

Haverford College Investment Office 370 Lancaster Avenue Haverford, PA 19041

November 15, 2017

We are pleased to present our annual letter on Haverford's endowment to the College community. The Haverford endowment returned 12.4%, net of fees, for the fiscal year ended June 30, 2017. The College's endowment ended the fiscal year at approximately \$503 million, which is an increase of \$38 million from the prior year and is the aggregation of investment returns of approximately \$54 million (net of expenses), new gifts of more than \$9 million, and a withdrawal in support of the College's academic mission, scholarship and operations of \$25 million.

The positive, double-digit performance for this fiscal year is reflective of a strong market for equities and other risk assets, and in stark contrast to the mildly negative returns that many endowments experienced last fiscal year. This year-to-year volatility is only a blip in the life of an institution like Haverford, and why we remain focused on generating solid investment performance over the long-term. This focus on long-term investment performance combines with generous philanthropy from our donors and sustainable levels of spending from endowment, to build endowment over time and support our academic mission in perpetuity.

Speaking of generous philanthropy, June 30, 2017, also marked the successful completion of Haverford's *Lives That Speak* campaign. Our thanks to all who made the campaign an

extraordinary success, from donors to volunteers and Haverford's Institutional Advancement team. The campaign results included a total amount raised of \$269.5 million from more than 15,000 donors, while we also successfully completed all of the fundraising priorities for the campaign. Congratulations to everyone; the success of the campaign will contribute immeasurably to Haverford's future.

Returning to the investment commentary for FY17, while we have internal benchmarks against which we measure our performance, and against which we continue to be pleased, discussion of performance inevitably moves toward comparisons against other institutions. Our performance for the year was just below the median of the The campaign results included a total amount raised of \$269.5 million from more than 15,000 donors, while we also successfully completed all of the fundraising priorities for the campaign.

Cambridge Associates Endowment Universe, while our five-year performance is above median, in the second quartile of this universe. At the same time, our level of volatility over five years is

below median of the universe, resulting in a risk-adjusted return squarely above median in the second quartile. We consider this a very positive result, especially given that a meaningful portion of the portfolio over this period remained invested in illiquid, legacy private equity funds.

We will continue to focus on managing the endowment in the most appropriate manner for Haverford, given our specific risk profile and institutional needs. We are fortunate to work with an Investment Committee and Staff at Haverford that is well aware of the danger of peer comparisons. We also have the privilege of having Narv Narvekar '84, CEO of Harvard Management Company, as a member of our Investment Committee. With his permission, we highlight a few sentences from his recent Harvard Management Company annual letter that speaks to this point. Narv wrote in that letter, "...returns will largely be a function of Harvard's chosen risk level and not necessarily related to that of any peers, who might have different risk appetites. Comparisons to other peers are natural, but not productive. In my opinion, misdirected pressures caused by peer return comparisons contributed meaningfully to the challenges experienced by leading endowments during the financial crisis." *Haverford* could easily replace *Harvard* in that sentence, and we could not agree more with Narv. While peer comparisons and

competition will always be human nature, we will continue to focus on managing the endowment in the most appropriate manner for Haverford, given our specific risk profile and institutional needs.

Investment Philosophy

The core of our investment philosophy remains a focus on a long-term investment horizon, partnerships with high-quality investment managers, and the view that market exposure (or "beta") can be accessed inexpensively through passive index funds. We seek active management where it provides a different type of market exposure compared to the broad market, or is expected to generate significant risk-adjusted returns in excess of active management fees. Our initial letters from 2013 and 2014 offer a bit more discussion on philosophy, so please refer to those letters for more detail.

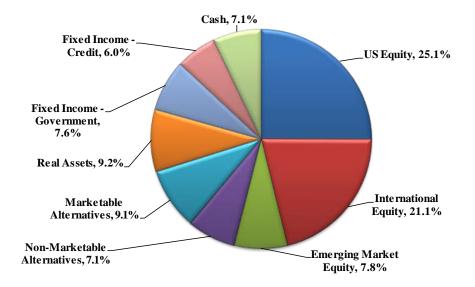
Next, we will provide some details on the 2016-17 fiscal year.

Asset Allocation

The endowment's asset allocation remains relatively stable from year-to-year, as we do not make sudden, large changes to the allocation, although we do rebalance and invest incrementally to manage within our allocation policy. The strong performance of equity markets increased our equity weighting during the year, even with several rebalancings that trimmed the equity allocation. Furthermore, continued large distributions from our legacy private portfolio resulted in further decline of our alternatives allocation and increased levels of cash. However, underneath these high-level portfolio allocations, we see significant progress and development of our private portfolio.

