Partners Capital Risk-Managed Endowment Approach (PRMEA)

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The Endowment Model of investing was conceived in the 1990's at the Yale Investment Office by David Swensen. He subsequently enshrined the principles of the model in his seminal book *Pioneering Portfolio Management* published in 2000. Over the last two decades, there have been seismic shifts in the investment landscape with substantial capital flowing into both the active and passive management industries. Against this backdrop, Partners Capital has made several important enhancements to the original model that we now term the Partners Capital Risk-Managed Endowment Approach (PRMEA). This whitepaper describes where we have got to on this journey, and how PRMEA will need to adapt dynamically to further shifts in the investment landscape.

The Original Yale Endowment Model

The foundation of Partners Capital's investment philosophy can be traced to David Swensen's seminal book, *Pioneering Portfolio Management*, published in May 2000. David Swensen joined Yale as its CIO in 1985 and has delivered annualized average returns of c.13% over his 30-year tenure, a feat exceeded by very few other institutional investors. Swensen's book details what is commonly referred to as the Endowment Model, and can be condensed into three overarching principles:

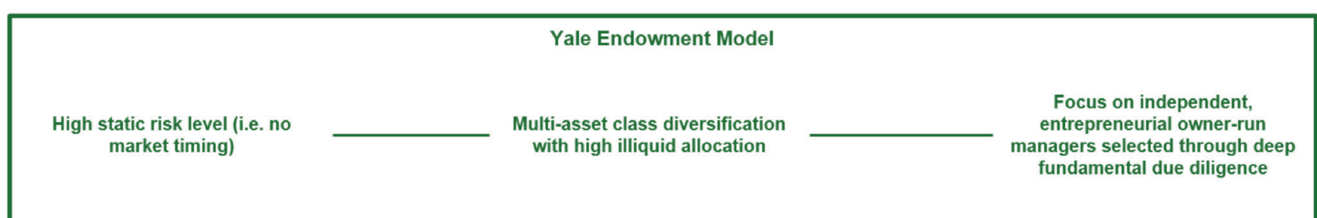
Overarching Principle 1: High static risk level (i.e. no market timing)

Endowments have a virtually infinite time horizon, and most can accept a high level of risk and volatility to achieve high excess returns. The top endowments monitor their overall risk level rigorously and exploit market movements to rebalance to the target risk level, paring asset classes that have rallied and buying those that are out of favour. The top performers maintained their high risk level through the market downturn in 2008-2009, reaping the benefits as equity and credit markets recovered in 2009 and beyond.

Overarching Principle 2: Multi-asset class diversification with high illiquid allocation

Multi-asset class diversification is the foundation of modern portfolio theory attributed to Harry Markowitz. In the 1950s, Markowitz showed that combining various asset classes that are not perfectly correlated to each other resulted in maximising a portfolio's expected return for a given amount of risk. In layman's terms, it makes intuitive sense that putting all one's eggs into one basket is riskier than having them spread across several. Following a decade of quantitative easing and the resulting appreciation of traditional asset classes, we expect the benefits of multi-asset class diversification to be of particular importance in the coming years. Our return forecast for a simple 60/40 blend of equities and bonds is c.4% per annum over the next ten years, whilst a multi-asset class portfolio of equivalent risk is forecast to return c.7% per annum over the same period.[1]

[1] Hypothetical returns are based on a simulation with forward-looking assumptions, which have certain inherent limitations. Unlike actual returns, hypothetical returns do not represent actual trading. Hypothetical returns presented do not reflect the deduction of Partners Capital's fees. Actual returns may differ materially from those reflected. There is no guarantee that the hypothetical return assumptions presented will be realised.



Yale's long-standing emphasis on illiquid asset classes is core to its model. Top performers exploit their long time horizon with high allocations to private equity, real estate and illiquid credit, harvesting the illiquidity premium and greater alpha potential found in these less efficient asset classes.

Overarching Principle 3: Focus on independent, entrepreneurial, owner-run managers selected through deep fundamental due diligence

Yale attribute most of their strong historical outperformance to manager selection which in turn is driven by a deep due diligence process that unearths the most talented, driven and appropriately incentivised asset managers. As opposed to large, bureaucratic organisations that offer a variety of investment management options (what Swensen calls "financial supermarkets"), smaller, entrepreneurial, independent and narrowly focused firms are more likely to have investment goals aligned with institutional investors. By virtue of this alignment, they tend to outperform. "Owner operators simply work harder and better than rank and file employees," says Swensen. "Investment focus improves the chances of satisfying client objectives" as the firm lives or dies by its success in its chosen area.

