



Harvard Faculty of Arts and Sciences Frequently Asked Questions (FAQ) About Our Endowment



The recent economic turmoil is affecting the sources of support for much that we do to carry out our core research and teaching missions. The most visible impact, while still somewhat uncertain in magnitude, will be on our endowment, the largest single financial asset to which we have historically turned for mission support. In order to understand better the potential impact on the FAS, we must first establish a shared understanding of our endowment, how it operates, and what changes to the endowment might mean for us.

Below is a set of questions and answers that addresses some of the practical (Questions 1-12) and technical issues (Questions 13-19) surrounding the endowment and the potential impact of a decline in its value on the FAS. For readers with less time, Section 1 (Practical issues: Questions 1-12) is the most important.

Section 1: Practical issues

1. How large is Harvard's endowment? What about the endowment of FAS? How has this changed over time?

As of June 30, 2008 (end of FY 2008), Harvard University's endowment was valued at \$36.9 billion. The FAS represents \$16.6 billion, or 45%, of this total.

Since FY 2000, the endowment has earned an average 14.5% per year (last year's return was 8.6%). At the end of FY 2000, the FAS endowment was valued at \$8.0 billion.

2. Isn't Harvard's endowment the largest university endowment in the world?

The value of Harvard's endowment is indeed the largest, at least in absolute terms, among the 785 institutions reporting annually to the National Association of College and University Business Officers (NACUBO), the organization that tracks endowment values, returns, and other performance indicators. Across a variety of other measures, however, Harvard's endowment is not the largest (e.g., on a per student basis, Harvard's endowment ranks fifth, behind Woods Hole, Rockefeller, Princeton, and Yale).

3. Has the Harvard endowment ever lost money (had negative returns) before?

Since FY 1971, when the Harvard Management Company began formally reporting our endowment investment returns, there have been four years with negative returns (1974: -12%; 1984: -4%; 2001: -3%; and 2002: -1%).

4. How much of our operating budget depends on the endowment? Has this changed over time?

In the 2007-2008 academic year, the FAS drew upon its endowment to cover \$550 million, or 51%, of our operating budget (from a beginning-of-year endowment value of \$15.8 billion). In the current 2008-2009 academic year, we will call upon our endowment for nearly \$650 million of operating budget support (from a beginning-of-year endowment value of \$16.6 billion), representing 56% of our annual operating budget.

Ten years ago, the endowment distribution covered approximately 35% of our annual operating budget. Because the endowment grew at a faster rate than other income sources, our endowment 'dependency' (the amount of our operating budget funded from the annual endowment distribution for operations) has grown over time.

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5. How does the FAS's endowment "dependency" compare to other schools? To other tubs within Harvard University?

Among Ivy League schools, only Princeton has a similar (~50% in FY 2008) level of endowment dependency. The endowment dependency of other Ivy League schools ranges from 6% (U Penn) to 33% (Yale).

Within Harvard University, there is a broad range of endowment dependency levels, spanning from the Radcliffe Institute at 83%, to the School of Public Health at 13% (FY 2008 level). Among the 12 schools within Harvard University, the FAS ranks third (behind Radcliffe and the Divinity School) in endowment dependency. Harvard University as a whole (including FAS) relies upon the aggregate endowment distribution for operations to support 35% of its operating budget (FY 2008 level).

6. If greater than 50% of our expenses are supported by endowment income and the endowment is reduced by 30%, how big is the cut going to be? Will it cut across the board?

We are still determining what changes might need to be made going forward to align better our operations with the endowment's support level. Since we do not know the exact value of the endowment, or what it will be by year-end, we have to plan on a contingency basis for a range of possible outcomes. The academic deans are actively engaged in this process right now, and we are working with a set of faculty and staff from across the FAS to clarify our priorities.

In the event that the endowment loses a significant amount of value this year, we will inevitably need to make changes in the way we operate, even if we allow ourselves a much larger payout rate (percentage of the endowment we allow ourselves to withdraw from the endowment each year). In times like these, we must strive to protect and enhance our core teaching and research missions.

In considering re-allocations, and possibly reductions, of resources across the FAS, we must strive to make decisions that protect, and even strengthen, these core activities. This means that any re-allocations and/or reductions will not necessarily be "across the board."

