



2013

The Endowment Model 2.0:
A Success Story That Endures

A Practitioner's Perspective

Mary Cove | David Thurston



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- ◆ In this paper, we look at the evolution of the endowment model, review the experience of early adopters of the model, and examine how these institutions and other practitioners are executing in the current environment. We believe that institutions could benefit from refocusing on the core principles embodied by this investment approach, especially as they consider how they will generate much-needed excess returns in the decade ahead.
- ◆ The endowment model is anchored to four core principles: equity bias; diversification; use of less-liquid or complex assets; and value-based investing. Fundamentally, execution of the strategy relies on embracing market inefficiencies and profiting through time arbitrage. Successful practitioners use this lengthened time horizon to their advantage, eschewing the shorter-term orientation of many other players in the market.
- ◆ The origins of the endowment model can be traced to the 1970s, when a number of endowments began to move to a higher equity portfolio. Throughout the late 1970s and into the 1980s, this style of investing faced headwinds as many early diversification efforts trailed an ebullient stock market. Moving into the 1990s, the early adopter endowments added to what were then unconventional equity and equity-like strategies and to a range of illiquid investment strategies. These investments in attractively valued asset classes set up a run of strong relative performance into the first decade of the millennium.
- ◆ The early adopters, and other institutional investors more broadly, were not immune to the market turmoil in 2008, and these endowments posted negative absolute returns for the fiscal year ended June 30, 2009. However, despite 2008, the performance gap between these endowments and a simple 70% S&P 500/30% bonds benchmark tallied up to more than 8 percentage points *per year* for the 2000–09 decade.
- ◆ Many commentators have pointed to the 2008 financial crisis as evidence that the endowment model is broken. Yet none of these observations diminish the fact that a well-constructed “endowment model” portfolio has provided exceptional results over the long run.
- ◆ Looking at the long-term performance of the early adopter group, value added has been fairly stable over time. There is cyclical to shorter-term performance and these diversified portfolios have underperformed simpler portfolios in recent years. But what is ahead?
- ◆ Allocations to hedge funds have remained fairly constant for this group of early adopters, while commitments to core common stock and bond strategies have been significantly reduced. In addition, there have been changes in the way these investments are used in portfolios. Established hedge fund firms have largely become more institutional, and many are managing far more assets than ever before. The largest firms have some opportunities due to their scale, but this also leaves room for niche players to capitalize on smaller, less scalable investment themes. An increased focus on liquidity enables investors to be more active in managing their exposure to individual strategies. Managers have responded to investor demands with greater transparency and better alignment of liquidity terms. This shift has fed investors’ willingness to take

on newer managers or larger positions with more established firms.

- ◆ Coming out of 2008, many investors found themselves over-allocated to the private investments space as the “denominator effect” played out. Credit and other undervalued assets performed well coming out of the crisis, allowing value buyers to profit. In the private investment space, concerns about illiquidity drove some investors out of the markets. Early adopter investors continued to build equity-biased portfolios focused on undervalued and/or illiquid assets. The surprising reality is that illiquid assets have grown significantly post-crisis as a percentage of these portfolios. Most of this shift has been funded through reductions in liquid assets. Moreover, this shift in favor of private investments is a major point of difference between these large endowments and many other institutional investors.
- ◆ Why have we seen this shift? Investing after a period of underperformance has worked well in the past, as even less-liquid markets have cyclicalities. We also believe that evolving market conditions enable these portfolios to be constructed in a way that is radically different from the ubiquitous advice of a decade (or two!) ago. There is considerably more choice in the private investment space than in the past, with more managers and more focused opportunities to exploit.
- ◆ The expansion in the number of firms and types of strategies within private investments provides an expanded opportunity set for investors. The growth of the market beyond diversified funds and into more focused strategies allows investors to build private investment programs with an eye toward current opportunity set and valuations. This approach is markedly different from more process-driven philosophies of portfolio construction and aligns well with the endowment model’s focus on benefiting from illiquidity and emphasizing valuation opportunities.
- ◆ We believe that while the endowment model relies on just a few simple principles, effective execution today requires building complex portfolios. Successful endowments have built significant infrastructure to identify and analyze new teams and investment opportunities. They have the ability to manage a portfolio with many small, complex and often illiquid positions, as well as a governance structure that enables them to exploit out-of-favor opportunities and take a long-term view. Institutions that choose to adopt this model of management should carefully consider whether they have the resources and institutional patience to take advantage of the current opportunity set.
- ◆ As fiduciaries consider how or whether they will be able to generate real returns in excess of their spending needs in the decade ahead, they should re-evaluate the process they use and the resources they bring to bear on the problem. As researchers, advisers, and portfolio managers, we see overvaluation in traditional stocks and bonds. Conversely, we see opportunities for well-positioned endowments to capitalize on an expanded opportunity set in hedge fund and private equity strategies. The strategy sounds simple: “maintain an equity focused portfolio,” “seek diversification,” “take advantage of illiquidity,” and “buy out of favor, inexpensive assets”. But successful execution requires a truly long-term time horizon and willingness to embrace complexity, which can be harder than it seems. ■

The endowment model of investing—scarcely in the consciousness of the investing public two decades ago, and more recently the subject of intense focus and imitation—is far from broken. Early adopters of the model continue to push forward, reaping impressive gains along the way, while market pundits, focused on trends and shorter-term performance, keep declaring the strategy dead, broken by the weight of “diworsification,” egregious manager fees, and a world where correlations have permanently moved to one.

In this paper we look back at the evolution of the endowment model, review the experience of some early adopters of the strategy, and examine how practitioners are executing the model in the current environment.¹ Investors today have a world of choices that did not exist when this model was in its infancy, and portfolios have evolved accordingly. While the foundational principles underlying the endowment model remain simple, execution in the current environment is grounded in embracing complexity.

In this practitioner-focused paper, we do not dwell on the theoretical arguments for or against the endowment model strategy. Instead, we look at the actual experience of early adopters² of the model and how these institu-

tions and other practitioners are executing in the current environment. As we look forward, we believe that institutions could benefit from refocusing on the core principles embodied by this investment approach. We believe that revisiting this strategy is critical as institutions consider how they will generate much-needed excess returns in the decade ahead.

Endowment Model of Investing

The endowment model is anchored to four core principles: equity bias, diversification, use of less liquid or complex assets, and value-based investing. Fundamentally, execution of the strategy relies on time arbitrage—endowments have a perpetual time horizon and can afford, in many respects, to take a longer-term view. This time horizon difference plays out in the ability of endowments to weather the volatility associated with high-equity portfolios, the investment horizon required for illiquid investments, and the sometimes frustratingly long time it takes for valuation gaps to revert to fair value. Successful practitioners use this lengthened time horizon to their advantage, eschewing the shorter-term orientation of many other players in the market.³ Some brand this

Other contributors to this report include Elena Laird, Jeremy Parsels, Rob Rodgers, Brittany Roy, and Meba Verghese.

¹ Readers familiar with the history of endowment model investing may wish to skip ahead to “Finding a Way Forward—Execution of the Endowment Model Post-Crisis” on page 12.

² To create our universe of early adopters, we looked at all the endowments for which we had asset allocation and performance data for at least 15 years. We then took the top ten institutions that had the highest exposure to alternative assets at June 30, 1995, while also holding an allocation to bonds of less than 20%. Using these criteria, our universe of early adopters includes Brown University, Claremont McKenna College, Duke

University, Harvard University, University of Notre Dame, Princeton University, Spelman College, Stanford University, University of Virginia, and Yale University.

³ This is not to say that endowment portfolios are immune to time considerations. As we noted in our 2002 report *How Will You Earn What You Spend?*, “Perhaps one should be patient, stoic, and skeptical, acknowledging merely that fat decades may be followed by thin, and that since neither is readily predictable one should stick with simple long-term policy allocations and trim spending as necessary. In the very long term (50+ years) this approach may work, but in practice few investors or investment committees possess either Job’s patience in the face of adversity or the stomach to cut spending, and will inevitably revisit their asset allocation over a more limited time horizon as the shape of the investment world changes.”

investment approach the “Yale model” because David Swensen, Chief Investment Officer of Yale University, provided a compelling explanation of the strategy in his book *Pioneering Portfolio Management: An Unconventional Approach to Institutional Investment*. Swensen argues:

- ◆ equity-biased portfolios reward investors that are willing to accept the higher risk of ownership versus debt;
- ◆ diversification provides investors with a “free lunch” in the form of higher returns at a given risk level than a less well-diversified portfolio;
- ◆ embracing less liquid assets often allows investors to establish ownership positions at meaningful discounts to fair value; and
- ◆ value-based investing provides contrarian investors with increased likelihood of identifying profitable investments that are out of favor.

However it is named, this general approach to investing became better understood and accepted over the last decade, leading to widespread attempts by investors to adopt the strategy as quickly and simply as possible.

What Can We Learn From the Evolution of the Endowment Model?

The origins of the endowment model begin in the 1970s, when a number of endowments began to move to a higher equity portfolio. From the starting point of a traditional, domestic balanced, stocks/bonds/cash portfolio, some endowments began to increase their exposure to equities, funding the increase by reducing cash. Results in the first decade were unspectacular, with endowments barely keeping up with the markets. Adding insult to injury, the CPI grew 7.4% on an annualized calendar-year basis for the period, seriously eroding the real value of endowments after spending.

These early adopters pushed on in the 1980s, moving away from traditional domestic stock/bond strategies after poor returns in the 1970s (Figure 1). Cash levels remained high and most early diversification efforts, including investments in venture capital, failed, trailing an ebullient stock market. Only investments in international equities proved fruitful. Despite all these efforts, between 1980 and 1989, the endowment cohort only managed 20 basis points (bps) of outperformance beyond a 70/30 domestic stock/bond benchmark.

Moving into the 1990s, the early adopter endowments again stepped up, adding emerging markets equities, increasing allocations to hedge fund strategies, and adding to a range of illiquid strategies, including buyouts, venture capital, distressed-for-control, and energy. The technology/media/telecommunications (TMT) market melt up of the late 1990s saw significant return dispersion between growth and value strategies within equities, and between TMT and everything else. While TMT returns were the dominant force in the

long equity markets, early adopter endowments reaped epic gains as a hot initial public offering (IPO) market provided exit opportunities for venture capital-backed darlings, including Amazon, Netscape, and Yahoo.

