WHITE PAPER

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WHAT SELF MANAGED SUPER FUND INVESTORS AND THEIR ADVISORS CAN LEARN FROM THE US UNIVERSITY ENDOWMENT MODEL OF ASSET ALLOCATION.

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The US University Endowment Funds, such as Yale and Harvard, have been leaders in multi-asset class returns for over two decades, consistently achieving attractive returns with moderate risk. Central to this success is the long-term, patient capital investment approach implemented by the Endowments. This has resulted in Asset Allocations which typically allocate over 70% of their portfolios to the "alternative" asset classes of Absolute Return, Real Estate and Real Assets, Private Equity and Natural Resources.

We believe that understanding the thinking and strategies of US Endowment Funds is relevant to family offices and private investors and their advisors investing via SMSFs for the following reasons:

a) US university endowment funds typically have long-term investment horizons. Because of this they can establish relatively stable asset allocations that do not rely on market timing for generating returns. This also results in lower trading costs. Families and private investors should also have long-term investment horizons. Thus they can learn from US university endowment thinking regarding asset allocation;

b) US university endowment funds have consistently generated superior long-term investment returns, compared to returns from predominantly domestic (in this case US) equities and bonds;

c) US university endowment funds have diverse portfolios including significant exposure to alternative and illiquid asset classes. This diversification and weighting to alternatives may inspire families to consider alternatives in their own portfolios. However, private investors need to understand that there is a wide variance in the returns generated by top quartile (top 25%) and bottom quartile alternatives fund managers. It is precisely this variance that attracts endowments to these asset classes, as skilled top quartile managers can exploit these market inefficiencies to generate outperformance and above market returns. Thus, simply adopting a broad-brush allocation to alternatives funds or alternatives funds of funds, has a high probability of resulting in an investment exposure to lower quartile funds and managers, which may not generate the returns anticipated.

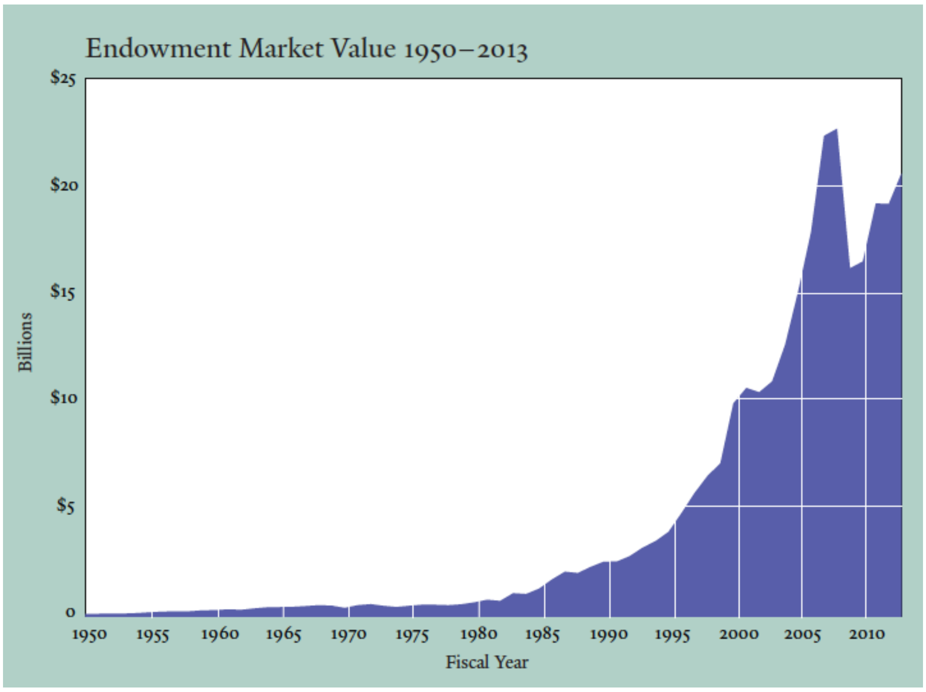
Background

The US endowment model of investing was pioneered by David Swensen, who in 1985 - almost 30 years ago - was appointed the Chief Investment Officer of Yale University, with the responsibility of managing and investing the university's endowment fund. He is still at the Yale Endowment's helm today, having grown the endowment's portfolio from a little under US$1 billion in 1985, to US$20.7

billion today, (as at 30 June 2013). This is an impressive track record, particularly when you also consider that the endowment has annually “paid out” a significant share of its revenues to fund university expenses (in 2013 the endowment paid out US$1.024 billion to the university). In 2012 Mr Swensen was listed 3rd in Chief Investment Officer Magazine’s list of 100 most influential investors worldwide.

