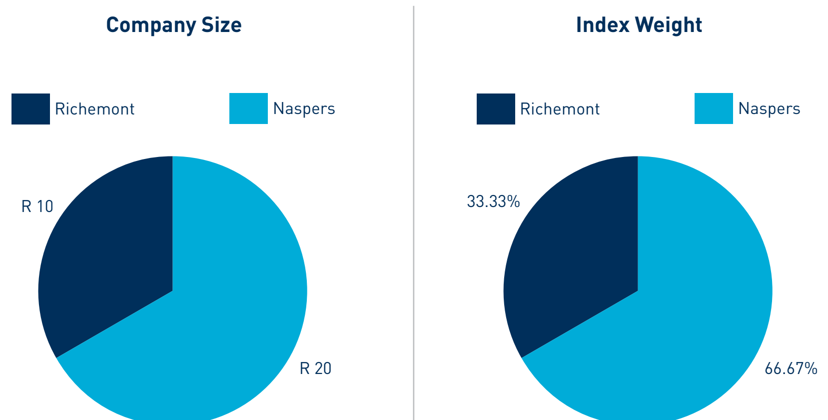
AN INTRODUCTION TO INDEX INVESTING

WHAT IS INDEX INVESTING?

An index is a theoretical portfolio of shares. These shares are selected according to a set of predetermined and defined rules. An index Committee creates these rules or criteria to determine which shares the index comprises and how much of each share it should hold. An index fund is a fund which buys shares and holds them in a portfolio in the exact same proportion of the index, thereby replicating the index identically.

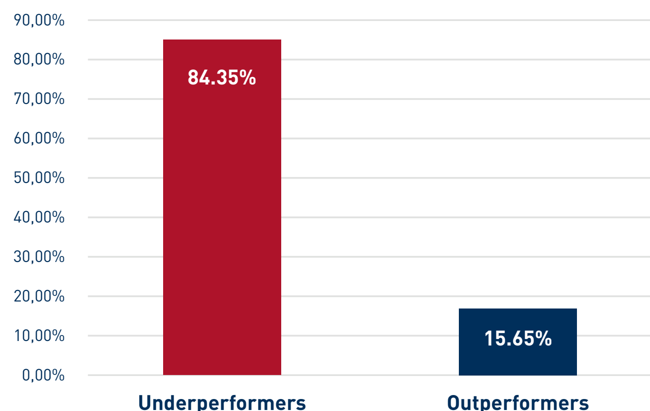
Today the most widely followed indices are known as "market capitalisation" (market cap) indices. In the South African context, the FTSE/JSE Top 40 Index is the most widely recognised example of such a market cap index. The simple rule of market cap indices is to select shares based on the size of the company and invest in them proportionately based on their size. A simple example of a market cap index would be to select the two largest shares on the exchange, "The Top 2 Index", and give them each an Index weight relative to their respective sizes. The Top 40 index does just the same but with the 40 largest shares listed on the JSE.

The Top 2 Index, Two Share Market Cap Index



Market Cap indices were originally created as a gauge of how markets were performing and then later became an accepted way to measure how active managers' portfolios were performing relative to the market. Investors started to realise how few active managers (15.65%) were outperforming the market and this layed ground for the creation of the Index fund. It is startling to note how few active mangers fail to beat this simple but smart form of investing:

Most active managers underperform the benchmark



Source: SA S&P SPIVA Scorecard, 2017

Essentially an index investment is the same as saying that an investor will be investing in a portfolio in the same proportions as the whole market. Investing in an Index fund allows the investor to benefit from the logic and wisdom the market has used to make its investment decisions and own a diversified portfolio of shares at a significantly lower cost relative to active investments.

In recent history Index funds have gathered a lot of interest and have been dubbed the "democratisation of investment management". It is a democratisation as investments are now accessible to all investors, large and small, at very low costs without the complexity that is usually associated with investing.

> *"My advice to the trustee couldn't be more simple: Put 10% of the cash in short-term government bonds and 90% in a very low-cost S&P 500 index fund (I suggest Vanguard's). I believe the trust's long-term results from this policy will be superior to those attained by most investors — whether pension funds, institutions or individuals — who employ high-fee managers"*
>
> ***Warren Buffett,***
> ***Annual letter to Berkshire Hathaway shareholders 2013***

WHY INDEX INVESTING?