At the end of the 1990s and into the 2000s, markets posted poor returns for three years running, with TMT stocks leading the way down. The good news for endowment model practitioners was the many cheap assets to choose from across liquid and illiquid investment strategies (Figure 2 shows Cambridge Associates' valuation calls in February 2000). Further, those with venture capital investments were graced with significant exits in an environment of underpriced assets. Endowments responded adding to value stocks (which outperformed the S&P 500 by 6.7% a year in the 2000–05 period), hedge funds, and emerging markets stocks within the more liquid

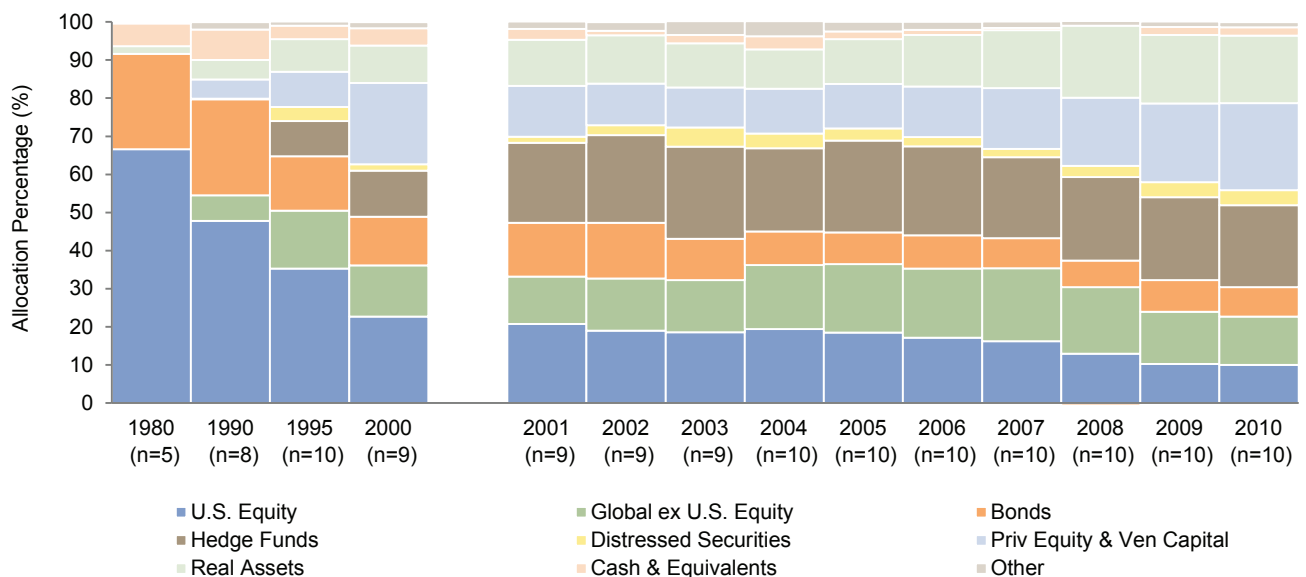
investment space and continuing to push into private investments of all types. This move toward cheaper asset classes set up a strong run of outperformance by portfolios following the endowment model strategy.

Undoubtedly, many institutions were disappointed by calendar year 2008 relative performance, and some learned new lessons about risk and liquidity management. However, despite 2008, the performance gap between these endowments and a simple 70% S&P 500/30% bond benchmark tallied up to more than 8 percentage points *per year* for the 2000–09 decade (Figure 3).

While the endowment model philosophy has been applied to portfolio management for several decades, implementation of that philosophy has shifted over time. Early practitioners took steps to increase equity allocations and were confronted with limited

Figure 1. "Early Adopters": Average Asset Allocation Over Time

Fiscal Years Ended June 30



Source: Cambridge Associates LLC.

Figure 2. Cambridge Associates' Valuation Calls in February 2000

Dangerous Bubble	Very Overvalued	Overvalued	Fairly Valued	Undervalued	Very Undervalued
Global Tech Equities U.S. VC (later-stage) U.S. VC (early-stage)	S&P 500 U.S. Large-Cap Equities U.S. Defensive Growth Equities U.S. Aggressive Growth Equities	U.S. Small-Cap Equities U.S. Mid-Cap Equities U.K. Equities European Equities U.K. Bonds Japanese Bonds U.S. Buyout Funds U.K./European PE Japanese Equities	Real Estate (retail) U.S. Value Equities Global ex U.S. Small-Cap Equities U.S. Long Bonds U.S. Intermediate Bonds High-Yield Bonds European Bonds EM Debt EM Equities (Asia) EM Equities (Europe) EM Equities (Lat Am) U.S. Timberland U.K./European VC Real Estate (apartments) Real Estate (industrial) Real Estate (office) Gold Event Arbitrage Distressed Securities Oil & Gas - Priv Debt	Real Estate (Public REITs) Oil & Gas - Priv Equity U.S. Infl-Linked Bonds Goldman Sachs Commodities Index Oil & Gas - Drilling Tax-Exempt Bonds	Oil & Gas Properties

Figure 3. Ten-Year AACRs: Early Adopters vs Broad Endowments and Benchmarks

Periods Ended June 30

	Early Adopters Median	CA Endowment Median	S&P 500	CPI-U	70% S&P/ 30% BC Govt/Credit	70% MSCI World/ 30% J.P. Morgan Global Govt Bond
1970–79	5.3 (n=6)	4.4 (n=18)	4.5	7.0	--	--
1980–89	15.7 (n=8)	14.7 (n=65)	16.9	5.6	15.5	--
1990–99	14.5 (n=9)	13.1 (n=161)	18.8	3.0	15.7	10.6
2000–09	9.2 (n=10)	4.2 (n=321)	-2.2	2.6	0.5	1.8
Full Period	11.0 (n=6)	9.8 (n=17)	9.1	4.5	--	--
1990–2009	11.7 (n=9)	8.9 (n=147)	7.8	2.8	7.8	6.1

Sources: Barclays, Cambridge Associates LLC, J.P. Morgan Securities, Inc., MSCI Inc., and Standard & Poor's. MSCI data provided "as is" without any express or implied warranties.

options for investing the assets outside of large-cap domestic equity markets. Institutions have benefitted from contrarian plays into out-of-favor asset classes, but those types of valuation-based opportunities are not necessarily a constant. Despite these challenges, institutions that have followed this approach have had enviable performance over time.

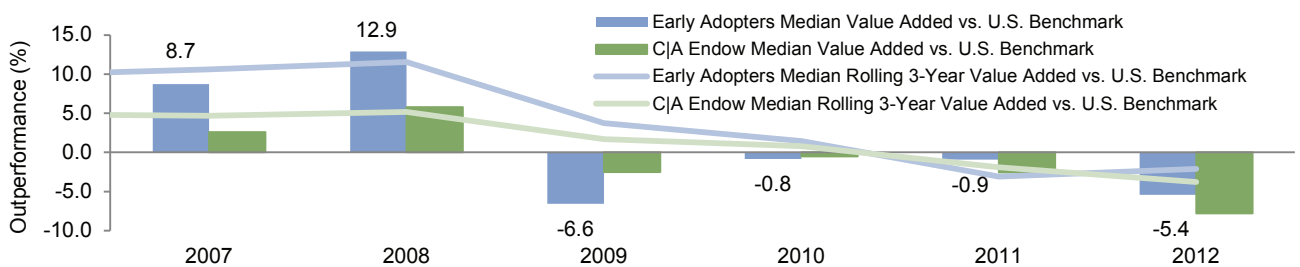
2008: Wheels Come Off the Bus?

Many commentators have pointed to the 2008 financial crisis as evidence that the endowment model is broken. According to this narrative, the crisis revealed that markets, reliance on endowment payouts by institutions, and the institutional management industry have evolved in ways that impair or eliminate the efficacy of the endowment model.

Supporters of this view note that for the fiscal year ending June 30, 2009, the early adopters significantly underperformed a 70% equity/30% bond benchmark. This poor performance was enough to erode these endowments' level of outperformance on a multi-year basis as well. The trend continued into the rebound, with simple balanced portfolios outperforming the diversified approach through fiscal year 2012 (Figure 4). On a three-year rolling basis, diversified endowments continue to lag the 70/30 portfolio.

Figure 4. Endowment Performance in Excess of a 70/30 Benchmark: Recent Experience

Fiscal Years Ended June 30



Annualized Performance as of June 30, 2012 (%)

	<u>3 Year</u>	<u>5 Year</u>
Early Adopters Median	11.7	2.1
Early Adopters Median Value Added vs. U.S. Benchmark	-2.3	-0.5
CJA Endowment Median	10.1	1.2
CJA Endowment Median Value Added vs. U.S. Benchmark	-4.0	-1.4
70% S&P 500 / 30% Barclays Govt/Credit	14.0	2.6
70% MSCI World / 30% J.P. Morgan Global Govt Bond	9.6	0.7

Sources: Barclays, Cambridge Associates LLC, J.P. Morgan Securities, Inc., MSCI Inc., and Standard & Poor's. MSCI data provided "as is" without any express or implied warranties.

Notes: Early adopters median and CJA endowment median are net of fees.

The first criticism of the endowment model is that historically high correlations—particularly in times of market stress or euphoria—limit opportunities for diversification. In his book *Skating Where the Puck Was: The Correlation Game in a Flat World*, William Bernstein mourns the short lifespan of uncorrelated investment opportunities with which to diversify portfolios. According to Lyn Hutton, then Chief Investment Officer of the Commonfund, “the principle of the endowment model that was called into question was diversification because almost everything was down.”⁴ In short, historically high correlations and spikes in correlations in times of market stress limit the benefits of diversification and introduce substantial risk into high-equity portfolios.

It is true that correlations rise during crisis periods, limiting the short-term effectiveness of diversifying risk assets. Yet diversification—employing investments that have fundamentally different drivers of return—still has a critical role to play in portfolio construction. A diversified approach helps dampen volatility and has improved the performance of institutional portfolios over the long haul.⁵ While most risk assets were down in 2008,⁶ the magnitude of the declines was markedly different across investment types and even among managers. Diversification of risk assets is not intended to play a heroic role during a full-blown crisis. Instead, mindful of the opportunity cost of such investments, investors rely on tailored

⁴ Quoted in JingLin Huang, “Analysis: Challenges to the Endowment Model,” *Infovest21*, August 12, 2010.

⁵ Please see our August 2013 Market Commentary *Why Did I Diversify?*

⁶ In fact, in 2008, many short-biased strategies that should have reaped significant gains were hurt by governments’ decisions to ban or severely limit short selling. As a result of this exogenous action, some investors saw substantial declines in value in these “negatively correlated” funds.

allocations to specific assets to provide some ballast to portfolios in periods of macroeconomic stress. The other side of diversification is increased opportunity set. Institutions with the skillset to invest in new managers, out-of-favor sectors, and new geographies are well positioned going forward.

The second criticism of the model is that endowments “mispriced” illiquidity and realize that they must add back more liquid assets such as traditional equities, fixed income, or even index funds to protect portfolios in times of stress.