The Yale Endowment has had remarkable long-term performance, generating net returns of 13.5% per annum over 20 years. This compares to the equities market (as measured by the S&P 500), which has had annualised annual performance of 9.22% per annum over the same 20 year period (through 2013).

DIAGRAM 1: YALE ENDOWMENT MARKET VALUE 1950 - 2013



Source: Yale Endowment Annual Report at 30 June 2013

In the late 1980s and early 1990’s, other universities, US family offices and other long-term investors, started to take notice of the success of Yale, and replicate its approach. Thus the “Yale Model” has morphed into the “Endowment Model”, and is widely regarded as a sensible approach for long-term investors. The Harvard University Endowment, at over $US30 billion, is the largest endowment fund to use this investment approach.

When Mr Swensen joined Yale in 1985, the Yale Endowment had an allocation of 50% to domestic U.S. equities, 40% to U.S. bonds and cash and 10% to a smattering of “alternative” assets. The high orientation to domestic equities and cash is probably not dissimilar to many Australian private portfolios.

In gradually shifting the bias of the Yale Endowment’s asset allocation, after back testing long-term investment returns, Mr Swensen adopted two principal’s on which the Yale Model would ultimately be based:-

1. That investors with long time horizon’s should invest with an equity bias (as opposed to bonds / fixed interest / cash), as the long-term inflation adjusted returns from equity

returns dwarf those from bonds and cash). Note, investing with an equity bias does not just mean only investing in “equities” in the sense of shares and other listed securities);

2. That diversification by asset classes, is very important in portfolio management. As Harry Markowitz, the Noble Prize winning father of Modern Portfolio Theory said, diversification provides investors with a ‘free lunch”. What he means by this is that combining asset classes that are lowly, or even inversely correlated to each other, reduces the risk of the overall portfolio. Even if some of the asset class may themselves be deemed “risky”.

Most families and their advisors would probably find it hard to argue with those two principals.

The Strategy

Taken to the next step, Mr Swensen believes that there are 3 tools that investors have at their disposal:-

1. Asset Allocation
2. Market Timing
3. Security (or Investment) Selection

On the basis that holding numerous individual investments and assets within each asset class, will provide ample diversification within that asset class, Mr Swensen believes Asset Allocation to be the most important long-term driver of returns. For investors who want to try to beat the market, i.e. be active, rather than passive investors, then Security (or Investment) Selection is also important.

However he advocates that if private investors have no investment skills or insight, then they should adopt a passive investing approach and invest in the indexes of the assets within their asset allocations, via index funds or Exchange Traded Fund (ETF’s), as there is less fee and transactional cost leakage in this approach.

He frowns upon trying to use Market Timing to generate above market returns, holding the view that one of the most pervasive problems in the financial markets is that long-term investors tend to invest with too short a time horizon. This results in emotions - fear and greed - rather than rational analysis and strength of conviction, dictating investment decisions. The consequence of this is buying high and selling low, which is disastrous for long term returns.

Investment Selection is important for those who seek to achieve above market returns by adopting an active management approach. However - and this is where the genesis of the Endowment Model begins - if you want to be an active investor, you need to ***allocate to those asset classes which offer the best opportunities to generate above market returns;*** and ***dedicate your time and energy seeking out the top performing investment managers in those asset classes.***

This means that if you want to be an active investor, you need to be investing in those asset classes that are the most **inefficiently** priced. Why? Because they are asset classes where investment skill, access to information and opportunities in opaque and inefficient or illiquid markets, and the ability to implement and execute strategies to profitably exploit these opportunities - **do** provide opportunities to significantly outperform the market.

But how you you determine which asset classes are the least inefficiently priced? Mr Swensen says that this can be done by comparing the performance variance of the top quartile managers and the bottom quartile managers within each asset class. In a 2011 Yale Lecture, Mr Swensen said that the 10 year performance variation between the top and bottom managers in each asset class were as follows:

TABLE 1: PERFORMANCE DIVERGENCE OF BEST AND WORST PERFORMING MANAGERS BY ASSET CLASS (THROUGH 2011).

