

Endowment Spending: Building a Stronger Policy Framework

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Introduction

A large and growing body of work exists on the subject of endowment investing, but the equally important topic of endowment spending is treated less often. While the degree to which endowed institutions depend on their endowment for budgetary support varies widely, the market crisis of 2008–2009 demonstrated that failure by the endowment to provide the expected level of cash support to the institution's operating budget can seriously undermine the mission—and, perhaps, the viability—of the institution. Yet the two major market declines of the last decade have also exposed significant weaknesses in prevailing endowment spending policies and practices, as spending methodologies have failed to protect endowed institutions against excessive volatility in the financial support they obtain from their endowments.

Most nonprofits' spending policies are based on a methodology first developed in the late 1960s, which had as its goal the dampening of volatility in spending. Under this method, dollars available for spending are determined by applying the endowment's policy spending rate (typically between 4.0 percent and 5.5 percent) to a moving average of the beginning-period market values of the endowment over a defined past period—most often three years or 12 quarters, though five years and 20 quarters are also used. While this moving average method does achieve some smoothing in the volatility of the amount available for spending, its use of the market value of the endowment as the basis for calculation is a flaw that is not easily remedied: when endowment values are strongly rising, the institution may spend more than is prudent, increasing nominal spending over the rate of inflation, and when endowment values are falling sharply, the formula will dictate budget cuts that may impair the institution's mission.

This paper will analyze and discuss the following issues, using data from the 2009 NACUBO-Commonfund Study of Endowments® (“NCSE”), a comprehensive survey of financial, investment and governance practices at 842 colleges and universities:

- What is the current state of endowment investment and spending practice?
- What are the key variables in endowment spending?
- What are the emerging trends in spending rates and policies?
- What role is played by other sources of funds such as gifts and government funding?
- What alternatives to current practice are available?
- What are the implications for future spending practices?

Endowment Investment and Spending Practice: The Current Environment

Background. Beginning in the 1950s and continuing through the 1970s, the development of modern portfolio theory laid the underpinnings for contemporary investment practice. These included recognition of the role that diversification can play in increasing long-term return while decreasing portfolio volatility, acknowledgment of the corrosive effects of inflation, and the consequent demotion of fixed income securities, which had previously served as the anchors of investment portfolios, in favor of equities. Beginning in the 1980s, less-liquid investment strategies such as private capital, natural resources and marketable alternative securities were introduced in order to obtain further diversification benefits while enhancing total return. These advances, taken together, demonstrated that perpetual investment pools could strive for long-term growth that would exceed the total of spending and costs plus inflation while keeping volatility within acceptable limits.

Contemporary investment practice embodies these principles, viewing the endowment as a perpetual resource for the mission of the institution. While its value should, in principle, be maximized over the long term, preferably in excess of inflation after costs and spending, its nominal amount may fluctuate over time due to investment results or spending choices. The goal of maintaining the fund's original value when contributed (its "historic dollar value") is not a priority. Instead, the preservation of purchasing power over time is on a par with mission support and, within this framework, flexibility of spending and investment is permitted: the institution may spend less in good times in order to grow the endowment, while spending more in bad times to support the institution's mission. This is the model that is prevalent among perpetual funds today, particularly larger funds.

Investing under UPMIFA. The legal structure for institutions that have adopted this model is contained in the Uniform Prudent Management of Institutional Funds Act ("UPMIFA").¹ The key principle underlying UPMIFA is that the board of an endowed nonprofit should, in the absence of specific donor instructions, be able to "invest in any kind of property or type of investment"² and spend the endowment in a flexible fashion, even to the extent of spending from a fund that has fallen below its historic dollar value. This freedom is constrained by specific guidelines set forth in the statute, and by an overarching standard of prudence.

Diversification of the investment portfolio is required by UPMIFA, unless the board reasonably determines that, because of special circumstances, the purposes of the fund are better served without diversification.³ Furthermore, management and investment decisions must be made in a portfolio context, as part of an overall investment strategy with risk and return objectives reasonably suited to the fund and the institution in question.⁴ Board or investment committee members with particular expertise are required to use that expertise in managing the funds; otherwise, they are held to the standard of expertise they actually possess.⁵

1 Enacted in 46 states, the District of Columbia and the U.S. Virgin Islands, and introduced in the legislatures of a further two states as of this date. For more information on the law, see <http://www.upmifa.org>.

2 UPMIFA §3(e)(3). http://www.law.upenn.edu/bll/archives/ulc/umoifa/2006final_act.pdf, p. 12.

3 *Ibid.* §3(c)(4), p. 13.

4 *Ibid.* §3(c)(2), p. 12.

5 *Ibid.* §3(c)(6), p. 13.

UPMIFA contains a series of lists that establish specific standards to which boards must adhere. In managing and investing institutional funds, for example, a board must:

- consider the charitable purposes of the institution and the fund;
- act in good faith and with the care an ordinarily prudent person in a like position would exercise under similar circumstances;
- only incur costs that are appropriate and reasonable in relation to the assets, the purposes of the institution, and the skills available to the institution; and
- make a reasonable effort to verify facts relevant to the management and investment of the fund.⁶

There is a further list of specific factors that the board must consider (if relevant) when making investment decisions for the endowment:

- general economic conditions;
- the possible effect of inflation or deflation;
- tax consequences (if any) of investment decisions or strategies;
- the role that each investment or strategy plays within the overall portfolio;
- expected total return from income and appreciation of investments;
- other resources of the institution;
- needs of the institution and the fund to make distributions and preserve capital; and
- an asset's special relationship or special value, if any, to the charitable purposes of the institution.⁷

As can be seen from these citations, the investment guidelines of UPMIFA combine the diversification principles embodied in modern portfolio theory with the traditional prudential standards expected of fiduciaries.

Spending under UPMIFA. Subject to donor intent expressed in a gift instrument, UPMIFA permits an institution to appropriate for expenditure or accumulate as much of an endowed fund as the board deems prudent. This standard is supported by another list, this one of factors that the board must consider in making a decision to spend or to accumulate:

- the duration and preservation of the endowment fund;
- the purposes of the institution and the endowment fund;
- general economic conditions;
- the possible effect of inflation or deflation;
- the expected total return from income and capital appreciation;
- other resources of the institution; and
- the investment policy of the institution.⁸

6 Ibid. §3(a)-(c), p. 11.

7 Ibid. §3(c)(1)(A)-(H), p. 12.

8 Ibid. §4(a)(1)-(7), p. 19.

These factors are similar to the standards governing investing; the change in emphasis is mainly due to the difference between the longer-term considerations that the board must weigh in investing and the more immediate and mission-driven concerns that influence spending.