Global investment thought leaders such as Warren Buffett have recommended index-based investments. However, in South Africa, index investing has attracted a significantly lower amount of assets relative to the global experience. This is a phenomenon which is not easily explained. We encourage investors to focus on the evidence when deciding between index funds and active investments.

THE EVIDENCE BEHIND AN INDEX ALLOCATION

Evidence Based Investing is a process of making investment decisions based on scientific analysis and thorough research. If one described investing as part science, part art, an evidence-based approach focuses on the science of investing. Indexation has been a major beneficiary of the growth in evidence-based investing, because the value propositions of indexation are grounded in evidence (the science of investing) rather than future promises (the art of investing). Most important is that the benefits of an index approach are meaningfully more repeatable and predictable than the uncertain promise of outperformance.

We believe the following aspects are the key pieces of evidence that should encourage investors to make an index fund a significant part of their portfolio.

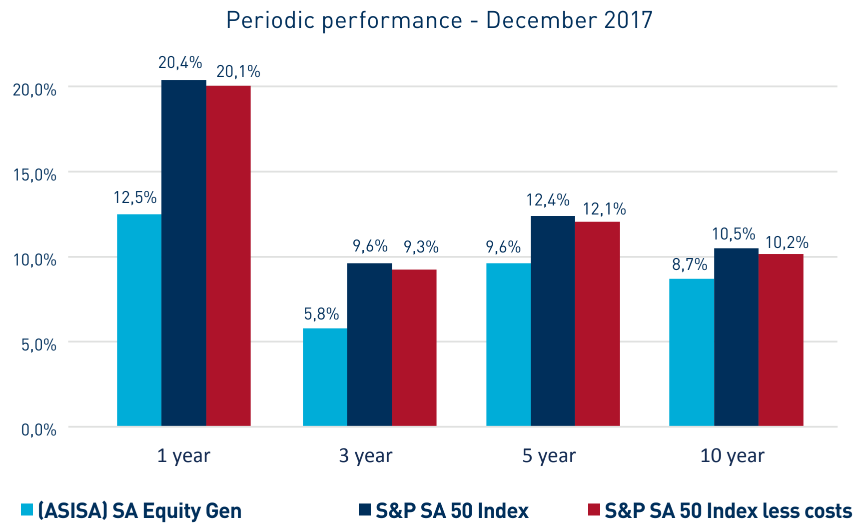
"ARITHMETIC OF ACTIVE MANAGEMENT"

1. **Index Fund Return is above average**

Investing is a "Zero Sum Game" (one investor's gain is exactly equal to another investor's loss), which means that before costs, the average active Rand invested will equal the return of the market index. This concept is best explained by Nobel Prize winning economist William Sharpe in what he refers to as the "Arithmetic of Active Management" which states:

> *"(1) before costs, the return on the average actively managed dollar will equal the return on the average passively managed dollar and (2) after costs, the return on the average actively managed dollar will be less than the return on the average passively managed dollar."*

The Evidence: The index less costs, which are lower, is consistently above the average active fund less costs, which are higher. By including an index investment in one's portfolio, one can increase the chance of achieving above average returns without taking on additional manager risk.



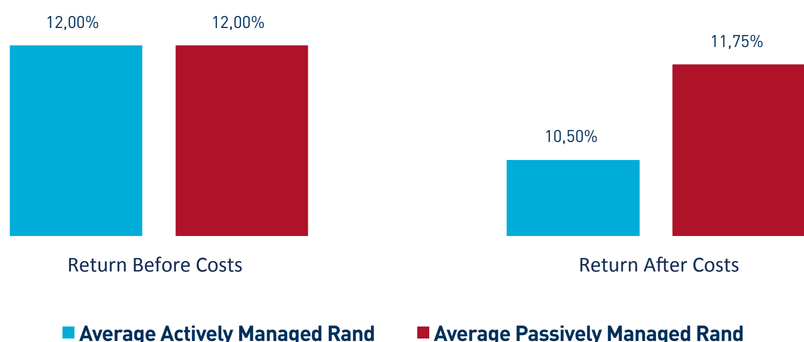
Source: Morningstar, S&P Dow Jones Indices. Returns until 31 December 2017