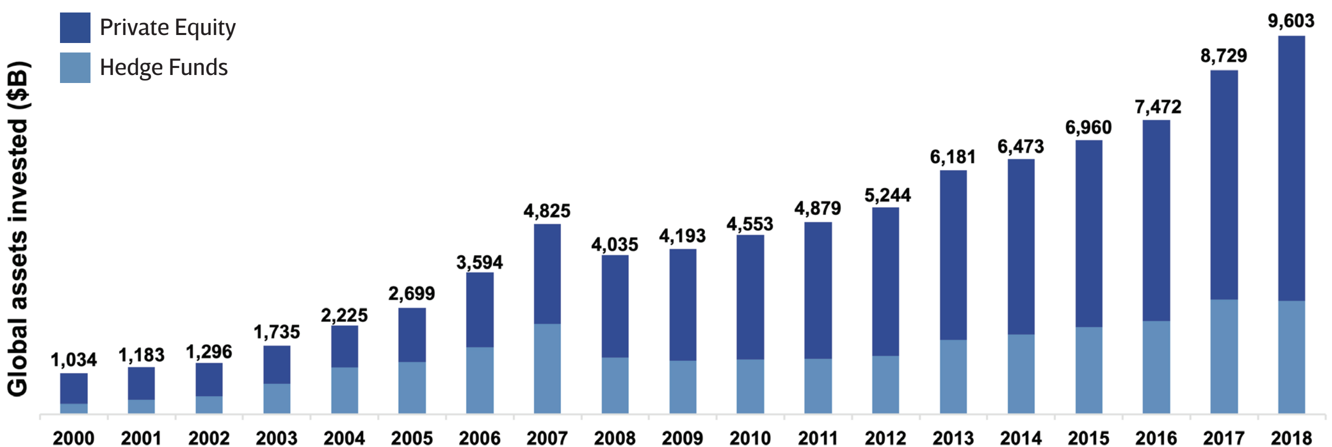
Shifts in the Investment Landscape

Since 2000, there has been substantial capital formation across the world, with some forecasting an increase in financial assets of $300T by 2020, supported by an increase of only $27T in the real economy (i.e. GDP growth). This glut of capital now resides with large institutional investors such as pensions and sovereign wealth funds. This in turn has led to huge inflows into the asset management industry since 2000. This "wall of capital" flooding into the asset management industry has created seismic shifts in two categories of assets that were historically niche industries: "Alternative Investments" and "Passive Investments".

In 2000, "Alternative Investments" were a relatively specialised industry representing c.$1 trillion of assets, or less than 1% of all invested capital. As shown in Figure 1, by the end of 2018 those assets had grown tenfold and stood at $9.6 trillion, or c.4% of invested capital. In other words, these "alternatives" have in effect become mainstream.

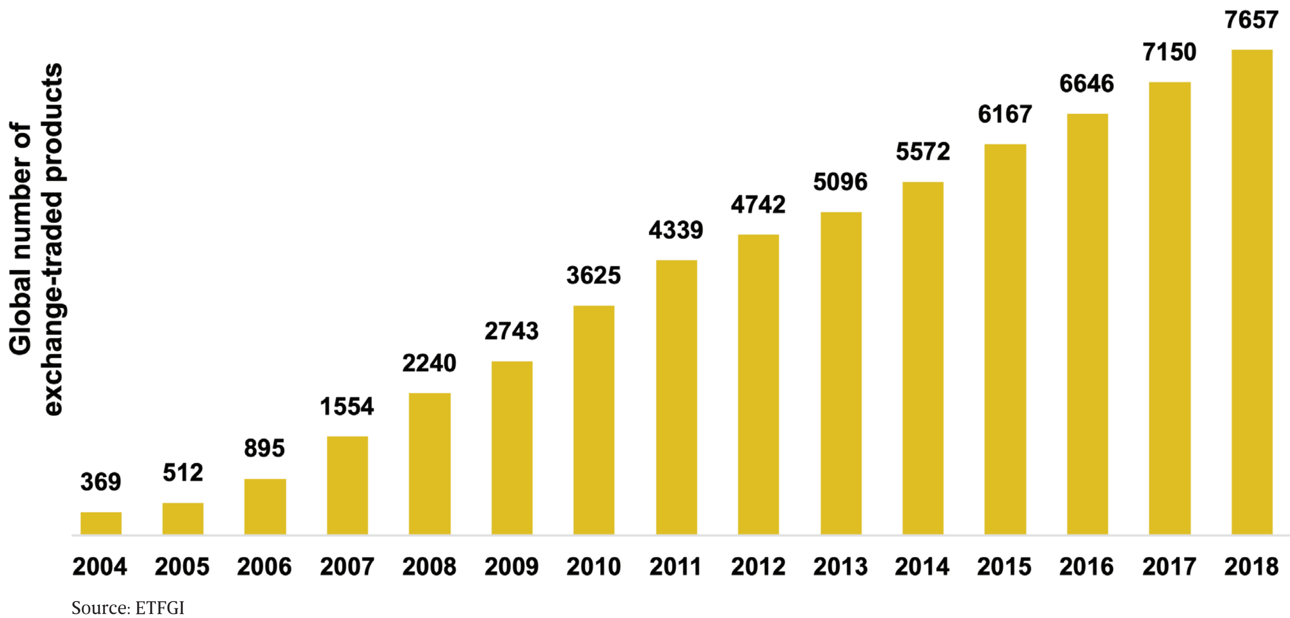
In 2000, passive ETFs were an embryonic investment product only offering exposures to highly liquid mainstream markets. iShares was launched in 2000 and Vanguard launched their first ETF in 2001. As shown in Figure 2, now ETFs and other passive investment products have proliferated to cover the entire gamut of different asset classes, styles, sectors and geographic markets. It is now possible to get access to relatively niche investment themes such as timber, emerging market local currency debt and Chinese internet stocks in a passive format at low cost.

