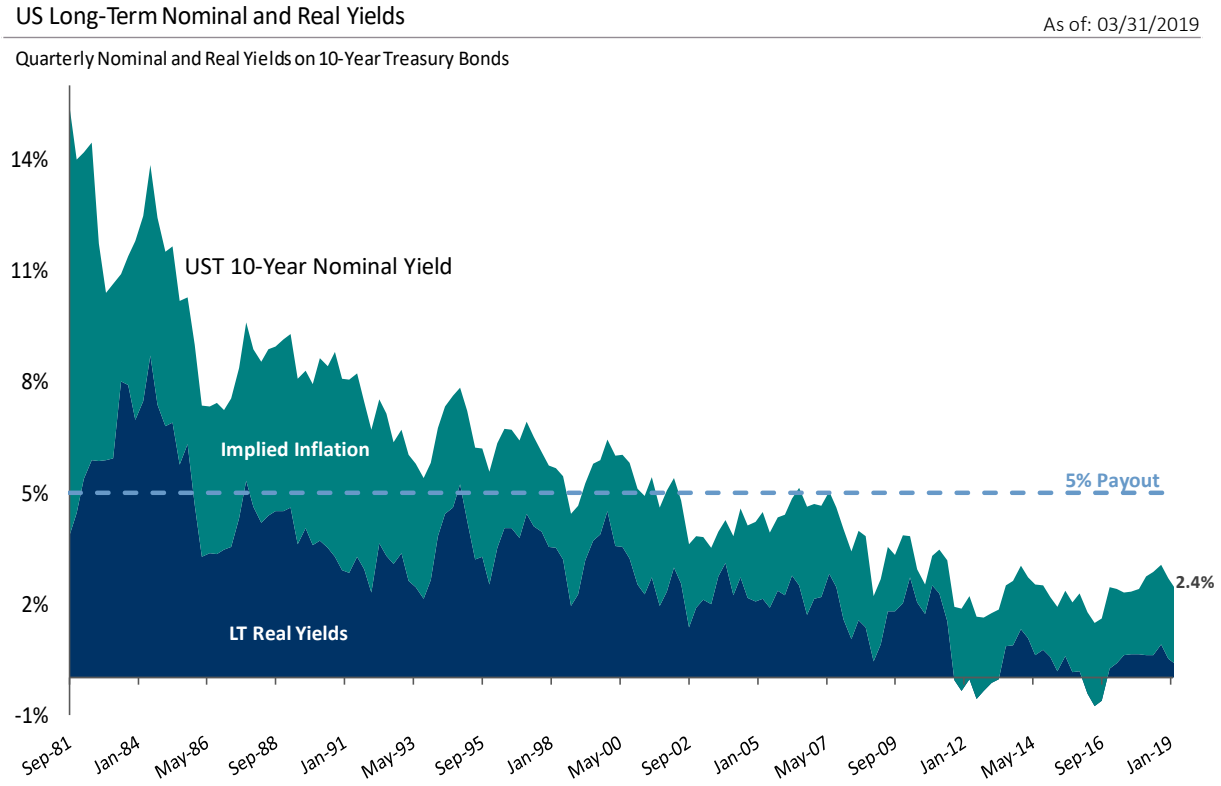
LETTER TO INVESTORS

The Endowment Model Revisited

MAY 2019

The investment objective of an endowment portfolio is simple, in theory: preserve the purchasing power of the investment pool over the long-run by growing at a rate greater than an annual payout and inflation. With average endowment payout rates anchored around 5% and long-term implied inflation of ~2% (for simplicity sake) the minimum absolute return bogey for an endowment portfolio today is roughly 7%. In practice, meeting or exceeding this return hurdle consistently has been and likely will be a challenge for investors to achieve going forward. Why?

For starters, a lot has changed since the Economic Recovery Tax Act of 1981 formally established 5% as the minimum payout threshold for private foundations to maintain their non-taxable status.[1] The "5% payout rule" directed at foundations quickly became an industry standard for non-taxable investment pools broadly and this fixed payout concept has been essentially static ever since. During this time, institutions increasingly relied upon payouts as a financial resource for the causes they support. The 10-year US Treasury Bond peaked at close to 16% in 1981; perhaps a 5% payout appeared quite reasonable to legislators at the time. Since the reform, however, long-term interest rates have been on a steady and material decline while payout rates have remained largely inflexible. A quick look over this historical period shows a path towards meaningfully lower nominal and real long-term interest rates. Since the Global Financial Crisis ("GFC"), in fact, we have experienced a long period of negative to near-zero 10-year real yields due to quantitative easing and slower GDP growth which further exacerbate the challenge facing investors.

