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DEMYSTIFYING ENDOWMENTS¹

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EXECUTIVE SUMMARY

Endowments are stocks of financial and real assets held by colleges and universities to generate income for current and future operations. The perception of endowments as saving accounts that can be used for whatever purpose institutions wish is incorrect, however. Donors often place specific restrictions on the use of their gifts. Historically, only the cumulative sum of income plus capital gains generated could be spent over time.

An endowment's portfolio must be allocated for long-run investment returns and also for short-term liquidity to meet cash flow needs, but this has proven challenging in the current economy. Higher education endowments reported an average rate of return of -3.0% for fiscal year 2008. Subsequently, from July to November 2008, endowment investment returns fell an additional 22.5%. Historically, colleges and universities have sought to smooth the flow of endowment spending over time, but such policies never envisioned a decline in investment returns of the type the economy is now experiencing. Twenty-seven percent of colleges and universities expect to decrease their endowment spending rates for the remainder of fiscal year 2009 in response to declines in

endowment market values and 17% expect to decrease fiscal year 2010 endowment spending rates. Reductions in endowment spending invariably affect all operations of a college or university, not just the activities that are financed by the endowment. Large declines in endowments have led to budget cuts, salary freezes, cuts in employment levels, and slowing or stopping building projects throughout higher education; institutions that cover relatively large shares of their budgets from their endowments have been impacted more. Since 2006, 37 states and the District of Columbia have allowed some spending from an endowment to still occur when its market value falls below the value on the date it was established. Among colleges, universities and affiliated foundations in these states, 31% have continued distributions from such "underwater" endowments in keeping with their normal spending rule compared with 27% that have suspended distributions.



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1 This report is based on an article that appeared in *Cornell Alumni Magazine*, March/April 2009.

INTRODUCTION

College and university endowments have received much attention over the past few years. Last academic year, the U.S. Senate Finance Committee launched an investigation into the finances of colleges and universities with endowments exceeding \$500 million and required the institutions to file reports detailing their finances. Underlying this investigation was the belief among some that colleges and universities should be spending more from their endowments to increase institutional financial aid budgets and limit tuition increases.

This year, decreases in the financial markets and reported large declines in the values of endowments at many institutions have led to numerous reports about how colleges and universities are slashing budgets, freezing faculty and staff salaries, cutting faculty and staff employment levels (often by attrition, but sometimes by layoff), and slowing down or stopping building projects. In spite of all of this attention there is a general lack of understanding regarding endowments—what they are, how they are used, how they are invested and the investments managed, how decisions are made regarding how much to spend from them, and why the reported declines in endowment values are having such profound effects on higher education. This paper addresses such issues.

ENDOWMENT BASICS

Endowments are stocks of financial and real assets that are held by colleges and universities to generate income for both current and future operations. “True endowments” are assets that at the time given to the college or university were specified by the donor to be held by the institution in perpetuity. Historically, only the cumulative sum of income plus capital gains generated for the institution could be spent over time. However, recent law changes in a number of states (discussed below) now allow for some spending from an endowment to occur when it’s principal is “underwater,” i.e., below the value on the date it was established. When endowment values are publicly reported by colleges and universities they usually include “funds functioning as endowments” as well as true endowments. These are funds that the institution has decided to treat as if they were endowments, but if the needs of the institution ever require, it is free to spend the principle of these funds.

It is useful to think of an endowment as a mutual fund (and indeed some college and university endowments are structured in this way). A donor makes a gift to the endowment which buys a number of shares in the endowment. Over long periods of time when average returns have been positive, the restriction that the initial principle of a true endowment can not be spent is usually not a constraint on university spending from its endowment. However, when endowment values decline rapidly, as they have over the past year, this restriction may well be binding for recently received endowments whose current value has fallen below the value when they were received by the college or university. Under this circumstance no expenditures can be made from these endowments until they regain their original values, except under certain conditions now allowed in numerous, but not all, states.

While there is often a perception of endowments as saving accounts that can be used by colleges and universities for whatever purpose they wish, this is not the case. Donors often place very specific restrictions on the use of their gifts. Whether or not these restrictions really are constraints on what the institution does depends upon the nature of the activity and the nature of the restriction. For example, suppose a donor provides an endowment to support undergraduate financial aid and the sum of the institution’s endowments earmarked for this purpose finances a level of financial aid expenditures less than the amount that the college or university plans to award. In this case the restriction on the use of the donor’s endowment for financial aid is not an actual constraint on institution behavior. Similarly, if a donor provides an endowment to support an endowed professorship in a particular discipline and the college or university would have employed at least one professor of that discipline anyway, then that endowment does not restrict the institution’s behavior. In contrast, if a donor provides an endowment to hire a professor who studies

a particular issue and in the absence of that endowment the university would not place a high priority on employing faculty with interest in the issue, then the endowment truly is a constraint both legally and in practice. Not surprisingly, colleges and universities try to encourage donors to make the allowable uses of their endowments as broad as possible.

