SPENDING POLICY PRACTICES

2019

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FIGURES

Annual distributions from the endowment are a source of supplemental operating revenue for most endowed institutions. An institution's endowment spending policy provides a basis for the calculation of the annual distribution, serving as a bridge that links the long-term investment portfolio (LTIP) and the enterprise. Spending policies are designed to reflect the needs of current and future generations of stakeholders, balancing the goals of providing appropriate levels of support to current operations and preserving, or even growing, endowment purchasing power.[1] The data and analysis in this report cover a variety of spending topics, including spending rule types, the endowment's support of operations, and effective spending rates.

FIGURE 1 PROFILE OF PARTICIPATING INSTITUTIONS
2018 • n = 253
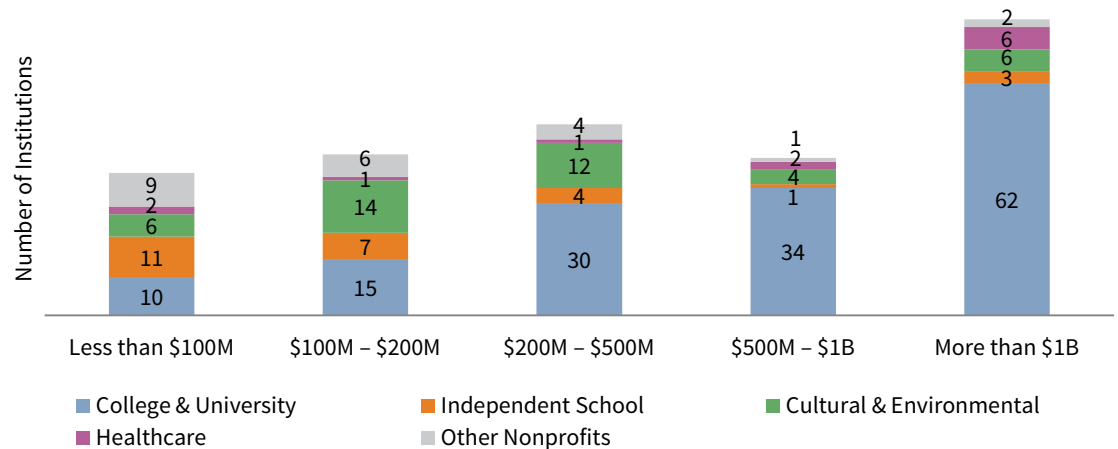
Source: Spending policy data as reported to Cambridge Associates LLC.

Annual Review

Cambridge Associates collected spending policy data on 253 of our endowment clients in 2018. Foundations were excluded from the survey group, as their spending is influenced by certain government-mandated spending requirements. Figure 1 shows the distribution of these institutions across various institution types and asset size bands.

Institutions in this study use three primary spending rule types. **MARKET VALUE–BASED** rules link the spending amount directly to the endowment's market value. **CONSTANT GROWTH** rules increase spending each year by a defined growth factor. **HYBRID** policies combine the elements of both market value–based and constant growth rule types.

Figure 2 shows the prevalence of the spending rule types across participating institutions. The most frequently used rule type is a market value–based policy, cited by 76% of institutions. Market value–based rules are most common among the smallest

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1   Purchasing power is defined as the real market value of the endowment. An endowment that is maintaining purchasing power is keeping pace with inflation (after spending and investment returns). An endowment that is growing purchasing power is outpacing inflation.

FIGURE 2   SPENDING POLICY TYPES
2018

All Institutions (n = 253)

Other Policy
4%

Hybrid Policy
13%

Constant Growth
Policy
8%

Market Value–
Based Policy
76%
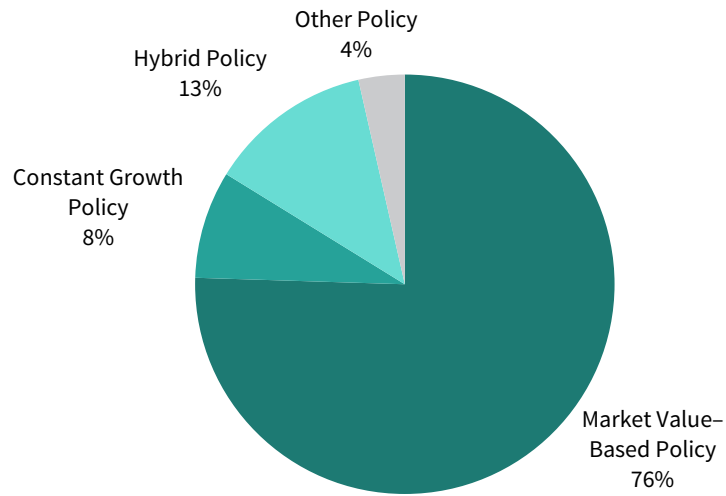
By Asset Size