The asset allocation as of June 30, 2017, is shown on the following page, and is categorized based on our policy allocations across global public equities, fixed income and alternative investments. However, we also consider the function of each investment in the portfolio, such as capital growth, capital preservation, inflation-sensitivity and diversification benefits, and the overall level of equity exposure, or beta, in the portfolio.

Haverford College Asset Allocation as of June 30, 2017							
Asset Class	Allocation	Policy Target	Policy Range				
US Equity	25.1%	22%	18% - 26%				
International Equity	21.1%	18%	15% - 21%				
Emerging Market Equity	7.8%	6%	4% - 8%				
Non-Marketable Alternatives	7.1%	12%	6% - 18%				
Marketable Alternatives	9.1%	14%	8% - 17%				
Real Assets	9.2%	12%	5% - 18%				
Fixed Income - Government	7.6%	8%	6% - 10%				
Fixed Income - Credit	6.0%	6%	4% - 8%				
Cash	7.1%	2%	1% - 10%				



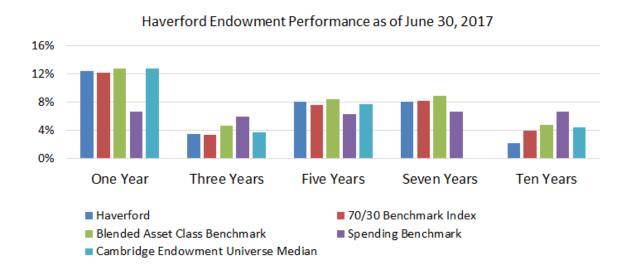
As we have described in previous annual letters, we fully expected the level of private investments in the portfolio to decline during the year, as ongoing distributions from private funds that began in 2008 or earlier outpaced capital funding of recent commitments. However, this balance is now shifting, and while it is difficult to know exactly when capital distributions and capital calls will balance each other, the portfolio is clearly moving away from legacy holdings and toward active relationships. For example, in the Non-Marketable Alternatives (private equity) allocation, active relationships represented only 11% of the market value as of June 2016, due to the young age of recently added funds. Just over a year later, as of September 2017, active relationships represent 33% of the market value, and we expect this trend to continue at an increased pace as legacy funds distribute capital and active funds call more capital. While the process of shifting a private portfolio can be slow, we are very pleased with the development of our current, active relationships. The commitments that we have made over the past several years are well diversified across strategy, sector, and capitalization, with leading firms that we feel will generate attractive returns. The

strategy that we developed with the Investment Committee years ago is being implemented according to plan, at a measured pace, and on schedule, befitting of our long-term investment perspective.

We continue to ensure that the portfolio remains within policy guidelines around asset allocation and projected equity beta of the portfolio. In the case of the rising markets in FY17, rebalancing resulted in the trimming of equity assets as they reached policy upper limits. While this type of rebalancing occurred several times during the year, we maintained equity allocations above targets, but within policy ranges, a significant positive in the rising markets. In the prior year, we found ourselves adding to equity to maintain a desired level of equity beta in the portfolio, paying off as the equity markets rallied in FY17. As a reminder, while our process does not generally result in frequent rebalancing, it ensures that we maintain our desired long-term exposures in the portfolio, and generally results in trimming asset classes that have appreciated, and adding to asset classes that have depreciated.

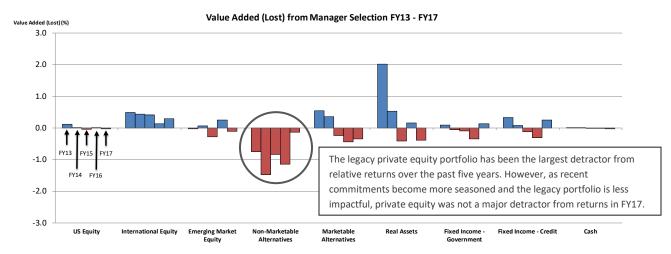
Investment Performance

Historical endowment performance is shown in the figure below. A primary goal in managing the endowment is to preserve its purchasing power for future generations, which requires us to generate a net return equal to or in excess of our spending rate from the endowment plus inflation. We approximate this "spending benchmark" to be inflation + 5%, given that spending over time has tended to be in the range of 5%. We also compare performance to a simple global benchmark of 70% equity / 30% fixed income, which is reflective of a traditional, balanced allocation, and to a benchmark that is representative of our strategic policy targets across asset classes. While we reiterate the difficulty with peer comparisons, for comparison to a broad universe of institutions, we provide the Cambridge Associates Endowment Universe median as well (not available for seven-year performance). Performance over the past five years has exceeded the simple benchmark, spending benchmark, and universe median, while slightly lagging the asset class benchmark, primarily due to the legacy private equity exposure. Ten-year performance remains impacted by the difficult 2008-09 period, which was discussed in our first letter from 2013.