Figure 1: Assets under management in alternative asset classes have increased almost ten-fold since 2000



Sources: Preqin, Barclayhedge

Figure 2: There are now over 7,500 exchange traded investment options available for investors



Source: ETFGI

Historically, alternative asset classes have provided substantial value to a portfolio because they offered a source of return that was relatively uncorrelated to broader liquid markets. However, the explosion of capital in these asset classes led us to question of whether the average alternative manager is anything more than an expensive package of market exposures that can be replicated through passive ETFs or index funds.

To examine this, we took the performance of an average hedge fund represented by a broad hedge fund index, used quantitative techniques to understand its broad market exposures and tried to replicate its returns using a set of low-cost ETFs. The results of this exercise are shown below in Figure 3.

The results show what we suspected: that the average hedge fund is nothing more than a package of market exposures that an investor should be able to buy for low cost. In fact, net of the high fees charged by these managers, the average hedge fund underperformed the passive portfolio by -0.3% per annum since 2006.

Figure 3: The index of hedge fund managers underperformed the market indices by 0.3% per annum since 2006

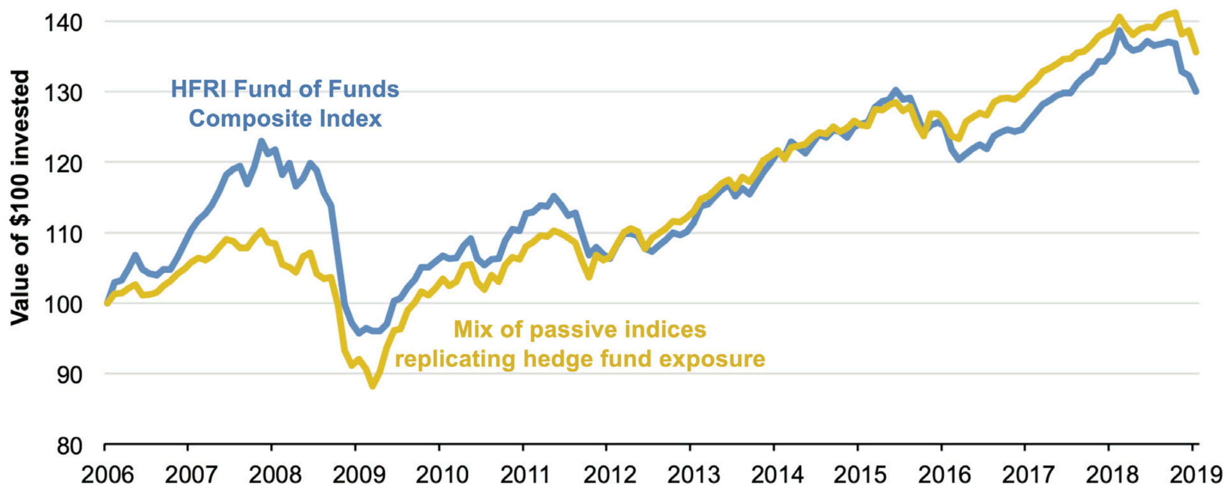
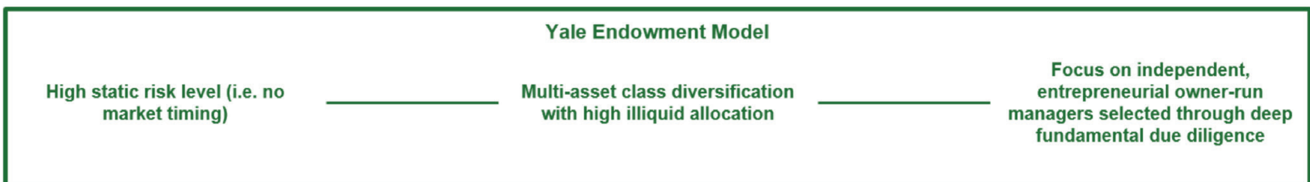


Figure 4: In recent times, private equity has earned a significantly smaller excess return compared to history

Note: Represents difference in rolling 10-year annualised return between Cambridge Associates U.S. Private Equity Index and S&P 500 TR USD.

Private equity has traditionally fared better as an asset class than hedge funds, delivering some outperformance on average compared to public markets. However, in the last decade, the level of outperformance has been challenged. Figure 4 above shows the excess performance of US private equity versus the S&P 500. The average private equity fund has delivered little excess return in recent times, despite the illiquidity and complexity of the asset class.

Against this backdrop, it is evident that the classic Endowment Model approach needs to evolve to remain relevant in today's world. At Partners Capital, we have spent the last fifteen years studying and evolving the model in what is now codified as the Partners Capital Risk-Managed Endowment Approach (PRMEA). What we set out below are the 8 key enhancements which describe this approach. The enhancements cut across a wide swathe of topics covering asset allocation, manager selection and risk management, and are most powerfully deployed within a rigorous investment framework by a capable experienced team of active investors.



The Eight Key Enhancements

Enhancement 1: Build portfolios around and diversify across market exposures not asset classes

Asset classes hide the true underlying risks that investors are paid for. To appreciate this, it is perhaps best to start with an example. In the mid-2000's, Partners Capital invested with a natural resource equity long/short hedge fund manager. In an asset allocation construct, it is not clear how you would categorise such a manager. Should we categorise it as a commodity manager given the exposure to natural resources, or within equities given that it invests in the equity market, or should we call it a hedge fund given that it deploys a long/short strategy? Depending on how one chooses to categorise the manager, the asset allocation and the risk/ return characteristic of the portfolio changes. This makes no sense because nothing about the investment has changed. What is clear is that the manager adds both equity risk and commodity risk to the portfolio given the nature of its underlying exposures.