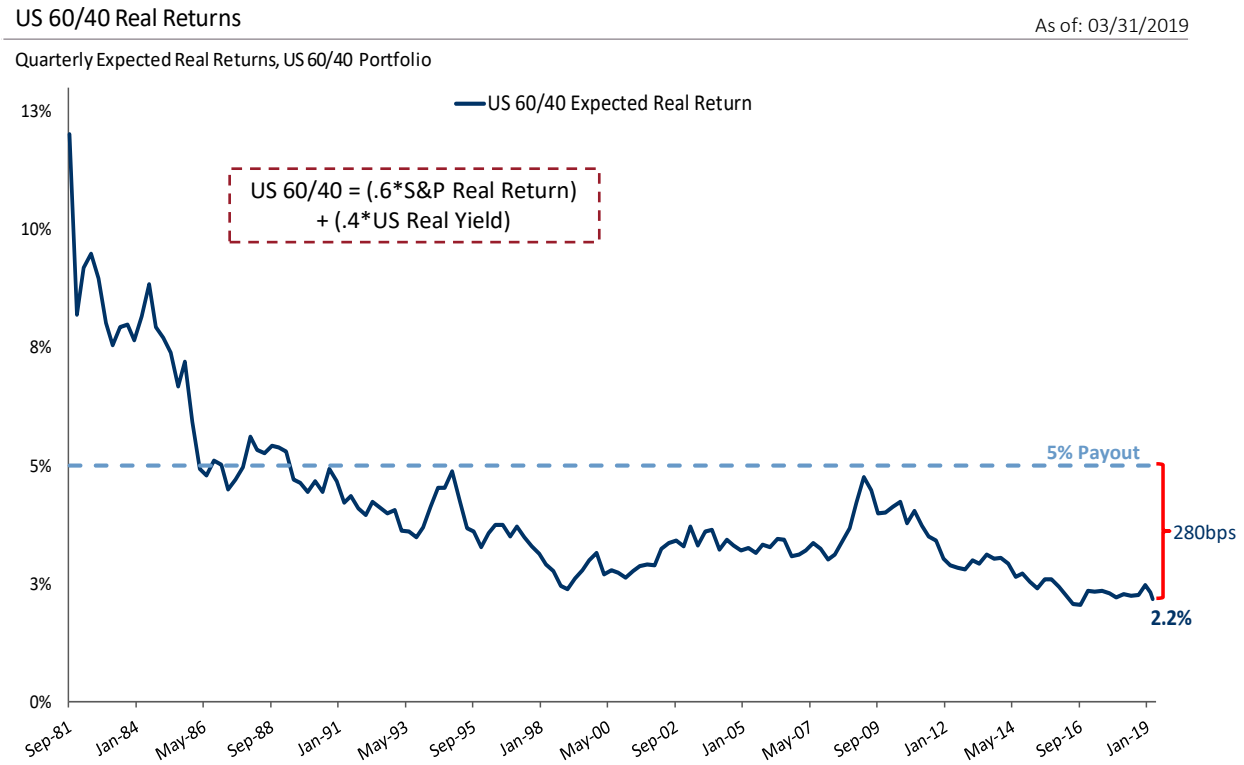


Source: Bloomberg, Federal Reserve. As of 03/31/2019.