Regardless of the endowment's ultimate returns for the year, the prioritization process will be crucial for our campaign planning as well as for allocation of our reduced resources. As I promised you in the Faculty meeting last week, I will continue to keep you informed and engaged in this process as we learn more.

7. Our endowment has experienced exceptional historic returns. Shouldn't we be able to utilize those returns now?

The amount we withdraw from the endowment in support of our operations has grown tremendously in the last decade. The \$650 million we will utilize in FY 2009 is 50% more than the amount we utilized in FY 2006, and it is more than double the \$284 million we utilized in FY 2001. The endowment's exceptional historic returns have enabled this growth in available endowment income.

8. If the endowment loses 30% of its value this year, what will be the year-end value? When was the last time the endowment would have been at that same level?

At the beginning of FY 2009 year, the FAS endowment was valued at \$16.6 billion. During this year, we will call upon the endowment to support ~\$650 million of our operating budget. If, at the end of this year, the endowment has a -30% return, the year-end value would be approximately \$11.0 billion (after accounting for the 30% reduction in value *and* the \$650 million we will utilize for our operations). The last time the endowment was at that level was between FY 2004 and FY 2005 (at the end of FY 2004, the endowment was valued at \$10.3 billion; at the end of FY 2005 it was valued at \$11.7 billion).

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9. Why can't we just "go back" to a budget like the one we had in FY 2005, when the endowment's value was approximately \$11 billion?

The FAS looks very different today from what it looked like in FY 2005. In the intervening years we have grown tremendously:

- in FY 2005, our operating budget was \$812 million; today it is nearly \$1.2 billion (45% increase over FY 2005 level);
- in FY 2005, we had 8.3 million square feet of space; today we have 9.2 million square feet of space (11% increase over FY 2005 level); and
- in FY 2005, we had \$538 million of debt (with approximately \$30 million per year in associated debt service expense); today, we have approximately \$1.1 billion of debt (with approximately \$85 million per year in associated debt service expense).

Much of our growth was in relatively fixed cost areas, like buildings, and therefore is not easily "reversed."

10. Will budget adjustments be "one-time" or will they affect all years? Will there be more cuts next year?

Any adjustments we make this year will have to be recurring. More specifically, whatever we change will have to apply to FY 2010 *and* beyond. A significant loss in our endowment distribution for operations will not be one-time, and we need to adjust our operations accordingly.

No one knows for sure what the long-term impacts of this economic crisis will be. In recent economic downturns (e.g., dot-com bubble in 2001/2002), the affected industries were relatively narrow in scope and geography. What we appear to be facing now is a much broader, global crisis that likely will impact *all* of our income streams, not just endowment income (consider the needs of financial aid for affected students' families, the effects on funds available to our donors for supporting our mission, and the external funds available to support our research activities).

While we cannot definitively say what next year will bring, our hope is to make the necessary adjustments going into FY 2010 that will set the stage for a stronger, more agile FAS.

11. Will financial aid be reduced?

There is currently no plan to reduce support for financial aid. In fact, in light of the expansive nature of the economic impacts across the globe, we expect that demand for financial aid support will increase in the near term.

12. What should we be doing in our departments/centers *now* to prepare for the future?

I have asked the academic deans to take a close look at their units' current expenditures. We should be asking ourselves: Are there things we can do without, or things we might go about doing differently? Are there things that can be done better locally or centrally? Can we be more strategic in our use of resources?

Anything we do today to reduce current spending (separate and distinct from *deferring* spending) while maintaining the critical support for our research and teaching missions sets us on a stronger foundation as we enter FY 2010. We are not alone in this endeavor. All higher education institutions will be facing similar pressures in the coming months.

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Section 2: Technical issues

- 13. Are we spending enough from our endowment? I thought that endowments were supposed to protect for down times and times of economic uncertainty. Shouldn't we be able to spend more during these uncertain times (from the "savings" we built up during times of plenty)?**

Many universities have formal spending policies, with most targeting an annual spending rate between 4.5% and 5.5%. This rate band is based on an assumption of a long-term targeted endowment return of approximately 8%. Allowing three to four percent for expense inflation, an 8% annual return yields a relatively flat endowment value in real terms (ignoring the impact of future gifts and pledges).