As we look through to underlying fund holdings to understand what risks each manager brings, we look for each of four discrete categories of "market risk" or beta[1] that investors should care about. These are equity risk (developed and emerging), credit or default risk, inflation risk (property, commodities, inflation-linked bonds) and interest rate or duration risk. Each of these four categories of market risk form part of a well-diversified portfolio. They have positive long-term return commensurate to their risk and perform differently in different market environments or parts of the business cycle. A manager that was previously categorised as a 'hedge fund' could contain any number of these four underlying risk exposures, or indeed none. To fully understand the risk of a portfolio, it is crucial to look through to the underlying risks of each manager within it and aggregate the total portfolio exposure to each of the four different market risks.

Figure 5 below shows a conceptual map of various asset classes and the underlying market risks that may be embedded in investment funds typically found within those asset classes. We have taken the four core market risks and broken them into seven reflecting developed vs emerging market equity risk and the three different types of inflation risk – property, commodities and inflation-linked bonds. As you can see, there is no way to fully understand a portfolio's actual risk exposures from an asset allocation. It is essential to aggregate each manager's exposures bottom up across the portfolio to understand true exposure to the various market risks.

Figure 5: Asset classes do not accurately describe the true risk exposure of a given investment strategy.

	Market Risks						
	Equity Risk		Credit Risk	Inflation Risk			Interest Rate Risk
Asset Classes	DM Equity	EM Equity		Inflation Linked Bonds	Property	Commodity	
Cash	--	--	--	--	--	--	--
Government Bonds	--	--	--	--	--	--	✓✓
Liquid Credit	--	--	✓✓	--	--	--	--
Illiquid Credit	--	--	✓✓	--	--	--	--
Absolute Return	✓✓	✓	✓✓	✓	✓	✓	✓✓
Hedged Equities	✓✓	✓	--	--	--	✓	--
Developed Market Equities	✓✓	--	--	--	--	✓	--
Emerging Market Equities	--	✓✓	--	--	--	--	--
Private Equity	✓✓	✓	--	--	--	✓	--
Inflation Linked Bonds	--	--	--	✓✓	--	--	--
Commodities	--	--	--	--	--	✓✓	--
Core Property	--	--	--	--	✓✓	--	--
Private Equity Real Estate	--	--	--	--	✓✓	--	--

✓✓ Indicates significant overlap

✓ Indicates some overlap

[1] Beta represents the correlation of an asset to its market exposure, adjusted for its relative volatility. It is calculated as the slope of the line when an asset's returns are regressed against those of its market exposure, and therefore describes the asset's returns in relation to the returns from the market. For example, if an asset has a beta of 0.5 to equities, then for a +10% return from the equity market the asset would be expected to return +5% before considering any alpha.

Enhancement 2: Manage risk to beta not volatility, with the best measure of portfolio risk being aggregated market exposure

Volatility (or standard deviation) of returns has long been the conventional measure of overall portfolio risk in academic literature. Through the 2008 financial crisis, many investors sold risk assets at low prices during the worst period of crisis in the name of keeping their portfolio within a maximum volatility budget. Once the market calmed and volatility measures declined, investors added back to risk assets, buying these assets at higher prices. The performance leakage from this approach (selling low and buying high) was significant. A superior risk management tool abandons volatility as a framework to manage portfolio risk and focuses on market exposure or beta.

This approach, when combined with a commitment to static risk level, promotes investor behaviour opposite to the "sell low, buy high" outcomes resulting from volatility-based measures of portfolio risk. In a beta framework, when one asset or asset type outperforms the remainder of a portfolio, it becomes a greater proportion of that portfolio. In order to maintain static risk exposures, an investor needs to sell the asset that has outperformed and buy the asset that has underperformed, promoting accretive "buy low, sell high" behaviour, that we believe can add between 0.2% and 1.0% per annum to returns when systematically and rigorously implemented, depending on the scale of volatility.[2]

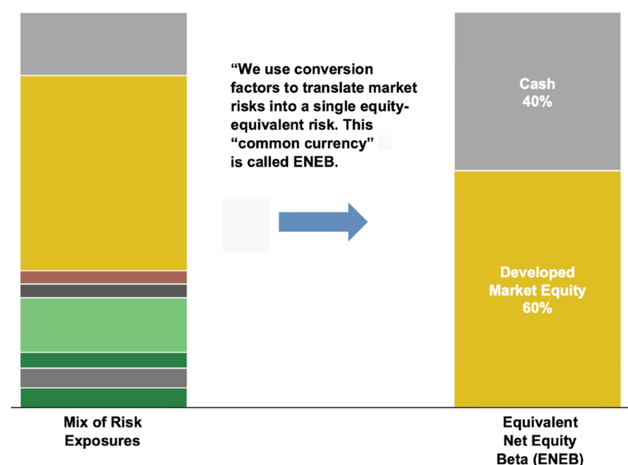
In the section above, we introduced the concept of four key categories of market risk – equity, credit, inflation and interest rates. However, to be useful portfolio management tools, we must aggregate these risks together into a practical model of total portfolio risk. Martin Liebowitz's book *The Endowment Model of Investing*, published in 2010, provides a framework for aggregating market risks. In it, he highlighted the concept that various risk exposures were related to one another. For example, credit behaves like a diluted version of equity as it is higher in the capital structure.