UPMIFA and intergenerational equity

In light of the abolition by UPMIFA of the concept of underwater funds, some have questioned whether the law is hostile to intergenerational equity—the principle that an endowment’s purchasing power should be maintained over time so that future generations are neither advantaged nor disadvantaged by today’s endowment spending. In fact, the commentary of the Drafting Committee for UPMIFA, which accompanies the model law, strongly supports the concept of intergenerational equity as a key test of honoring the intent of donors in creating endowed funds. In the comments accompanying Section 4 of the law, the Committee states:

UPMIFA requires the persons making spending decisions for an endowment fund to focus on the purposes of the endowment fund as opposed to the purposes of the institution more generally, as was the case under [the predecessor statute] UMIFA. When the institution considers the purposes and duration of the fund, the institution will give priority to the donor’s general intent that the fund be maintained permanently. Although the Act does not require that a specific amount be set aside as “principal,” the Act assumes that the charity will act to preserve “principal” (*i.e., to maintain the purchasing power of the amounts contributed to the fund*) [emphasis added] while spending “income” (*i.e., making a distribution each year that represents a reasonable spending rate, given investment performance and general economic conditions*).⁹

This language takes a position contrary to those commentators who have argued that endowments should spend more, even at the risk of losing purchasing power. Implicit in such arguments is the belief that the high rates of return experienced in recent decades are likely to return and continue, and the philosophical position that intergenerational equity should not be a goal of fiduciaries of endowed institutions. In addressing this latter concept, the UPMIFA drafters framed the text of Section 4 of the law in terms of honoring donor intent, stating clearly that:

Terms in a gift instrument designating a gift as an endowment, or a direction or authorization in the gift instrument to use only “income,” “interest,” “dividends,” or “rents, issues, or profits,” or “to preserve the principal intact,” or words of similar import [...] create an endowment fund of permanent duration unless other language in the gift instrument limits the duration or purpose of the fund.¹⁰

As this paper considers the relative merits of various spending rules, it will be appropriate to bear in mind this nationally-enacted statute which contemplates that endowed funds will generally be interpreted to be of permanent duration, and that investment and spending practices should be structured in such a way as to preserve their purchasing power over time. The strong implication of UPMIFA is that spending should be moderated during times of rising markets in order to preserve the ability to sustain mission support during times when markets are falling, thus limiting budget volatility and increasing the likelihood of achieving intergenerational equity.

9 Uniform Prudent Management of Institutional Funds Act (UPMIFA), Commentary to §4. http://www.law.upenn.edu/bll/archives/ulc/umoifa/2006final_act.pdf, p. 21.

10 UPMIFA §4(c). http://www.law.upenn.edu/bll/archives/ulc/umoifa/2006final_act.pdf, p. 20.

Volatility, Spending and Economic Utility Theory

Limiting volatility in spending has several benefits. Increased spending eventually loses its effectiveness as an organization is challenged to deploy each additional dollar as effectively as the last. Decreases in spending, however, impose organizational pain of increasing intensity, as missions become curtailed or are cut altogether. Thus, while increased spending is desirable up to a point, decreases are disproportionately painful.

In trying to quantify these feelings of pleasure or pain, economists speak of units of economic utility, or “utils,” associated with different types of economic events. Generally, individuals and organizations seek increases in economic utility and try to avoid decreases. But, because there are limits to the degree that increased spending can be productively used, at some point the utility curve that describes the relationship between increased spending and increased utility begins to flatten out. Put in economic terms, the curve becomes “kinked” as each increase in spending generates a decreasing amount of marginal utility.¹¹ Similarly, decreases in spending cause a fall in economic utility, but again the relationship is not strictly linear. Below a certain point, the pain resulting from spending reductions becomes so great that organizations will go to great lengths to avoid such cuts. Each decrease in spending subtracts an increasing amount from marginal utility.

In a recent article,¹² the question was posed: “How can nonprofits apply this utility curve to the design of a more effective spending policy—one that reduces the volatility of spending, mitigates the pain of deep cuts and manages to effectively balance the needs of today with the demands of future generations?” Much of the remainder of this paper is devoted to exploring potential solutions to this question. This economic theory, while seemingly bloodless and technical, goes a long way toward explaining why nonprofit organizations prize stability in dollar spending. Most of the spending formulas analyzed in this paper have as their goals the avoidance of volatility. But some accomplish that task better than others.

Current Endowment Spending Practice

With this description as background, we will now turn to an analysis of spending policies and practices at endowments. Supporting statistics are drawn from the 2009 NCSE and its predecessors, the Commonfund Benchmarks Study of Educational Endowments and the NACUBO Endowment Study. For ease of reference, a table showing the mathematical formulas for calculating spending under each policy may be found on the next page.

11 For a more complete discussion, see “Less pain, more pleasure: navigating the utility curve” by Verne Sedlacek, *Mission Matters* Winter 2010, pp. 5–11, at http://www.commonfund.org/InvestorResources/Publications/MissionMatters/MM10_Wntr.pdf.

12 *Ibid.*, p. 11.

TABLE A

Endowment Spending Rules Described

Category I: Simple Rules

Method	Description	Formula
Income-Based	Spend all current income.	
Decide on an appropriate rate each year		
Spend a pre-specified percentage of beginning market value		
Meet IRS minimum of 5 percent	For private foundations subject to this requirement.	

Category II: Inflation-Based Rules

Method	Description	Formula
Inflation-Protected	Grow distribution at a predetermined inflation rate.	Spending for Year X = Spending for Year X ₋₁ * [1+ rate of inflation]
Banded Inflation	Last year's spending plus an inflation rate, but bounded by upper and lower bands.	Spending for Year X = Spending for Year X ₋₁ * [1+ rate of inflation] but $\leq 6\% * \text{beginning period endowment value for Year X}$ and $\geq 3\% * \text{beginning period endowment value for Year X}$

Category III: Smoothing Rules

Method	Description	Formula
Moving Average	Pre-specified percentage of moving average of market value, typically based on a three-year or 12-quarter moving average of beginning market values.	Spending = r% * mean (x, y, z) Where r is the policy spending rate and x, y and z are beginning period endowment market values for fiscal years X, Y and Z
Spending Reserve	Segregate 5-10 percent of market value in separate account, invested in 90-day Treasury bills. Reserve is drawn down when endowment performance is less than policy target.	
Stabilization Fund	A fund created from endowment returns in excess of the target spending rate which is used to control the long run growth of the total endowment. The stabilization fund is invested alongside the endowment, but with a different (higher) spending rate.	