If we extend this discussion further out the risk spectrum to US public equities, we see a similar trend for expected returns. Falling interest rates have generally led to rising equity valuations and lower expected earnings yields for US stocks when using the S&P 500 as a market proxy. If we simply take the cyclically adjusted Shiller PE ratio ("CAPE") for the index and invert it to establish an earnings yield, we can see what the market is pricing in over time. Not

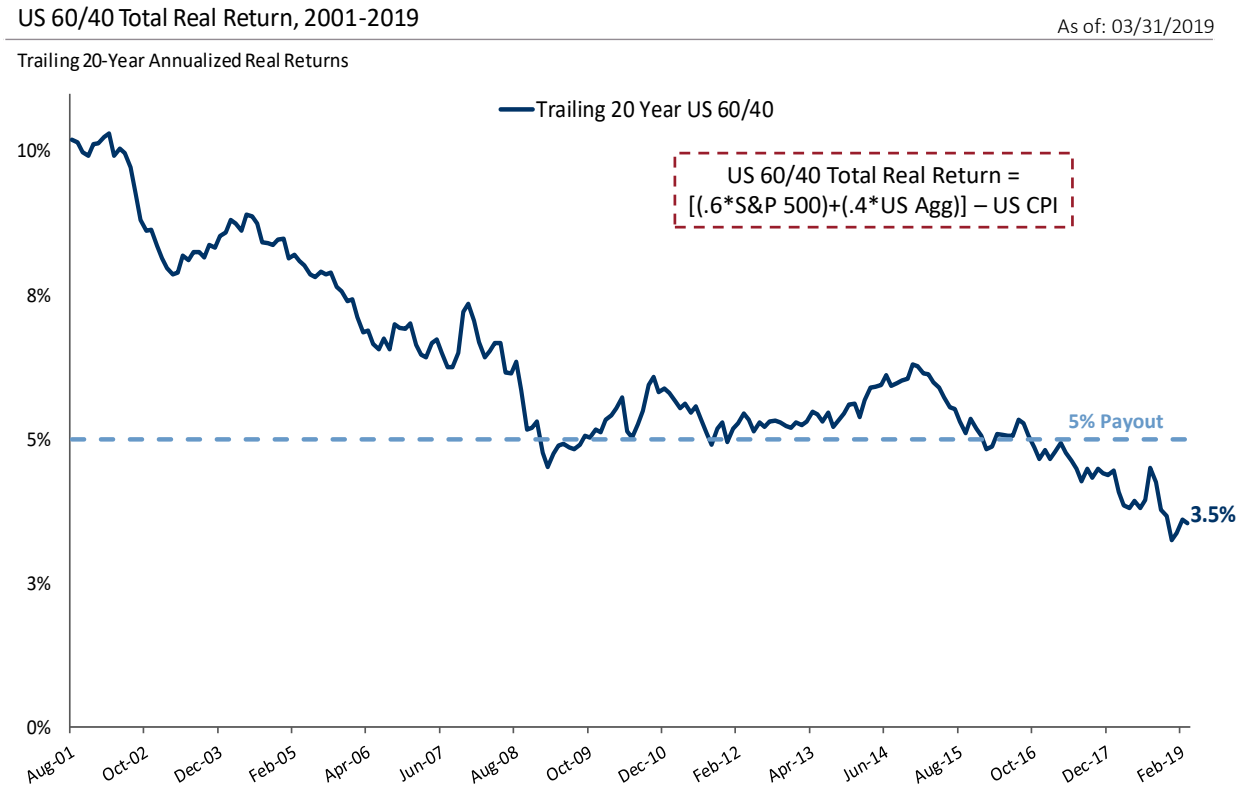
[1] https://www.irs.gov/irm/part7/irm_07-027-016

surprisingly, when using a widely adopted and diversified portfolio which combines stocks and bonds ("US 60/40") as a baseline, a relatively low expected real return prospect of approximately 2.2% is on offer: quite a sobering back drop for investors with the goal of a 5% real return. The risk/reward trade off, at a minimum, appears to be less compelling today for investors than it has been for some time.



Source: Bloomberg, Makena analysis. As of 03/31/2019.

Admittedly, predicting future returns is an incredibly difficult exercise that is wildly imprecise in practice. That said, starting valuations absolutely matter and are one of the most statistically meaningful factors in predicting actual long-term realized real returns on equities and other asset classes. Said differently, these trends are real, worth internalizing, and investors must plan accordingly. Let's take it one step further and look at actual results. If we look at 20-year annualized rolling returns for the US 60/40 since the reforms of 1981, we see a similar story and experience. Realized returns have trended materially lower over time. The US 60/40 portfolio, for example, has failed to maintain intergenerational equity for investors over the last two plus decades. Many investors have been focused on the major bull market run of the last ten years since the GFC and can lose sight of this powerful and prevailing long-term trend.