	Market Value–Based	Constant Growth	Hybrid	Other
Less than $100M	89%	3%	3%	5%
n	34	1	1	2
$100M – $200M	88%	2%	7%	2%
n	38	1	3	1
$200M – $500M	84%	4%	10%	2%
n	43	2	5	1
$500M – $1B	79%	12%	10%	—
n	33	5	4	
More than $1B	54%	15%	24%	6%
n	43	12	19	5

By Institution Type

	Market Value–Based	Constant Growth	Hybrid	Other
Colleges & Universities	75%	12%	12%	1%
n	113	18	18	2
Independent Schools	69%	—	19%	12%
n	18		5	3
Cultural & Environmental	69%	7%	21%	2%
n	29	3	9	1
Health Care	83%	—	—	17%
n	10			2
Other Nonprofits	95%	—	—	5%
n	21			1

Source: Spending policy data as reported to Cambridge Associates LLC.
Notes: Market value–based spending policies base spending on a pre-specified percentage of a moving average of market values.
Constant growth policies increase prior year's spending by a measure of inflation and/or pre-specified percentage. Hybrid policies are
those that incorporate a weighted average of a constant growth rule and a percentage of market value rule. Other policies are those that
cannot be classified as market value–based, constant growth, or hybrid policies.

portfolios, with nearly 90% of institutions with assets less than $200 million using this approach. In comparison, 54% of institutions with assets of more than $1 billion use a market value–based rule. Hybrid and constant growth rules were cited by 13% and 8% of all participants, respectively. Both rule types were more likely to be used by larger portfolios than smaller portfolios. Among the institutions with assets greater than $1 billion, 24% used a hybrid policy and 15% used a constant growth policy.

Figure 3 shows the distribution of rule types for the 154 institutions that provided spending policy data in 2013 and 2018. The market value–based rule continues to be the most common among institutions in this study, with close to the same number of institutions using this policy in 2018 compared to five years ago. Among the other rule types, three more institutions used a hybrid policy; one fewer institution used a constant growth policy; and the same number of institution used some other policy.

FIGURE 3   SPENDING POLICY TYPES: 2013 VS 2018
n = 154
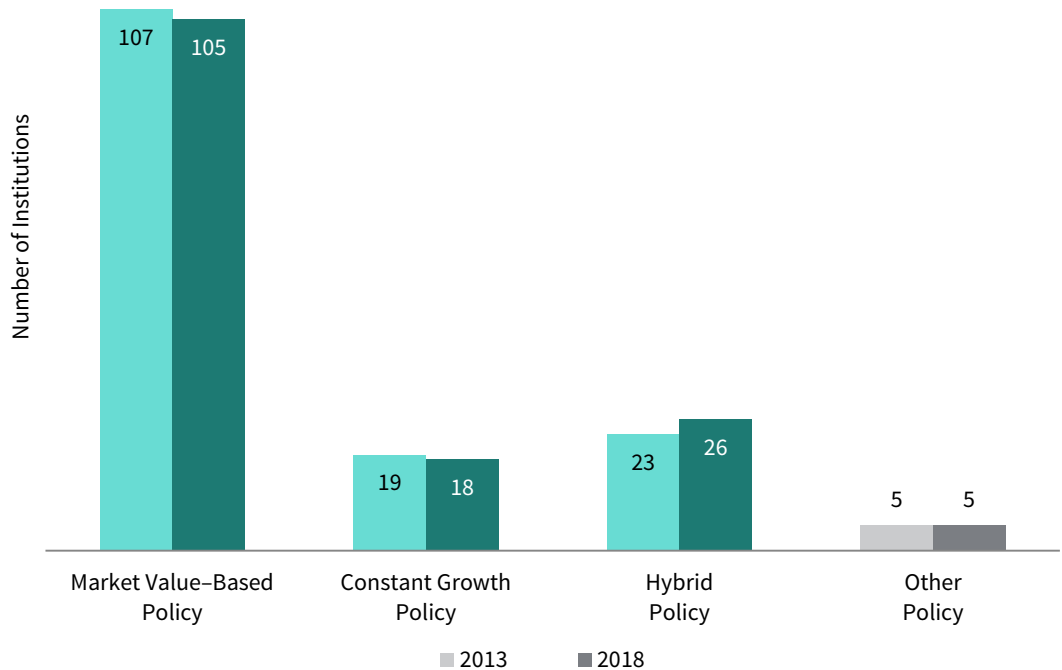
Source: Spending policy data as reported to Cambridge Associates LLC.
Note: Chart represents the 154 institutions that provided a spending policy in both 2013 and 2018.