Compared to the Cambridge Associates College and University universe over the past five years, our return is in the second quartile of the universe, while risk (standard deviation) is near the bottom of the third quartile, producing a risk-adjusted return squarely in the second quartile. Five years represents the period since we revised our investment approach after the global financial crisis and had completed transitioning much of the portfolio to our current approach, so we are pleased with these results. We were also able to manage through the continued overhang from legacy illiquid investments during this period.

Performance attribution of fund selection during the year showed, for the first time in five years, the private equity portfolio was not a major detractor from relative returns, as newer funds mature and legacy funds become less impactful. While a single year's performance of a private equity portfolio is not particularly meaningful, the figure below shows how the legacy private equity portfolio has been the largest detractor from returns in recent years. This private equity performance is a primary reason for performance lagging the asset class benchmark, while exceeding the simple benchmark and spending benchmark. However, as we described in the Asset Allocation section, the private portfolio is shifting toward active relationships and away from legacy holdings. The small amount of underperformance from private equity during FY17 is reflective of this shift and we are encouraged by the improvement in relative returns in the asset class. In addition, as a reminder, we focus on long-term relationships with fund managers and there will typically be only a small amount of turnover in the portfolio in a given year, so most of the holdings remain consistent from year to year.



With respect to our marketable alternatives (hedge fund) portfolio, five-year performance is in excess of our benchmark, but performance in recent years has been disappointing. We have always had a relatively small allocation to hedge funds in the portfolio, limiting the impact of recent underperformance, but we have made several changes in the allocation. We continue to evaluate the evolving hedge fund landscape, and continue to opportunistically seek funds that, in our view, specifically address the diversifying role of this exposure in the portfolio.

Further detail on asset categories is provided in the table on the following page.

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Asset Category	June 30, 2017 Allocation	FY17 Return	Comments
U.S. Equity	25.1%	18.4%	The majority of our U.S. equity allocation is passive exposure to the broad equity markets, and should perform generally in line with broad market indexes.
Developed International Equity	21.1%	20.9%	The developed international equity portfolio consists of both passive and active management. Our active managers have a notable value-bias and continue to provide attractive relative returns versus the asset class overall.
Emerging Market Equity	7.8%	22.5%	While emerging markets was the strongest-performing area of the portfolio during the year, our value-biased portfolio slightly underperformed the benchmark during FY17. Expensive areas of the market, such as Chinese internet stocks and Indian consumer companies continued to drive performance. We continue to have confidence in our managers over the long-term, and expect them to lag in strong growth-driven markets that have little regard for valuations.
Non-Marketable Alternatives	7.1%	15.6%	The non-marketable private equity portfolio is currently about two-thirds legacy funds, although the mix of legacy and new funds is shifting at an advanced pace. These aged legacy funds are no longer experiencing as many markups as the overall market, leading to underperformance in recent years. However, the category only trailed benchmarks slightly in FY17 as funds that are more recent have begun to mature and represent a greater portion of the portfolio.
Marketable Alternatives	9.1%	3.4%	The hedge fund portfolio lagged overall in FY17, primarily due to the underperformance of a single fund. We note the same fund was our best performer in the category in FY16, and is our strongest performer year-to-date in FY18. Sometimes we must sustain through this type of volatility to capture attractive long-term performance.
Real Assets	9.2%	3.2%	Our real asset portfolio consists primarily of real estate and, to a lesser degree, legacy energy-related funds. Private real estate funds have performed strongly, while the pre-2009 alternative energy funds have lagged the market. Furthermore, as the energy sector recovered some in FY17, our underweight in energy proved to be a negative position during the year.
Government Fixed Income	7.6%	-0.4%	The return environment for government fixed income securities remains subdued, given the low interest rate and high valuation environment. For these reasons, we remain positioned with a low duration profile. This positioning, along with a slight underweight, was positive during the year, in which the broad government bond index declined more than short-term bonds.
Credit Fixed Income	6.0%	6.3%	The credit fixed income asset class includes both investment-grade and non- investment grade credit. The investment-grade exposure remains low-duration, a positive during the year, while the non-investment grade allocation outperformed on rising credit markets.
Cash	7.1%	0.0%	Cash has remained relatively steady for the past several years, above our targets due to continued distributions from private funds. The snapshot of cash at year- end is high due to these distributions, and cash is being redeployed into new or existing funds over time. The cash overweight balances the overweight in marketable equity and underweight in marketable alternatives, to enable us to remain at a desired level of portfolio equity beta.