Plenty of endowments found themselves in a liquidity crunch during 2008. In some cases, the culprit was a burgeoning private investments program, fueled by new commitments based on assumptions of steady portfolio growth. In others, endowments found themselves locked up in investments that were expected to be liquid, including those “safe” index funds.⁷ Faced with the experience of 2008, many investors redefined what it means

⁷ During late 2008, liquidity across most markets dried up, furthering the strain on investors and active managers. Many hedge funds, facing a cascade of redemptions, took extraordinary action, including implementing never before used gates to slow capital outflows and avoid compounding losses. But hedge funds were not the only funds to face significant liquidity problems. The U.S. government stepped in to backstop money market mutual funds—previously considered to be a highly liquid investment in a secure investment structure—to prevent a run on the funds. According to a 2012 statement issued by SEC Commissioner Mary Schapiro, prime money funds experienced more than \$300 billion in redemptions the week of September 15, 2008. At the same time, many investors in institutional commingled Treasury index funds found themselves without liquidity as the securities-lending programs for these pools ran into severe liquidity constraints in their underlying (and not-so-high-grade) collateral pools. In other words, even investments in what should have been highly liquid, high-quality assets may have been stressed during 2008.

to have appropriate liquidity at the institutional level. However, this does not necessarily mean that endowments needed to step back from less liquid investments. In fact, with successful endowments providing their institutions with returns well in excess of public, long-only assets, institutions could not afford the opportunity cost of “excess liquidity.” We have instead seen some institutions address liquidity by taking action outside of the endowment—for example, by re-examining spending rules and needs and establishing lines of credit or building operating cash reserves.

The third concern regarding the endowment model is that the fees charged by hedge fund and private investment managers have risen to such high levels that they consume most of the “available alpha” in alternative strategies. As Bernstein explains in *Skating Where the Puck Was: The Correlation Game in a Flat World*, “As total hedge fund assets sailed past a trillion dollars in the mid-2000s, the alpha commons got overgrazed, and the hedgie’s increasing transactional costs and egregious fees overwhelmed the increasingly slim per-fund pickings.”

The premium fees charged by hedge fund and private investment managers require scrutiny, yet many of these managers have generated significant net performance for their partners. Clearly, investors should consider the impact of fees on the expected return of a fund investment.⁸ While the growth of the hedge fund industry certainly had an impact on fund returns during the mid-2000s, other market conditions—including competition from highly leveraged proprietary trading desks, the availability of cheap credit, and the booming buyout business—likely impacted the ability of fund managers to put up attractive returns as well.

These common criticisms of the endowment model resonate because they hold a grain of truth. Correlations of risky assets do rise in a crisis. Most institutions must provision for short-term liquidity needs. Skewed supply/demand dynamics for a manager’s strategy can render it unattractive. Yet none of these observations diminishes the fact that a well-constructed “endowment model” portfolio has provided exceptional results over the long run. And these portfolios are specifically constructed to benefit from an institution’s long investment horizon.

⁸ For more information on this topic, please see our 2013 report *Hedge Funds: Value Proposition, Fees, and Future*.

How Do You Measure Success?

Since the endowment model relies on “time arbitrage” and incorporates illiquid investments with lifespans of greater than ten years, we believe taking the long view is appropriate in evaluating the performance of the strategy.⁹ Figure 5 shows the rolling 15-year return history of the “early adopter” cohort. The

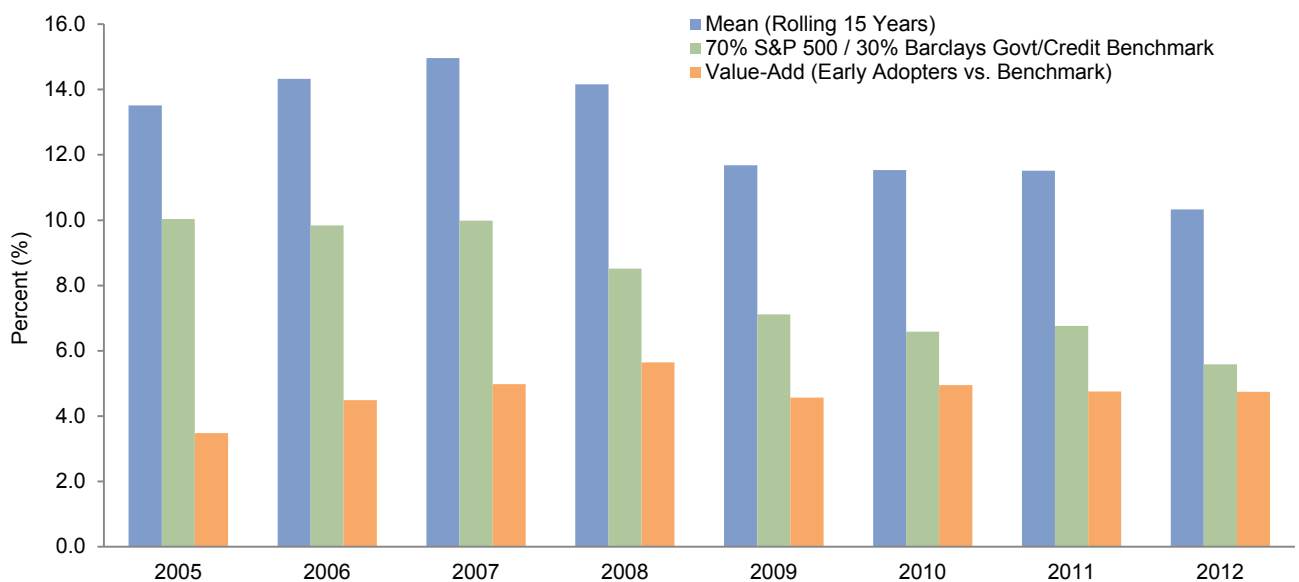
⁹ Jane Mendillo, CEO of Harvard Management Company, put it well in her 2012 annual report: “We are constantly aware of both the opportunities and the responsibilities presented by the long-term nature of the endowment. This pool of assets needs to be kept secure and to grow, in perpetuity. Such an extended investment horizon gives us an edge over the long-term, requiring that we think in decades, not months or years, when assessing the costs and benefits of our investment decisions and operating model.”

group’s excess performance versus a simple 70% S&P 500/30% bond benchmark has been fairly stable over these longer measurement periods even though endowment model investing is now well within the mainstream.

Yet is the long-term performance measurement cycle suited to the institutions employing the endowment model? It is difficult to generalize about the appropriate time horizon for institutions with varied objectives and financial structures. In our view, many of these institutions have dual objectives: provide a relatively stable level of support to current operations and maintain (or grow) the real value of endowment. A long-term measurement period seems appropriate for the latter objective. For the former, one might look to shorter measurement periods, reflecting the institution’s time horizon

Figure 5. "Early Adopters" vs. a 70/30 Benchmark: Rolling 15-Year Returns

Fiscal Years Ended June 30



Sources: Barclays, Cambridge Associates LLC, and Standard & Poor's.

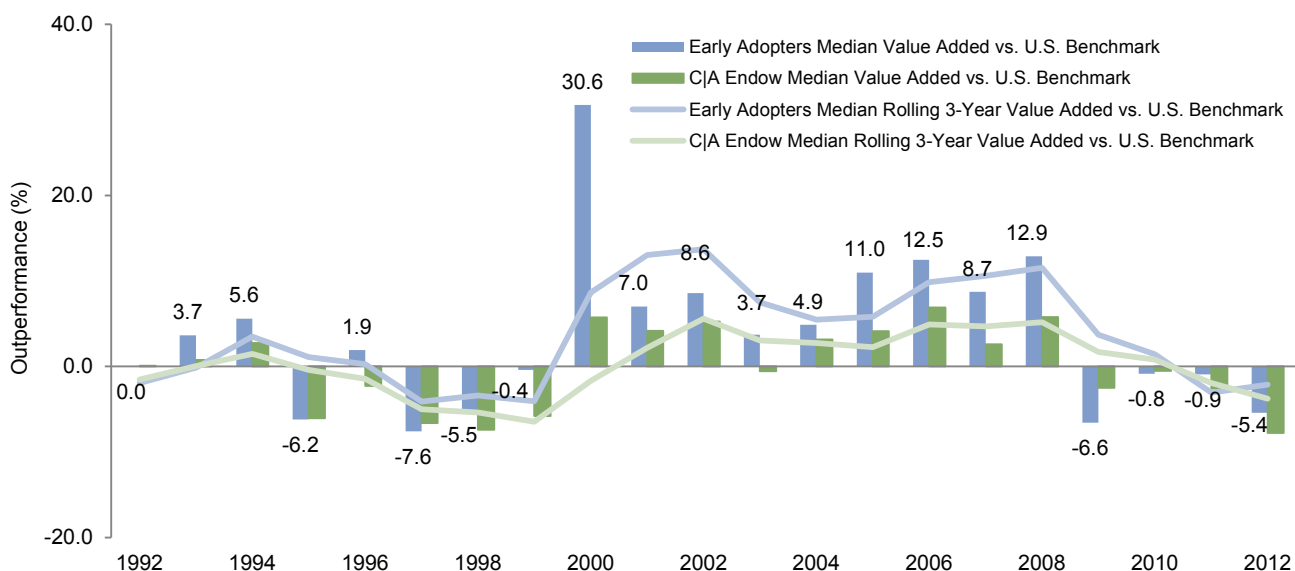
for the use of averaging rules to smooth spending.¹⁰ Clearly, when viewed through the lens of this shorter-term metric, 2008 performance is

challenging. Measured over three-year periods, both the early adopters and the broader group of endowments have experienced cycles of outperformance and underperformance versus the simple stock/bond portfolio. The most recent three years, when diversified endowments underperformed a simple 70/30 portfolio, is not without precedent, with the most obvious example the late 1990s (Figure 6).

¹⁰ While a rolling three-year period remains the dominant smoothing period for market value-based spending rules, longer periods may be used to dampen spending volatility. A number of large endowments have moved to “hybrid” spending rules (i.e., including both market values and past spending in the calculation), which have the effect of spending a percentage of an exponentially weighted average of market value.

Figure 6. Endowment Performance in Excess of a 70/30 Benchmark: The Past 20 Years

Fiscal Years Ended June 30



Annualized Performance as of June 30, 2012 (%)

	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>20 Year</u>
Early Adopters Median	11.7	2.1	9.7	12.1
Early Adopters Median Value Added vs. U.S. BM	-2.3	-0.5	3.9	3.9
CJA Endowment Median	10.1	1.2	6.6	8.8
CJA Endowment Median Value Added vs. U.S. BM	-4.0	-1.4	0.8	0.6
70% S&P 500 / 30% Barclays Govt/Credit	14.0	2.6	5.8	8.1
70% MSCI World / 30% J.P. Morgan Global Govt Bond	9.6	0.7	6.2	6.8

Sources: Barclays, Cambridge Associates LLC, J.P. Morgan Securities, Inc., MSCI Inc., and Standard & Poor's. MSCI data provided "as is" without any express or implied warranties.