Source: Bloomberg, Makena analysis. As of 03/31/2019.

The concept of "lower returns for longer" is certainly not fun to talk about yet it is beginning to be widely discussed in the investment community these days for good reason. Investors will need to evolve and adapt to be successful. This is nothing new. The first step appears to be a reset of return expectations. Putting your head in the sand and hoping for good outcomes using yesterday's model is a risky strategy. Further, dialing up risk today with the hope of more return does not seem like a good option either. The math has changed. Our experience has been that investors who choose to aggressively increase the risk of their portfolios to meet fixed return hurdles can be setting themselves up for very disappointing outcomes. For one, starting valuations today do not appear to offer a suitable risk/reward proposition to make that choice compelling enough. Secondly, and most importantly, investors must build a portfolio that can survive the path of stressed market environments and withstand the test of time. An 80/20 stock/bond portfolio risk posture, for example, can and likely will experience substantial drawdowns due to market volatility. In the GFC, for example, an 80/20 portfolio experienced a peak to trough drawdown of 46%.[2] Surviving the path during that type of severe market environment is very difficult to do in the heat of the moment and many will fail to make the right decisions. An investor must maintain the confidence of their Board and/or Investment Committee while keeping emotions in check to avoid capitulating at precisely the wrong time. So, the question remains: what can investors do from here to find long-term success?

Obviously, if faced with the prospect of lower interest rates and potentially lower future returns, Boards could and should consider a reduction in payout, if practical, to put them in a higher probability position to maintain intergenerational equity. At Makena, we are advising our clients to strongly consider that option when and where possible. Absent that (and of course fundraising efforts), endowment and foundation CIOs must critically examine their portfolio risk level and asset allocation to ensure they are sourcing risk appropriately to meet their desired return goals. The most successful endowment investors have been evolving for some time now and the outcomes have been very good. They have done so by innovating and doubling down on their edge: time and execution.

[2] Represents a portfolio with 80% allocation to MSCI ACWI and 20% allocation to Barclays Global Aggregate Bond Index for the period November 2007 to February 2009.

The "endowment model" of investing is generally characterized by a portfolio management style that diversifies exposures across a broad range of asset classes globally. The basic principles of diversification have been widely understood and implemented since the introduction of Modern Portfolio Theory by Harry Markowitz over 60 years ago (hence the 60/40 stock and bond concept) but only over the course of the last few decades has this style of diversification and portfolio management led to an increased emphasis on and exposure to alternative asset classes generally and illiquid private asset classes most notably. Endowment portfolios also offer the option to pivot into new geographies beyond the US. Emerging markets public stocks, for example, may offer investors superior starting valuations, higher earnings growth prospects, and inefficiency where skilled investors can find a repeatable edge. The largest endowments (Yale, Harvard, Princeton, MIT, Stanford) have been pioneers in this regard. Today, the portfolios of these endowments have a low allocation to traditional assets such as domestic stocks and bonds. Yale's 2018 annual report offers some compelling insights on this point:

"Over the past three decades, Yale dramatically reduced the Endowment's dependence on domestic marketable securities by reallocating assets to nontraditional asset classes. In 1988, 65% of the Endowment was targeted to U.S. stocks and bonds. Today, target allocations call for 9.5% in domestic marketable securities and cash, while the diversifying assets of foreign equity, absolute return, real estate, natural resources, leveraged buyouts, and venture capital dominate the Endowment, representing 90.5% of the target portfolio…the heavy allocation to nontraditional asset classes stems from their return potential and diversifying power. Today's actual and target portfolios have significantly higher expected returns than the 1988 portfolio with similar volatility. Alternative assets, by their very nature, tend to be less efficiently priced than traditional marketable securities, providing an opportunity to exploit market inefficiencies through active management. The Endowment's long-time horizon is well suited to exploit illiquid, less efficient markets such as real estate, natural resources, leveraged buyouts, and venture."[3]

Yale has consistently been an innovator and has reaped the benefits. They have evolved as market conditions and opportunity sets have evolved. Today, they remain an outlier in their exposure to less efficient and illiquid private asset classes, for example. Yale proactively seeks to take advantage of its edge which is a long-time horizon and its ability to partner with the best talent in the most inefficient asset classes and strategies. Private asset classes, when executed well, can offer fertile hunting grounds.