Category IV: Hybrid Rules

Method	Description	Formula
Weighted Average or Hybrid Method (Yale/Stanford Rule)	<p>Yale Rule: Spending is calculated by taking a weighted average comprising 80 percent of the prior year's spending adjusted for inflation and 20 percent of the amount that results when the endowment's policy spending rate is applied to the endowment market value.</p> <p>Stanford Rule: The calculation is weighted 60 percent on the actual payout from the prior year and 40 percent on the policy spending rate.</p>	$[w_1 * (s * [1 + i])] + [w_2 * (r * m)]$ <p><i>stabilizing factor</i></p>

$w_1 = 80\%$
 $w_2 = 20\%$
 $s = \text{last year's spending}$
 $i = \text{inflation}$
 $r = \text{policy spending rate}$
 $m = \text{last year's market value}$

Moving average. The most common spending policy, used consistently by about three-quarters of institutions over the last six years, employs a formula based on a percentage of a moving average of past beginning-period endowment market values, typically three years or 12 quarters but sometimes five years or 20 quarters. This methodology dates from the 1970s, when it represented an attempt to smooth out some of the volatility that would result from simply applying the policy spending rate to the endowment's market value each year. The implicit assumption underlying this method, and several of the other methods analyzed herein, is that excessive volatility in spending is undesirable, particularly for institutions that undertake multi-year programs such as grants or scholarships.

Inflation-based rules. A small group of institutions has chosen to control volatility by attenuating the link between their spending formula and the market value of the endowment. These institutions calculate their spending by taking last year's dollar amount and inflating it by either the Consumer Price Index ("CPI") or the Higher Education Price Index ("HEPI"),¹³ sometimes imposing upper and lower bands (for example, a low of 3 percent and a high of 6 percent of endowment value). Use of this rule tripled between FY2004 and FY2006, and has since remained stable at 3 percent. A further 1 percent of institutions simply grow the endowment distribution at a predetermined inflation rate.

Hybrids. Still another group of institutions takes a middle road between the moving average and banded inflation methods. These institutions, which tend to be more endowment-dependent, use a weighted average methodology in which the predominant weighting (for example, 80 percent) is given to the banded inflation method, with the remainder (for example, 20 percent) being calculated according to the moving average method. This technique, originated at Stanford University and used in various forms by other institutions such as Yale and Harvard, results in a reduced volatility of spending due to the lower reliance on market value-based calculations, while honoring the fact that market values do have an influence on the ability to spend. Use of this rule has risen from 4 percent in FY2004 to 6 percent in FY2009, but as noted above, it is more prevalent among the largest institutions: among those with assets above \$501 million, 12 to 15 percent of institutions use a hybrid method.

Other rules. Despite the prevalence of these rules designed to smooth spending amounts from year to year, a surprising proportion of institutions seem quite comfortable with volatility in spending. Nine percent report that they decide on an appropriate spending rate each year, a percentage that has remained relatively stable over the last decade. Similarly, 4 percent spend all current income each year. This is up from 2 percent last year, an increase that seems to be due to limitations on spending from underwater funds in states that had not yet adopted UPMIFA. Moving further out on the volatility curve, 4 percent of institutions simply apply their policy spending rate (in this case, an average of 4.9 percent) to the beginning-period market value for that year. This group has remained relatively stable in recent years. Many of these are institutions that are less endowment-dependent, and therefore perhaps better able to tolerate volatility in spending from year to year.

¹³ HEPI is calculated annually by Commonfund Institute, with forecasts from January through June each year and the final number in July. For more information about HEPI, see <http://www.commonfund.org>.

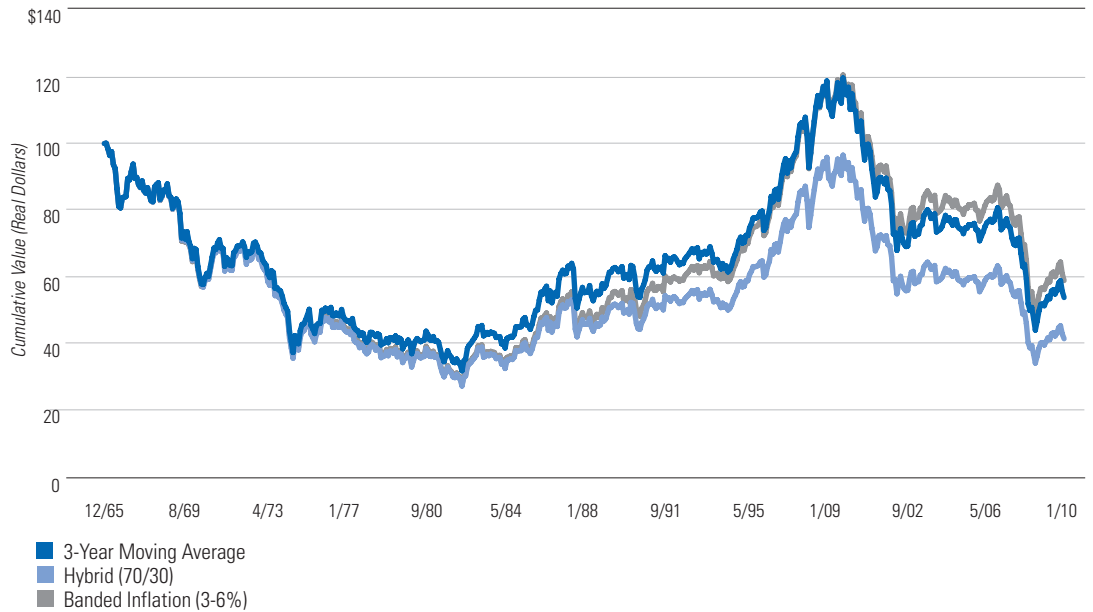
Analysis and Key Variables

Moving average method. While, as noted above, the moving average method has as its goal the dampening of volatility in spending, in practice the interaction of the rule with market values and the laws of compounding can lead to some unanticipated results. For example, when market values are rising faster than the institution's policy spending rate (typically around 5 percent), the unspent amounts are added to the endowment's value each year and become part of the base for the calculation of its market value in the following year. This compounding process results in an accelerating curve of upward spending during boom times, as the spending rate is applied to higher endowment values each year. This pattern can encourage a false sense of security and a misplaced belief that these higher spending levels are sustainable when, in fact, they are simply the result of the interaction of the formula with temporarily higher market values.¹⁴