According to the 2008 NACUBO Endowment Study (NES), the mean and median market value of the assets held by college and university endowments as of June 30, 2008 was \$522 million and \$88 million, respectively (Table 1.) Large endowments dwarf these figures, however, and even among the 20 largest endowments by asset size there are substantial differences. Harvard has the largest endowment in higher education at \$36.6 billion which is eight times the size of the endowment at the University of Virginia which is the 20th largest at \$4.6 billion. Controlling for the size of the student body (both undergraduate and graduate students) changes relative picture; Princeton has the largest endowment per student, while Harvard drops to third behind Yale.

TABLE 1
MARKET VALUE OF ENDOWMENT ASSETS, 2008

RANK	INSTITUTION	TOTAL ('000S)	PER STUDENT
1	Harvard University	\$39,556,584	\$1,861,000
2	Yale University	22,869,700	2,024,000
3	Stanford University	17,200,000	1,170,000
4	Princeton University	16,349,329	2,229,000
5	University of Texas System	16,111,184	85,000
6	Massachusetts Institute of Technology	10,068,800	985,000
7	University of Michigan	7,571,904	184,000
8	Northwestern University	7,243,948	275,000
9	Columbia University	7,146,806	315,000
10	The Texas A&M University System and Foundations	6,659,352	64,000
11	University of Chicago	6,632,311	447,000
12	University of Pennsylvania	6,233,281	315,000
13	University of Notre Dame	6,225,688	531,000
14	University of California	6,217,340	33,000
15	Duke University	6,123,743	455,000
16	Emory University	5,472,528	429,000
17	Cornell University	5,385,482	260,000
18	Washington University	5,350,470	432,000
19	Rice University	4,610,164	721,000
20	University of Virginia	4,572,613	231,000
	Full Sample Average	521,913	
	Median	88,028	

Source: 2008 NACUBO Endowment Study, National Association of College and University Business Officers.

ENDOWMENT INVESTMENTS

Investment returns depend upon general market conditions and the skills of the people managing the investments. Investment policy is set by an endowment's investment committee (or similar entity) and covers items such as portfolio diversification across broad asset classes and periodic rebalancing of the portfolio to take account of changes in the shares of the portfolio in different classes that have occurred due to differences in asset class returns and to take account of judgments regarding likely future returns across asset classes. An investment committee does not actually manage the money; the vast majority of assets are managed by external investment fund managers.

Table 2 shows average asset allocations in college and university endowments. Differences by endowment size are readily apparent. In particular, larger endowments tend to invest larger percentages of assets in hedge funds (investments open to a limited range of investors that often may be leveraged and that can use short selling and hedging methods), private equity (equity in operating companies that are not publicly traded), real estate, natural resources and venture capital. Smaller endowments invest relatively more of their assets in equities, fixed income products and cash instruments. If one had looked at college and university endowments 25 years ago, they would have been invested in a narrower set of assets—primarily domestic and foreign equities, bonds, real estate and cash. The inclusion of the broader range of asset classes in endowments today derives from the increasing sophistication of money managers and the broader range of investment vehicles that are now accessible.

TABLE 2
ENDOWMENT AVERAGE ASSET CLASS ALLOCATIONS

INVESTMENT POOL ASSETS	EQUITY	FIXED INCOME	REAL ESTATE	CASH	HEDGE FUNDS	PRIVATE EQUITY	VENTURE CAPITAL	NATURAL RESOURCES	OTHER
Greater than \$1 Billion	39.4%	10.8%	6.4%	1.4%	22.6%	10.0%	3.6%	5.3%	0.5%
> \$500 Million to ≤ \$1 Billion	42.5	14.6	6.1	1.9	19.2	7.7	2.8	3.5	1.7
> \$100 Million to ≤ \$500 Million	50.4	16.5	4.1	2.5	16.4	4.3	1.2	3.0	1.7
> \$50 Million to ≤ \$100 Million	54.1	20.3	4.2	4.4	11.5	1.8	0.5	1.9	1.4
> \$25 Million to ≤ \$50 Million	57.6	20.8	4.1	3.4	10.4	1.0	0.3	1.2	1.1
Less Than or Equal to \$25 Million	55.9	27.1	2.2	8.1	3.3	0.6	0.3	0.4	2.1
Equal-weighted Average	51.9	19.2	4.1	3.9	12.9	3.3	1.0	2.2	1.5
Dollar-weighted Average	40.0	13.1	6.5	0.5	21.0	8.4	3.2	6.5	0.9

Source: 2008 NACUBO Endowment Study, National Association of College and University Business Officers.