Notes: Early adopters median and CJA endowment median are net of fees.

Finding a Way Forward— Execution of the Endowment Model Post-Crisis

Given the dire headlines about the death of the endowment model and the negative short-term returns suffered by early adopter endowments, one might have expected them to have made radical changes post-crisis. Use index funds? Hoard Treasuries? Not exactly.

In fact, with many asset classes dislocated, good value opportunities did exist in the markets. To capitalize on these opportunities, early adopters spent time assuring that they would have adequate liquidity to meet their operational and investment obligations. In a number of well-publicized instances, institutions issued debt (including taxable debt) to provide a ready source of liquidity and operational support. This off (endowment) balance sheet liquidity enabled institutions to take advantage of market opportunities and avoid becoming forced sellers—the very group from whom they would typically profit.

Private investments, illiquid and structured with the ability to draw down capital from committed investors on short notice, were in the crosshairs of many skeptics. These investments, which can enable long-term investors to buy assets and build businesses at attractive valuations, were not marked down as quickly or (arguably) as aggressively by managers as liquid assets. As a result, many investors found themselves over-allocated to the space as the “denominator effect”¹¹ played out. Market participants worried that private investments managers would be

¹¹ This refers to the idea that market action, rather than actions taken by a portfolio manager, are changing an asset allocation. In the case of private investments, as a portfolio’s total value declines due to public market declines, illiquid private investments are unlikely to be marked down at a similar rate. As a result, private equity will become a greater percentage of the total portfolio.

quick to draw down capital to put money to work at post-crisis prices, magnifying the liquidity issues many investors faced and driving up illiquid allocations even further.

Credit and other undervalued assets performed well coming out of the crisis, allowing value buyers to profit.¹² In the private investments space, a sudden queasiness at illiquidity drove some investors out of the markets. Banks, feeling the squeeze in their core businesses and with the encouragement of Messrs. Dodd and Frank,¹³ stepped back too.

Rather than executing a prompt 180-degree turn, the early adopters leaned in to the market opportunity set. This group of investors continues to build equity-biased portfolios focused on undervalued and/or illiquid assets. But where are the opportunities today? As we look across more than 30 investment types, we see few that look “undervalued” or “very undervalued.”

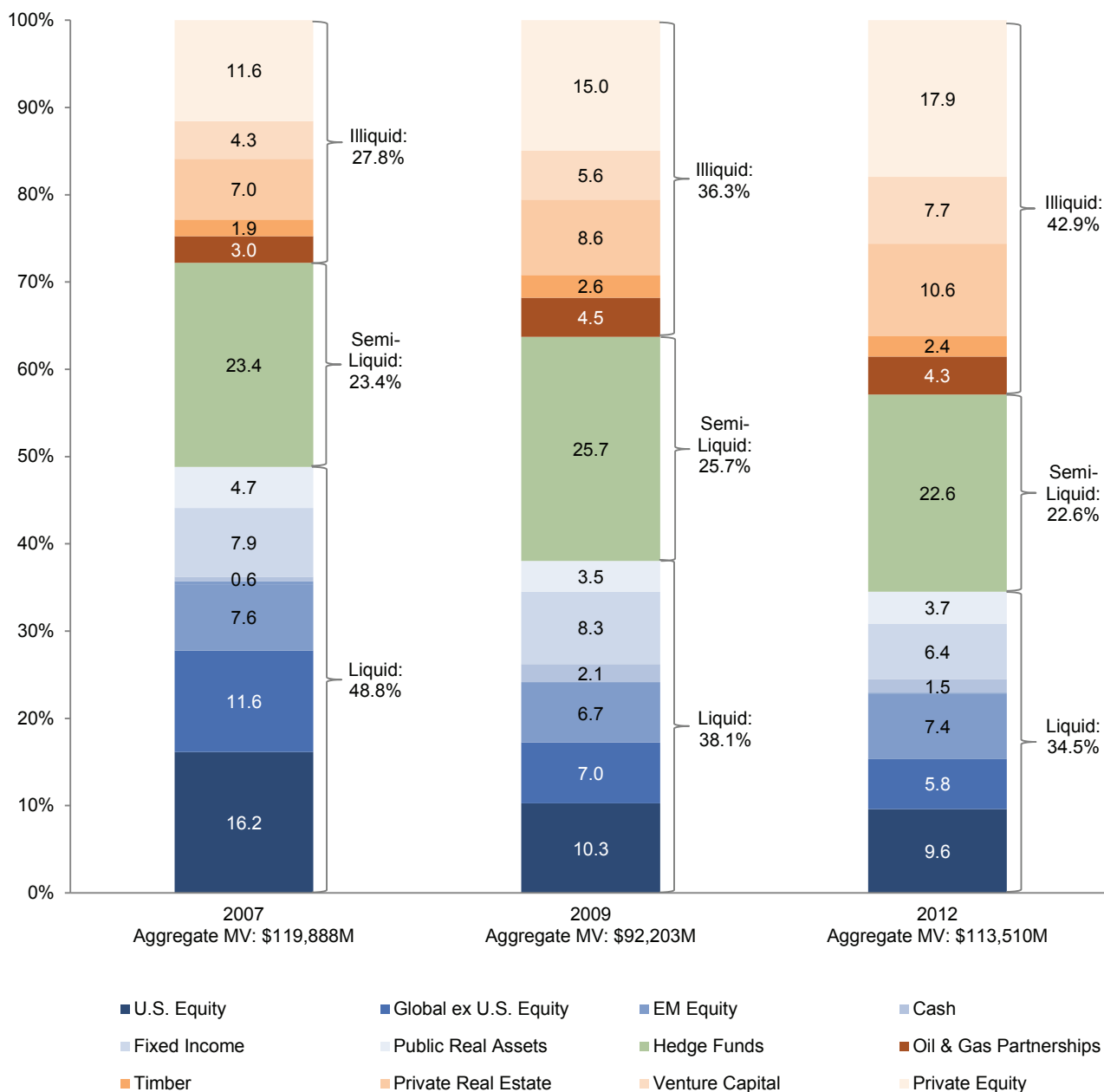
How then are endowments allocated today? With few conventional asset classes undervalued, early adopter endowments are even more committed to illiquid private investments. The surprising reality is that illiquid assets have grown significantly post-crisis as a percentage of these portfolios. Between fiscal year 2007 and fiscal year 2012, the exposure of early adopters to private investments has grown meaningfully—a 54% increase in allocations over the beginning of the period, representing nearly 43% of assets. Most of this shift has been funded through reductions in liquid assets, while allocations to hedge funds have remained fairly static (Figure 7). Note also that the market value of this

¹² For example, from 2009 to 2012, the S&P 500 returned 14.6% per year while high yield (BofA ML U.S. High Yield Master II Index) returned 21.6%.

¹³ Under the Dodd-Frank Act’s Volcker Rule, financial firms are subject to limitations on their ownership or investment in private equity funds. A bank’s private fund ownership cannot exceed 3% of its Tier 1 capital, and a bank’s seed capital plus other interest in an individual fund cannot exceed 3% of the fund’s assets.

**Figure 7. Asset Allocation of Early Adopters Pre-Crisis and Today:
A Significant Increase in Private Investments Exposure Versus 2007**

Fiscal Years Ended June 30



Source: Cambridge Associates LLC.

Notes: Hedge funds includes long/short equity, absolute return, and distressed hedge funds. Public real assets include public real estate, commodities, and inflation-linked bonds. Fixed income includes U.S. and global debt and high-yield bonds. Allocations to other assets, which were de minimus, are not shown.

group in the aggregate has not yet recovered to June 2007 levels.

This shift appears to be taking place not simply on an asset allocation basis, but also at the investment policy level.¹⁴ For example,

¹⁴ Some institutions that have above-target allocations to private investments due to decisions made pre-crisis are working these allocations down over time. See, for example, Princeton University's *Report of the Treasurer, 2011–12: Fundraising and Finance*. Others may have shifted targets rather than decrease exposure. In fact, as this report was being completed, Yale University released

comparing Harvard and Yale's policy targets pre- and post-2008, we can see that the universities have increased policy targets to private investments (Figure 8).

Moreover, this shift in favor of private investments is a major point of difference between these large endowments and many other insti-

its 2013 asset allocation targets. Among other shifts the new allocation targets reduced private equity by 4 percentage points to 31% while adding to absolute return and international equities.

Figure 8. Policy Portfolios: 2008 Versus 2012

Harvard University			
2008 Policy Portfolio		2012 Policy Portfolio	
Domestic Equities	12.0%	Domestic Equities	11.0%
Foreign Equities	12.0%	Foreign Equities	11.0%
Emerging Markets	10.0%	Emerging Markets	11.0%
Private Equities	11.0%	Private Equities	16.0%
Absolute Return	18.0%	Absolute Return	15.0%
Real Estate	9.0%	Real Estate	10.0%
Timber/Agriculture Land	9.0%	Natural Resources	13.0%
Liquid Commodities	8.0%	Publicly Traded Commodities	2.0%
Domestic Bonds	5.0%	Domestic Bonds	4.0%
Foreign Bonds	3.0%	Foreign Bonds	2.0%
High Yield Bonds	1.0%	High Yield	2.0%
Inflation Indexed Bonds	7.0%	Inflation Indexed Bonds	3.0%
Cash	-5.0%	Cash	0.0%
Yale University			
2008 Policy Portfolio		2012 Policy Portfolio	
Absolute Return	21.0%	Absolute Return	18.0%
Domestic Equity	10.0%	Domestic Equity	6.0%
Fixed Income	4.0%	Fixed Income	4.0%
Foreign Equity	15.0%	Foreign Equity	8.0%
Private Equity	21.0%	Private Equity	35.0%
Real Assets	29.0%	Real Assets	29.0%
Cash	0.0%	Cash	0.0%

Sources: Harvard Management Company Endowment Report September 2012 and Yale Investments Office Endowment Update 2012.