2 Cost Matters Hypothesis (CMH)

GROSS RETURNS MINUS COSTS EQUAL THE NET RETURNS DELIVERED TO INVESTORS

The Cost Matters Hypothesis is a term that was originally introduced by John Bogle, founder of Vanguard. Simply put, the greatest certainty of any investment is the costs charged. For example, If Manager A charges 0.2% and Manager B charges 1.2%, we know with absolute certainty that every year Manager A will have a 1% advantage over Manager B, based purely on the difference in fee structure.

The Evidence: The structural cost advantage of indexation is absolutely unavoidable; this is amplified by the power of compounding returns. Morningstar Research, both locally and globally, has concluded that the single largest determinant of a fund's future success is the fees it charges. [1]



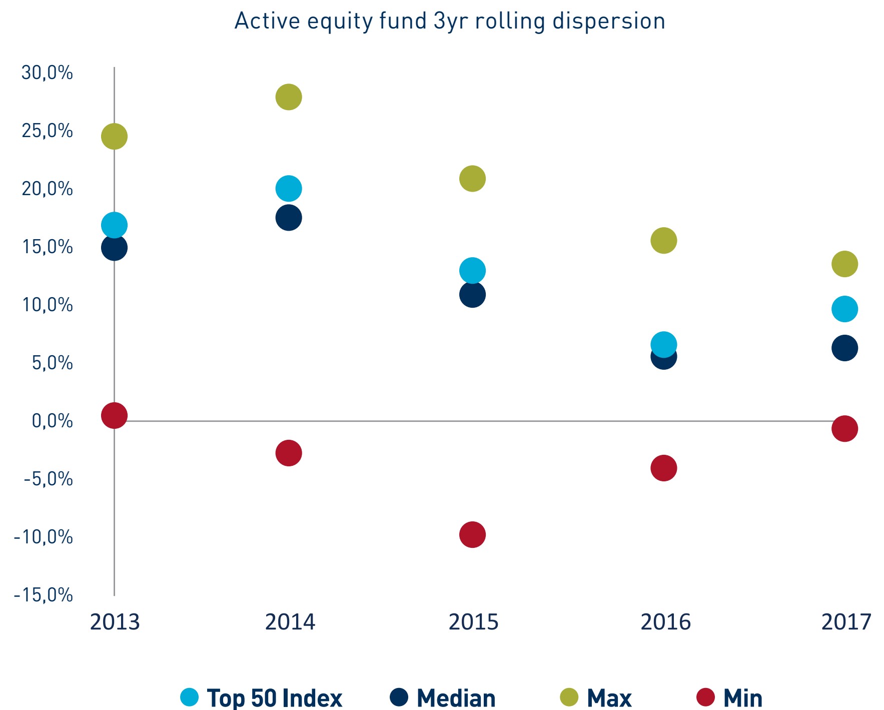
3 Fund Selection Dilemma (manager selection risk)

CoreShares embraces the core-satellite approach to investing (see *Why CoreShares*). Given this belief it follows that there are active funds which produce alpha or perform well relative to their peers. However, the challenge for investors is selecting funds today that will outperform tomorrow and, more importantly, whether this outperformance persists into the future. The additional challenge for investors who are choosing between active funds is the low probability of selecting the outperformers in advance. When selecting more than one manager, as is common practice, this challenge is amplified.

Number of active funds chosen	Number of fund combinations	Probability of only selecting outperformers
1	164	18.27%
2	13 366	3.29%
3	721 764	0.58%

Source: Morningstar. Fund combinations are based on the ASISA SA General Equity category, using funds with more than three years of return data.

An additional risk faced by investors is manager selection risk. This is the risk of selecting a poor performing fund. Manager selection risk can be highlighted by showing the wide dispersion of returns (difference between the best and worst performing managers). The average annual dispersion of returns over calendar ended three-year periods from 2013 to year end 2017 is **23.75% per annum.**



Source: Morningstar.