FIGURE I

Cumulative Inflation-Adjusted Performance HEPI as Deflator

70% S&P 500/30% Barclays Aggregate/5% Policy Spending Rate
12/1965–1/2010



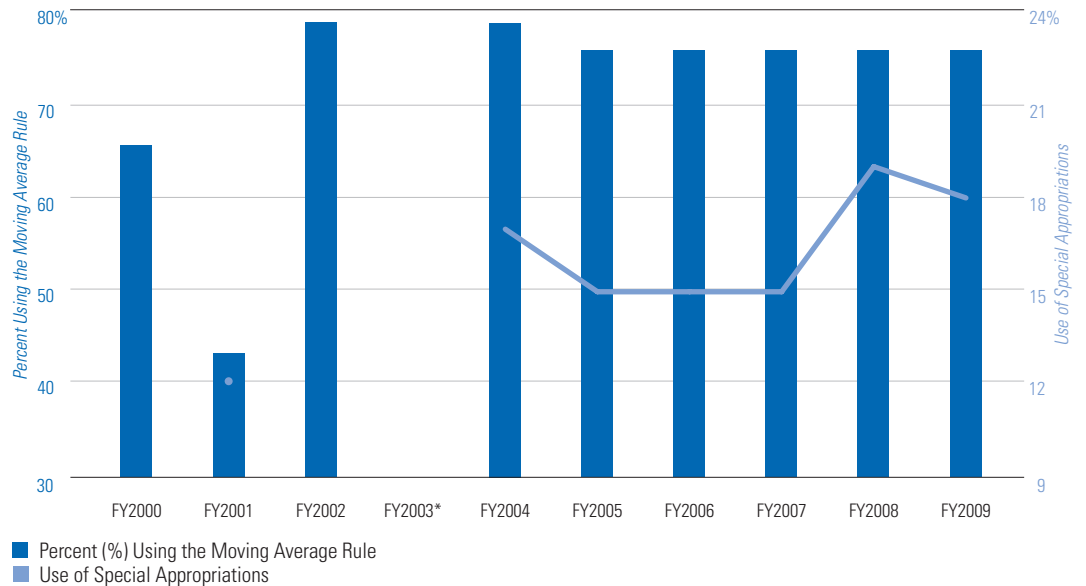
Conversely, when markets decline, the resulting shrinkage in endowment values leads the formula to demand cuts in spending. In moderately fluctuating markets, these changes are minor and are dampened by the three- or five-year averaging formula. When, however, markets decline sharply or for a prolonged time, as has happened on several occasions in recent decades, the formula quickly begins dictating cuts in dollar spending which can be very painful for an institution to implement, particularly over multi-year periods.

14 For an analysis of this issue, see the white paper "Why Do We Feel So Poor? How the Overspending of the '90s Has Created a Crisis in Higher Education" by Verne O. Sedlacek and Sarah E. Clark (Commonfund Institute, 2003), pp. 5–6 at <http://www.commonfund.org/InvestorResources/Publications/WhitePapers/WhyDoWeFeelSoPoor.pdf>.

Data from the NCSE and the Commonfund Benchmarks Study of Educational Endowments show that the level of adherence to the moving average rule by institutions fluctuates as markets move up and down—and that, for many, special appropriations from the endowment are used to cushion the blow from spending cuts demanded by the rule.

Sixty-five percent of institutions began the decade of the 2000s using the moving average rule. In the following 12 months, as the tech bubble burst and stock market valuations plummeted, institutions struggled with the formula. In the Study for FY2001, use of the moving average rule dropped to 43 percent, while the percentage reporting usage of an “Other” rule leaped to 24 percent from 7 percent. By FY2002, as the recession passed its midpoint, use of the moving average rule recovered strongly to 78 percent. At the same time, however, institutions began invading their endowment corpus to sustain spending, with 12 percent reporting that they had done so and an average of 6.8 percent of the corpus being spent. In FY2003’s Study, the spending formula question was not asked but 20 percent of respondents reported making changes to their spending policy during the year, which could imply that as many as three-quarters of that group, or 15 percent, moved away from the moving average rule. In the same fiscal year, in which the last six months of calendar 2002 saw the deepest point of the recession, 37 percent of respondents reported having made cuts to their operating budget. By FY2004, the market was recovering and the moving average rule re-established itself, with 73 percent of respondents reporting use of this methodology. The percentage of institutions reporting having made special appropriations to spending was only 17 percent. Usage of the moving average rule has remained in the 75 percent range since, while the incidence of special appropriations during FY2005–FY2007 hovered between 12 and 16 percent. In FY2008, however, as the recession hit and endowment values declined, use of special appropriations rose to 19 percent, and in FY2009 it remained high at 18 percent.

FIGURE II
Use of the Moving Average Rule and Use of Special Appropriations
 FY2000–FY2009



*Question not asked in FY2003 Study.

Source: Commonfund Benchmarks Study of Educational Endowments and NACUBO-Commonfund Study of Endowments

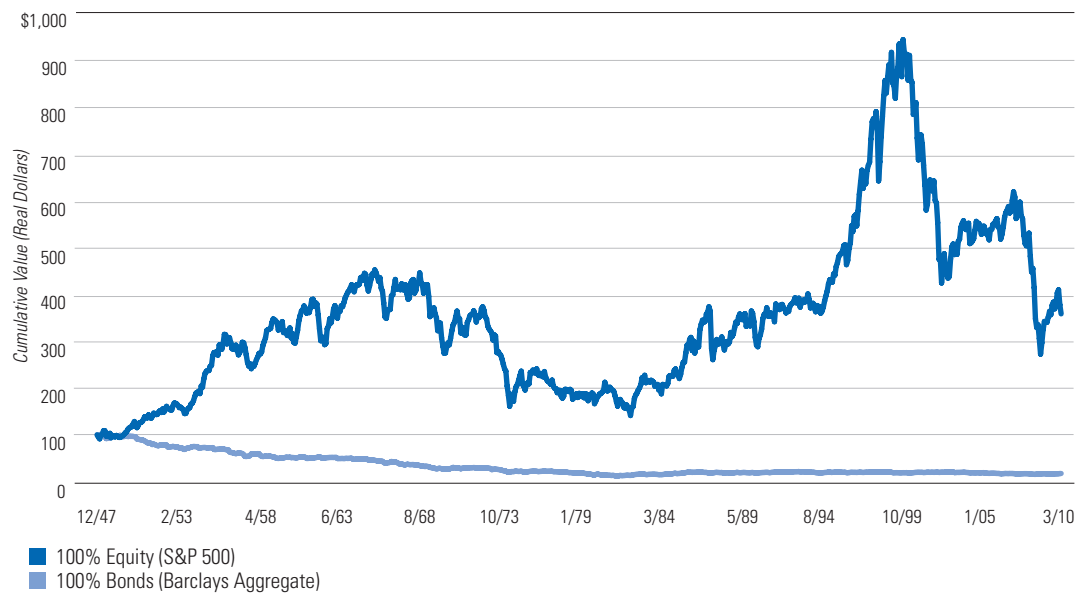
The implications of these data are that the moving average rule, while honored during upwardly-rising markets, poses challenges during market declines that are chiefly resolved by making budget cuts and special appropriations from the endowment corpus.

Prior to the passage of UPMIFA, spending from funds that were below their historic dollar value was limited in most states to current income, which would traditionally include dividends, interest, and rents and royalties such as would accrue from real estate or natural resources-based investments. This requirement placed significant restrictions on the ability of relatively new endowments, which lacked a cushion of accumulated gains, to continue spending. Now that UPMIFA permits such spending from these underwater funds (subject to requirements enumerated in the law), immediate cash needs may be satisfied—but the rule of prudence mandated by UPMIFA requires that these needs be balanced by equally important considerations of intergenerational equity.¹⁵

Banded inflation method. With this method, as we have noted, the calculation of the amount to be spent is partially severed from the market value of the endowment. This has three results, which illustrate the strong contrast between the banded inflation method and the moving average method:

- Institutions using banded inflation will spend less during rising markets than those using the moving average method. This is because, over time, it is expected that equity market returns will exceed inflation—indeed, by the logic of the capital markets system, they must. This reduced spending during good times enables the institution to retain prudent amounts in the endowment that can be used for operating budget support during times when markets are declining.