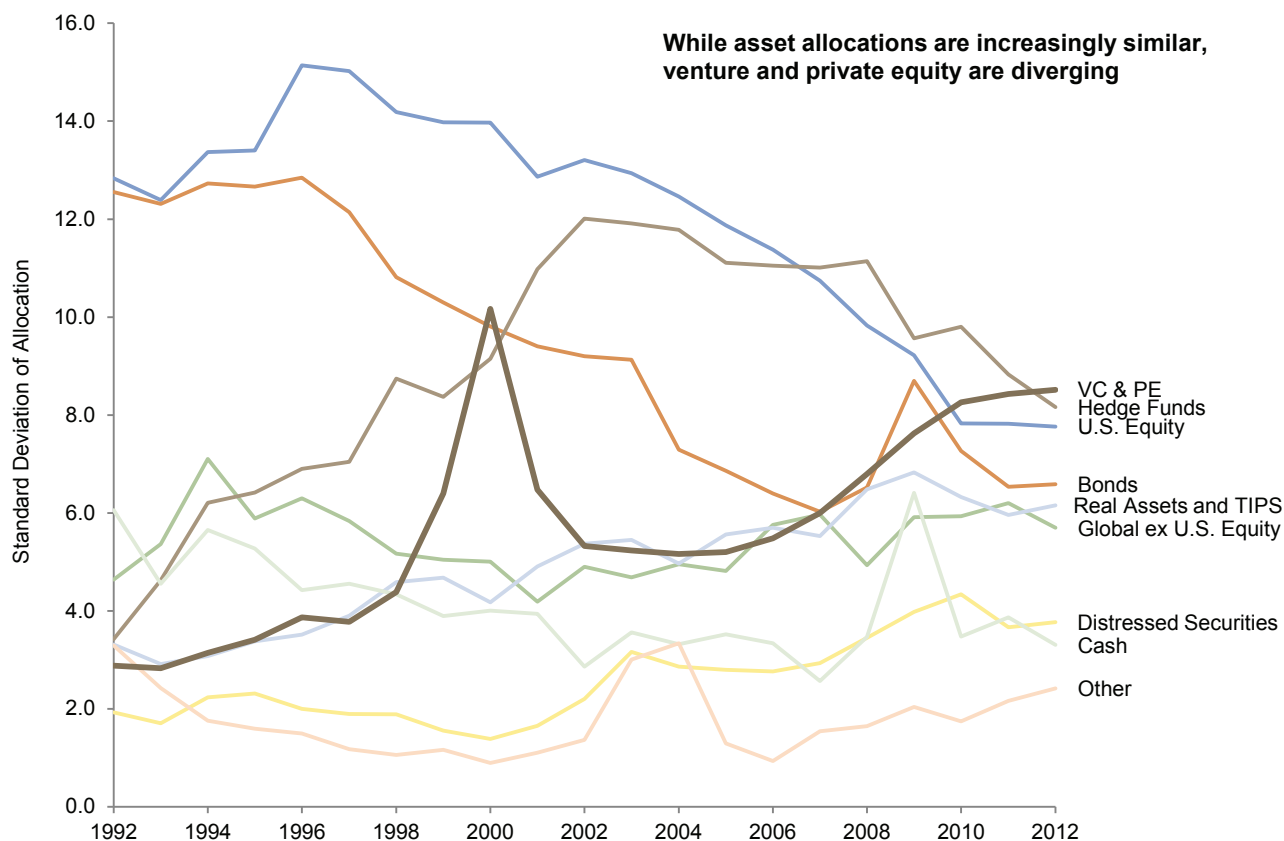
tutional investors. An analysis of differences in asset allocations among a cross section of institutions year by year helps shed light on trends. In recent years, asset allocation dispersion has remained constant to narrower for most asset classes. However, the major point of asset allocation differentiation among institutions is within allocations to private investments (Figure 9).

And so in the current environment, characterized by few undervalued asset classes, early adopter practitioners of endowment model

investing continue to construct high-equity portfolios, seek differentiated sources of alpha, and add value through complex and often illiquid investments. This approach is consistent with the endowment model philosophy, but reflects both a willingness to take on even more illiquidity than in the past and the substantial changes in the opportunity set in illiquid investments versus even a decade ago. What has changed and how are these endowments capitalizing on the opportunity set?

Figure 9. Differences in Asset Allocations Across Endowments

Fiscal Years 1992–2012



Source: Cambridge Associates LLC.

Notes: The analysis includes data for 85 nonprofits that provided data each June 30 from 1992 to 2012. The data represent the standard deviations of client allocations to each asset class for each respective time period. Interpretation: if standard deviations of allocations fell, then institutions look more similar on asset allocation. If standard deviations rose, the range of institutional allocations to an asset is widening.

Does Asset Allocation Drive Performance Differentials?

We are often asked how endowments might differentiate themselves today, given that so many institutions have portfolios with diverse assets. The key to superior results is in the execution.

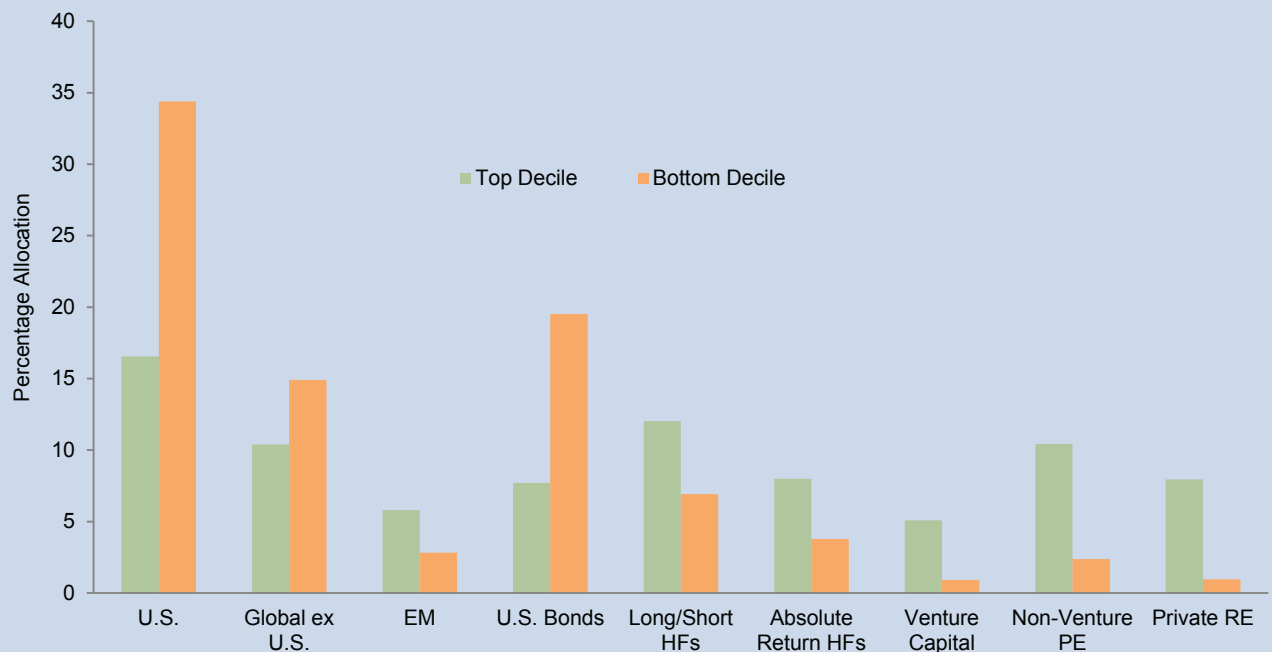
The chart below depicts the average allocation to different asset classes over the last ten years by the top and bottom decile of performers within a subset of our client base.¹ Generally, the top-performing institutions have shifted toward less efficient investment types, where there is more potential for managers to add value.

¹ This universe includes 226 institutions that provided both returns and asset allocation for each June 30 fiscal year from 2003 to 2012.*

The two charts on the following page contrast the return history of the top decile of performers within a subset of our client base with the bottom decile of performers. For this analysis, we calculated the indexed return associated with each portfolio, based on the portfolio's asset allocation, and contrasted that with the portfolio's actual returns. The top chart depicts the portion of returns explained by asset allocation. On a *per year* basis, asset allocation explained, on average, about 72% of returns for the top decile of performers. In six of ten years, the bottom decile underperformed its asset allocation. The bottom chart depicts the share of the group's returns that are not coming from asset allocation (e.g., manager selection).

Average Asset Allocation: Top/Bottom Decile Performers for the Ten Years Ended Fiscal Year 2012

Fiscal Years 2003–12 • Selected Asset Classes

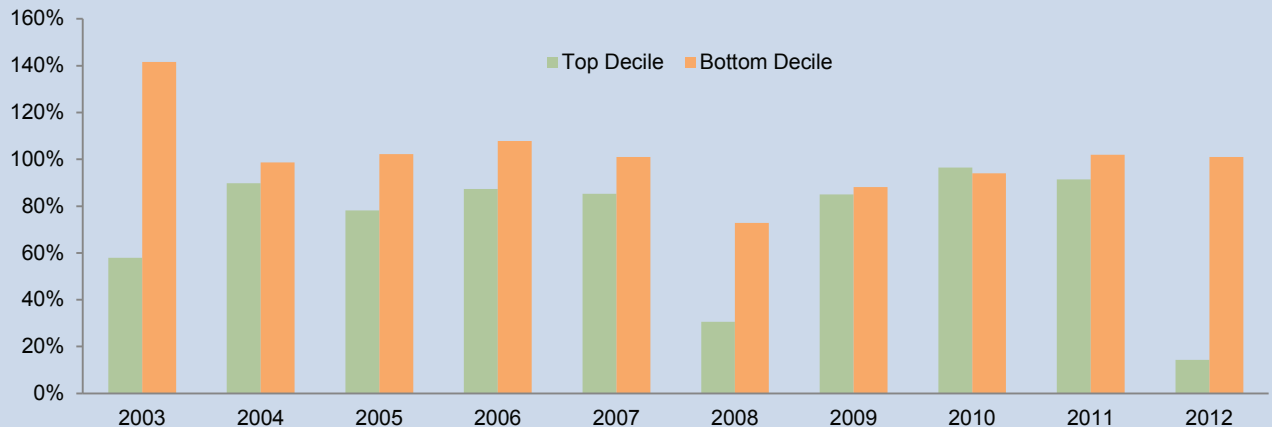


Source: Cambridge Associates LLC.

Notes: Analysis based on 230 endowments that provided data each June 30 from 2003 to 2012. Each decile included 23 institutions.