The Evidence: Only 18.27% of the General Equity active funds in South Africa outperformed the benchmark on a 3-year period.[2] This low probability of selecting outperformers is coupled with the risk of selecting a poor performing manager which can significantly detract from your portfolio's performance.

CONCLUSION

Globally the increasing use of indexation has been a function of the overwhelming evidence supporting it. The South African evidence is no different. We position Index Investing as a focus on the evidence and that due to the certainty and predictability of the advantages of indexation it should form an important (Core) part of one's active and passive mix.

(2) By increasing the number of active funds in one's portfolio, the probability of selecting only outperformers reduces as the possible combinations to choose from increases. This moves from 18.27% for one manager to 0.58% when three managers are selected, a drop in odds from less than 1 in 5 to less than 1 in 100 chances of exclusively selecting outperformers.

WHY CORESHARES?

CoreShares is a contemporary, independent investment management business that specialises in index tracking investment solutions – Unit Trusts as well as Exchange Traded Funds. CoreShares enjoys robust corporate ownership through RMI Investment Managers, OUTsurance Holdings Limited and GFS Holdings Pty Ltd (Grindrod).

CoreShares believes in the power and simplicity of index investing.

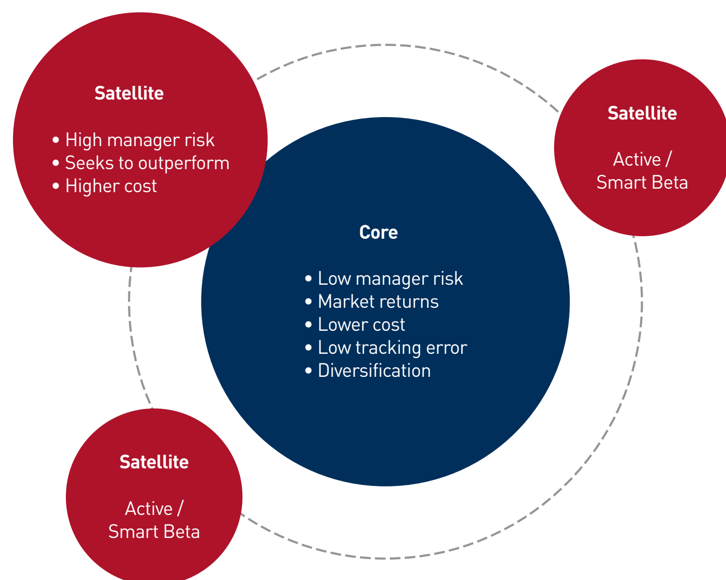
> *"Simplicity is the ultimate sophistication"*
> ***Leonardo da Vinci***

RULES-BASED INVESTMENT

CoreShares believes in the many benefits of following a rules-based, index approach to investing. These benefits include competitive returns, lower costs and ensuring that portfolios are transparent and well governed.

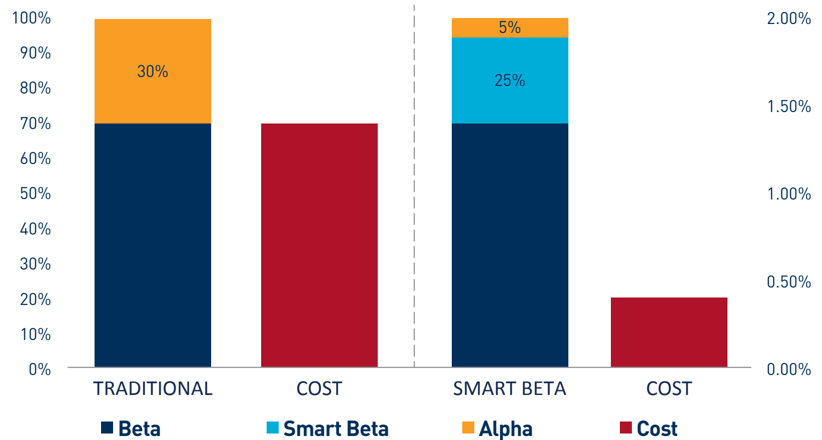
CORE-SATELLITE

CoreShares embraces the core-satellite approach to investing. This approach holds index investments as the majority investment, Core, of a portfolio with long term strategic objectives. The Core is then complemented with high conviction active satellite portfolios.