FIGURE III
Cumulative Inflation-Adjusted Performance
CPI as Deflator
 12/1947–3/2010



15 For a detailed discussion of spending under UPMIFA, and the accounting practice that institutions must follow to comply with the law, see “Freedom isn’t free” by John Griswold and William Jarvis, *Mission Matters* Spring/Summer 2009, pp. 2–8, at <http://www.commonfund.org/InvestorResources/Publications/MissionMatters/MissionMattersSpringSummer2009.pdf>.

- The banded inflation method allows the institution to spend more during down markets than the moving average method. This is because, by partially severing the spending formula from the endowment's market value, the banded inflation rule frees the institution from crippling budget cuts during periods of declining asset values. Yet because the amounts being spent come from the savings that were set aside during the periods of rising markets, the overall amount spent over time is not higher than that required by the moving average method, and may in fact be lower because of the compounding effect that pulls endowment values—and spending—up with that method.¹⁶
- An important potential negative factor with the banded inflation rule is that, in times of severe or prolonged market downturns, the increase indicated by the inflation formula may be capped by the 6 percent upper limit on spending. For example, in the case of a \$100 million endowment that spent \$5 million last year, has inflation of 5 percent but suffers a market decline of 15 percent, spending would normally be \$5,250,000 (i.e., $\$5,000,000 * 1.05$) but a 6 percent cap on spending will limit the actual draw to \$5,100,000 (i.e., $\$85,000,000 * .06$).
- Finally, and importantly, the banded inflation method is the least volatile, and most predictable, of methods. Institutional budgets are supported through bad times and good in real, after-inflation terms, enabling institutional leaders to plan over the long term. The lower band supports spending at a basic level in the event of a deflationary period; and if inflation increases, the upper band provides a cap on spending.

Hybrid method. As noted, this method is used most often by large endowments—15 percent of those with assets over \$1 billion, and 12 percent of those with assets between \$501 million and \$1 billion. It provides greater stability of dollar funding compared with the moving average method, while recognizing the fact that market values have an influence on the ability of the endowment to support the institution's mission.

In its operation, the hybrid method constitutes a middle road between those methods that are entirely based on endowment market values and those that ignore market values completely. Because it contains aspects of both methods, its effect on spending is also a moderating one. In strongly rising markets, spending under a hybrid method will not increase as fast as with a moving average rule. Conversely, in falling markets, a hybrid rule will not call for cuts as deep as the moving average method. If it has a heavy weighting toward the banded inflation formula, however, a hybrid rule may hit the 6 percent upper limit and spending may be dragged down with a strongly declining market. In addition, the total amount spent over time under a hybrid method will tend to be less due to the reduced spending that occurs in rising markets. As a result, the likelihood of maintaining purchasing power over time is somewhat higher with a hybrid rule.

¹⁶ Sedlacek and Clark, *op. cit.*, p. 6.

Other rules

- Deciding on an appropriate rate each year

As noted above, deciding on an appropriate rate each year is a surprisingly popular spending method, used by 8 to 9 percent of institutions in each year since FY2004. While all sizes of organization use this method, it is more prevalent among institutions with endowments under \$50 million. In support of this method, it can be said that it is highly responsive to the operational needs of the institution. Its use by an institution does imply, however, that the institution can tolerate the volatility that comes from having a different amount coming from the endowment each year. Such volatility requires a rational budgeting and spending process, and a management and investment team that can make difficult decisions in times of stress.

- Spending all current income

In considering the policy of spending all current income each year, we have already noted that one reason for adopting this policy might be spending restrictions relating to underwater funds. It appears, however, that, even under UPMIFA, which abolishes the concept of underwater funds, some institutions desire to restrain spending from funds that have diminished in value.¹⁷ It is important to note that the amount spent bears no relationship to the market value of the endowment.

Amounts unspent under this method—largely portfolio appreciation—are added to the nominal principal of the endowment. The result is that spending is lower under this method than other methods, being limited to the cash flow attributable to dividends, interest and other eligible payments.

This method may also be somewhat less volatile than that of choosing a rate each year, but the actual cash flows will depend on such factors as dividend payout amounts and interest rates on fixed income instruments.

- Spending a percentage of beginning market value

The characteristics of this method are similar to those of the moving average method, but here spending is more volatile due to the absence of any smoothing. Use of this method is therefore more often found among institutions that are less dependent on endowment spending, or where the endowment supports purely discretionary budget items.

The characteristic that all these methodologies share is a higher degree of volatility than the banded inflation and hybrid methods. Volatility in endowment spending, it goes without saying, can damage the institution's mission. Hiring surges and freezes, the crafting of ambitious building plans that then must be put on hold, the scramble to secure funding to sustain multi-year programs begun during boom times, and a lack of a secure stream of financial aid for current students—all of these are the undesirable results of excessive volatility. Minimizing such volatility, it seems, should be a greater priority, particularly at endowment-dependent institutions, than it has been historically.

¹⁷ See, for example, the 2010 study "Spending and Management of Endowments under UPMIFA" sponsored by the Association of Governing Boards of Universities and Colleges in partnership with Commonfund Institute (http://agb.org/sites/agb.org/files/UPMIFASurvey_2010_Web_0.pdf), where over one-third of respondents reported that they had discontinued spending or spent only dividends and interest from their underwater funds notwithstanding the elimination of the historic dollar value concept under UPMIFA.

How big should an endowment be?

Determining the “right” size for an institution’s endowment is not easy, but there are ways to approach the question from a logical point of view.

Revenue substitute

Essentially, the endowment substitutes for revenue that otherwise would have to come from outside the institution or from operating surpluses. To that extent, it can be used either to enable the institution to provide its core services or activities at a discount or to subsidize additional services or activities that do not attract revenue. Viewed in this way, the endowment should therefore generate sufficient returns to enable the institution to continue to provide these free or subsidized services into perpetuity, after accounting for inflation. This approach implies that the purpose of the endowment is to serve as a source of ongoing mission support for the institution and, by extension, serve the public benefit for which the institution was founded.

(continued on page 14)

In choosing among these varying spending methods, institutional priorities will obviously take precedence. In the world of foundations, for example, a family foundation, whose founder may be more concerned with maximizing the amount of dollars given and less interested in intergenerational equity, may choose to decide on an appropriate rate each year—as, indeed, some 24 percent of independent/private foundations do.¹⁸ The attraction of the moving average method is difficult to understand, since its smoothing effect is limited and the higher spending that it allows during rising markets does not assist in maintaining purchasing power over time.