Median Share of Returns From Asset Allocation

Fiscal Years 2003–12

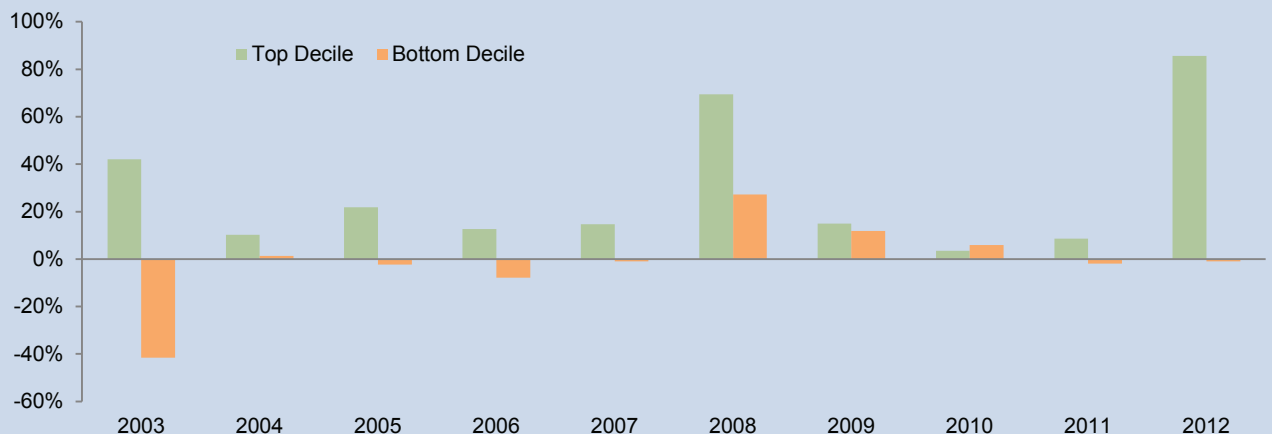


Source: Cambridge Associates LLC.

Notes: Analysis based on 230 endowments that provided data each June 30 from 2003 to 2012. Each decile included 23 institutions.

Median Share of Returns Not From Asset Allocation

Fiscal Years 2003–12



Source: Cambridge Associates LLC.

Notes: Analysis based on 230 endowments that provided data each June 30 from 2003 to 2012. Each decile included 23 institutions.

Methodology Note: When calculating the indexed return associated with each portfolio, we used beginning period asset allocation values. The indices used in this analysis are: U.S. equity - Wilshire 5000 Total Market Index; global ex U.S. equity - MSCI World ex U.S. Index; global ex U.S. equity - MSCI Emerging Markets Index; U.S. bonds - Barclays Aggregate Bond Index; global ex U.S. bonds - Citigroup Non-U.S. Dollar World Government Bond Index; global ex U.S. Bonds - J.P. Morgan Emerging Markets Bond Index Global; high-yield bonds - Citigroup High-Yield Market Index; long/short hedge funds - HFRI Equity Hedge (Total) Index; absolute return - HFRI Fund of Funds Diversified Index; distressed securities - Altman-Kuehne Index of Defaulted Public Bonds & Bank Loans; venture capital - Cambridge Associates U.S. Venture Capital Index®; private equity - Cambridge Associates U.S. Private Equity Index®; other private - blend: CA VC & CA PE indices; private real estate - NCREIF Property Index; public real estate - FTSE® NAREIT Composite Index; commodities - S&P GSCI™; inflation-linked bonds - Barclays U.S. TIPS Index; private oil & gas - CA Private Natural Resources ex Timber; timber - NCREIF Timberland Index; other inflation-hedging - MSCI World Natural Resources Index; cash - 91-Day Treasury Bill Index; global equity - MSCI All Country World Index.

A Closer Look at Private Investments

Why do we see this shift toward private investments? Isn't the venture capital model broken? Hasn't a simple indexed 70% S&P 500/30% bond portfolio beaten most diversified institutional portfolios over the last three years? The early adopters have seen this before—returns for venture capital in the 1980s and early 1990s were bleak. Investing after a period of underperformance has worked well in the past, as even less liquid markets have cyclicity.

It appears that the early adopter institutions are doing precisely that now, as less experienced investors have stepped away from private investments—an investment approach requiring truly long-term investment horizons. We also believe that the early adopter institutions have evolved in the way they approach private investments. Evolving market conditions enable these portfolios to be constructed in a way that is radically different from the ubiquitous advice of a decade (or two!) ago. At a time when some institutions have discontinued programs given the combination of disappointing returns and the significant staff and operational infrastructure requirements for success,¹⁵ early adopters have had a positive experience¹⁶ and see an attractive opportunity set. What appears to be happening is that these well-resourced investors are shifting

¹⁵ For example, please see Diane Mulcahy, Bill Weeks, and Harold S. Bradley, “We Have Met the Enemy ... and He Is Us: Lessons from Twenty Years of the Kauffman Foundation’s Investments in Venture Capital Funds and The Triumph of Hope over Experience,” May 2012, Ewing Marion Kauffman Foundation.

¹⁶ For a different take on the experience of institutional investors investing in private equity, please see Josh Lerner, Antoinette Schoar, and Wan Wong, “Smart Institutions, Foolish Choices?: The Limited Partner Performance Puzzle,” *The Journal of Finance*, 62 (2007): 731–764.

toward investing with smaller firms and into niche strategies. Looking at how the private investment market has evolved and revisiting conventional wisdom around constructing these portfolios provides context.

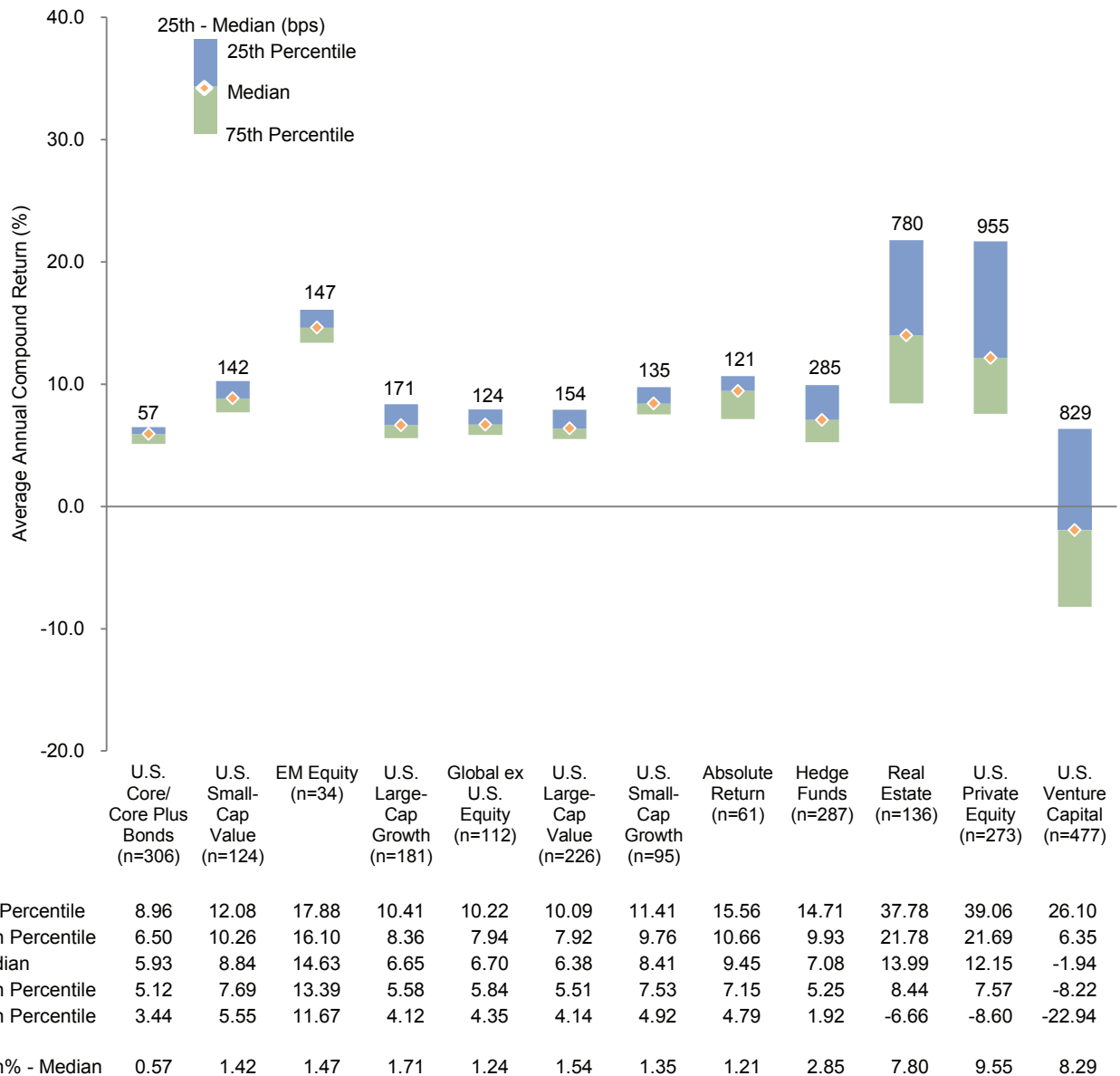
Historically, endowments have looked to private investments as a source of premium returns over public market indices. Endowments’ long-term time horizon should give them the ability to profit from the inefficiencies associated with private market investments. Further, the nature of these investments creates significant return dispersion among managers, enabling practitioners to benefit from manager selection (Figure 10). And while U.S. venture capital and private real estate industry performance over the past ten years has been unrewarding, many other types of private investments have performed well (Figure 11).

Asset class level returns are a small part of the story. What has been the experience of institutional investors? We evaluated the returns of a group of mature institutional portfolios to help answer this question. These institutions have had strong long-term results, with the median of this group earning a 500 bp premium over the S&P 500 over the 15-year period ending June 30, 2012. We also evaluated each portfolio individually, calculating the public market equivalent (PME) return¹⁷ for each portfolio

¹⁷ PME analysis enables benchmarking of any private investments data set (from fund-level investments to entire portfolios) against public markets, providing context on what performance would have been had the private investments cash flows been subject to public returns. Using mPME (our proprietary PME calculation), actual private contributions are invested in the public market index. Distributions, on the other hand, are calculated in the same proportion as in the private investment. In other words, the public equivalent “sells” the same proportion of the dollar value of public shares contained in the calculated net asset value as the private investment sells in private shares.

Figure 10. Manager Returns by Asset Class

July 1, 2002 – June 30, 2012



Source: Cambridge Associates LLC.

Notes: U.S. venture capital, U.S. private equity and real estate returns represent (net IRRs net to limited partners) the median and top quartile of mature funds (vintage years 1998 through 2003). U.S. private equity, U.S. venture capital, and real estate data are from the Cambridge Associates LLC U.S. Private Equity Index® and Benchmark Statistics, Cambridge Associates LLC U.S. Venture Capital Index® and Benchmark Statistics, and Cambridge Associates LLC Real Estate Index® and Benchmark Statistics, as of March 31, 2012. Data are based on managers with a minimum of \$50 million in assets.