An endowment's portfolio must be allocated in a way that makes sense for the long-run investment returns and that also provides liquidity for short-term cash flow needs. This has proven extremely challenging in the current economy. During the financial meltdown the need for liquidity has been exacerbated because a decline in asset values can potentially lead to pressure to sell assets for short-term reasons (such as to raise cash to meet endowment spending needs) even if such sales are not consistent with the endowment's long-term investment strategy. In addition, investments in some asset classes may include commitments by the institution to provide additional investment dollars if requested and limitations on the institution's ability to rapidly withdraw funds. In the current environment some institutions have taken out substantial taxable long-term debt as a way to ensure their liquidity and also to protect themselves from having to sell endowment assets that they believe will generate returns exceeding the borrowing costs over the long-run.

The expansion of endowments into a broad range of alternative investments was an effort by colleges and universities to increase their average rates of return without increasing the riskiness of their portfolios. According to the 2008 NES, higher education endowments reported an average rate of return of -3.0% for the fiscal year ending June 30, 2008 (Table 3). From July to November 2008, the first five months of FY09, endowment investment returns fell an additional 22.5%.² While college and university endowments were affected by overall market conditions, they generally outperformed the market; during fiscal year 2008 the Standard and Poor's 500 Index declined 13.3%, and from July 1 to November 30, 2008, the S&P 500 fell an additional 29.3%.

TABLE 3
ENDOWMENT AVERAGE INVESTMENT RETURNS

INVESTMENT POOL ASSETS	FY 2008	JULY THRU NOVEMBER 2008
Greater than \$1 Billion	0.6%	-20.5%
> \$500 Million to ≤ \$1 Billion	-1.9	-22.2
> \$100 Million to ≤ \$500 Million	-2.9	-23.5
> \$50 Million to ≤ \$100 Million	-3.2	-22.1
> \$25 Million to ≤ \$50 Million	-4.3	-23.1
Less Than or Equal to \$25 Million	-4.1	-21.4
Equal-weighted Average	-3.0	-22.5
Dollar-weighted Average	1.7	na
Median	-3.3	na

Sources: 2008 NACUBO Endowment Study, National Association of College and University Business Officers; 2008 NACUBO-Commonfund Endowment Study Follow-up Survey, National Association of College and University Business Officers and Commonfund Institute.

Notes: The fiscal year 2008 study includes data from 796 colleges and universities in the United States and Canada. The follow-up survey includes 435 institutions that responded to the original study. "na" designates data not available.

² See 2008 NACUBO-Commonfund Endowment Study Follow-up Survey, National Association of College and University Business Officers and Commonfund Institute, 2009.

How recent history will affect the investment allocation of endowment assets in higher education is an open question, but it is important to emphasize a fundamental rule about investments—past performance of an asset class only matters to the extent that it is believed to be an indicator of future performance given perceptions of market conditions.

SPENDING DECISIONS

The share of a college or university's operating budget that comes from its endowment depends upon, among other things, its endowment's value, the spending rate from its endowment, and its other sources of revenue. According to the 2008 NES, the average spending or payout rate (spending from the endowment as a share of beginning fiscal year market value) during fiscal year 2008 was 4.6% (Table 4). Over the period 1999-2008, the average spending rate increased from 4.5% in 1999 to a high of 5.1% in 2003 from which it decreased to its 2008 level. Payout rates tend to be lower at institutions with larger endowments because they do not need to generate as much spending from each dollar of their endowment to support current operating budgets. In 2008, the average spend rate among endowments with assets greater than \$1 billion was 4.3% compared with 4.8% for endowments with assets of \$25 million or less; this relationship held in 7 out of the 10 years between 1999 and 2008 (Table 4.) Given the return on an endowment and the new gifts it receives, lower spending rates lead to higher rates of growth for the endowment; this in turn leads to increased disparity in endowment wealth among colleges and universities over time.