Emerging Trends in Spending Rate and Policy

Effective spending rate and spending dollars

A nonprofit institution’s policy or target spending rate, which is set forth in its investment policy statement, typically falls between 4.0 and 5.5 percent of assets and is changed infrequently. The *effective* spending rate, which is derived by dividing the dollars actually spent in a given period by the endowment’s market value at the beginning of that period, is calculated annually and can vary considerably from the policy rate. The extent of that variation is largely determined by the spending rule used by the institution.

For example, when an institution spends a percentage of the endowment’s beginning-period market value and the rate spent is the same as its policy rate, the effective rate and the policy rate are the same. Other spending rules that are based in some fashion on the market value of the endowment (e.g., moving average or hybrid method) result in effective rates that differ from the policy rate to the extent that market returns and the policy rate are not the same.

For institutions that use a moving average spending rule, effective spending rates usually fall when market values rise strongly and, conversely, rise when market values fall. This is because the averaging effect causes the institution to increase spending somewhat less quickly than the market rises and decrease it somewhat less quickly than the market falls. For example, during the market downturn of FY2001–FY2002, investment returns were -3.0 percent and -6.0 percent, respectively. During the same period, effective spending rates rose to 5.1 percent from 4.8 percent.

In FY2009, the average effective spending rate was 4.4 percent overall, virtually unchanged from 4.3 percent in FY2008. This unexpected stability appears to have been due to cuts in dollar spending that were sufficiently steep to match the decline demanded by the moving average spending rule used by three-quarters of educational institutions. At institutions with larger endowments, the rate ranged from 4.6 to 4.9 percent, while at the smallest institutions it was 3.9 percent. Private institutions’ effective spending rate averaged 4.5 percent, while public institutions were generally lower, ranging from 3.7 to 4.5 percent.

¹⁸ 2010 Commonfund Benchmarks Study of Foundations, p. 68, Figure 5.4A. Private foundations must also, of course, observe the government-mandated minimum spending rate of 5 percent of assets.

(continued from page 13)

Rescue fund

A very different way of quantifying the “right” amount would be to determine the amount necessary to provide a draw sufficient to cover the institution’s operating expenses for one or two years. This formula implies that the purpose of the endowment is to serve as a rescue fund for the institution and not necessarily as a source of ongoing operational support.

Peer group comparison

A third, frequently-used metric is comparison with peer institutions. This can be helpful in determining optimal size; it can be challenging, however, to find true peers and the temptation always exists to reach for the larger institutions as peers, whether or not such comparisons are appropriate.

Each of these approaches should provoke debate and analysis of the appropriate spending rate and how it is derived—topics which are preeminently the purview of the board in its fiduciary capacity.

As would be expected from this discussion, in a declining market 43 percent of institutions increased their effective spending rates (a sharp increase from 20 percent the previous year) while only 25 percent decreased their effective rates (down from 42 percent in FY2008). This pattern prevailed across all sizes of endowment with the exception of the smallest institutions, where the proportions were reversed (presumably reflecting less endowment dependence and quick budget-cutting by these institutions).

Similarly, the proportion of institutions increasing their spending dollars declined to 54 percent from 69 percent in FY2008, while the incidence of institutions decreasing their spending dollars tripled, to 30 percent from 10 percent.

The average spending decrease, in dollar terms, was 21 percent, up sharply from 16.7 percent in FY2008, while the average spending increase was 13.3 percent, down from 13.8 percent.

Increases and decreases in spending dollars are correlated with the type of spending formula used. Institutions using the banded inflation or hybrid methods were much more likely to have increased spending dollars in FY2009 (76 percent and 62 percent, respectively) than institutions using the moving average method (55 percent), and somewhat less likely to have decreased spending dollars (17 percent and 27 percent, respectively) than the 30 percent using the moving average method.

Policy spending rates and inflation

As noted above, policy spending rates typically range from 4.0 to 5.5 percent. In light of the recent market downturn, some commentators have questioned whether such a rate is sustainable if intergenerational equity is in fact a goal, and have suggested that a rate of 4.0 percent or even lower might be more appropriate in a low-return environment.¹⁹ Other observers lend less support for intergenerational equity, and have suggested that in such an environment endowments should spend more, not less.

In a period of low inflation, the banded inflation method is likely to lead to the greatest stability in spending from year to year. Such stability is highly desirable for institutions that have multi-year obligations such as scholarships, contracts and strategic grants. This formula also provides stronger budgetary support during market downturns than the rules based on market values. Some boards may be reluctant to commit to sustained spending at a time when the market is down; if, however, the endowment is in fact conceived as a rainy day fund for support of the institution during difficult times, this rule may be the purest expression of that view.

Institutions that use inflation-based spending formulas must decide whether the inflation measure they use will be the CPI or the HEPI. In the current NCSE, a total of 10 percent of all respondents reported that they use the hybrid, banded inflation or straight inflation-linked formula. In the same study, one-third of participants reported using HEPI, up from 27 percent the previous year. While most said that they use the index for their budgeting process, 18 percent use it for setting their spending rate. This is nearly 6 percent of total participants, over half of those that use an inflation-linked or hybrid spending rule. This suggests that, where educational institutions are concerned with maintaining budgetary support levels in real terms, some will take advantage of the opportunity provided by HEPI to measure the needed increase in real terms.

¹⁹ This issue also arose in discussions of the 2000–02 downturn. In “Why Do We Feel So Poor?,” the authors criticized a policy rate of 5 percent on the basis that in nearly one-third of the projected cases, the endowment value would fail to keep pace with inflation. Sedlacek and Clark, *op. cit.*, p. 10.

Other Sources of Funds

The strategic importance of gifts

While investment returns understandably occupy the center of attention in discussions of endowment spending, for many institutions gifts are an equal, or greater, source of funds and are often overlooked in planning investment strategy. In the 2009 NCSE, for example, only 8 percent of participants stated that they consider future gifts when considering spending policy. At institutions with endowments over \$501 million, at least twice this percentage consider such gifts—evidence, no doubt, of well-developed planned giving programs which benefit from actuarial probability models that give the institution a measure of confidence in predicting when such gifts will mature.

Gifts can make a profound difference in achieving intergenerational equity. Private foundations, which generally do not receive further gifts after the initial donation, struggle to maintain purchasing power in the face of the legally-mandated 5 percent spending requirement. It is therefore ominous that giving levels have declined in the current recession, since it is not clear when they will return to previous levels.

In the NCSE, the evidence of the data is somewhat counterintuitive. The percentage of institutions' operating budgets funded by gifts rose in FY2009 to 6.9 percent from 5.5 percent—a result that is more likely a reflection of shrinking budgets rather than increasing gifts. In support of the thesis, however, the largest institutions—those with assets over \$1 billion—were the only size group to see this figure fall (to 3.6 percent) which may be an indication that, despite the continuing best efforts of these highly sophisticated development teams, the scale of gifts to these institutions may be shrinking even if donors' enthusiasm has not.