Figure 11. Cambridge Associates' Private Benchmark Pooled End-to-End Returns (%) of Various Private Equity Categories

As of June 30, 2012

	Annualized Returns (%)						
	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>15 Year</u>	<u>20 Year</u>	<u>25 Year</u>
U.S. Buyouts	5.7%	17.3%	5.4%	12.9%	11.2%	12.8%	12.5%
U.S. Venture Capital	6.0%	12.7%	4.9%	5.3%	27.5%	27.8%	18.7%
U.S. Mezzanine	7.3%	12.4%	7.0%	8.7%	8.1%	9.9%	8.9%
Global ex U.S. Private Equity	-4.0%	14.3%	3.1%	14.2%	12.4%	12.6%	12.4%
Global ex U.S. Venture Capital	1.7%	12.2%	3.9%	4.2%	4.6%	3.8%	4.6%
Distressed Securities	4.0%	16.8%	7.6%	10.7%	10.5%	11.1%	--
Real Estate	5.1%	7.1%	-4.9%	2.5%	4.0%	4.4%	4.4%
Energy	5.6%	14.6%	8.8%	18.4%	16.4%	16.4%	16.1%
Timber	0.0%	1.5%	2.6%	4.0%	3.9%	4.3%	--
Secondary Funds	4.1%	15.2%	6.3%	11.2%	11.3%	12.2%	--

Source: Cambridge Associates LLC.

Notes: Pooled end-to-end returns, net of fees, expenses, and carried interest. Energy includes energy upstream & royalties and private equity energy funds.

and assessing the value added of the portfolio against that metric. What we see is that institutions have added significant value through their private investment portfolios. Despite conventional wisdom, even a below median result would have garnered a nearly 300 bp excess return over public market alternatives. The significant performance dispersion across the group reflects the opportunities to add value through manager and strategy selection in this market (Figure 12).

For many years, investors have repeated the same advice about investing in private assets: invest with a very select minority of “top quartile” or “top ten” firms or do not invest at all and invest consistently year-over-year to ensure vintage year diversification.

This approach largely made sense in a world characterized by few “institutional-quality” firms that pursued fairly diversified strategies

in venture capital and private equity. Some readers will remember when these were considered to be esoteric investments.

In the two decades since this advice became a familiar refrain, the number of private investment firms has vastly expanded. According to the National Venture Capital Association, the number of active firms in the venture capital industry has expanded from 384 in 1990 to more than 800 in 2011. According to the Private Equity Growth Capital Council, there are nearly 2,800 private equity firms headquartered in the United States today.

This expansion in the number of firms and types of strategies within private investments provides an expanded opportunity set for investors that have the stomach to back newer teams, the resources to vet them, and the infrastructure to manage a portfolio with a greater number of smaller positions than in the past. In our view,

the quality of teams across the private investment landscape continues to improve, increasing the range of viable investment choices for those who have chosen to venture beyond the well-trafficked names.

With the maturing of the private investment space has come more specialization. The expansion of the market beyond diversified funds and

into more focused strategies allows investors to build private investment programs with an eye toward current opportunity set and valuations. This approach is markedly different from more process-driven philosophies of portfolio construction and aligns well with the endowment model's focus on benefitting from illiquidity and emphasizing valuation opportunities.

Figure 12. Private Investment Returns of CA Performance Measurement Clients

As of June 30, 2012

	<u>1 Year</u>	<u>3 Years</u>	<u>5 Years</u>	<u>10 Years</u>	<u>15 Years</u>
5th Percentile	10.3%	18.7%	8.0%	13.5%	42.2%
25th Percentile	6.9%	14.9%	6.3%	11.6%	17.6%
Median	4.2%	13.0%	4.2%	9.3%	9.8%
75th Percentile	2.4%	11.1%	2.7%	7.4%	7.8%
95th Percentile	-0.3%	8.6%	0.1%	3.6%	5.8%
S&P 500 AACR	5.5%	16.4%	0.2%	5.3%	4.8%
MSCI World AACR	-5.0%	11.0%	-3.0%	5.2%	3.6%
S&P 500 mPME (Median)	5.8%	16.2%	2.6%	5.1%	4.7%
MSCI World mPME (Median)	-4.6%	10.6%	-1.0%	3.5%	2.8%
<u>Value Added (bps)</u>					
S&P 500 mPME (5th Percentile)	464	254	563	809	3,616
S&P 500 mPME (25th Percentile)	113	-146	347	588	1,242
S&P 500 mPME (Median)	-132	-283	140	366	514
S&P 500 mPME (75th Percentile)	-339	-502	7	166	289
S&P 500 mPME (95th Percentile)	-570	-793	-246	-171	-45
<i>Number of Portfolios</i>	75	75	75	75	73

Number of Funds per Portfolio	
Mean	100
Median	64
Total Market Value (MV)	\$54.3 billion
Median Portfolio MV	\$104.3 million

Sources: Cambridge Associates LLC, MSCI Inc., and Standard & Poor's. MSCI data provided "as is" without any express or implied warranties.

Notes: CJA client returns are end-to-end internal rates of return and the public index average annual compound returns are calculated for the period ending June 30, 2012. Each percentile of returns is calculated independently. Percentiles are calculated based on 0 being the best and 100 being the worst. CJA client private investment returns includes mature private investment fund programs at least 15 years old and with at least ten private investment funds per portfolio. Terminated client returns are not included due to unavailability of data. Total market value allocations: 11% distressed, 10% energy, 4% fund of funds, 17% global private equity, 2% global venture capital, 7% real estate, 3% secondaries, 34% U.S. private equity, and 11% U.S. venture capital. The performance of CJA's clients may be attributable to factors other than CJA's advice because CJA's clients may or may not follow this advice. Similarly, client returns shown may include investments made prior to client's relationship with CJA. Past performance is not necessarily a guide to future performance. The performance data are net of investment managers' fees but have not been adjusted to reflect CJA's advisory fees and other expenses that a client may incur. The S&P 500 mPME calculation is based on aggregated cash flows for all of the clients in the sample. The mPME calculation for the range of value-added returns is based upon each portfolio's mPME.

A Researcher's Perspective: What Opportunities Do We See in the Venture Capital Markets Today?

Venture market conditions and underlying fundamentals have steadily improved over the past few years. Yet one of the more notable aspects of venture capital, until very recently, is its relative lack of buzz. We view this disenchantment as a positive. Savvy investors have focused on the improving industry conditions today and what they portend going forward, rather than just the poor performance of the last decade. These investors have thought critically about succession and incentive structures of firms within their portfolios and have a fresh perspective on which managers are best positioned in today's market and beyond.

As with any asset class, venture capital's best returns have tended to follow periods of relative disinterest, and *vice versa*. The late 1990s' venture capital "golden age" was true for investors already in the asset class—Amazon and Yahoo were funded in 1994. However, vintage year funds raised and deployed during 1998–2000, which capitalized on the buzz spawned by myriad strong exits, are the worst performing ever on a median return basis. Today, the situation is the reverse. Many investors are skeptical of the asset class after a decade of underperformance and venture capital commitments have slowed.

Innovation remains strong and is occurring at a faster pace. Venture capital investments provide direct exposure to emerging technology and health care companies that is difficult to obtain via the public markets or in other asset classes. Though it's impossible to know what is "around the corner," it's safe to say there will be "something." Several of the world's most valuable companies—like Google, Facebook, and even Apple—provide products or services that were almost unimaginable just five to ten years ago. There is a continued disintermediation of industries such as health care, education, financial services, media, and retail/commerce.

What else is changing? The cost to start a company has never been cheaper, resulting in a boon of investment opportunity. As a result, venture capital firms can see early signs of traction on an investment of less than a couple million dollars. Meanwhile, the addressable market opportunity for technology companies continues to expand globally, with the United States today

accounting for only 10% of Internet users. New venture capital markets are arising where valuations and competitive dynamics are generally more favorable: new entrants in the United States (Austin, Los Angeles, and New York); emerging venture capital markets in Berlin, China, and Toronto; and select opportunities in London.

Headwinds still exist for the industry, first among them the exit market. Notwithstanding some recent improvement in the number of venture-backed IPOs, companies today are generally forced to stay private longer, due to increased regulation and related costs, and a smaller number of investment banks catering to IPOs of venture capital-backed companies. Of course, current venture capital investments will be dependent on future exit markets, about which neither we nor anyone else can offer confident predictions.

Capital is increasingly concentrated among a small number of elite firms that are often difficult to access. Most of the elite firms have moved upmarket and have pursued international deals with their larger funds. As a result, their focus on U.S. early-stage venture deals has been diluted, helping pave the way for smaller, specialized, and well-positioned firms to emerge. These firms often have better GP/LP alignment, match funding to actual need, and preserve flexibility in company building and exits. We have seen a mini exodus of early-stage-oriented partners from elite firms as seed and early-stage deal math becomes incongruent with large fund size. These partners are forming new, smaller firms more focused on seed and early-stage deals.

—Theresa Sorrentino Hajer and Peter Mooradian

While investors are familiar with the notion that private investment *manager* performance has significant dispersion, private investment *subsectors* do as well (Figure 13). Here, as elsewhere, valuations matter, and the ability to focus on a specific subsector using targeted funds provides an opportunity to investors that have an in-depth understanding of valuations and the drivers of return within private investments.

Figure 13. Performance of Various Asset Classes by Vintage Year Ranges

U.S. Dollar

1986–90	1991–95	1996–2000	2001–05	2006–10
Distressed 23.1% (7)	U.S. Venture Capital 47.8% (152)	Energy 22.2% (36)	Energy 21.4% (59)	Asian Private Equity 14.9% (66)
U.S. Venture Capital 17.6% (144)	W. European PE 30.8% (29)	W. European PE 19.6% (89)	Asian Private Equity 14.9% (66)	Asian Venture Capital 11.5% (43)
W. European PE 16.1% (20)	U.S. Private Equity 27.4% (82)	U.S. Venture Capital 12.5% (461)	W. European PE 14.4% (87)	Distressed 10.5% (97)
U.S. Private Equity 15.7% (48)	Real Estate 16.8% (39)	Real Estate 10.9% (96)	Asian Venture Capital 12.8% (19)	U.S. Venture Capital 9.8% (251)
Energy 13.6% (21)	Distressed 11.2% (21)	U.S. Private Equity 10.8% (231)	Distressed 12.0% (56)	Energy 9.4% (86)
S&P 500 10.0%	S&P 500 9.2%	Distressed 10.6% (26)	U.S. Private Equity 11.6% (195)	U.S. Private Equity 7.6% (205)
Timber 9.3% (1)	Timber 8.6% (2)	Asian Private Equity 8.9% (45)	U.S. Venture Capital 4.7% (251)	S&P 500 4.3%
Asian Venture Capital 8.4% (6)	Energy 8.4% (22)	S&P 500 7.1%	Timber 4.4% (17)	W. European PE 3.5% (78)
Asian Private Equity 6.2% (4)	Asian Venture Capital 5.8% (8)	Timber 6.5% (5)	Real Estate 4.2% (187)	Timber 3.1% (14)
Real Estate 5.3% (14)	Asian Private Equity 0.3% (20)	Asian Venture Capital 2.9% (20)	S&P 500 2.7%	Real Estate -1.2% (257)
Spread Between Highest and Lowest Values Within a Given Time Period (ppts)				
17.8	47.5	19.3	18.7	16.1

Sources: Cambridge Associates LLC and Standard & Poor's.