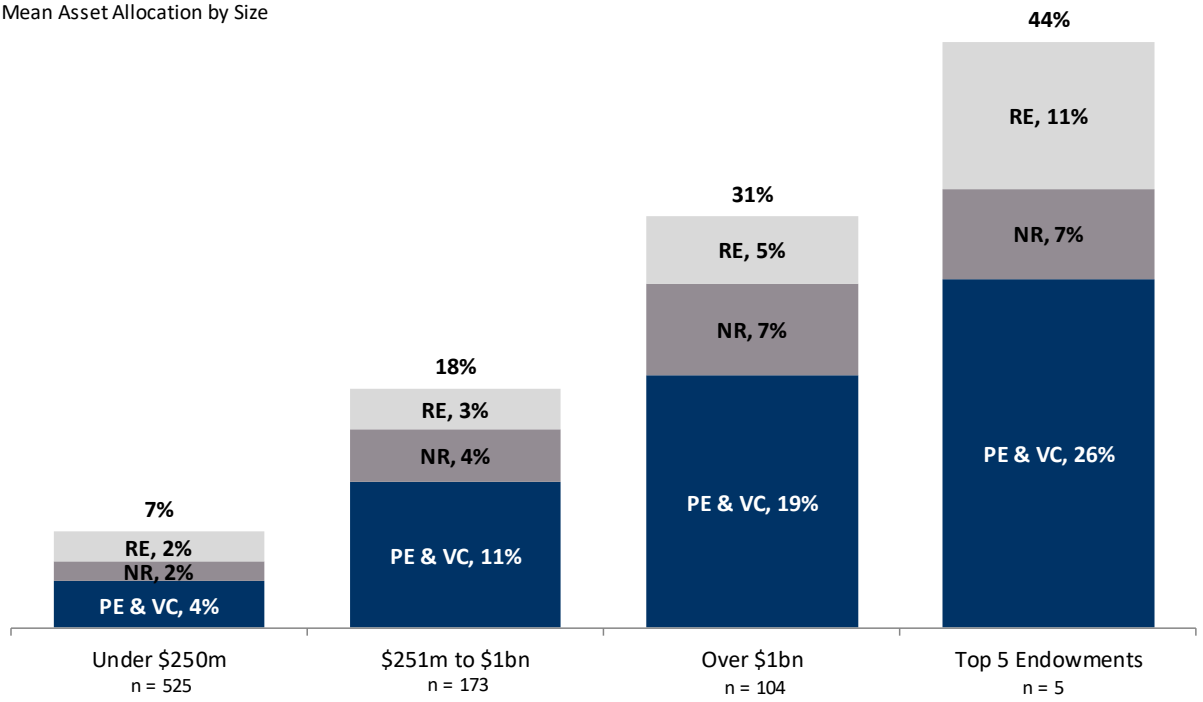
This point is reinforced when looking at the recently released 2018 NACUBO-TIAA study of Endowments which offers some insights into the asset allocation approaches pursued by endowment practitioners across size cohorts. One clear observation is that there is a direct relationship between endowment size and success as well as endowment size and allocation to private asset classes. It appears that larger endowments are attempting to more aggressively take advantage of their long-time horizon by pursuing illiquidity while smaller pools remain more reliant on traditional and liquid asset classes. Endowments with assets >$1B have on average more than 30% of their portfolios in privates (Private Equity, Venture Capital, Real Estate, and Natural Resources) as of 6/30/18 while pools with less than $250MM have on average only 7% exposure to privates. Over long time periods, this has led to the difference between success and failure generally for large vs. small endowments. The two tables below illustrate the difference in exposure to privates by size and performance by size among various endowment cohorts:

[3] https://static1.squarespace.com/static/55db7b87e4b0dca22fba2438/t/5c8b09008165f55d4bec1a36/1552615684090/2018+Yale+Endowment.pdf

