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Smart Beta:

Giving investors more for less

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Investing has become more sophisticated in recent years. When actively managed funds were first offered to investors, performance was uncertain and the costs were high. Sometimes the returns were good, but often they weren't. Many people found this a poor bargain and moved to lower cost passive funds which tracked traditional indices. In these new funds returns could be thought of as average - not high, not low, just the market average.

New innovations in index design for passive funds are delivering above market returns over the long term while retaining low costs. This is the new world of 'Smart Beta' and intelligent investors are taking advantage of it in increasing numbers.

ETF providers are at the forefront of this new world by offering Smart Beta products that combine active and passive management styles. The result is portfolios based on intelligently designed indices that aim to outperform traditional benchmark indices, all while retaining the low costs, transparency, liquidity and ease of trading.

A short history of indices, or 'beta'

When Charles Dow first published the Dow Jones Industrial Average index in 1896 he allocated weightings to the top 12 stocks of the day based on their prices. Over time, allocation based on market capitalisation was developed by Henry Varnum Poor and the Standard Statistics Co, resulting in the 1926 predecessor of the United States' S&P 500 Index.

Market capitalisation is the measure of market value of a company and is calculated by multiplying the share price by the number of tradable shares:

$$\text{Market capitalisation} = \text{share price} \times \text{no. of tradeable shares on issue}$$

It was thought to produce a better economic snapshot if larger companies were given more weight in an index.

Market capitalisation indices

Market capitalisation indices are the source of market performance reported in the media. Australia's Accumulation index (S&P/ASX 200) contains the 200 largest companies in Australia by market capitalisation.

The world of managed funds is typically split into two camps:

- 1) active management and
- 2) passive management

1. Active management and alpha

Actively managed funds aim to outperform the fund's benchmark index. If the benchmark index returns 10%, the fund aims to return more than 10%. If the benchmark index falls 10%, the fund's goal is to fall less than 10%. To outperform a benchmark index an active fund manager will buy stocks they think will perform better than the rest of the benchmark index and sell stocks that they think will perform worse than the rest of the benchmark index. In financial jargon outperformance above the benchmark is called "alpha".

Most active fund managers use a market capitalisation index as the index they are attempting to beat. Investors now realise that active funds do not always achieve

returns higher than the benchmark and are questioning the fees. The most recent SPIVA® Australian scorecard shows that over five years 80.6% of Australian equity large-cap equity funds underperformed the S&P/ASX 200¹.

Over time the uncertain performance of active managers struggling to outperform the benchmark index led to demand for passive investments that tracked the returns of the market (beta).

2. Passive management and beta

Passively managed funds aim to give investors the return of the fund's benchmark index. If the benchmark index returns 10%, the fund aims to return 10%. If the benchmark index falls 10%, the fund aims to fall 10%. A passive manager holds the shares that are in the index and only change their portfolio when the index changes. In financial jargon the performance of the benchmark is called "beta".

¹ SPIVA® Australian scorecard mid-year 2019

The demand for passively managed funds that tracked market capitalisation indices resulted in the creation of exchange traded funds (ETFs). ETFs are professionally managed portfolios that trade on an exchange, just like shares.

The very first ETFs tracked traditional market capitalisation weighted indices and were seen as tools for beta exposure. Initially they were particularly popular with institutional investors. Investing based on market capitalisation is supported by the theory of efficient markets (see below).

However, there is mounting research that concludes market capitalisation weighting is not the best method for portfolio construction.

An investment portfolio or fund which tracks a market capitalisation index, allocates more to bigger companies than smaller companies. So when the market overvalues a stock, a fund tracking that index buys too much of the overpriced stock. Conversely when the market undervalues a stock, the fund sells too much of the undervalued stock.

For investors seeking maximum returns this strategy is not ideal.