Harvard has no formal payout policy. Rather, the Corporation adjusts the endowment distribution (the dollars distributed) each year. To do this they balance past returns with expectations of future inflationary pressures.. This distribution has varied between a low of 3.6% in FY 2001 and a high of 5.1% in FY 2002.

Paramount to setting Harvard's spending practices is the notion of intergenerational equity. In 1974, James Tobin formalized the principle of intergenerational equity, an influential, normative principle for endowment management:

The trustees of endowed institutions are the guardians of the future against the claims of the present. Their task [in managing the endowment] is to preserve equity among generations. In formal terms, the trustees are supposed to have a zero, subjective rate of time preference (p.427).

Reference from Tobin, James. 1974. "What Is Permanent Endowment Income?" *American Economic Review*, 64:2, pp. 427-32.

- 14. I understand that the payout rate (the endowment distribution divided by the beginning-of-year endowment value) has an upper limit on it in percentage terms. What is that limit and why does it exist?**

The National Conference of Commissioners on Uniform State Laws (NCCUSL), a group of attorneys appointed by state governments, researches, drafts, and promotes enactment of uniform state laws. In 1972, the NCCUSL enacted the Uniform Management of Institutional Funds Act (UMIFA), which provided guidance and authority to charitable organizations concerning the management and investment of funds held by those organizations. UMIFA permitted charitable organizations to use modern investment techniques and to determine endowment funding spending based on spending rates rather than in determination of "income" and "principal." UMIFA also defined measures of prudence, both in investment management and in endowment spending policies and practices. Further information on the NCCUSL may be found at www.nccusl.org.

In 1975, Massachusetts enacted the UMIFA. It is codified in chapter 180A of the Massachusetts General Laws. Both the UMIFA and Massachusetts General Law place a 7% upper limit on prudent endowment payout rates, as measured by an at least trailing twelve-quarter payout rate average. Further information on the Massachusetts General Law for management of institutional funds may be found at www.mass.gov/legis/laws/mgl/gl-180a-toc.htm.

- 15. There has been a lot of growth in the FAS since FY 2000. How much larger is our budget now than it was in FY 2000? What has been the growth in ladder faculty over the same time period? Staff growth?**

The FAS experienced rapid growth from FY 2000 to FY 2008. Much of that growth was fueled by extraordinary investment returns in our endowment. From a budgetary perspective, our operations have nearly doubled, growing from \$525 million in FY 2000 to \$1.04 billion in FY 2008.

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Since FY 2000, both ladder faculty and staff have grown a cumulative 22% and 21%, respectively, or ~2.5% per year. The chart below shows details in the growth of ladder faculty and staff between FY 2000 and FY 2008.

FAS Faculty and Staff Growth (FY 2000 - FY 2008)		
	<u>Ladder Faculty</u>	<u>Staff</u>
FY 2000	586	2,659
FY 2008	712	3,205
<i>Absolute growth (%)</i>	<i>22%</i>	<i>21%</i>
<i>Compound annual growth rate (%/yr)</i>	<i>2.5%</i>	<i>2.4%</i>

16. During the Great Depression, what did the FAS's financials look like? What did the FAS do in response to the economic climate? How is today different from then?

In 1930, the FAS looked very different, both in terms of our size and our income components. At the end of FY 1930, the FAS had an operating budget of approximately \$8 million, which represented ~55% of the University's \$15 million operating budget.

The two single largest components of the FAS's revenue components at the time were tuition/fees and endowment income, representing 55% and 20%, respectively, of the total operating income. Today, these components are almost reversed, with tuition/fees comprising 17% of our operating budget and endowment income comprising 56% of our operating income in FY 2009.

During and following the Great Depression, the FAS responded to the new fiscal reality by

- Increasing the size of the undergraduate student body: In the fall of 1931, 1,134 freshmen were admitted, whereas previous classes for many years had been fixed at 1,000;
- Completing the seven original houses: Lowell House and Dunster House completed in 1930; Wigglesworth Hall and Eliot House completed in 1931; and
- Slowing the growth of faculty: In the ten years leading up to 1930, the ladder faculty grew by 3.2% per year, increasing from 154 to 212; in the ten years after 1930, the ladder faculty grew by 1.9% per year, rising from 212 to 257.

It is also important to look at endowment's returns during the Great Depression. Despite the fact that the country was enduring great economic and investment hardship, Harvard's endowment did not lose value in the early 1930s (see table below for an endowment summary from FY 1926 – FY 1940).