Allocation to Private Assets by Size of Endowment

As of: 06/30/2018

Mean Asset Allocation by Size

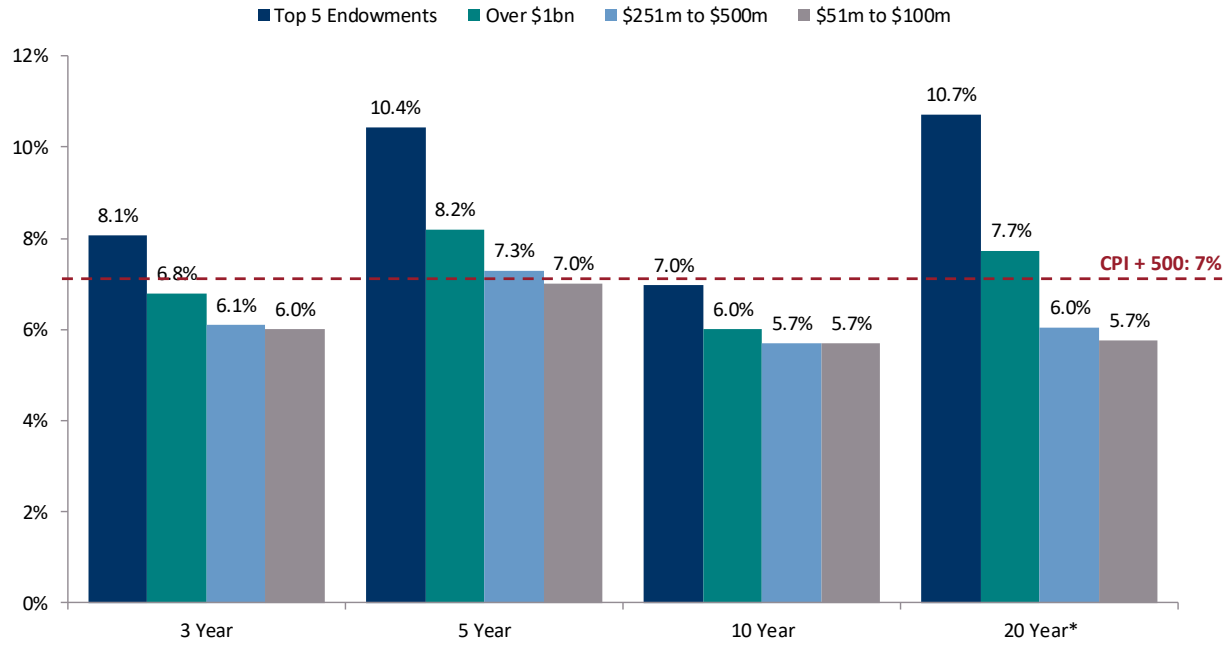


Source: NACUBO, Makena analysis. As of 06/30/2018.
Note: "Under $250m" is the average of four groupings: Under $25m (n = 73), $25m to $50m (n = 103), $51m to $100m (n = 154), and $101m to $250m (n = 195). "$251m to $1bn" is the average of two groupings: $251m to $500m (n = 88) and $501m to $1bn (n = 85).
Top 5 Endowments is the average allocations of Harvard, Yale, Stanford, Princeton, and MIT as of their 2018 annual reports.