Asset Class	1st to 4th Quartile Return Variation (over 10 years)
Bonds	0.5% pa
Large Cap (US) Equities	2.0% pa
Non-US Equities	4.0% pa
Hedge Funds	7.1% pa
Real Estate (Unlisted)	9.3% pa
Leverage Buy Outs	13.7% pa
Venture Capital	43.2% pa

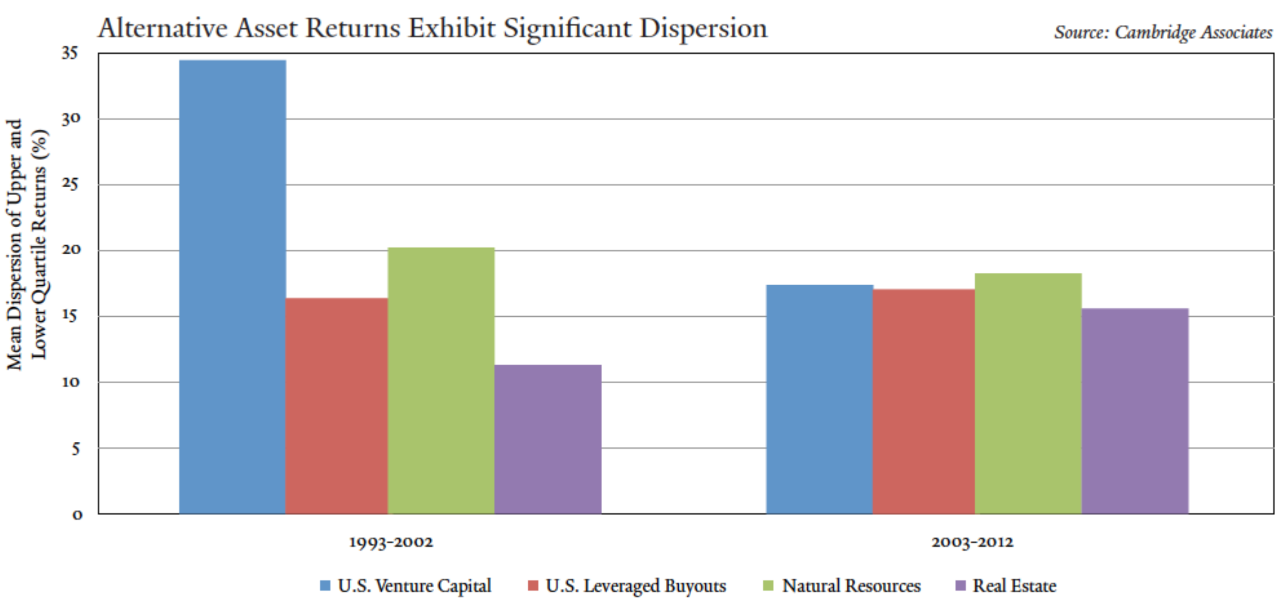
Source: Yale University Lecture

The takeaway for this data is best described In Mr Swensen's own words from the lecture in which he presented the data:

> *"So, the measure that we have here of market inefficiency, points us toward spending our time and energy trying to find the best venture capital managers, trying to find the best leveraged buyout managers, and spending far less of our time and energy trying to beat the bond market or beat the stock market. Because, even if you win there, even if you end up in the top quartile, you're not adding an enormous amount of value relative to what you would have had, if you just would have bought the market."*

The table below, from 2012 by Cambridge Associates, and taken from the 2013 Yale Endowment Annual Report, re-emphasise this point and shows the excess return potential that can be generated by investing with the best managers in each alternative asset class.

DIAGRAM 2: ALTERNATIVE ASSET RETURN DISPERSION



The wide divergence in returns between certain asset classes, is primarily due to the inefficient pricing of the assets within those asset classes. This is a factor of the opacity of those markets and the value that can be created by great managers who have access to good information and opportunities. This is not to suggest that these managers are doing anything illegal, such as insider trading. Rather, they have specialist knowledge and skills, which have led to success, which in turn have led to more opportunities and so on.