Much like different currencies on a balance sheet are converted to a common currency using an exchange rate, we can aggregate a portfolio's risk exposures into a single measure by converting those risk exposures using an exchange rate to a common risk. In this case, we convert credit, inflation and interest rate risk to equity risk. We refer to this overall equity-like risk measure as Equivalent Net Equity Beta ("ENEB"). This is the portfolio risk budget metric with which all Partners Capital clients will be familiar.

[2] These estimates of performance returns are based upon certain assumptions which should not be construed to be indicative of actual events that will occur. There is no assurance that the performance presented will be achieved.

Figure 6 shows how a conceptual map of how this process works.

Figure 6: We aggregate market exposures into a single measure of risk; ENEB



Enhancement 3: Embrace Tactical Asset Allocation as an additional source of returns

The tenet of the Endowment Model which stipulates static risk with no market timing is one we hold sacred. We never change the overall portfolio risk in anticipation of some change in the markets. We do not time "risk-on" vs. risk-off", but simply rebalance the portfolio to the target ENEB risk measure whenever it deviates from that target by more than 2%. However, we do believe in timing markets when it involves shifting the location of the overall risk across a different mix of market risks, asset classes or sub-asset classes (or "micro-betas" as we call them). We refer to this as Tactical Asset Allocation or TAA.

Tactical asset allocation is an investment strategy which dynamically adjusts a portfolio's exposures to improve returns, all within an overall risk budget constraint. For example, if we expect European equities to outperform US equities, we will overweight them in order to benefit from the higher return, but without changing the overall equity exposure.

Only a small handful of endowments deploy tactical asset allocation, primarily on the basis that they are long-term investors and do not have the decision-making processes in place to execute in a timely manner as triggers are met. Our partnerships with successful macro hedge funds (whose returns are determined by their positioning in relation to macroeconomic events) have transferred the required learning and helped us successfully execute a TAA program over the last decade. The growth in the number and liquidity of derivative instruments has also facilitated timely execution.

The TAA process starts with a clear macro view and focuses on a handful of medium term (c. 3-year time frame) "pair" trades. We think of pair trades because for any overweight, we must underweight something else. Our experience is that careful macro analysis, a focus on asymmetric outcomes, proper trade sizing and trade timing management (with triggers), can deliver between 0.5% and 1.0% per annum of excess performance.[3]

The ENEB framework described above provides an helpful tool to evaluate our Tactical Asset Allocation efforts. Each trade must be optimised to deliver excess returns over the risk budget it consumes. We consider the "cost of capital" for every TAA move as of a hurdle of equity-market-equivalent return. For example, if we expect credit markets to outperform over in the next 12 months, this expected return would be compared to the risk budget it consumes in equity-equivalent terms. As credit has 40% of the equity-equivalent risk of developed market equities, the return "hurdle" it must cross is 40% of the expected return for developed market equities.

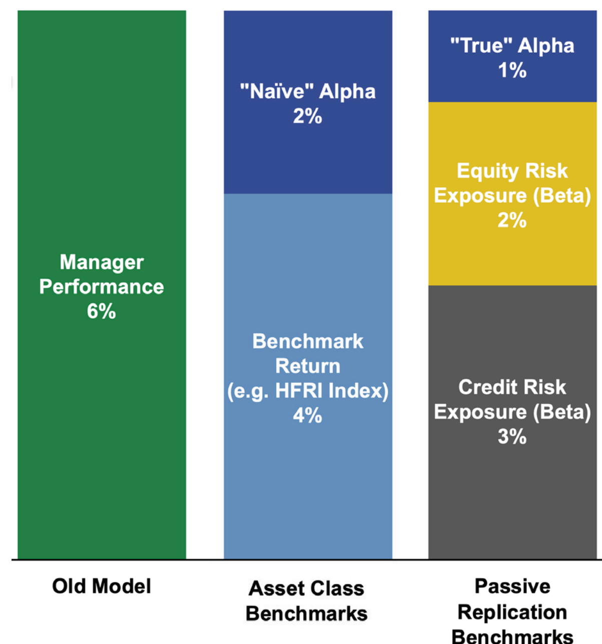
Systematically applying this framework to TAA allows us to select the best ideas and calibrate them appropriately for inclusion within the overall portfolio.

Enhancement 4: Disaggregate manager returns into beta and alpha and be asset class agnostic in maximising alpha

This enhancement flows naturally from the implications of our previous insights and concerns our manager selection process. We are obsessively focused on decomposing manager performance into that which can be cheaply and passively replicated (beta) and that which cannot be explained by systematic factors (alpha). A naïve approach to determining manager alpha is to simply compare manager performance to an industry or peer group benchmark, such as a hedge fund index. Often, this benchmark would not have similar risk exposure to the manager in question so would mis-state the quantum of alpha a manager has achieved relative to the risk they are taking. For example, if a hedge fund returns 6% versus the hedge fund index performance of 4%, the "naïve" alpha is 2%. If you were to simply passively replicate the underlying risk exposures taken by the manager (say the manager has some credit exposure and some equity exposure), then you may find that the "true" alpha achieved by the manager may be less than 2%, or even negative.