MARKET VALUE–BASED RULES

A market value–based rule dictates spending a percentage of a moving average of endowment market values. By linking the spending distribution amount directly to the endowment's market value, this rule type usually produces the most dramatic changes in spending when investment conditions shift. Therefore, purchasing power preservation is prioritized during periods when the endowment's market value declines.

The primary levers of this approach are the target spending rate and the date or smoothing period used to measure the market value. Some institutions also use a cap and floor to contain changes in annual spending during volatile market periods.

TARGET SPENDING RATE. The target spending rate helps determine the proportion of the endowment that is distributed on an annual basis. Institutions incorporate long-term investment return expectations and inflation into the selection of the appropriate target spending rate. To preserve the purchasing power of an endowment,[2] the spending rate would align with long-term real investment return expectations. The purchasing power of an endowment will increase when the spending rate is lower than the long-term real return, and vice versa.

In 2018, the majority (88%) of participating institutions that cited a market value–based rule used a pre-specified target rate, while the remaining institutions allowed some discretion by setting a pre-specified percentage range within which the target spending rate may fall. For the purposes of comparing target spending rates, we assume the midpoint for institutions that specified a discretionary range. Of institutions with a market value–based policy, 42% used a target spending rate of 5%, while 51% of respondents used a target rate below 5%. Only 7% of institutions applied a rate that exceeded 5% (Figure 4).

In fiscal year 2018, 87% used the same target spending rate as reported in the previous year (Figure 5). This is consistent with the trend we have observed over the last five years, where the vast majority of institutions make no change in any given year. Approximately 11% of institutions decreased their target spending rate in 2018, while another 2% increased the rate.

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2   In this instance, we use the term "endowment" to refer to a single fund with no future inflows. The LTIP, which is a collection of multiple endowments and other long-term funds, can use inflows to increase purchasing power even if the spending rate is equal to the pool's long-term real return.

FIGURE 4   TARGET RATES USED IN MARKET VALUE–BASED SPENDING POLICIES
2018

All Institutions (n = 189)
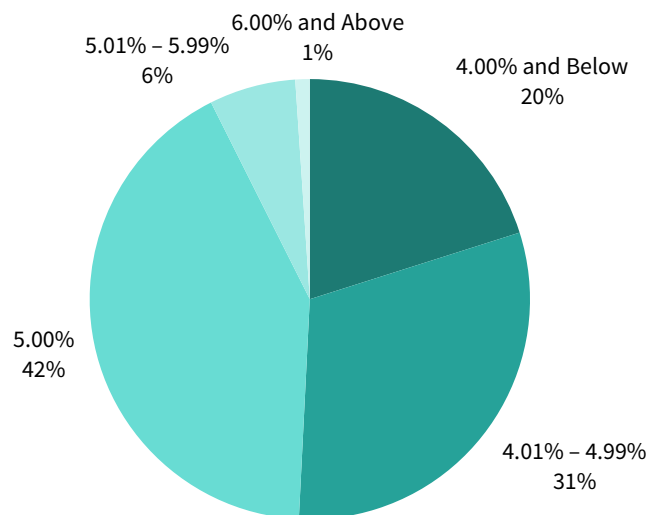
By Asset Size

	4.00% or Less	4.01% – 4.99%	5.00%	5.01% – 5.99%	6.00% and Above
Less than $100M	21%	18%	50%	6%	6%
n	7	6	17	2	2
$100M – $200M	16%	32%	47%	5%	—
n	6	12	18	2	
$200M – $500M	19%	37%	37%	7%	—
n	8	16	16	3	
$500M – $1B	27%	27%	36%	9%	—
n	9	9	12	3	
More than $1B	20%	37%	39%	5%	—
n	8	15	16	2	

By Institution Type

	4.00% or Less	4.01% – 4.99%	5.00%	5.01% – 5.99%	6.00% and Above
Colleges & Universities	22%	34%	35%	8%	1%
n	24	38	39	9	1
Independent Schools	28%	39%	33%	—	—
n	5	7	6		
Cultural & Environmental	10%	21%	59%	7%	3%
n	3	6	17	2	1
Healthcare	20%	30%	50%	—	—
n	2	3	5		
Other Nonprofits	19%	19%	57%	5%	—
n	4	4	12	1	

Source: Spending policy data as reported to Cambridge Associates LLC.