As at 30 June 2013, Yale's Asset Allocation was as follows:-

TABLE 2: YALE ENDOWMENT ASSET ALLOCATION 2013

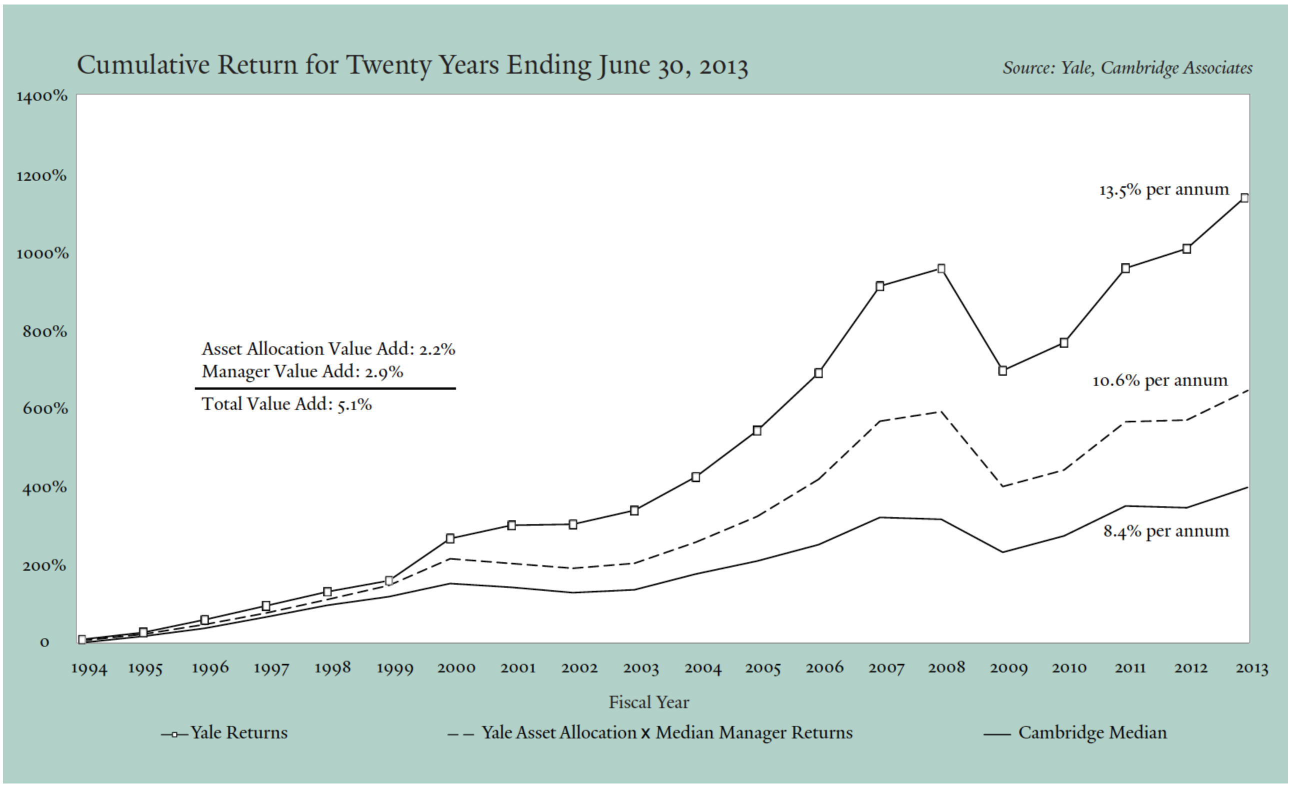
Asset Class	Allocation
Marketable Securities	
Domestic (ie US) Equities	5.9%
Foreign (ie non-US) Equities	9.8%
Fixed Income	4.9%
Cash	1.6%
Total Marketable Securities	**22.2%**
Alternatives	
Absolute Return (Hedge Funds, LBO, VC)	17.8%
Natural Resources	7.9%
Private Equity	32.0%
Real Estate	20.2%
Total Alternatives	**77.9%**

However, simply allocation to these alternative asset classes does not in and of itself guarantee outperformance. Remember, it is the skill of the specialist managers within these asset classes, whether they be real estate, private equity or leveraged buy outs, which determines their access to great deals, and their ability to execute to achieve the expected returns.

For Yale, (which does not directly select securities), but appoints external managers, this means spending a lot of time researching, meeting, understanding and performing due diligence on those managers who they expect to be top quartile or top decile managers.

Diagram 3 on the following page shows Yale's attribution of the portfolio's excess return, or Value Add - 43% being attributable to the Asset Allocation and 57% being attributable to the skill of the underling Investment Manager's appointed by Yale.