Endowment Performance by Size

As of: 06/30/2018

Annualized June Year Returns from 2018 Annual Reports



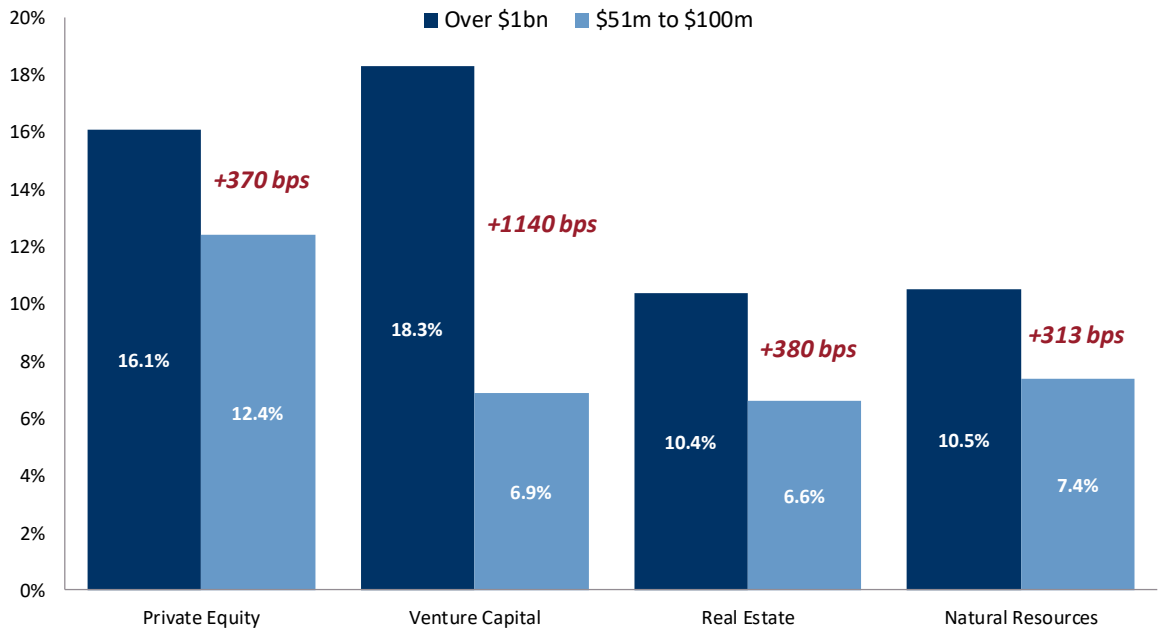
*20 Year NACUBO returns calculated from 10 year ann. returns from 2018 and 2008, using $100m-$500m legacy group as a proxy for $251m-$500m.
Source: NACUBO 2018 Report, NACUBO 2008 Report, Makena analysis. As of 06/30/2018.
Top 5 Endowments is the equal weighted average FY 2018 return of Harvard, Yale, Stanford, Princeton, and MIT.

Larger pools not only have much higher allocations to privates and have generated higher returns over time but also appear to have superior relative results within these asset classes. Illiquid alternative asset classes are less efficient and therefore offer a wider dispersion of outcomes. Put simply, execution and manager selection matter much more in these asset classes. Those who execute well can enjoy capturing more share of the upside available by partnering with skilled managers with appropriate alignment. Within Venture Capital, for example, the difference between a first-quartile manager and a median manager can be 1000 basis points or more for any given vintage.[4] Getting an average outcome in Venture Capital can mean the difference between a highly accretive return profile and a money losing strategy. Allocation matters but superior manager selection is also a prerequisite for persistent success in private asset classes. Private asset manager selection depends heavily on relationships to get access to constrained opportunities and also requires the network and team necessary to perform value-added due diligence. Further, having larger pools of capital tends to mean that an investor can be a more meaningfully sized partner, negotiate better terms, get more transparency and access, and can employ a deeper internal team with a research and network advantage. The results from the 2018 NACUBO study show a clear distinction in results within private asset classes for large vs. small endowments.