Harvard University Endowment (FY 1926 - FY 1940)															
Fiscal Year	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
Endowment (\$M)	84	87	95	106	119	126	128	129	130	131	136	145	141	146	144
<i>Year-over-year change</i>		<i>3.6%</i>	<i>9.2%</i>	<i>11.6%</i>	<i>12.3%</i>	<i>5.9%</i>	<i>1.6%</i>	<i>0.8%</i>	<i>0.8%</i>	<i>0.8%</i>	<i>3.8%</i>	<i>6.6%</i>	<i>-2.8%</i>	<i>3.5%</i>	<i>-1.4%</i>

The lack of significant negative returns over that time period was partially due to the investment allocations. At the time, endowment spending distributions were based on investment income (dividends and interest). As a result, much of the endowment (approximately 50% in 1930) was invested in fixed income securities (railroad, municipal and industrial bonds), which paid a relatively steady stream of income, even during turbulent economic times.

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Regardless of the endowment returns during the Great Depression, since the endowment represented a much more modest component of the total revenue base in the 1930s, the ‘market’ impact of a greatly reduced endowment would not have affected the school as much as a similar decrease would today.

Today, our endowment has a much broader and more diverse base of investments, many of which rely upon capital appreciation (versus dividends and interest) for distribution purposes. As a result, the endowment distribution today, all else equal, is more sensitive to changes in asset market values than it was during the Great Depression.

17. Why can’t we live with deficit spending? The U.S. Government does.

To fund budget deficits, the U.S. Treasury borrows money by selling securities like Treasury bills, notes, bonds and savings bonds to the public (and sometimes to government trust funds). The Treasury securities issued to the public and to the government trust funds then become part of the total national debt. As of December 1, 2008, this total debt stood at \$10.7 trillion.

Over time, this debt must be repaid, along with interest. In FY 2008, interest payments were more than \$400 billion, or more than ten times the collective size of the NIH and NSF annual budgets. That repayment necessarily negatively impacts future national budgets.

If the FAS borrowed money to finance budget deficits (we typically borrow money only for capital projects such as new buildings), the associated debt payments would negatively impact our future operating budgets, and therefore growth opportunities, for years to come.

18. I read that the endowment earned 23% in FY2007. If the endowment loses 30% of its value this year (FY 2009), doesn’t that mean that we can ‘earn’ our way back to where we started in a year or two? Can’t we just wait this recession out?

The short answer is no. Under significant loss scenarios, it takes a disproportionately long time to get back to where we started.

Consider a hypothetical endowment worth 100 units at the end of FY 2006. Assume that in FY 2007 and FY 2008 this endowment enjoyed the same returns as Harvard’s endowment, 23% and 9%, respectively. Further assume that in FY 2009, this endowment has a negative 30% return. After accounting for annual 5% “withdrawals” (endowment spending distribution for operations), this hypothetical endowment would have a FY 2009 year-end value of 80 units. The table below shows this progression.

	<u>Return</u>	<u>Payout</u>	<u>Net change</u>	<u>End-of-year value</u>
FY 2006				100
FY 2007	23%	-5%	18%	118
FY 2008	9%	-5%	4%	123
FY 2009	-30%	-5%	-35%	80

Note that the 80-unit value at the end of FY 2009 would need to *increase by more than 50%* (54% to be exact) to rise to the 123-unit level again.

How long will it take for the 80 units to grow to the 123-unit level again? That depends on two things: (1) the endowment investment return and the payout (the “withdrawal” each year for operations).

Assume that, due to the endowment’s reduced value, the Corporation decided to increase the payout rate to 6% (after all, 6% of 80 units, or 48 units, is still less than 5% of 123 units, or approximately 61 units, so this certainly does not seem imprudent).