At many institutions, development officers are hindered by their relative inexperience with endowment matters. Understanding of the institution's governance model and committee structure; knowledge of the roles and responsibilities of the chair, committee members, investment staff and consultants; and literacy with regard to asset allocation, investment returns and spending metrics are frequently lacking, even in experienced development professionals. From the point of view of a potential donor, a demonstrated competence in managing the existing endowment should lead to confidence that new gifts will also be well managed. For this reason if for no other, it is desirable that development staff be conversant in the endowment and investment policy matters of the institution they represent.

At the board level, it is also necessary that trustees protect the institution with a written gift policy and written gift instruments. In addition to eliminating uncertainty by confirming the intentions of donors and recipients, these two documents serve as a shield against impractical or unwanted gifts or gift items while providing legal protection in the case of challenges alleging a failure to observe donor intent.

Government funding

In the current recession, cuts in educational funding by government have made headlines nationwide. But the retreat from government funding of education, even for public institutions, has been in process for at least a decade, as cash-strapped state and local legislatures have reduced educational budgets and deferred maintenance on aging campus facilities. While state funding of the core budget is difficult to replace, institution-related foundations (“IRFs”) in many states have exhibited steady growth as alumni and other donors have begun to regard these organizations as a means for funding what has been called the margin of excellence that can attract outstanding students and top corporations to their institution and state. Given the large numbers of living alumni at many state institutions and the strong leadership demonstrated by some IRFs and donors, it seems clear that IRF funding will form an increasing proportion of state institutions’ budgets. Furthermore, even should the economy stage a robust recovery—a prospect that is by no means certain—the future balance between state funding and IRF support is unclear.

Perhaps most challenging for educational institutions is the fact that state funding levels, while they can be substantial, are also volatile and depend on the economic condition, political situation and taxing power of each state. In addition, government funding may also come with strings attached in the form of political influence on the type of programs funded, their location and the individuals or groups that benefit, directly or indirectly.

Alternatives to Current Practice

Levels of endowment dependence

It is axiomatic that no nonprofit institution feels that it has sufficient resources to accomplish its mission. Viewed in this light, it has long been thought that, on balance, a higher level of endowment support for an organization’s operating budget was a good thing. Yet endowment support varies widely among institutions surveyed in the NCSE; while the average percentage of operating budget funded by endowment was 13.4 percent, the median was much lower at 4.6 percent and the highest average levels were 19.6 percent and 21.1 percent among institutions with endowments over \$1 billion and from \$501 million to \$1 billion, respectively. The lofty levels of endowment support enjoyed by the very largest institutions—30 to 40 percent or more, in some cases—is clearly not shared by the broad range of colleges and universities, even those with substantial endowments.

A high degree of endowment dependence was long viewed as a beneficial insulator against volatility in other sources of income such as enrollment and tuition income. Yet the view that a high level of endowment support is an unqualified benefit is now in retreat. Institutions that were accustomed to relying on endowment draws for substantial proportions of their operating budget experienced severe cash squeezes during the 2008–2009 liquidity crisis. The initial public offering and merger and acquisition markets, which had previously provided the major exit strategy for the well-diversified private capital programs in which they invested, dried up completely in late 2008. With this source of liquidity no longer available, institutions became forced sellers of their most liquid investments, typically

public market equities and bonds, to raise cash to support ongoing operations. These sales accelerated a cascade of falling prices, as abundant supply overwhelmed shrinking buyer demand. Those institutions that could not raise cash in this way turned, where they could, to the credit markets via bank loans and long-term bonds. While low interest rates reduced the cost of borrowing to some extent, many institutions found themselves shouldering new debt burdens that will weigh heavily on cash flow for years to come.

In the aftermath of the liquidity crisis of 2008–2009, an increasing number of observers believe that it is becoming incumbent on boards of endowed institutions, as a fiduciary matter, to make some provision for liquidity in the event of a future squeeze. Two major questions present themselves:

– *How to calculate the right amount of cash to set aside.* The most straightforward approach would be to set a target equal to the endowment contribution for a certain period—for example, six months, one year, 18 months or two years. Some institutions, where the endowment primarily supplies scholarship support, define the amount in terms of having so many enrollees’ worth of tuition in reserve; this method has the benefit of being keyed to inflation while at the same time addressing the fact that in a downturn applications may decline and requests for financial aid increase.

– *How to accumulate and invest the cash.* There are a number of possible methods for accumulating the reserve. Institutions that have operating surpluses can divert those for the purpose. Alternatively, where unrestricted endowment or quasi-endowment (board-designated) funds are available, these can be used. Once created, the reserve can be invested in a portfolio of U.S. government securities with maturities running out to the horizon of the funding need.

Other investment possibilities exist, such as the use of money market funds. These have risks of their own, however, including the risk that a fund may “break the buck” and fall below its net asset value. Bank accounts and certificates of deposit are also a possibility, but are subject to the limits on deposit insurance.

If these sources of cash are unavailable, an institution may have to resort to setting up a line of credit with a bank. Depending on the institution’s other resources and cash flow, such a line may need to be secured by a pledge or mortgage of assets belonging to the institution. Regardless of the status of the collateral, however, it is difficult to structure a bank line so that it is truly irrevocable and, in fact, banks may refuse to release agreed funds to an institution in difficulty, citing clauses in the credit facility that relieve the bank from the obligation to lend if a material adverse change has occurred in the borrower’s status.

In any case, once the loan has been made the borrower must sustain the costs of the debt. At the moment, with interest rates at historic lows, this burden may be seen as relatively minor, but future loans in a higher interest rate environment may give rise to debt service issues unless the rate is fixed or hedged.

Implications for Future Spending Practices

Current expectations are that, despite the recent market recovery, it will take many years for endowments to regain the nominal value lost in FY2008–FY2009. One significant measure is the percentage of endowment underwater in dollar terms, which, according to the NCSE, nearly quintupled from 4.6 percent in FY2008 to 22.4 percent in FY2009. No size group was exempt. Private institutions had a lower percentage underwater, at 16.9 percent, than public institutions, due most probably to the fact that private endowments as a group are typically older and presumably have more accumulated gains on which to draw than do public funds.

Lower endowment values have, not surprisingly, led institutions to reconsider their spending plans. In a leap from last year, 24 percent of institutions reported that they had deviated from their spending plan—up from 11 percent the previous year. Strong jumps were observed across all size groups, particularly the endowments with assets over \$1 billion, where the rate went from 2 percent last year to 23 percent this year. Perhaps as a corollary, 18 percent of institutions made special appropriations. Nearly one-third of these institutions indicated that the appropriations were used to cover capital campaign costs, while 24 percent said that the purpose of the appropriation was to support the operating budget.

Looking ahead, anecdotal evidence indicates that more institutions are considering moving away from the moving average spending formula toward inflation-based and hybrid methods. For institutions where intergenerational equity remains a priority, policy spending rates will have to be restrained, which may force some difficult choices with respect to spending for mission support. On the other hand, where mission support is a priority, spending levels will remain robust, but at the risk of eroding the future purchasing power of the endowment.