As shown in Figure 7, our approach is to measure "true" alpha against a replication of a manager's underlying risk exposure using a basket of passive investment options. This allows us to identify those managers who truly add value over and above their risk.

Figure 7: Compare manager performance to an appropriate risk-equivalent benchmark, not a naïve asset class benchmark.



[3] These estimates of performance returns are based upon certain assumptions which should not be construed to be indicative of actual events that will occur. There is no assurance that the performance presented will be achieved.

A corollary of the idea that a manager's performance can be decomposed into beta and alpha is that investors should be agnostic as to whether their portfolio's beta exposure comes from a passive or active source. The investor's primary consideration should be to construct a portfolio which is populated with their highest-conviction managers where alpha is maximised, and then "top up" the portfolio with passive exposure to reach an overall beta target. The practical application of this technique leads to portfolios constructed of managers concentrated in the highest alpha-generating asset classes, with passive allocations taking the portfolio to its target market exposures.

Enhancement 5: Use an analytical toolkit to optimise alpha quality

Not all manager outperformance is of the same quality (or "not all alphas are created equal"). When analysing manager performance outcomes, it is insufficient to simply analyse performance relative to the appropriate market exposure benchmark. The discipline of manager selection should also seek to determine the quality and repeatability of alpha. We have developed several analytical tools which attempt to decipher between signal and noise, establish a causal link between investment process and performance outcomes, and reduce our chances of backing a merely lucky rather than skilled manager.

Two of the most important analytical techniques we use are listed below:

Return on Invested Capital (ROIC) analysis. This analysis disaggregates manager performance into that which was derived from short-term changes to net exposure levels (i.e. market timing), that which was derived from over/underweights to certain sectors, geographies or style factors (e.g. if a manager has simply been long technology, or long momentum), and that which is derived from pure idiosyncratic security selection. It is our belief that the most sustainable source of alpha is security-selection alpha, and we allocate to managers whose alpha can be attributed to security selection as opposed to market timing calls or structural sector or style tilts that have simply benefitted from a macroeconomic tailwind.

Manager Hit Rate Analysis (MHRA). At a simplistic level, manager alpha outcomes are a function of three factors. 1. Hit Rate: Ratio of winning trades to losing trades. 2. Sizing Asymmetry: The ratio of average size between winning trades and losing trades. 3. Performance Asymmetry (or skew): The ratio between the extent to which winners outperformed and the extent to which losers underperformed. When analysing manager performance, we look for managers whose investment philosophy is consistent with the results of our hit rate analysis. Although it is not possible to provide definitive targets for each of these metrics (the target hit rate for a Venture Capital manager would be very different to that of a Merger Arbitrage manager), we look for evidence that the manager's performance outcomes are consistent with their stated philosophy and our own expectations for their strategy.

We also lend far greater credence to a manager's track record when it demonstrates many successes consistently over a long period of time, as it provides greater confidence that the results are statistically significant as opposed to being predicated on a small number of big bets that were extremely profitable.

Just as we must analyse the quality of a manager's alpha, we must also investigate our own alpha outcomes according to the same analytical framework. We continuously analyse our own portfolio alpha outcomes according to the Manager Hit Rate Analysis framework. Our target alpha hit rate for manager selection is 65%, meaning we have a target for two-thirds of managers in a multi-asset portfolio to generate alpha in any given twelve-month period. Likewise, we target positive asymmetry across sizing, hold period and performance, cognizant that one of the biggest risks to portfolio alpha outcomes is an oversized allocation to a manager with a large left tail.[2] We have developed a manager sizing tool which mitigates this risk by establishing maximum portfolio size based on the severity of that manager's left tail.

[2] If an investment has a large left tail, it means that there is a higher-than-normal probability of a significant negative event. A classic example would be an investment in a single corporate bond, which provides a predictable income stream unless the company defaults on its debt.

Figure 8 shows an example of the MHRA applied to The Partners Capital Master Portfolio, our flagship liquid multi-asset class vehicle that was established in 2010.

Enhancement 6: Align success through fair fee structures

Most active investment managers agree that their success is defined by the level of their excess returns, not total return. Despite this, the fee structure for many funds imbeds a performance fee as a percentage of all investment returns above zero including both market-based returns (beta) and excess returns (alpha). In other words, investors are paying very high fees for something they could obtain for free. The best institutional investors have a bias towards managers with fee structures more properly aligned with investors' objectives, and work with managers to restructure terms to align incentives.

In addition to pushing for equitable changes to managers' fee schedules, the best institutional investors budget for and secure fee-free or reduced-fee co-investment opportunities across a range of asset classes, including private equity, private debt, and public equities. It has become the rule, rather than the exception, that large institutional investors negotiate for access to fee-free direct private equity deal co-investment opportunities. This is tantamount to a fee reduction for larger investors in private equity funds. Co-investment has also extended into the realm of marketable securities investing. A growing number of large institutional investors run in-house public equity co-investment programs where they "shadow" or replicate the core holdings in their core equity manager portfolios who generally invest with long holding periods and where trading alpha is not a major source of outperformance.

Enhancement 7: Be a value-added partner to gain exceptional manager access

Most of the best asset managers are closed to new capital and investors. Capping capacity is often critical to sustaining outperformance. A successful institutional investment approach must embed preferential access as a key tool to allocating capital to the very few needles in the asset manager haystack.