Time to Reflect

When we gathered the reconstituted Investment Committee after the global financial crisis to examine our policies and processes, we spent an extensive amount of time reviewing best practices, discussing our investment principles, and developing our current approach to managing the endowment. In the years since, we followed a methodical approach to re-engineering the portfolio and our investment approach, across governance, portfolio management, and investment operations. This approach was guided by a long-range action plan we developed back in 2009-2010. At a high level, this plan included specific objectives around investment and asset allocation

policy, benchmarks and rebalancing processes, resourcing the Investment Committee and Investment Office, and standardizing meetings, research processes, and investment reviews. Furthermore, an additional objective was to enhance communications and reporting, for those involved in decision-making on the portfolio (Investment Committee and Staff), those who oversee the financial operations of the College (Board and Administration), and the Haverford Community at large.

While the objectives of that plan have been achieved in recent years, along with a multitude of other activity along the way, the endowment management process is something that is never finished. We are always in search of strategies that are additive to the portfolio; and governance and operational aspects of endowment management are constantly evolving. However, we are moving from a transitional/development period into a maintenance and optimization period. We have developed strong policies, relationships with excellent fund managers, a robust research process, and a well-functioning investment decision-making process, combining Committee, Staff, and external resources. However, we cannot rest on what we have achieved over recent years, but rather we must maintain what we have built and seek further improvement as we optimize the endowment portfolio and our investment resources. With respect to reflection and planning for the next five-to-ten years, we will be having discussions with the Investment Committee and College administration over the course of the coming year; of primary importance is the question of how the investment management function at Haverford should continue to evolve over time in conjunction with, and in support of, the College's outstanding academic program.

<u>A Final Word</u>

We always highlight the expertise and relationships that the Investment Committee brings to endowment management, and this year is no different. In fact, each of three recent funds in which we have invested was introduced to us by a different Investment Committee member. These funds are hard-to-access funds, which Haverford likely would not have been able to access without these introductions. Regardless how or from whom a fund is sourced, every fund in which we invest goes through extensive Investment Office-led due diligence to ensure that every fund meets our requirements for investment and is without conflicts of interest. We thank the Committee for these introductions, along with the ongoing engagement in overseeing the portfolio.

In terms of the current market environment, at a recent Investment Committee meeting, the group was lamenting the lack of attractive areas for investment these days. While we do not seek to time markets or invest based on any macro perspective, we do understand how high valuations across the globe and across asset classes typically mute prospective returns. Yet, we recently recommended and received Committee approval for five new funds in the endowment. While these statements may sound counterintuitive, we will continue to invest with our long-term perspective, with attractive investment managers such as these – a severely access-constrained lower middle-market equity fund, which we were able to leverage a Committee relationship for access; an oversubscribed middle-market private equity fund with which the Investment Office has maintained a relationship for several years to secure access; a niche private real estate fund that operates in a highly-inefficient area of the market; a non-U.S. equity fund focused on an inefficient area of the equity market in which the manager brings a significant informational advantage; and a highly-diversifying fund that complements the existing portfolio. We expect all of these new

funds to be long-term relationships and to generate strong long-term performance regardless of what the near-term brings.

As always, we also thank all of the people of the Haverford community, each of whom makes the College the extraordinary place that it is.

With appreciation for your continued support,

Michael H. Casel, CFA, CAIA Chief Investment Officer Haverford College Roger Kafker '84 Chair of the Investment Committee Managing Director TA Associates

Investment Committee of the Board of Managers

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Narv Narvekar '84	Rick White '81 (Chair of Board of Manage	

Chief Executive Officer Harvard Investment Management Company MBA, Wharton School, Univ. of Penn. Rick White '81 (Chair of Board of Managers) Managing Partner Minot Capital, LLC

Haverford College Investment Office

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