Appendix I

Shifting to the Banded Inflation Spending Rule

In 2009, the University of Iowa Foundation undertook a review of its spending policy. The Foundation had been using the three-year moving average rule, but it was felt that a change might be appropriate for the following reasons:

- Two painful recessions, in 2000–2002 and 2007–2009, had exacerbated volatility in the Foundation’s dollar spending, leading to disruption in programs and uncertainty in budgeting.
- The passage of UPMIFA in Iowa had eliminated the concept of historic dollar value, but had imposed a standard of prudence that, it was felt, continued to emphasize the importance for boards to put in place spending policies that would assist in maintaining intergenerational equity.

After discussion, the Foundation staff and Investment Committee leadership proposed the following investment and spending goals for the Foundation’s endowment:

- Achievement of a long-term return equal to or greater than the sum of spending, administrative costs and inflation.
- Consistent growth in dollar spending each year.

To achieve these goals, it was agreed that it would be necessary to obtain both an increase in the endowment’s market value over time and a reduction of the volatility of spending from year to year. It was furthermore agreed that asset allocation should drive spending policy and that short-term spending needs should not influence asset allocation decisions.

In modeling the available alternatives, the Foundation compared two versions of the moving average spending method with the banded inflation method. One of the moving average options used a 6 percent policy spending rate (5 percent spending rate and 1 percent endowment fee); the other used a 5 percent policy spending rate (4 percent spending rate and 1 percent endowment fee). The banded inflation formula assumed that the dollars available for spending, which had in the past been calculated by applying the Foundation’s 5 percent policy spending rate, would in the future be increased by the Consumer Price Index, subject to a lower band of 4 percent and an upper band of 6 percent of assets.

Each of the moving average options produced different probabilities of being able to preserve intergenerational equity. It was also observed that while year-to-year variability of spending would be somewhat dampened by use of a 5-year rather than a 3-year smoothing period for each of the moving average alternatives, the difference was not significant. The banded inflation method, in comparison, provided a likelihood of intergenerational equity that was similar to that of the 5 percent moving average option. It also yielded superior results over the other options in decreasing year-to-year variability of spending and—importantly—had fewer years in which dollar spending was less than in the preceding year.

Having determined that the banded inflation method was right for this institution, the staff and Investment Committee moved to make the case for change with clients and stakeholders. From the beginning, the Investment Committee partnered with the University—which had its own endowment—to research and come to a joint conclusion to adopt the banded inflation model. In addition, the staff and chair of the Investment Committee met with University administrators, including deans and directors, and carefully communicated the options, gathered responses, and followed up with the ultimate decision. In this, they were aided by the timing of the decision: coming at the end of a period of declining endowment values, it was possible to demonstrate that spending in dollar terms would stabilize or increase under the banded inflation method instead of continuing to decrease. Had the decision been proposed during a market boom, the argument would have been more difficult to make, since deans and program directors would have seen short-term decreases in dollar spending for their programs instead of increases.

The staff and Investment Committee felt that their success was in large measure due to the fact that they had been able to evaluate in objective terms the differences between the moving average method and the banded inflation method, and to make the case for change to its key partners and stakeholders. From beginning to end, the process took around 12 months—an important factor to consider at a time when budgets were being challenged across the educational sector.

Appendix II

About the Authors

Verne O. Sedlacek has been President and Chief Executive Officer of Commonfund Group since July 1, 2003. He also serves as a member of the Investment Policy Committee of Commonfund Group. Mr. Sedlacek joined Commonfund in 2002 as Executive Vice President and Chief Operating Officer. Before joining the firm, Mr. Sedlacek served as President and COO of John W. Henry & Company, Inc. and President and Director of Westport Capital Management Corporation and Global Capital Management Limited since 1998. Prior to that, he served as EVP and CFO for the Harvard Management Company where he was responsible for managing the areas of personnel, budgets, systems, performance, analysis, contract, credit, compliance, custody, operations, cash management, securities lending, and market risk evaluation for the then approximately \$14 billion Harvard endowment fund. He has served on many not-for-profit and for-profit boards. Mr. Sedlacek currently serves on the boards of the Association of Governing Boards of Universities and Colleges, the NYSE Pension Managers Advisory Board and is a member of the Samsung Global Investment Advisory Council (SGIAC). He earned an A.B. in Economics from Princeton University and was certified as a C.P.A. by the State of New York in 1978.

William F. Jarvis is Managing Director of Commonfund Institute. He is responsible for the Institute's research, written analysis and client publications. A financial services executive and attorney, Mr. Jarvis has worked with JPMorgan, where he spent 13 years as an investment banker in New York and Tokyo; Greenwich Associates, where he advised leading investment management firms and led the fielding of the first Commonfund Benchmarks Study; and Davis Polk & Wardwell, where he provided legal advice to global banks and securities firms. Prior to joining Commonfund in 2006, Mr. Jarvis served as Chief Operating Officer of a privately held hedge fund manager based in New York City. Mr. Jarvis holds a B.A. in English Literature from Yale University, a J.D. from the Northwestern University School of Law, and an M.B.A. from the Kellogg Graduate School of Management.

Appendix III

About Commonfund Institute and Commonfund

Commonfund Institute

Commonfund Institute was founded to house the education and research activities of Commonfund and to provide the entire nonprofit community with investment information and professional development programs. Commonfund Institute is dedicated to the advancement of investment knowledge and the promotion of best practices in financial management among operating charities, educational institutions, foundations and healthcare organizations. Commonfund Institute pursues its objectives through a wide variety of resources, including conferences, seminars and roundtables on topics such as endowment and treasury management; proprietary and third-party research and publications including the annual NACUBO-Commonfund Study of Endowments® (NCSE) and the Commonfund Benchmarks Studies,® in-depth surveys of nonprofit investment management practices and policies; the management and distribution of the Higher Education Price Index (HEPI), an inflation index designed specifically for higher education; Commonfund Forum, the largest investment conference for trustees and senior executives of qualified nonprofit organizations; the Endowment Institute, an intensive, week-long seminar for trustees and senior managers of nonprofit organizations; and the Commonfund Prize for outstanding contribution to nonprofit investment research. The institute's broad range of programs and services is designed to serve financial practitioners, fiduciaries and scholars.

Commonfund

Founded in 1971, Commonfund is devoted to enhancing the financial resources of nonprofit institutions and corporate pensions, as well as family offices, through superior fund management, investment advice and treasury operations. Directly or through its subsidiaries—Commonfund Capital and Commonfund Asset Management Company—Commonfund manages approximately \$25.5 billion for about 1,580 educational institutions, foundations, healthcare organizations and other institutions. Commonfund, together with its subsidiary companion organizations, offers more than 30 different investment programs. All securities are distributed through Commonfund Securities, Inc. For additional information about Commonfund, please visit www.commonfund.org.

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