SMART BETA, THE ACTIVE REPLACEMENT

The CoreShares rules-based index portfolios range from simple market cap weighted to smart beta or alternatively weighted indices wherein an outcome can be targeted, and a high cost active portfolio can be replaced.



"What is new about Smart Beta is not the (invetment) idea – but the simple and transparent packaging; carving out and lowering the cost of the one significant component of active management."

Khan & Lemmon 2016

(1) Fees as a Predictive Tool of Outperformance, Kyle Cox., Morningstar, April 2017 (Local) and Predictive Power of Fees: Why Mutual Fund Fees Are So Important Russel Kinnel, Director of Manager Research, Morningstar, May 2016 (Global)

(2) Source: S&P Dow Jones Indices LLC and Morningstar. Average of active outperformers from the SPIVA South Africa report from June 2014 to Dec 2017 in 6-month intervals.

SETTING THE RECORD STRAIGHT:
THE INDEX INVESTING MISCONCEPTIONS

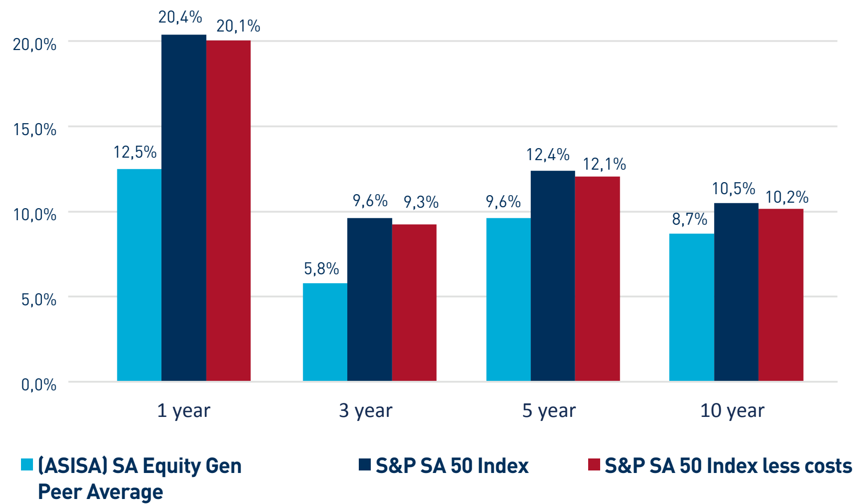
There are, without question, investors who embrace the benefits of blending active and index investing when constructing their portfolios. However, in the South African context, these investors are certainly in the minority. Many investors dismiss the use of passive and do so based on numerous preconceived notions. We encourage investors to challenge these assumptions with rigour when next deciding the appropriate mix of active and index investments.

We have set out what we believe to be the four most common misconceptions which may have led to the relatively lower levels of index investing as an investment choice and further challenge these beliefs by presenting some facts below:

MISCONCEPTION 1: INDEX INVESTING RETURNS ARE AVERAGE

"The index is the average return, therefore after costs, no matter how low the fee, I am guaranteed below average returns."

There is no doubt that offering an investor guaranteed below average returns will send them running for the hills. However, the index isn't your typical "average return". The index, even after factoring in costs, is able to offer consistently above average returns. By including index investing in one's portfolio mix, one is able to achieve above average returns without taking on additional manager risk.



