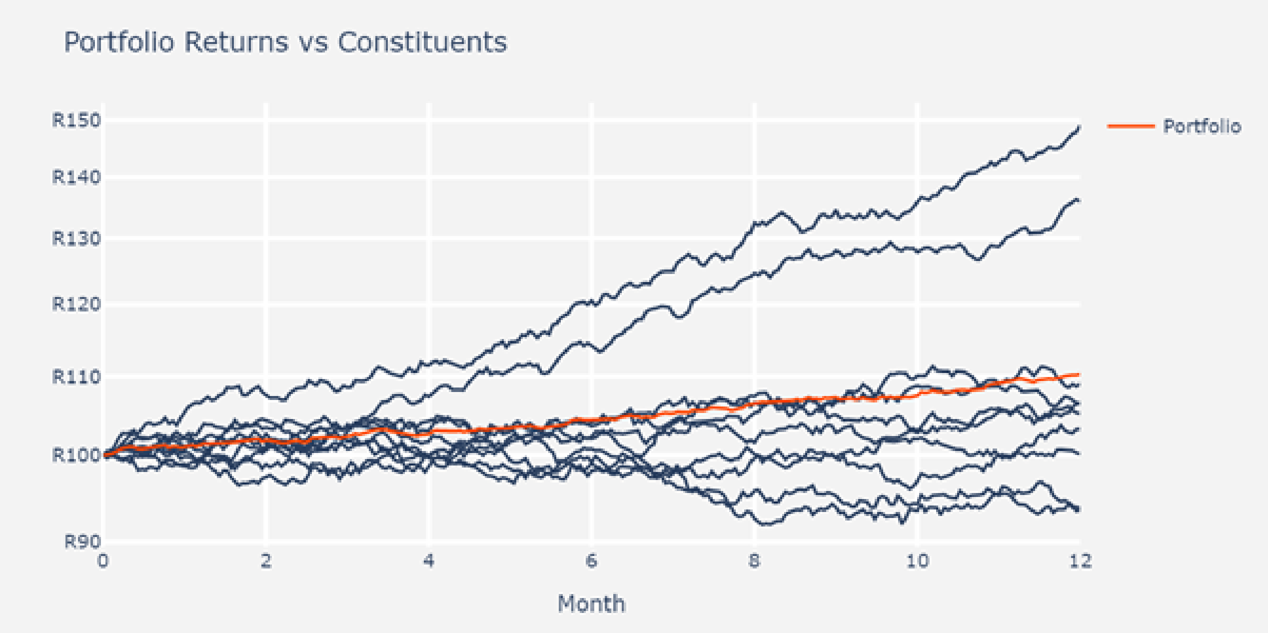
After graduating as a chemical engineer, Garrett pursued his master's degree in finance and investments and is currently writing his CFA exams. Garrett gained experience in the modelling and optimisation of financial data through his postgraduate research. As one of the newest members of the New Road Capital team, he enjoys his role as an investment analyst, where he gets to follow his passion in solving challenging problems using mathematics and technology. In his free time, Garrett never misses a Grand Prix, and has been doing Brazilian Jiu Jitsu for more than 10 years.

Grouping Bets

By Garrett Nel

When investing in a basket of equities, it is often the case that 20% of the shares are responsible for 80% of the returns of the portfolio—a phenomenon known as the Pareto Principle. It is tempting to think that one should attempt to be invested in only those shares that make up the high performing 20% of the portfolio as this would clearly lead to the best return outcome. However tempting it may seem, it is in fact better for most to be invested in the portfolio as a whole rather than trying to pick individual winners.

The figure below shows an example of what the Pareto Principle may look like: out of a portfolio of 10 simulated stocks, 2 shares average a return of 50% for the year, while the 8 remaining shares only get an average return of 2.5% for the year. However, because the return of the portfolio is disproportionately affected by the top performing shares, the portfolio itself has a return of 10% for the year, outperforming the bulk of the underlying shares in the portfolio.



When considering the returns distributions of the underlying shares, compared to that of a portfolio holding these shares, the increased certainty in investment outcomes becomes striking. The broadness of the constituents' distribution indicates that there is a lot of uncertainty regarding the return outcome of a share in any given year. Compared to its constituents, the narrower band of returns observed in the portfolio returns show that, although the maximum potential return in the portfolio is lower, the expected outcome is much more certain.

It is also clear that, as indicated by the dashed lines, the median return of the portfolio was nearly double that of the median share return. What this means is that most investors would benefit from being invested in a portfolio of stocks rather than trying to choose winners themselves—they are very unlikely to choose the best performing stock by chance but are guaranteed to be invested in this stock to some degree when purchasing the portfolio. Thus, the risk-adjusted returns of the portfolio become much better.

This example shows that, although it is possible to outperform a well structured portfolio in the short term with small bets, these gains may very well be due to luck and are not easily reproducible. In the long run, using the basket approach should lead to the desired outcome of capturing sufficient exposure, while minimising outlier risks and maintaining consistency.