The Yale Endowment Spending Rule and the COVID-19 Crisis

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The Yale endowment spending rule emerged gradually as a rational and principled way of supporting Yale's mission in the present while also maintaining it for the indefinite future, in the face of market fluctuations and uncertainty. The precise rule evolved from work begun by Nobel Prize winner James Tobin and his students, and was later refined by a former student who had become Provost and another who had become Chief Investment Officer. The spending rule was adopted by the Yale Corporation in 1979 and reaffirmed by the Corporation many times over in the ensuing decades. The spending rule is embraced by the Yale endowment management team, which always features it prominently in its annual report.

The endowment mission is to provide stable (i.e. as close to constant as possible) purchasing power, correcting for inflation, every year, in the short run and in the long run. To meet the twin goals of long-run stability and short-run stability, the spending rule has two elements, a long run spending rate, which is set at 5.25%, and a short run averaging rule, which puts a weight of 20% on the most recent year.

A longstanding consensus has been that Yale can average 5.25% return (income) beyond inflation per year in the long run. That is why Yale's spending-rule rate is 5.25%.

If there were no variation in the returns from 5.25% beyond inflation, then spending 5.25% of last year's endowment this year would leave next year's endowment, corrected for inflation, unchanged. For example, if last year the endowment was $100 and inflation was 3% (as Yale assumes) and Yale made 3+5.25 = 8.25% returns, then it would have $108.25 this year. After spending $5.25, the endowment would be at $103, exactly the same as the year before, correcting for inflation.

The world, however, is volatile and uncertain. So in order to preserve short-run stability, a second element appears in the spending rule. The spending rule does *not* say spend 5.25% of last year's endowment, because then spending would fluctuate too much as the endowment returns went up and down each year.

Instead, the spending rule says to spend 5.25% of the "rolling average endowment", that is the average endowment over many years. Measuring the endowment every year in inflation corrected dollars, last year's endowment gets weight 20% in the "rolling average", and the endowment size two years ago gets weight 16%, and three years ago gets weight 12.8% and so on. The rolling average endowment is much more stable than the annual endowment. If the most recent endowment is $1 higher than the previous rolling average, then the new rolling average goes up only 20 cents. The introduction of the rolling average enables the Yale spending rule to maintain the short run stability of spending. This smoothing rule formally recognizes the principle that abrupt changes in spending cause unnecessary damage.

The Current Situation:

In years when the endowment is higher than the rolling average, the smoothing rule will ensure that spending the next year will be below 5.25% of current endowment. The endowment on June 30, 2019 stood at $30.3 Billion, higher than the rolling-average endowment because in recent years the inflation adjusted endowment had been pretty steadily rising. Spending was set by the smoothing rule for the

current fiscal year 2019-20 at $1.439 Billion, just 4.749% of $30.3 Billion. Yale thus entered the COVID-19 crisis in a very conservative position. For 2020-21, the spending rule calls for an increase in spending out of the endowment of about 3%. Instead President Salovey and Provost Strobel have called for 5% spending reductions. Why?

President Salovey reported that in fiscal year 2019-20, we lost $200 million because of reduced revenue and added costs. The number $200 million sounds large, but is only 0.6% of our $30 billion endowment. According to the Yale spending rule, if those losses had materialized in the endowment number for June 30, 2020, they would have no effect on spending in 2020-21. Not until 2021-22 would the $200 million loss decrease spending, and then by only 5.25% x 20% x $200 = $2.6 million or about 0.06% of the budget in 2021-22.

To get an idea of why the spending rule would prescribe such small changes in expenditures in reaction to a $200 million loss, recall that David Swensen told us (as an approximation) to imagine that the Yale endowment is all invested in the U.S. stock market. We know historically that the stock market fluctuates up or down by about 1% *a day* on average. That means that on average, every other day the endowment loses $300 million, much more than $200 million. We don't tie spending to the value of the endowment in any particular year because it fluctuates too much. Imagine how foolish it would be to tie spending to what happens on one particular day.

There is a risk (unrealized so far) that because of lost tuition and additional expenses, the University might lose as much as $800 million in fiscal year 2020-21. If those feared losses had *already* actually occurred in the endowment as of June 30 2020, they would subtract only another 0.24% of the budget in 2021-22, and only about 1% by year 2025-26.