Notes: Market value–based spending policies base spending on a pre-specified percentage of a moving average of market values. Chart reflects data for the 189 institutions that provided detailed data on their target spending rate. If a range was provided, the target spending rate was calculated using the midpoint of the range.

FIGURE 5   INSTITUTIONS CHANGING TARGET RATES IN MARKET VALUE–BASED SPENDING POLICIES

Fiscal Years 2013–18 • Percent (%)
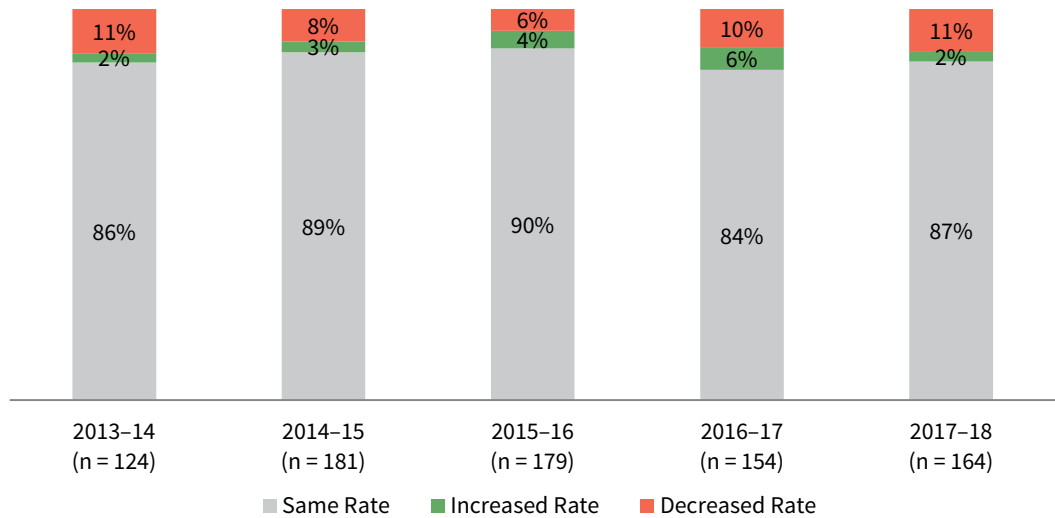
	2013–14 (n = 124)	2014–15 (n = 181)	2015–16 (n = 179)	2016–17 (n = 154)	2017–18 (n = 164)
Decreased Rate	11%	8%	6%	10%	11%
Increased Rate	2%	3%	4%	6%	2%
Same Rate	86%	89%	90%	84%	87%

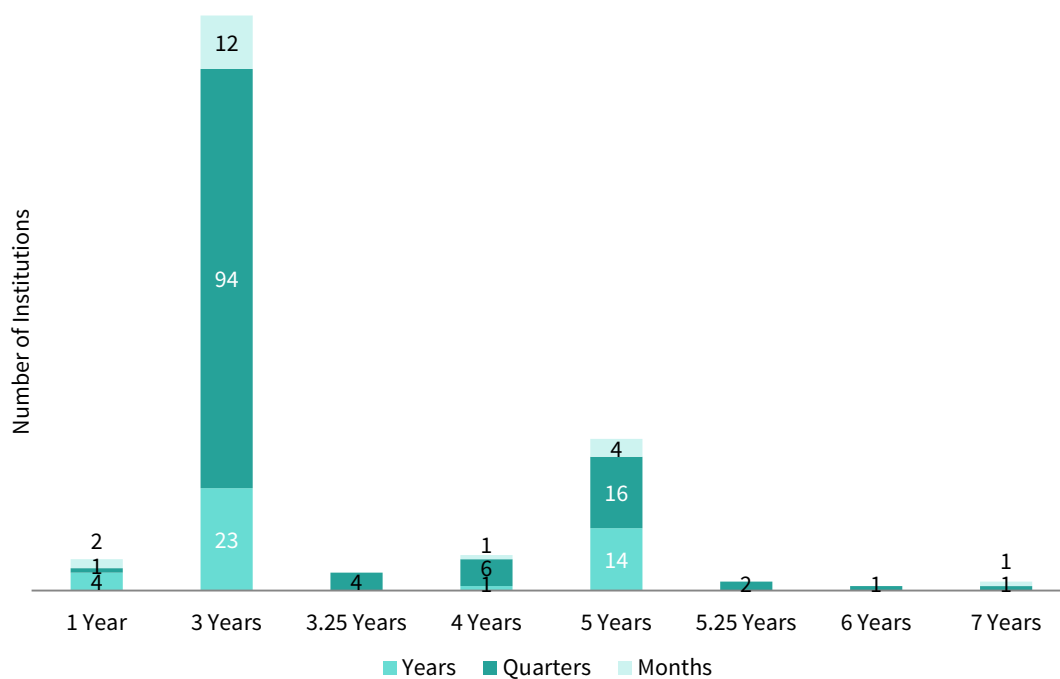Legend: ■ Same Rate ■ Increased Rate ■ Decreased Rate