Incumbency is one of the most effective guarantees of additional capacity in the future (i.e., most redemptions are reallocated to existing investors). When it comes to allowing new investors into a fund, different managers have different criteria. Our learning suggests that being long-term, loyal, sophisticated investors are necessary but not sufficient conditions for being granted capacity. Ranking high on the waiting list requires that the new investor is more strategic or offers greater value-added than incumbent investors. This can come in the form of helping closed asset managers source more and better investment opportunities or it can come from helping those firms in other strategically important areas including investment strategy, organisational strategy, governance processes, team compensation and terms. While finding investment opportunities is the most tangible and appealing strategic benefit to a capital-constrained manager, few LPs, if any, are cited as significant sources of investment ideas. Aiding managers in their investment strategy may be even more elusive as a meaningful source of value-added for most LPs, but the few institutional investors whom managers perceive to be deep experts in asset

Figure 8: Example "Manager Hit Rate Analysis" for The Master Portfolio C, 2014-2018

TMP C Manager Alpha Analysis	2014	2015	2016	2017	2018	Last 5 Years	Long-Term Target
Hit Rate (% of managers with positive alpha)	59.5%	72.6%	55.6%	67.5%	45.5%	60.1%	65%
Asymmetry (Ratio of Average Outperformance vs. Underperformance)	2.1x	0.7x	0.6x	0.9x	1.2x	1.0x	>1.0x
Average Alpha of Outperforming Managers	7.8%	5.2%	5.3%	5.8%	6.1%	6.0%	
Average Alpha of Underperforming Managers	-3.8%	-7.1%	-8.2%	-6.4%	-5.0%	-6.1%	
Relative Sizing (Average Size of Outperforming Managers vs. Underperforming Managers)	1.0x	1.2x	0.9x	1.2x	0.8x	1.0x	> 1.0x
Average Size of Managers with Positive Alpha	3.2%	3.5%	2.9%	3.0%	2.2%	2.9%	
Average Size of Managers with Negative Alpha	3.2%	3.0%	3.2%	2.4%	2.8%	2.9%	

management usually top the waiting list and gain preferential access.

Institutional investors see hundreds if not thousands of asset managers. Indeed, Partners Capital has more than 2,000 interactions with asset managers every year. Veteran active manager investors have seen what works and what does not work in each strategy in different investing environments through several cycles. With a business consultant style of work process in due diligence, it is often the case that the asset manager under scrutiny actually values the due diligence process as a source of learning and adopts changes as a result.

Accordingly, our manager due diligence and ongoing monitoring is more akin to a business strategy and operations analysis looking for ways those managers can improve their investment results, in the same way as a private equity investor assesses new investments. Asset managers who already have strong capabilities, but who have a culture for continuously learning and improving, who listen to our views and look for ways to improve performance from any ideas that they take on board, will generate more outperformance. This approach transforms the normal relationship between investor and asset manager to one that is more constructive and symbiotic than the traditional passive ("in or out") relationship. Given our backgrounds in strategy consulting, working as asset managers and decades of research conducted across all asset classes, our team has a unique ability to work actively with our asset managers on these questions. This has translated into preferential access in the zero-sum world of rare asset manager capacity.

Enhancement 8: Use technology to institutionalise knowledge and monitor risk

Much as we consider the interdependence of a manager's investment philosophy and the practical implementation of that philosophy, we recognise that our own investment philosophy can only be effective when implemented through robust systems and processes. We have spent significant internal resources building a proprietary database and portfolio management system to facilitate effective management of our clients' portfolios.

The two pieces of technology requisite for the proper management of an institutional investment portfolio are 1. A centralised database containing all pertinent information on all managers with responsibility for data integrity clearly delegated to members of the research team. 2. A portfolio management system which can combine that information with an individual client's holdings to provide a live, aggregated picture of a portfolio across multiple risk dimensions. At Partners Capital, these two systems are called the Central Asset Manager System (CAMS) and Portfolio Risk Management System (PRisM). These two tools enable our research teams to update data for specific managers or strategies as views or exposures change, and for that data to be seamlessly incorporated into portfolio management decisions taken by the portfolio management team.