TABLE 4
AVERAGE ANNUAL ENDOWMENT SPENDING RATES, 2008-1999

ENDOWMENT ASSETS	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
Greater than \$1 Billion	4.3%	4.4%	4.6%	4.7%	5.2%	5.3%	5.1%	4.2%	4.2%	4.2%
> \$500 Million to ≤ \$1 Billion	4.4	4.4	4.5	4.8	5.2	5.3	5.1	4.5	4.5	4.3
> \$100 Million to ≤ \$500 Million	4.5	4.5	4.6	4.7	4.9	5.2	5.1	4.9	4.6	4.5
> \$50 Million to ≤ \$100 Million	4.7	4.8	4.7	4.7	4.9	5.2	5.3	5.3	5.1	5.0
> \$25 Million to ≤ \$50 Million	4.6	4.8	4.8	4.7	4.8	5.0	4.9	4.9	4.7	4.6
Less Than or Equal to \$25 Million	4.8	4.6	4.6	4.8	4.6	4.8	4.7	4.9	4.6	4.5
Full Sample	4.6	4.6	4.7	4.7	4.9	5.1	5.0	4.9	4.6	4.5

Source: 2008 NACUBO Endowment Study, National Association of College and University Business Officers.

How does a college or university decide how much to spend from its endowment? It must balance the needs of the current generation with the needs of the future. To provide future generations with protection against inflation, the endowment for a specific funded activity must grow over time by the average rate of inflation faced by the university. If the percentage investment return from the endowment (net of investment costs and the administrative costs associated with the endowment, including stewardship requirements such as reports to donors) was constant over time, as was the rate of inflation faced by the university, then to preserve the real purchasing power of endowment spending, the payout rate should be set equal to the difference between the endowment's investment return and the rate of inflation faced by the university. Over long periods of time, this difference has typically been in the range of 4 to 5%, sometimes higher.

Investment returns are not constant and endowment values do not grow smoothly over time, however. If institutions based their spending each year only on the beginning of year market value of their endowments, their spending from the endowment would fluctuate wildly over time. To try to "smooth" out the flows of spending coming from

the endowment, most institutions apply a desired spending percentage to the average value of their endowment over a number of quarters (often twelve).

Such smoothing rules never envisioned, however, a decline in investment returns of the type our economy is now experiencing. If for example, the endowments of colleges and universities wind up falling by 33% this fiscal year and then stay flat for two more years, by the third year spending from an endowment that followed a “twelve quarter” rule would have declined by 33%. Colleges and universities do not have the option of cutting back their expenditures on the activities supported by an endowment by such an amount. For example, if spending from an endowment covered the cost of an endowed professor’s salary, the reduced spending from the endowment over the three year period would require the college or university to finance part of the professor’s salary (and any salary increases granted over the three year period) from other funds. Or depending on an institution’s financial aid policies, if the spending from endowments dedicated to financial aid declines, the institution may have to make this up by spending more of its unrestricted operating funds (primarily tuition revenues) on financial aid. Reductions in endowment spending will invariably affect all operations of a college or university and lead to reductions throughout the institution, not just in the activities that are financed by the endowment. For an institution that obtains about 10% of its budget from endowment income, a 33% reduction in endowment spending would create approximately a 4% budget gap. For an institution that gets 45% of its budget from its endowment, the budget gap would be 15%.

Institutions that cover larger shares of their budgets from their endowments are naturally impacted more in the short run by the tremendous fall in endowment values that has occurred over the past year. Generally, these are the institutions that have larger endowments. At the same time, institutions with larger endowments tend to have lower spending rates and thus have somewhat more leeway to increase payout rates to partially offset the decline in endowment market values.

According to the 2008 NES follow-up survey, 61% of colleges and universities do not expect to change their endowment draw for the remainder of fiscal year 2009 in response to the declines in endowment market values, 27% expect to decrease their draw amounts, 1% expect to increase their draws and 12% are uncertain. Institutions with larger endowments were somewhat less likely to expect to decrease their draws. As for anticipated changes to fiscal year 2010 endowment spending rates, 45% of higher education endowments do not expect to change their endowment draw, 17% expect to decrease it, 4% increase it, and 35% are uncertain.³

A recent survey by the Association of Governing Boards of Universities and Colleges (AGB) addressed management of “underwater” endowments, i.e., endowments whose market value has fallen below the original gift value. Since 2006, 37 states and the District of Columbia have adopted the Uniform Prudent Management of Institutional Funds Act (UPMIFA), with legislation introduced in 10 other states. UPMIFA provides boards with greater flexibility to distribute funds from “underwater” endowments, but it also challenges them to rethink endowment spending practices that may have remained more or less unchanged for decades. AGB concludes that UPMIFA has “significantly enhanced the ability of colleges, universities, and other charities to provide sustained funding for endowed purposes during the current financial crisis and has encouraged boards to strengthen their processes for determining prudent endowment spending.” Specifically, the survey found that among colleges, universities, and affiliated foundations in states in which UPMIFA has been enacted, 31% are continuing distributions from underwater endowments in keeping with their normal spending rule compared with 27% that are suspending distributions. In addition, 10% are distributing only interest and dividends, and 16% are making distributions at a rate less than their normal spending rule but more than interest and dividends.⁴

³ The survey was conducted in December 2008.