Source: Spending policy data as reported to Cambridge Associates LLC.
Notes: Market value–based spending policies base spending on a pre-specified percentage of a moving average of market values. Chart reflects data for the institutions using a market value–based spending policy that provided the target rate used in their spending calculation. If a range was provided, the target spending rate was calculated using the midpoint of the range.

SMOOTHING PERIOD. The spending distribution under a market value–based rule is determined by applying the target spending rate to the endowment's market value. This is usually measured as an average market value over a period of time, known as a smoothing period. By capturing the endowment's market value over several points in time, the smoothing period helps reduce the year-to-year volatility in spending distributions. Smoothing periods for participants in this report range from one to seven years and the time interval (i.e., monthly, quarterly, or annual market values) can vary (Figure 6). The most common measurement period continues to be 12 quarters (50% of those with a market value–based policy).

FIGURE 6   SMOOTHING PERIODS FOR MARKET VALUE–BASED SPENDING POLICIES: LENGTH OF PERIOD AND UNIT OF TIME MEASUREMENT
2018 • n = 187

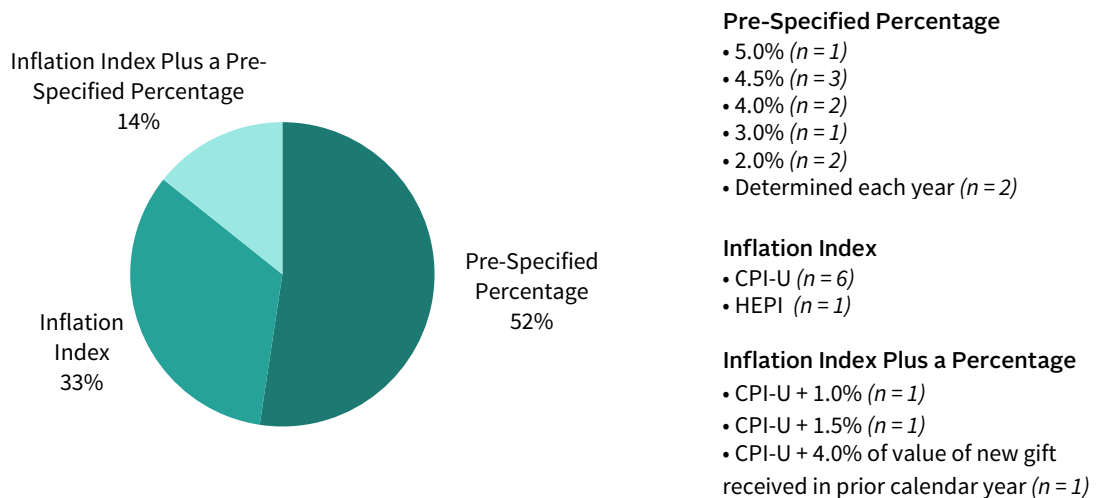Source: Spending policy data as reported to Cambridge Associates LLC.
Notes: Market value–based spending policies base spending on a pre-specified percentage of a moving average of market values. Unit of time measurement indicates whether spending is calculated using monthly, quarterly, or yearly market values. Chart reflects data for the 187 institutions using a market value–based spending policy that provided the unit of time measurement in their spending calculation.

CAP AND FLOOR. The introduction of a spending floor and/or cap can also serve as a smoothing mechanism for spending dollars by limiting the change in spending during particularly volatile periods. A floor for a market value–based rule prevents spending from falling below a certain level, usually the previous year's spending dollar amount. Although a floor can relieve budgetary pressures during market downturns for institutions with concerns about spending cuts, limiting the decline in distributions can further erode the endowment's market value and thus make purchasing power preservation more challenging over the long run. A cap limits spending increases when endowment growth is particularly strong by setting a maximum annual growth rate. When paired together, a cap and floor (known as a collar) can produce smoother distributions by maintaining a level of spending during challenging economic environments and saving a greater portion of investment gains from period with exceptional endowment growth. In practice, only 15 institutions (8%) that use a market value rule employ a cap and/or floor (Appendix). For the 23 institutions that outline a discretionary range for the target spending rate, the range serves as a collar in that it allows institutions to raise the rate of spending in down markets and lower the rate of spending when endowment growth rates are high.