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Now, let's look at the time to return to 123 units of value, across a variety of investment returns:

	15% prospective returns				10% prospective returns				8% prospective returns			
	Return	Payout	Net change	End-of-year value	Return	Payout	Net change	End-of-year value	Return	Payout	Net change	End-of-year value
FY 2006				100				100				100
FY 2007	23%	-5%	18%	118	23%	-5%	18%	118	23%	-5%	18%	118
FY 2008	9%	-5%	4%	123	9%	-5%	4%	123	9%	-5%	4%	123
FY 2009	-30%	-5%	-35%	80	-30%	-5%	-35%	80	-30%	-5%	-35%	80
FY 2010	15%	-6%	9%	87	10%	-6%	4%	83	8%	-6%	2%	81
FY 2011	15%	-6%	9%	95	10%	-6%	4%	86	8%	-6%	2%	83
FY 2012	15%	-6%	9%	103	10%	-6%	4%	90	8%	-6%	2%	85
FY 2013	15%	-6%	9%	113	10%	-6%	4%	93	8%	-6%	2%	86
FY 2014	15%	-6%	9%	123	10%	-6%	4%	97	8%	-6%	2%	88
FY 2015					10%	-6%	4%	101	8%	-6%	2%	90
FY 2016					10%	-6%	4%	105	8%	-6%	2%	92
FY 2017					10%	-6%	4%	109	8%	-6%	2%	93
FY 2018					10%	-6%	4%	114	8%	-6%	2%	95
FY 2019					10%	-6%	4%	118	8%	-6%	2%	97
FY 2020					10%	-6%	4%	123	8%	-6%	2%	99
FY 2021									8%	-6%	2%	101
FY 2022									8%	-6%	2%	103
FY 2023									8%	-6%	2%	105
FY 2024									8%	-6%	2%	107
FY 2025									8%	-6%	2%	110
FY 2026									8%	-6%	2%	112
FY 2027									8%	-6%	2%	114
FY 2028									8%	-6%	2%	116
FY 2029									8%	-6%	2%	119
FY 2030									8%	-6%	2%	121
FY 2031									8%	-6%	2%	123

Only under the most aggressive scenario will the endowment return to its 123-unit level within a decade. Indeed, under more reasonably planning assumptions (8% prospective investment returns), it takes more than two decades to return to the 123-unit level.

What this example shows is that, if the endowment does indeed lose a significant portion of its value by the end of FY 2009, it will be a long time before it returns to a level anywhere near what we were accustomed to even a year ago.

None of this is meant to imply that the goal of Harvard University is to maximize the endowment's value. Rather, the endowment's distribution is the asset upon which we rely for our research and teaching missions, and as the endowment's value changes, so does the endowment distribution it generates. As Tobin concluded in his 1974 American Economic Association journal article on endowment management:

A university is interested in the security of its income, not in the stability of the endowment's market value (p.432).

Reference from Tobin, James. 1974. "What Is Permanent Endowment Income?" *American Economic Review*, 64:2, pp. 427-32.

19. When the endowment was paying out 5% but grew by 20%, where did that 15% difference go?

Critical to understanding the payout rate – the annual endowment distribution divided by the beginning-of-year endowment value – is an appreciation of the effects of changes in the value of the endowment (investment gains or losses, as well as additional gifts to the endowment) on subsequent years' distributions for operations. Similarly, it is important to understand the effects of these increases (or decreases) on the imputed payout rate, or percentage.

For example, let us assume that the beginning-of-year (BOY) endowment value was \$1 million. Further let us assume that the endowment spending for the year has been determined (in advance, as is the case with Harvard's endowment spending practice today) to be \$50,000. This equates to a 5% payout rate.

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Now let us assume that during the year, the endowment returns 20%. After the 5% endowment distribution for operations, there is a net 15% gain on the endowment. At the end of the year, the endowment's value has risen by \$150,000. So, at the end of the year (beginning-of-year value for the following year) the endowment's value is, *ceteris paribus*, \$1,150,000.

Suppose now that the Corporation approves a payout increase of 10% for the following year. That means that the following year's distribution will be \$55,000 (10% more than the \$50,000 distributed in the prior year). The payout rate for that year will thus be \$55,000 / \$1,150,000, or 4.8%. Had the payout increase been 20%, the available distribution would have been \$60,000, and the payout rate would have been 5.2%.

These examples illustrate that the value accretion (returns above and beyond the prior year's payout) in the endowment is recognized through the subsequent year's payout. In years following real (that is, after accounting for inflationary impacts) endowment growth, the payout increases create endowment distributions that release that growth. In years following modest, flat, or decreasing endowment value changes, flat or even decreasing payout changes moderate the access to the endowment in order to protect the endowment's future potential.