If Yale should respond slowly to realized losses, then it should respond much more slowly to speculation that losses might occur. Cutting spending immediately on the speculation that wealth *might* be lost in the future runs counter to the spirit of the Yale spending rule. The idea is not to begin turning before you get to a driveway that might lead to lower wealth. It is, instead, to pass the driveway and verify where the driveway is headed, and only then to start the turn, relying on Yale's endowment of a big lawn and long driveway to make a very gradual turn with lots of time for deliberation.

The endowment does not appear to have lost much value in the 2019-2020 fiscal year, perhaps around 5%. But there was a point during the year when it appeared to be down by 20% or even more. At that point what should Yale have done? Put new building projects on hold, in case the loss persisted. Those projects can be delayed without damages to quality. Ask leadership of faculty departments and of administrators and of staff of every kind to prepare plans for how they would gradually contract spending over the next five years, starting the year after next. Most important, convene a committee of faculty leaders who would help reimagine, in consultation with the faculty at large, how a smaller Yale would look.

This strategic deliberation could not be concluded quickly. This is precisely why the Spending Rule does not allow for significant changes to spending out of the endowment until at least two years after an endowment shock. And midyear fluctuations in the market are never allowed to change endowment spending.

There are other ways Yale could lose wealth even if the endowment did not fall. Someone might worry that Yale can no longer get 5.25% returns after inflation on average over the long term. That would be the case if you thought the COVID 19 epidemic was going to lead to a 20 year recession, or because there were no more great inventions like the car or the telephone or the dishwasher left to discover. Some economists believe the latter. Yale might then change the spending rule to 4.25%, which would be a $300 million hit every year. But for Yale to come to such an epochal conclusion of secular stagnation, there would have to be a blue ribbon committee of experts and a huge investigation by the Corporation. Even a pessimistic committee that believed in secular stagnation would recommend reducing the spending rate very gradually from 5.25% to 4.25%, honoring the logic of the smoothing rule, and not jumping down $200 million immediately. No such committee has been consulted.

In the absence of such a clear headed and careful deliberation, there does not seem to be an obvious reason for an immediate cut of such a large size.

Operating Income vs. Endowment Income:

Other great research universities, like Berkeley or NYU, will most likely need to make draconian cuts because they have negligible endowments. If they lose $200 million in operating revenue, they pretty much have to cut spending by $200 million because they don't have the money to plug the hole. But not Yale. David Swensen said that Yale could draw on funds it had in reserve or borrow, which it could easily do because of its high credit rating. Such borrowing would effectively lower the value of the endowment (net of debts) by $200 million.[1]

The $200 million loss Yale just suffered in 2019-20 was from the operating budget, not the endowment. The strict endowment spending rule therefore does not apply. The administration and the Corporation have the freedom to exercise judgment. On the one hand, Yale could treat the losses as Berkeley or NYU would be forced to, insisting on balancing the budget immediately. At the other extreme, Yale could try to treat the loss like a loss from the endowment. Whatever point on the continuum Yale chooses between these extremes, the principles behind the endowment spending rule should be applied, especially the principle of adjusting gradually to shocks and choosing to cut first easily deferrable projects.

The 5% cut in expenditures Yale announced a couple of months ago is equal to about $200 million, which appears to put us in the same situation as a school like Berkeley or NYU, squandering the great advantage Yale has gained through its endowment and careful management by the investment team led by David Swensen. If Yale faced a much worse scenario of an extra $200 million of operating expenses every year into the indefinite future, it would eventually have to reduce spending by $200 million per year. Even then, it would be optimal to borrow so that the reduction in spending would come slowly over several years, consistent with the spirit of the smoothing rule. The fact that we have such a big endowment, and that Swensen has managed it so well, puts us in a rarified set of advantaged schools, with a big opportunity not to make abrupt, and therefore unnecessarily damaging, cuts.

So what other reason could explain why Yale is acting as if it took a hit many times bigger than the actual one? And why is Harvard also acting like it might go broke? There are possible explanations. Yale and

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[1] The technical definition of Yale Endowment does not appear to take into account the debts of the fund. A more reliable measure of the financial wealth of the University would net out the debts from the assets.

Harvard might feel it is advantageous to pose as poor when so many others are suffering. It may be an opportunity to make cuts, say in administration, or in peripheral funding, that are easier if they can be explained as financially required. Or maybe some of the professional schools that are not supported by the endowment will need to be cut, and it is awkward for parts of Yale to thrive while others suffer. But each of these explanations calls for careful strategic planning, and just the kind of consultation that has been missing.