DIAGRAM 3: YALE ENDOWMENT 20 YEAR ATTRIBUTION ANALYSIS



Liquidity

US Endowment Funds operate on the expectation that illiquid investments will provide an "illiquidity premium" to the returns generated by liquid assets. The logic behind this thinking is described in the 2013 Yale Endowment Annual Report as follows:

> *"Since market participants routinely overpay for liquidity and since less liquid markets exhibit more inefficiencies than their liquid counterparts, illiquid markets create opportunities for astute investors to identify mispricings and generate outsized returns. Furthermore, operational, strategic, and company-building skills of control-oriented, illiquid asset managers can add tremendous value to portfolio holdings. Investors willing to accept less liquid alternatives enhance the opportunity to outperform the market. Intelligent pursuit of illiquidity is well suited to endowments, which operate with extremely long time horizons."*

The second part of this statement again re-empahsises the importance of "control-oriented" specialist manager selection, as without the right managers, because of the divergence of returns between the best and worst performing, an allocation to alternatives may not produce the outperformance sought.

The Yale Endowment report goes onto make the point that investing in illiquid assets, does not mean that they do not generate cash.

> *"Even a portfolio characterized by high percentages of illiquid, long-term assets contains more liquidity than might be immediately apparent. Yale's holdings generate a fair amount of natural liquidity: bonds pay interest, stocks pay dividends, real estate produces rents,*

energy reserves provide both returns on capital and returns of capital (through depletion), and private equity partnerships distribute proceeds from realizations."

The other reality is that there is today a deep market of buyers and sellers in interests in so called illiquid alternatives funds. These transactions occur in what is known as the secodaries market, and according to Cogent Partners, a specialist intermediary in the secondaries market for illiquid alternatives funds (real estate, private equity, LBO), the 2014 annual volume of trades is on track to excess US$30 billion (see Diagram 4). Importantly too, not all of these trades occur at discounts to NAV, as is shown by Diagram 5.

DIAGRAM 4

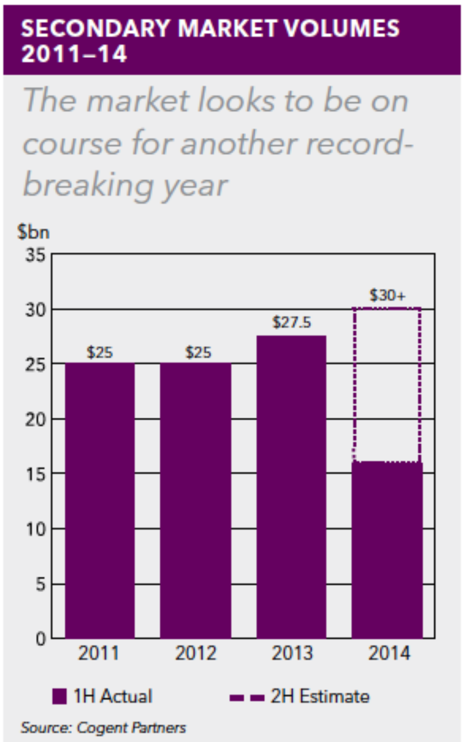
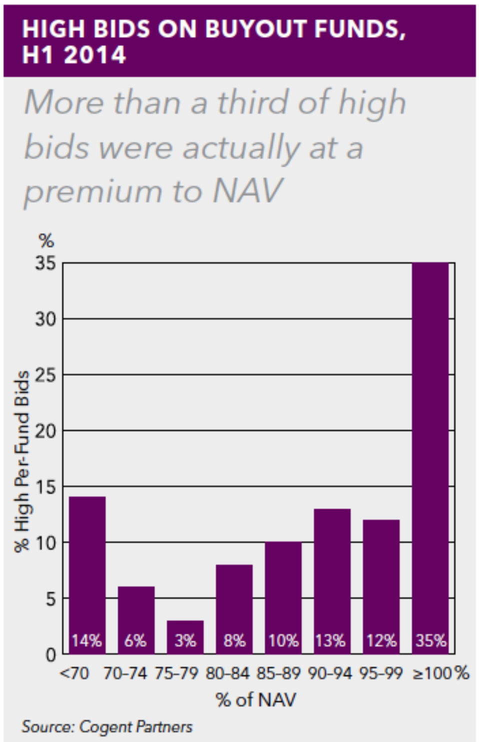


DIAGRAM 5



So, whilst alternatives funds may not offer daily liquidity, there is actually a robust market of buyers and sellers in the secondaries market.

Even smaller funds can create their own secondaries trades. If the fund and the manager are performing, in the event that an investor needs liquidity, there will normally be buyers who will be prepared to offer to acquire the interests.

So the message from the Endowment Model is clear. Illiquid asset classes are less efficiently priced, thus providing investors with long-time horizons the ability to generate excess returns via managers with the skill to exploit these market inefficiencies.