CONSTANT GROWTH POLICIES

A constant growth spending policy increases the prior year's spending amount by a measure of inflation and/or a pre-specified percentage. Institutions tend to use this rule type when the endowment is a significant source of operating revenue and volatility in annual spending is less tolerable. More predictable spending is derived from constant growth rules with a fixed annual increase in spending compared to those linked to inflation, which is not a constant number and not known in advance. Of the 21 institutions that use this rule type, 52% use a pre-specified percentage growth rate, 33% use an inflation-index growth rate, and 14% use an inflation-index growth rate plus a pre-specified percentage (Figure 7).

FIGURE 7   GROWTH RATES USED IN CONSTANT GROWTH SPENDING POLICY CALCULATION
2018 • n = 21

Inflation Index Plus a Pre-Specified Percentage
14%

Pre-Specified Percentage
52%

Inflation Index
33%

Pre-Specified Percentage
• 5.0% *(n = 1)*
• 4.5% *(n = 3)*
• 4.0% *(n = 2)*
• 3.0% *(n = 1)*
• 2.0% *(n = 2)*
• Determined each year *(n = 2)*

Inflation Index
• CPI-U *(n = 6)*
• HEPI *(n = 1)*

Inflation Index Plus a Percentage
• CPI-U + 1.0% *(n = 1)*
• CPI-U + 1.5% *(n = 1)*
• CPI-U + 4.0% of value of new gift received in prior calendar year *(n = 1)*

Source: Spending policy data as reported to Cambridge Associates LLC.
Note: Constant growth policies increase prior year's spending by a measure of inflation and/or a pre-specified percentage.

The strict application of a constant growth rule produces predictable spending, but this rule type has some notable shortcomings. Increasing spending during prolonged periods of low or negative investment returns quickly eats away at an already dwindling market value and may permanently impair the endowment. Conversely, in a high-return environment, a strict constant growth rule can be perceived as significantly under-spending.

In practice, institutions mitigate these shortcomings by imposing a spending cap and floor based on a percentage of the endowment's market value, or a moving average of market values (Appendix). Spending collars essentially transform the constant growth rule to a market value–based rule in times of significant endowment growth or contraction to avoid a complete disconnect between spending and the endowment market value. When the constant growth rate falls behind endowment growth by a certain amount, the floor is triggered and the spending distribution is raised to a new level determined by the floor. The cap works in the opposite manner by resetting spending to a lower level than was what calculated from the growth measure. Spending caps are typically triggered during periods where the endowment's market value has significantly declined.
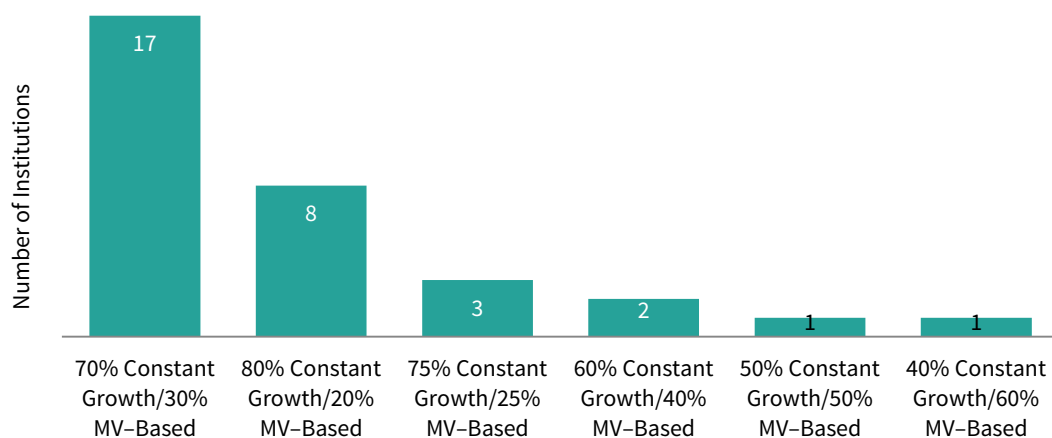
HYBRID POLICIES

A hybrid spending policy blends the more predictable spending element of a constant growth policy with the asset preservation principle of a market value–based policy and allows an institution to set the appropriate mix that best meets its needs. The rule is expressed as a weighted average of a constant growth rule and a percentage-of-market-value (or average market value over a period of time) rule. Hybrid spending rules essentially have the effect of spending a percentage of an exponentially weighted average market value that is adjusted for inflation.