Theory of efficient markets

The theory of efficient markets or the efficient market hypothesis is that the price of each stock in the market reflects all the relevant information about that stock and thus the market trades at fair value. That is, the current share price is the best unbiased share price estimate. Based on this theory, market capitalisation weighted indices must deliver the best returns for the least risk; proponents of this theory call this mean variance efficiency. There has been significant academic and commercial literature in support of the efficient market hypothesis. It was thought that you could not outperform the market unless you take on additional risk.

But what if markets are not efficient?

There are numerous examples where the market has been wrong. There have been periods of irrational buying and selling and periods during which bubbles have formed. Consider too, the differing needs of individual investors and institutions.

Each has a unique reason for buying and selling shares and thus each assigns a different value to different aspects of the financial transaction which is often unrelated to the valuation. Investors sometimes trade for liquidity, tax, income or even emotional reasons which further distorts market prices. As a result of these factors, the reality is: the market is not efficient.

Smart Beta is born

Sophisticated investors in passive funds started to consider the possibility that alternate index weightings could give investors higher returns for the same, or even less level of risk.

In response, index providers started to create indices that used a method different to market capitalisation. Where market capitalisation weighted indices assigns index weights based on the value of each company, alternate index construction methods started to focus on factors and fundamentals to screen or weight stocks, including equal weighting constituents. The intention of this innovation was to tilt toward undervalued companies and avoid those that were overvalued.

Institutions such as The University of London's Cass Business School, EDHEC Business School, Goeth University and Australia's own Monash University have

demonstrated the long term outperformance and lower volatility of alternate indexing methods. These findings reinforce industry research by index companies. These innovative index construction techniques became known as "Smart Beta".

Smart Beta ETFs

ETFs that track Smart Beta indices do so by holding the shares that are in the index and only changing their portfolio when the index changes. Just like a passive manager.

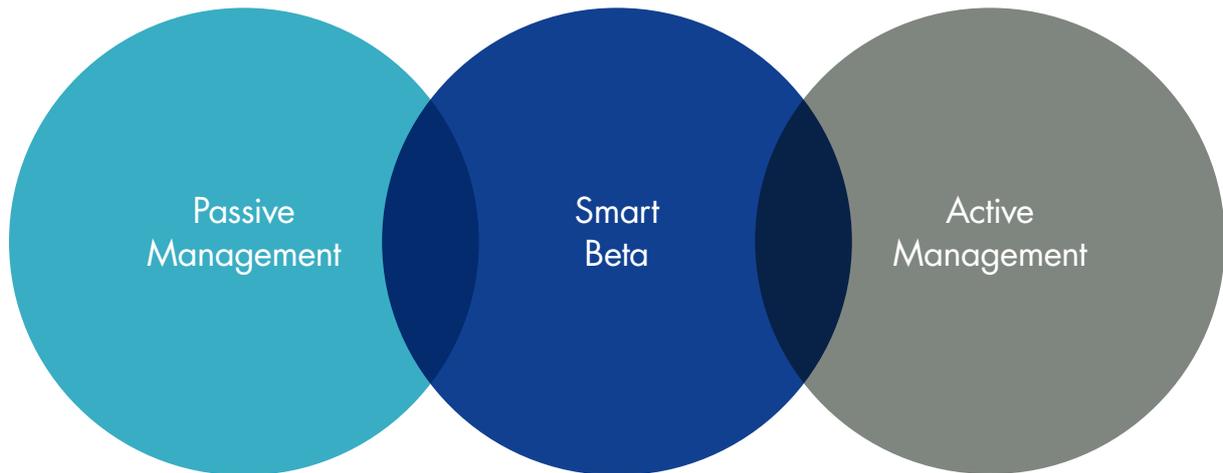
The global ETP industry which amounts to over US\$5.6 trillion² in assets widely follows conventional market capitalisation weighted indices. The trend however shows Smart Beta emerging as the preferred risk adjusted return methodology growing to in excess of \$600 billion in 2019 from \$100 billion in 2010^{3,4}.

2. ETFGI – 31 August 2019 3. Blackrock Global ETP landscape Q2 2019 4. Blackrock Global ETP landscape 2015.

What is Smart Beta?