⁴ See *Management of Underwater Endowments under UPMIFA: Findings of a Survey of Colleges, Universities, and Institutionally Related Foundations*, Association of Governing Boards of Universities and Colleges, 2009.

Colleges and universities with large endowments heard a lot of criticism during the booming markets of the 1990s and most of the first decade of this century because a spending rule of, say, 5% of the average value of the endowment when market values are rapidly increasing will lead to a much lower spending percentage out of the current endowment value over a number of years. Perhaps because of this criticism, or because colleges and universities realized that they faced important needs for additional funds to improve financial aid programs and for strategic academic priorities, a number of institutions decided to discretely “jump” their payout rates several times over the past two decades to move them closer to their desired spending rate as a function of the current value of the endowment. In retrospect, these institutions might have been better served if they had stuck to their spending rules.

Even if an endowment is a restricted endowment, an increase in the endowment spending rate may benefit activities of the institution other than the one the endowment is supporting because endowments sometimes fail to provide enough spending to support the total cost of the designated activity. For example, the spending from a restricted endowment for a professorship may not provide enough resources to cover the cost of the professor’s salary and benefits; if this occurs, part of the cost of the professor must be covered by the institution’s unrestricted revenues. Thus if the spending rate is increased, the college or university can reduce its support of the professor from unrestricted revenues and use the savings achieved for other purposes. Institutions try hard to only accept new restrictive endowments whose spending will cover the entire cost of the activity.

CONCLUDING THOUGHTS

Wide fluctuations in market valuation call into question whether the spending rules of college and university endowments need to be altered. For example, wide fluctuation in endowment values may suggest the need to base spending on a longer period of endowment values to provide less variability in the flow of spending. A few institutions already do this. The University of Michigan, for example, with the 7th largest endowment in the country, spends 5% of a seven year average of its endowment value, up to a maximum of 5.3% of the current value of its endowment. The downside of basing spending rules on longer historical periods is that during prolonged upswings in market valuations (such as that experienced during most of the past 20 years), spending as a share of the current value of the endowment will fall below the target percentage share and public criticism may mount that colleges and universities are not spending enough. But, again in retrospect, it may be make sense for colleges and universities to take this heat and base spending decisions on longer averages of endowment values.

It should also be noted that during prolonged upswings such a spending policy would disadvantage the current generation of students relative to future generations and the resulting low spending rates as a share of the current value of endowments would likely discourage giving for endowments. To achieve intergenerational equity, it would be essential for colleges and universities to focus more of their efforts on developing increased annual flows of unrestricted giving to support current operations.

Colleges and universities are likely to find that they have reached a turning point and they will not have the flexibility to keep increasing tuition at rates substantially faster than the rate of growth in family income as they have in the past. Thus developing increased flows of philanthropy to fund current operations, to help fund capital projects and to build endowments is likely to be increasingly important if they are to continue to prosper. It is likely that increased flows of philanthropy will be contingent upon institutions demonstrating to potential donors that they are good stewards who use such funds wisely.

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Ronald G. Ehrenberg is the Irving M. Ives Professor of Industrial and Labor Relations and Economics at Cornell University and a Stephen H. Weiss Presidential Fellow. He also is Director of the Cornell Higher Education Research Institute and is an elected member of the Cornell Board of Trustees. In May, 2009, Governor Paterson nominated him for membership on the SUNY Board of Trustees. From July 1, 1995 to June 30, 1998 he served as Cornell's Vice President for Academic Programs, Planning and Budgeting. A member of the Cornell faculty for 33 years, he has authored or co-authored over 120 papers and authored or edited 21 books. He was the founding editor of *Research in Labor Economics*, and served a ten-year term as co-editor of the *Journal of Human Resources*. He is a research associate at the National Bureau of Economic Research, a research fellow at IZA (Berlin), and a fellow with the TIAA-CREF Institute. Ehrenberg has served as a consultant to faculty and administrative groups and trustees at a number of colleges and universities on issues relating to tuition and financial aid policies, faculty compensation policies, faculty retirement policies, and other budgetary and planning issues. Ehrenberg received a B.A. in mathematics from Harpur College (SUNY Binghamton) in 1966, M.A. and Ph.D. in economics from Northwestern University in 1970, and an Honorary Doctor of Science from SUNY in 2008.