An important decision with the hybrid rule is to determine the weighting of the market value and constant growth components. The larger the weighting to the market value component, the more impact that a change in the endowment's market value will have on the annual spending distribution. Most institutions apply the larger weighting to the constant growth component, emphasizing more predictable spending. Just more than half of respondents (17 of 32) that use this rule type assign a 70% weighting to the constant growth portion and a 30% weighting to the market value–based portion (Figure 8). Among institutions in this study, the constant growth component is most frequently linked to an inflation index. For the market value component, the most common target spending rate is 5% (41%). Inputs to the calculation of both the constant growth and market value–based components are shown in Figure 9.

FIGURE 8   HYBRID SPENDING POLICIES: WEIGHTINGS OF CONSTANT GROWTH AND MARKET VALUE–BASED COMPONENTS
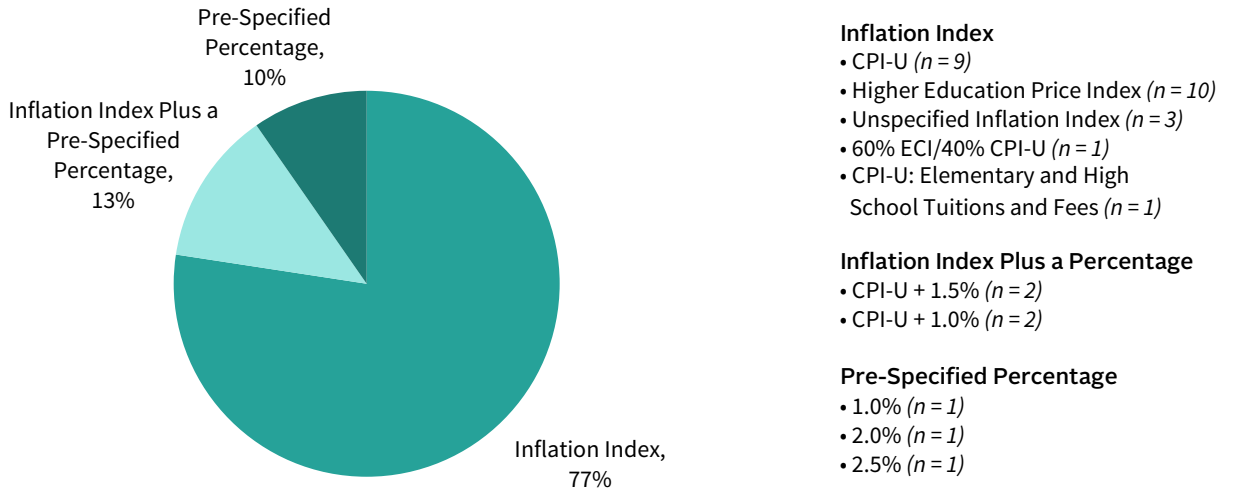
2018 • n = 32

Source: Spending policy data as reported to Cambridge Associates LLC.
Notes: Hybrid policies essentially have the effect of spending a pre-specified percentage of an exponentially weighted average market value (MV). The rule is expressed as a weighted average of a constant growth policy and a percentage of market value policy. Of the 32 institutions that use a hybrid spending policy, 21 do not use a collar, cap, or floor to contain year-to-year spending. The 11 types of collars used can be found in the appendix.

FIGURE 9 HYBRID SPENDING POLICIES: GROWTH & MARKET VALUE–BASED CHARACTERISTICS
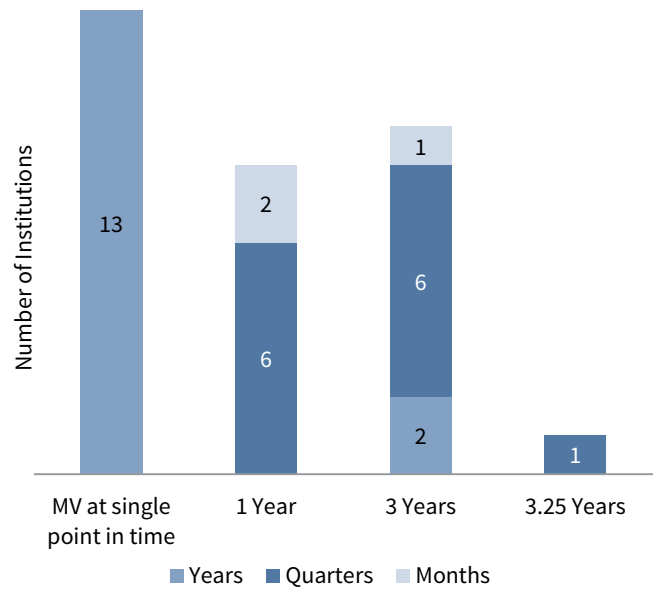2018