Smart Beta is an index strategy that involves a construction methodology that differs from traditional market capitalisation weighted benchmark indices, or beta. Smart Beta indices therefore perform differently to beta. There are different types of Smart Beta strategies. Examples include: equal weighting; factor based indexing; and fundamental based indexing.

Smart Beta could be thought of as the intersection of active and passive management, combining the best of both worlds; the potential for outperformance above beta, at low cost.



Institutional investors have been using Smart Beta for years. It is now becoming more widely used and accepted by all types of investors. Smart Beta strategies are attractive compared to active management due to:

- cost effectiveness;
- explicit rules based methodology;
- transparency; and
- risk-adjusted performance.

Different types of Smart Beta

There are different types of Smart Beta. Some of the more popular are outlined below:

➤ Equal weight

All constituents are given an equal weighting regardless of their market capitalisation. Components of equal weight indices are often selected from a universe of stocks based on market capitalisation before being equally weighted.

Equal weighting may be applied at the individual stock or sector level.

➤ Capped weight

Individual stocks cannot exceed a maximum percentage of the index. Components of capped weight indices are often selected from a universe of stocks based on market capitalisation before the capping is applied.

➤ Factor based

Securities are selected based on factors such as dividends, return on equity, momentum, book value, and dividend yield or a combination of these. Constituents may be weighted by factors or by market capitalisation or a combination of these.

Components of factor based indices are often selected from a universe of stocks based on market capitalisation before screening is applied.

➤ Fundamentally weighted

The proportion of each constituent is based on the company's value using economic and accounting fundamental factors instead of price. Fundamental factors include total assets, sales, cash flows, number of employees or a combination of these and other factors.

➤ A combination of the above:

Some indices use a combination of Smart Beta types, such as the Morningstar's MOAT Indices which **equally weight** constituents that have passed Morningstar proprietary **factor based** screens.

Comparing index strategies

	Market capitalisation	Capped weight	Equal weight	Factor based	Fundamental
The largest stocks have the greatest impact on the performance and volatility of the index?	Yes	To a lesser extent	No	No	Yes
Components selected from market capitalisation index	Yes	Generally	Generally	Generally	Yes
Stock concentration risk	Yes	No	No	Yes	Yes
Screens stocks by dividends, earnings, momentum and/or valuation metrics	No	At times	No	Yes	No
Examples	S&P/ASX 200 Accumulation Index	MVIS Australia A-REITs Index	MVIS Australia Equal Weight Index	MSCI World ex Australia Quality Index	US Fundamentals 1000 Index

MVIS Australia Equal Weight Index: An example of Smart Beta

In a concentrated market like Australia greater diversification benefits can be achieved by applying an equal weight methodology. Equal weighting reduces the concentration to large companies, such as the banks and miners that dominate the S&P/ASX 200 and delivers increased exposure to companies outside the top 10 where there is greater opportunity for growth.

There are two key reasons that have been identified by researchers why equal weight investing outperforms market capitalisation benchmarks such as the S&P/ASX 200 namely, equal weighting has:

- a trading strategy that is contrarian⁵; and
- higher exposure to smaller stocks rather than to bigger stocks⁶.

How equal weighting reduces stock concentration

ASX STOCK RANK	Stock name	Sector	% of S&P/ASX 200	% of MVIS Australia Equal Weight Index
1	Commonwealth Bank	Financials	7.93%	1.18%
4	Westpac	Financials	5.53%	1.18%
5	ANZ	Financials	4.41%	1.18%
9	Telstra	Telecommunications	2.52%	1.18%
6	National Australia Bank	Financials	4.26%	1.18%
2	BHP Billiton	Materials	6.21%	1.18%
3	CSL	Health care	6.09%	1.18%
8	Wesfarmers	Consumer staples	2.53%	1.18%
7	Woolworths	Consumer staples	2.83%	1.18%
10	Macquarie Group	Financials	2.23%	1.18%
TOTAL			44.55%	11.80%

Source: VanEck Vectors. For illustrative purposes only.