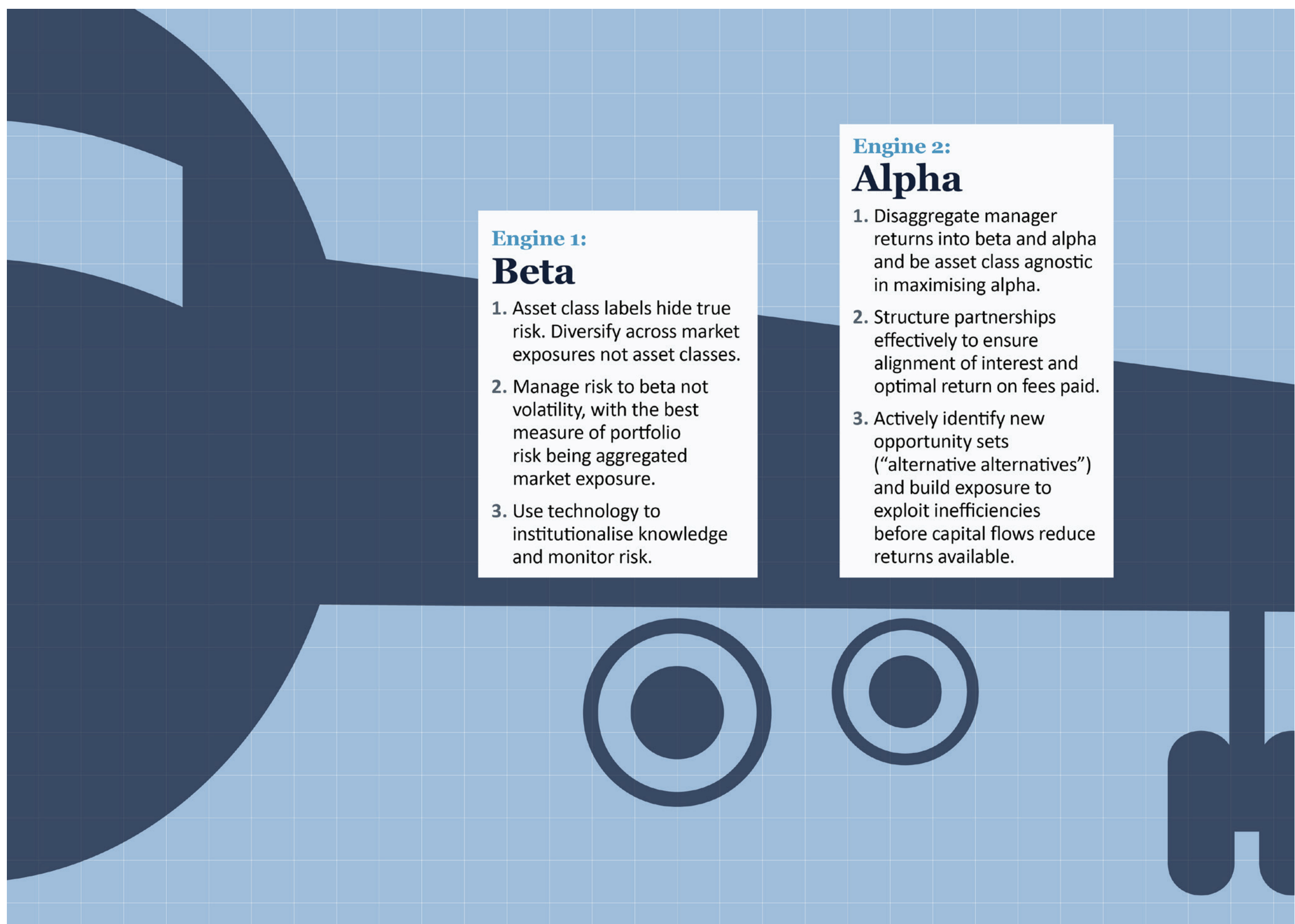
Key Conclusions regarding the Partners Capital Risk-Managed Endowment Approach (PRMEA)

The primary learning over the period since Swensen's book on the Endowment Model was published is that the core principles remain as relevant today as when the book was published. Institutional investors who maintained high static risk have prevailed over those who attempted to time markets. High allocations to alternative asset classes, particularly in illiquids, have beaten traditional asset types over the long term. Independent, entrepreneurial, owner-run alternative asset managers selected through deep fundamental due diligence continue to provide a source of outperformance to those skilled enough to select only the best.

While these core tenets remain true, by incorporating the eight advancements summarised above into our investment model, we arrive at a more modern and robust edition of the Endowment Model, the Partners Capital Risk-Managed Endowment Approach ("PRMEA").

One can summarise the approach by considering investment return as having two drivers; the so-called "twin engines" of performance. The first "engine" represents market exposures or beta. The market exposures determine the 'base speed' of the portfolio and must be carefully calibrated to ensure it can deal with difficult market conditions. The second "engine" represents outperformance or alpha. This engine adds valuable extra speed to the first engine but comes at high cost. Correctly calibrating this

Figure 9: Alpha and Beta are the "twin engines" of portfolio performance, but both must be optimised



engine with a clear focus on return on investment (i.e. return on fees paid) is crucial to optimising this second engine. In an investment world of lower market returns, this second engine becomes a crucial component in achieving a portfolio's target return.

What next for PRMEA?

The Partners Capital Risk-Managed Endowment Approach (PRMEA) is constantly evolving. We have described some of the major evolutions to our investment theory over the past two decades, but fully accept that the model must evolve in order to continue generating outperformance in the increasingly competitive zero-sum-game of institutional investment management. Developments in progress that take us beyond these eight include building portfolios around new uncorrelated asset classes (which we refer to as Alternative Alternatives), measuring a portfolio's impact rather than just its risk and return, and a more comprehensive measure of risk that goes beyond ENEB.

This latter idea has consumed the most of our recent portfolio construction research efforts. We are well down the path of building a quantitative model for measuring idiosyncratic risk in portfolios that is not associated with the four core market risks. Although ENEB provides a useful framework for understanding market risk, this model accounts for non-normal return distributions, fat tail risk, non-market risk and so-called "stress beta". We will discuss this topic in the detail it deserves in a future whitepaper.

One of the primary motivations for all of us at Partners Capital is to debunk the many myths and the general mystery surrounding investing and pass that learning on to our clients and others. To that end we hope this paper has given you a better understanding of what makes for sound and successful long-term investing.

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