Notes: Returns shown are pooled since inception limited partner internal rates of return as of December 31, 2012. Chart is sorted by performance in each five-year period and number of funds is shown in parentheses after performance. Energy includes energy upstream & royalties and U.S. and non-U.S. private equity energy funds. Western Europe includes Israel. Asia excludes funds focused in Japan. Private equity includes buyout and growth equity funds. S&P returns are time-weighted returns starting from the first quarter in each vintage year range through March 31, 2012.

The Trouble with Hedge Funds

Allocations to hedge funds have remained fairly constant for this group of early adopters; as with most statistics, however, the numbers do not tell the whole story. Given that this allocation is made up of a lot of different things—cats, dogs, and, well, the occasional turkey—understanding how these portfolios are structured is important. While some institutions relied on a limited group of established hedge funds employing diversified strategies as the core of their portfolios, approaches have diverged in the wake of lessons learned in 2008.

The number of managers in portfolios and their respective sizing has evolved. Historically, some large investors relied on substantial allocations to a very concentrated (5–8) list of high-conviction managers; these institutions have largely increased the number of funds in their portfolios. Why? As these “anchor” funds matured, many restricted their assets under management, in some cases returning capital to investors. In addition, the experience of 2008, with many firms imposing gates or posting poor performance, coupled with the negative returns by “absolute return” funds, encouraged investors to diversify. At the

A Hedge Fund Specialist’s Perspective: Change Is the Only Constant

Over the last decade, endowment allocations to hedge funds have been largely unchanged. While the allocation to these investments has remained static, the structure, number, and types of managers within the allocations have changed dramatically.

How have hedge fund portfolios changed? In brief, hedge fund allocations are less “programmatic” today than a decade ago. Less seen as a standalone asset class, hedge fund investments are now viewed in the context of the goals of the entire portfolio and asset allocation. While performance of hedge funds still may be reported together, increasingly similar investments (i.e., all equity-based investments) are grouped together, allowing investors to evaluate investments with similar exposures more easily.

Allocations to hedge fund strategies and managers are more dynamic today, which requires more frequent rebalancing. Investors are more likely to rebalance allocations between hedge funds and long-only strategies or among different hedge fund strategies based on perceived market opportunity set and perceived market risk. After the 2008 market correction, for example, some institutions trimmed hedge funds that protected in favor of investing in cheaper investment opportunities such as long-only equities or high yield. Earlier, in 2007, investors reduced overvalued long-only funds in favor of more defensive hedge funds in the midst of a bull market. In both cases, these moves are consistent

with the contrarian, valuation-sensitive approach embodied by the endowment model of investing.

The astonishing complexity of the capital markets has created myriad niche opportunities for managers and their investors. Temporary market dislocations will create further opportunities due to pricing anomalies, especially in more thinly traded instruments and markets. Increasingly, managers offer specialized funds to pursue a niche opportunity that might have a two- or three-year life. But what a life! These niches are too small for big funds, but perfect for the specialist funds. Finding and vetting these specialist managers is time consuming and time sensitive. In some cases, investors identify the niche and then find and negotiate with a hedge fund manager that can exploit the opportunity; the result is a highly customized vehicle and strategy that fits the investor’s needs closely.

We have found that many commonly held assumptions when selecting managers have little supporting data. Emerging hedge funds, younger portfolio managers, hedge funds that cap their assets under management, and closed funds have shown meaningful outperformance across many strategies over multi-year periods. Yet some less experienced or more constrained investors avoid managers with the preceding attributes. Other rules-of-thumb, such as excluding high-fee managers, are questionable barriers to selecting the best-performing managers.

—Joseph Marena

opposite end of the spectrum are investors that employed a programmatic approach to hedge fund investing. For this group, the shift has been from portfolios with well in excess of 20 funds to the mid-to-high teens. Since the allocation to hedge funds has remained flat, fewer managers typically means a larger allocation to each manager. This reflects institutions' confidence in firms that are becoming much more institutionalized, as well as confidence in the more robust due diligence processes investors are employing. Core-satellite sizing is now common, with satellite sizing enabling the use of niche-oriented managers.

Established hedge fund firms *have* largely become more institutional, and many are managing far more assets than ever before. This gives the largest firms some opportunities due to their scale but also leaves room for niche players to capitalize on smaller, less scalable investment themes. With hedge funds and their investors more focused on liquidity, investors have been able to more actively manage their exposure to individual strategies.

Portfolios tilted to capture returns from the credit and distressed dislocations in 2008 have begun to rotate back into other strategies—including the much-maligned long/short strategies—to take advantage of the cyclicity of strategy returns.

The depth and breadth of investment and operational due diligence has increased over the last decade. The demand for deeper knowledge of managers and markets has grown due to the complexity of the markets, the regulatory environment, and the instruments that managers trade. Managers have responded to investor demands with greater transparency and better alignment of liquidity terms and fees. This shift toward greater transparency has fed investors' willingness to take on newer managers or larger positions with more established firms.

Hedge funds remain a critical component of a diversified portfolio, particularly those with high allocations to equities. With fixed income unattractive on a risk-reward basis, many institutions have reduced their exposure in favor of higher-equity portfolios, looking to hedge funds to provide modest protection in down markets. Further, certain strategies and their differentiated return streams are available only through the hedge fund structure. Dynamic markets continue to drive the opportunity set for hedge funds, as well as the need for hedge funds in diversified portfolios.

Try This at Home?

We believe that while the endowment model relies on just a few simple principles, effective execution today requires building complex portfolios. Clearly, these early adopter institutions have built significant infrastructure to identify and analyze new teams and investment opportunities. They have the ability to manage a portfolio with many small, complex, and often illiquid positions, as well as a governance structure that enables them to take advantage of out-of-favor opportunities and take a long-term view.

Institutions that choose to adopt this model of management should carefully consider whether they have the resources to take advantage of the current opportunity set. Do they have the infrastructure to handle an increase in commitments to private investments and hedge funds? Do they have the ability—whether from a financial, behavioral, or operational perspective—to take the long-term—make that the *very* long term—view? Do they have the resources to effectively identify and size investments in newer teams and strategies?

A Practitioner's Perspective: Behavioral Challenges to Implementing a Private Investments Portfolio

Large endowments have used private investments as an important driver for performance in the past and we believe they will be the key to performance in the future. Why so few others? The common excuse has been that only “first movers” can get access to high-performance partnerships. Professor Josh Lerner's *Journal of Finance* article¹ included an endowment universe of 100 institutions with significant outperformance, not just a top ten. An examination of the recent performance of a Cambridge Associates universe of 70 portfolios suggests the margin of outperformance, while smaller, is closer to the “early adopters,” and still well worth the effort if you are looking for 3% to 5% excess return over the stock market over long periods of time. Further, top-quartile performance is much more “top” (600 bps over an index) in private equity than an equivalent high-performance common stock manager.

Yet implementation hurdles are immense, even for those practitioners confident of the value add. The most difficult assignment for investment committees, investment officers, and consultants is adding illiquid long-term private equity investments to a portfolio. The concept of a J-curve is daunting in theory and even worse in practice. Every dollar transferred out of a stock portfolio with an assumed 5% to 8% return (nominal) is replaced by a substantial negative number as cash is drawn down into new, immature investments. Since most investment committees, staff, and consultants live and die by a maximum of five-year returns, the more you put in private equity, the greater the likelihood you will underperform common stock and bond benchmarks. Even “failure” over three years is often accompanied by unpleasant comparisons to peers in local—and, if you are truly unlucky, national—newspapers.

An extended J-curve followed by modest returns in years 5 through 10 will signal the “death” of an asset class, the inevitable discussion of wasted fees, and job searches for all participants. As such, an institution should add private equity to a portfolio only if it is

a truly long-term investor (ten to 20 years depending on the market cycle) with a clear understanding of liquidity needs and at a commitment level of 20% or more. Otherwise, do not bother. The worst outcome for a fiduciary is to buy in after a bubble (2001) and sell out in the form of secondary sales (2008 through the present), which is, unfortunately, going on at this very moment.

Institutions with portfolios in place face similar problems when adding at lows, with the audience questioning your very existence. These institutions face the additional problems resulting from the very success of past private equity investing. Past success has led to more competition for access, bloated fund size of past predictable performers (as if there ever was such a thing!), a vastly expanded universe of less well-known options, and the strong suspicion that smaller, younger funds will outperform. This means more research, more uncertainty, and more money spent to support an activity that will hurt performance in the short run as you commit more capital—hardly an attractive option in these days of short-term, intense performance analysis to determine incentive fees at all levels.

Unfortunately, for those who have embraced the “we should not be doing this” school of thought, institutions with the most invested in these asset classes will likely have greater outperformance relative to stocks, bonds, and peers over the next ten years than in the last 40. Why? It is simple—valuations. With bonds likely to return 2% to 3%, stocks 5% to 6% (even emerging markets are unlikely to provide much more), institutions holding “private equity” returns approaching or exceeding 10% will handily outperform the “competition.” Yes, it is complex, requires incredible patience, and you may not earn credit (your replacement will be thankful), but adding private equity may well be best for the mission of the institutions you serve whose time horizon is, indeed, well aligned with these complex, illiquid investments.

—David Thurston

¹ Josh Lerner, Antoinette Schoar, and Wan Wong, “Smart Institutions, Foolish Choices?: The Limited Partner Performance Puzzle,” *The Journal of Finance*, 62 (2007): 731–764.

While many institutions have developed in-house resources, we continue to see a wave of institutions moving to fully outsourcing their investment offices. Whether insourced or outsourced, an underresourced office attempting to develop a high alpha portfolio is an accident waiting to happen.

As fiduciaries consider how or whether they will be able to generate real returns in excess of their spending needs in the decade ahead, they should re-evaluate the process they use and the resources they bring to bear on the problem. As researchers, advisers, and portfolio managers, we see overvaluation in traditional stocks and bonds today. Conversely, we see opportunities for well-positioned endowments to capitalize on an expanded opportunity set in hedge fund and private equity strategies. The strategy sounds simple: “maintain an equity focused portfolio,” “seek diversification,” “take advantage of illiquidity,” and “buy out of favor, inexpensive assets”. But successful execution requires a truly long-term time horizon and willingness to embrace complexity, which can be harder than it seems. ■