S&P/ASX 200 as at 31 August 2019. MVIS Australia Equal Weight Index as at 18 June 2016 rebalance.

Rather than having nearly 50% of an Australian equity investment in just 10 companies tracking the S&P/ASX 200, you have equally weighted exposure to all stocks in the MVIS Australia Equal Weight Index giving you an increased exposure to mid caps and the broader economy.

The result:

The MVIS Australia Equal Weight Index

- has outperformed the S&P/ASX 200 over the long term;
- has better risk/return trade-off than the S&P/ASX 200; and
- is around three times better diversified than the S&P/ASX 200.

For more information on equal weight investing in Australia see VanEck's research:

Why equal weighting outperforms: The mathematical explanation which can be accessed at www.vaneck.com.au/why-equal-weighting-outperforms

⁵ Why Does an Equal-Weighted Portfolio Outperform Value- and Price-Weighted Portfolios, Plyakha, Uppal and Vilkov, March 2012

⁶ Is fundamental indexation able to time the market? Evidence from the Dow Jones Industrial Average-Lajbcygier, Chen, Dempsey, December 2014

What to look for in beta

It is important for investors to understand the construction methodology of the index that underpins an ETF in order to identify the ETF that best suits their investment purposes. Investors should ask the following questions:

01 | Are the rules for inclusion in the index easy to understand?

Index construction methodology and rules for inclusion and exclusion vary between indices. These should be easily understood and transparent.

03 | Do the index rules make sense?

Does the rationale for the index make sense and will it help you achieve your investment goals.

02 | Will the beta perform in line with expectations?

Considerations that will adversely impact the beta and thus increase its risk include:

- diversification, is there unintended stock or sector concentration risk;
- liquidity, how easily sold are the underlying assets of the index; and
- replication, an ETF that physically replicates its index is more likely to perform in line with its index.

04 | How often is the index rebalanced?

Indices including Smart Beta indices are reviewed and rebalanced by the index provider at regular intervals (generally quarterly) based on its rules for index construction. This means that for some indices, components may change often, while for others with more stringent rules, they will not. This may impact underlying costs and impact returns.

VanEck's Global Smart Beta ETFs in Australia

ETF	Asset Class / Sector	Index centre	Smart Beta type	Rationale for beta
VanEck Vectors Small Companies Masters ETF	Australian Small Companies	MVIS Australia Small-Cap Dividend Payers Index	Factor Based	Includes only small companies that have payed a dividend thus removing highest risk small caps.
VanEck Vectors MSCI World ex Australia Quality ETF	International Equities	MSCI World ex Australia Quality Index	Factor Based	Factors identify companies that have durable business models and resilient earnings that are less correlated to the broader business cycle.
VanEck Vectors Australian Equal Weight ETF	Australian Equities	MVIS Australia Equal Weight Index	Equal Weight	By equally weighting the largest and most liquid securities on the ASX the portfolio addresses concentration in the Australian market
VanEck Vectors Australian Property ETF	Australian A-REITs	MVIS Australia A-REITs Index	Capped Weight	An A-REITs ETF that caps holdings to 10% to reduce the concentration to retail.
VanEck Vectors Australian Resources ETF	Australian Resources	MVIS Australia Energy & Mining Index	Capped Weight	Access Australia's resource sector which caps stocks at 8% to reduce the concentration to the mega miners.
VanEck Vectors Morningstar Wide Moat ETF	US Equities	Morningstar Wide Moat Focus Index	Factor Based & Equal Weight	Focus on 20 most undervalued "Wide Moat" US Stocks as determined by Morningstar.
VanEck Vectors MSCI Multifactor Emerging Markets ETF	Emerging Markets	MSCI Emerging Markets Diversified Multiple Factor Index	Multi-factor	A diversified portfolio of emerging market equities included on the basis of Value, Low Size, Momentum and Quality.

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