FY2018 Performance by Private Asset Class

As of: 06/30/2018

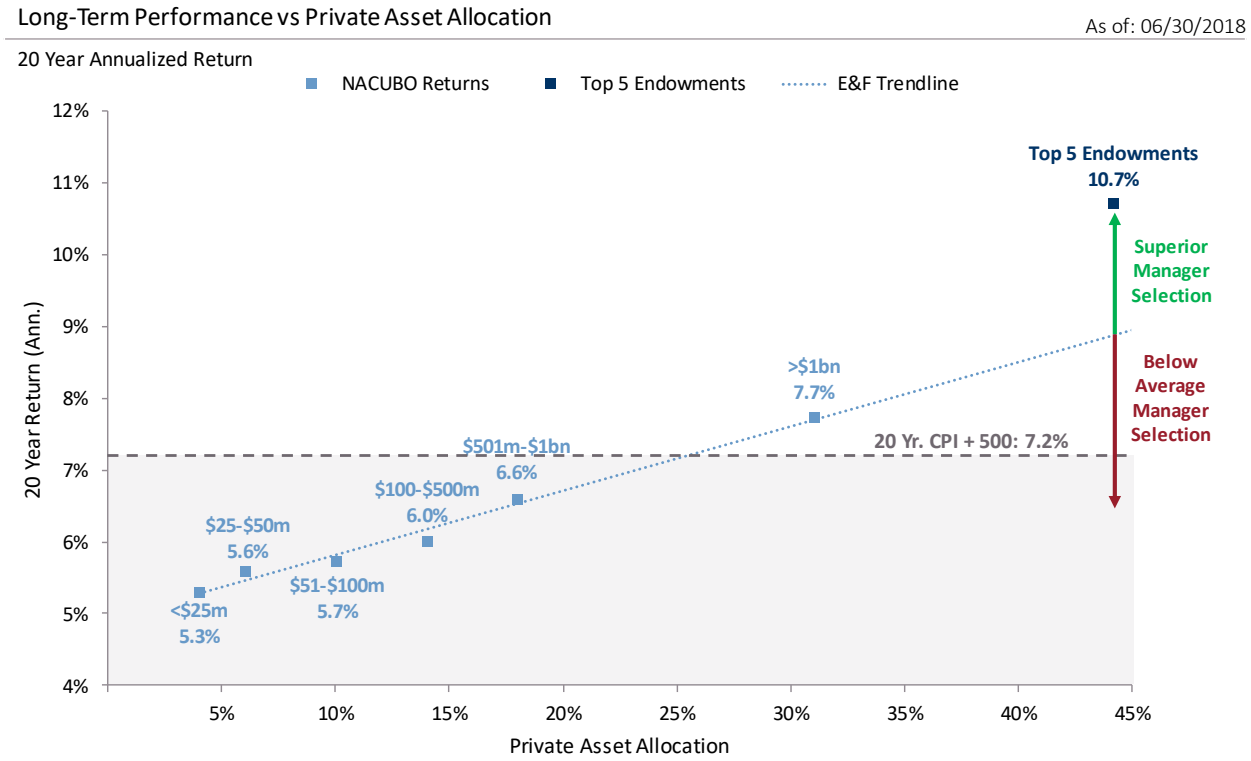
Returns of Large and Small Institutions



Source: NACUBO, Makena analysis. As of 06/30/2018.

Academic studies and the last two decades of endowment results have long pointed towards the persistence of an illiquidity premium. That said, more illiquidity is not a universal good for a portfolio. There are limits and new risks need to be carefully considered. More private asset exposure equates to a much wider range of potential outcomes for a portfolio as you take on more manager selection dispersion, cash flow uncertainty, and unfunded commitment risk. That said, investors that have taken advantage of their long horizon and invested in illiquid private asset classes seem to have been compensated for taking on these incremental risks. The top five endowments have not only had meaningful allocations, they have also had excellent execution and as a result, have captured more share of the upside offered by private asset classes. Interestingly, endowments with less than 25-30% privates on average failed to achieve returns above inflation and a 5% payout.

[4] Burgiss Private IQ: Venture Capital universe returns for vintages 1990-2018.



Note: NACUBO returns calculated using 10 year annualized returns from 2018 and 2008. Allocations as of 06/30/2018.
University peer endowment allocation is as of the 2018 annual report, returns are as of JY 2018.

In conclusion, starting interest rates and valuations today suggest a challenging market environment going forward for investors with the goal of achieving or exceeding 5% real returns. The traditional market and passive portfolio of stocks, bonds, and credit in the US – the 60/40 – has offered investors high returns very efficiently for a long time, but it seems to be running out of steam. Or at least slowing down. The implications of this should be internalized by CIOs and Boards, and changes might need to be considered. Lowering payout expectations increases the odds for investors with certainty. Those are not easy decisions to make given the reliance on endowments as a financial resource but offer an option to be thoughtfully weighed. Absent that, the biggest advantage an endowment investor has is a long-time horizon. That is an edge that can be appropriately exploited. Private asset classes offer endowment investors the ability to truly take advantage of this edge. If you pair that with good manager selection and execution, you have a powerful approach which puts you in a very strong position to achieve your goals. The elite endowments have moved in this direction for good reason and have enjoyed strong results. This formula works well but is not without risk, and there are limitations. However, we feel strongly that a material dose of private assets in an endowment portfolio with best in class managers is a compelling strategy to pursue.

Sincerely,

The Partners of Makena Capital Management

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