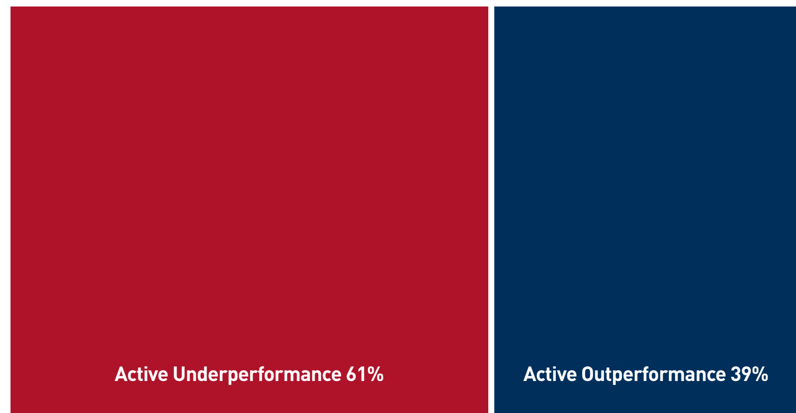
Source: Morningstar, S&P Dow Jones Indices. Returns until 31 December 2017

MISCONCEPTION 2: ACTIVE ALWAYS WINS IN A CRASH

> *"Index investing is a compelling option when markets are rising however, it will always underperform when markets are falling, as in the 2008 Global Financial Crisis (GFC)."*

One would assume, due to the portfolio being fully invested, index investments will underperform relative to active investments in downturn markets. In contrast, active managers will be able to protect on the downside by moving into cash positions when there is a crash. However, when assessing the ASISA SA General Equity category through the Global Financial Crisis of 2008 it is clear that this assumption is incorrect as 61% of active managers underperformed the SWIX All Share index.

GLOBAL FINANCIAL CRISIS

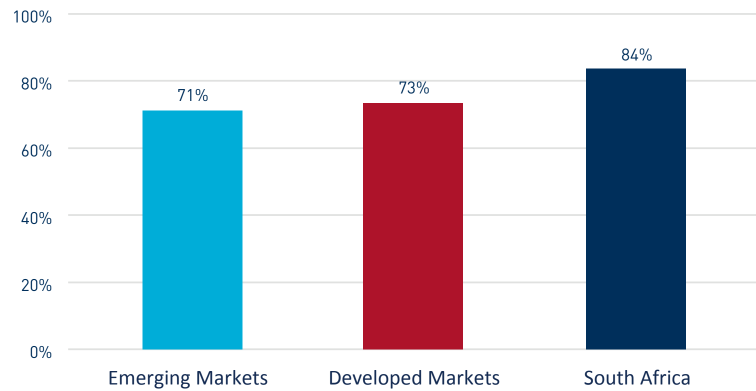


Source: Morningstar. Performance of equity funds in ASISA SA General Equity category over the GFC period.

MISCONCEPTION 3: OUR MARKET IS DIFFERENT

> *"Emerging Markets, such as the South African market, are inefficient and therefore active managers can easily beat the index."*

In a recent study, it was shown that on average, 71.18% of active managers in emerging markets underperformed the benchmark. Similarly, 73.43% of active managers in developed markets underperformed the benchmark. The same holds true for the South African market, wherein 83.72% of active managers underperformed the benchmark in the five years to 30 June 2017. [2]



Source: Various S&P SPIVA reports in 2017. Based on equity asset managers.

MISCONCEPTION 4: SOUTH AFRICA ISN'T DIVERSIFIED ENOUGH FOR INDEX INVESTING

> *"How can an investor hold an extreme single stock exposure, for example, Naspers, which makes up 20% of the Top 40 Index?"*

The potential of excessive single stock exposure is often cited as an issue with market capitalisation indices in small, more concentrated markets such as South Africa. However, the evolution of indices in South Africa has led to the introduction of simple risk-based rules in many index investing options. The S&P South Africa 50 Index, whose returns are cited above, simply avoids excessive single stock exposure by capping the weight of any single share at 10%, an exposure that would not be unusual within an active fund.

CONCLUSION

At CoreShares we believe that a fair and sensible consideration of index investing, without any mistaken beliefs, will enable one to create the best possible outcome for clients by:

- Delivering above average returns (after costs) without taking on unnecessary manager risk;
- Outperforming in downturn markets;
- Increasing the probability of outperforming active managers; and
- Limiting excessive single stock exposure

We believe that beta is the foundation of an optimal portfolio construction process. At considerably lower costs, an investor is able to take advantage of the numerous value add benefits of index investing.

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