Summary lessons for family office and private investors and advisors

Spire Capital believes that the following lessons can be gleaned from an understanding of the US Endowment Model and applied to family and private investing:

- Private investors should invest with long-term horizons and as such it is always prudent to invest part of the portfolio with a longer-term (limited liquidity) bias,

- A relatively stable, equity / growth orientated asset allocation is probably the most important tool at an investor's disposal. Even if an investor or advisor does not have the historical data or technical expertise to model an asset allocation's efficient frontier, investors should recognise that multi-asset portfolios, which include alternative and illiquid asset classes, will provide greater diversification, and thus lower risk, than a portfolio that is heavily concentrated in domestic equities (direct or funds) and cash;

- Investors need to decide to what extent they are prepared to be active investors vs passive investors. If a barbell approach is implemented where part of the portfolio is managed passively and part actively, then the passive portion should be invested in index type funds in each asset class, as this is the most cost effective means of generating this exposure;

- For that portion of the portfolio that is to be actively managed, bonds and domestic equities, given the efficient market pricing mechanisms, have low variance of returns between top and bottom performing managers. Thus long only managers in these asset classes typically are not prepared to take large bets against the market (and lose), and tend to hug the indexes. Thus an investor seeking to dedicate part of the portfolio to active investing to generate higher than market returns, should focus on those less efficient asset classes, where opportunities to exploit mispricings can generate excess returns;

- Many of these alternative investments will be in illiquid markets and assets. As market participants in liquid securities tend to routinely overpay for liquidity, illiquid asset classes will provide the investor with long-term investment horizons excess returns, or illiquidity premiums;

- Even large institutional investors like Yale and Harvard do not have the skills or access to opportunities to invest in alternative investments directly, and must invest via specialist investment managers in each alternative asset class. Given the wide distributions of returns between the best and worst performing managers in alternatives, time and energy is most productively spent in seeking out, researching and conduct due diligence on those managers who have been, (or expected to be in the case of new managers), top quartile (top 25%) or top decile (top 10%) performers;

- In the case of Yale, selecting the right managers has more than doubled their excess return over 10 years, compared with the excess return from a high allocation to alternatives alone;

- Yale would never invest in an alternatives fund of fund, as they would not take on the "black box" risk of not knowing who the various underlying investment managers, or what their investment strategies, may be. Given the wide range of returns between managers, private investors should be similarly cautious about investing in alternatives funds and bear in mind the disparity of returns between the top and bottom quartile performers, to ensure that the managers who are ultimately doing the investing:-

    - are known,
    - are top quartile or preferably top decile performers in their specialised field,
    - are hard working, smart and maniacally focused on beating the market,
    - are not huge funds - size is the enemy of performance in alternatives funds,
    - have an alignment of interest with investors (real skin in the game, not just performance fees).

Ideally for private investors, all of these points (and more), would be available via independent research.

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About Spire Capital

Spire Capital is an independent fund manager based in Sydney owned by entities associated with its Directors.

The firm has a goal of providing retail investors with access to specialist funds that are compatible with the US endowment style of investing, and which are normally only available to institutional investors investing a minimum of US$10 million, or High Net Worth investors investing a minimum of US$1 million.

In accordance with the endowment model, Spire Capital spends a significant amount of time and resources seeking out those specialist managers which it expects to provide top decile or top quartile performance. It then creates an Australian domiciled and regulated feeder fund and Product Disclosure Statement, paying particular attention where relevant to maximise the tax outcomes for Australian investors.

Spire calls this the democratisation of institutional investing, and makes these funds available to investors and advisors, either directly or via selected platforms, as building blocks to introduce a component of US endowment style asset allocation to their portfolio.

These funds are available within the Spire Global Investment Series.

The Spire Global Investment Series currently has three funds:

Fund Name	Thematic	Underlying Manager	Research	Status
Spire USA ROC II Fund (AUD) APIR: ETL0371AU	US private equity real estate	Bridge Investment Group Partners, LLC (Salt Lake City / New York)	Zenith “Highly Recommended”	Closed to new investment
Spire USA ROC Seniors Housing and Medical Properties Fund (AUD) APIR: ETL0412AU	US private equity real estate	Bridge Investment Group Partners, LLC (Salt Lake City / New York)	Zenith “Highly Recommended”	Open for investment, min $50,000 direct or via BT Wrap & Asgard with no min.
Spire Copper Rock Global Small Companies Fund (AUD) APIR: ETL0410AU	Global small caps	Copper Rock Capital (Boston, MA)	Zenith - in progress	Open for investment. Min $5,000

Full details and Product Disclosure Statements are available at www.spirecapital.com.au.