Growth Measures Used in Constant Growth Component (n = 31)

Pre-Specified Percentage, 10%

Inflation Index Plus a Pre-Specified Percentage, 13%

Inflation Index, 77%

Inflation Index
- CPI-U *(n = 9)*
- Higher Education Price Index *(n = 10)*
- Unspecified Inflation Index *(n = 3)*
- 60% ECI/40% CPI-U *(n = 1)*
- CPI-U: Elementary and High
  School Tuitions and Fees *(n = 1)*

Inflation Index Plus a Percentage
- CPI-U + 1.5% *(n = 2)*
- CPI-U + 1.0% *(n = 2)*

Pre-Specified Percentage
- 1.0% *(n = 1)*
- 2.0% *(n = 1)*
- 2.5% *(n = 1)*

Target Rates Used in Market Value–Based Component (n = 32)

5.01% – 5.99%, 16%

≤ 4.00%, 6%

4.01% – 4.99%, 38%

5%, 41%
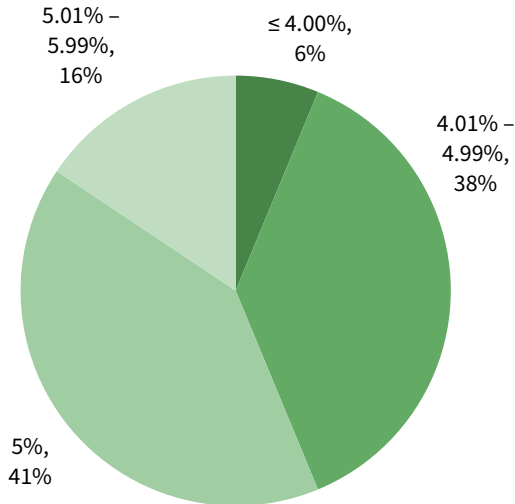
Smoothing Periods and Units of Time Measurement Used in Market Value–Based Component (n = 31)

Number of Institutions

MV at single point in time: 13

1 Year: 6 (Quarters), 2 (Months)

3 Years: 2 (Months), 6 (Quarters), 1 (Months)

3.25 Years: 1

■ Years ■ Quarters ■ Months

Source: Spending policy data as reported to Cambridge Associates LLC.
Notes: A hybrid rule is expressed as a weighted average of a constant growth policy and a percentage of market value policy. One institution that uses a hybrid policy did not provide all details of their spending rule. Of the 13 institutions using a single market value, six use the beginning fiscal year market value, four use the prior calendar year-end market value, and three use the market value two years prior.

SUPPORT OF OPERATIONS

Since few nonprofit institutions generate enough revenues from their core operations to break even on their annual operating budgets, many rely on their LTIP to provide additional financial support. The level of LTIP support varies considerably among the institutions in this study. Spending distributions supported 1% or less of the operating budget for some institutions, but for others, they serve as the single largest source of revenue.

Public universities, which receive financial support from state appropriations, generally rely less on the LTIP to fund the operating budget compared to private colleges and universities and other nonprofits. For the 15 public universities that provided data, median support from the LTIP as a percentage of operating expenses was 3.3% in 2018. Median support for private colleges and universities was 14.1% (Figure 10). Among independent schools and cultural and environmental institutions, reliance on the LTIP is higher, as median support of the operating budget was 16.3% and 25.5%, respectively.

The more predictable stream of spending dollars presumably makes the constant growth and hybrid rules appealing to institutions with higher reliance on the LTIP. Median LTIP support was 27.8% for institutions using a constant growth policy, the highest among the three main rule types (Figure 11). Institutions using hybrid policies, which also contain a constant growth component, had the second highest median LTIP support (23.1%). For institutions using a market value–based policy, median LTIP support was just 8.6%.

## FIGURE 10   LTIP SUPPORT OF OPERATIONS BY INSTITUTION TYPE

2018 • Percent (%)
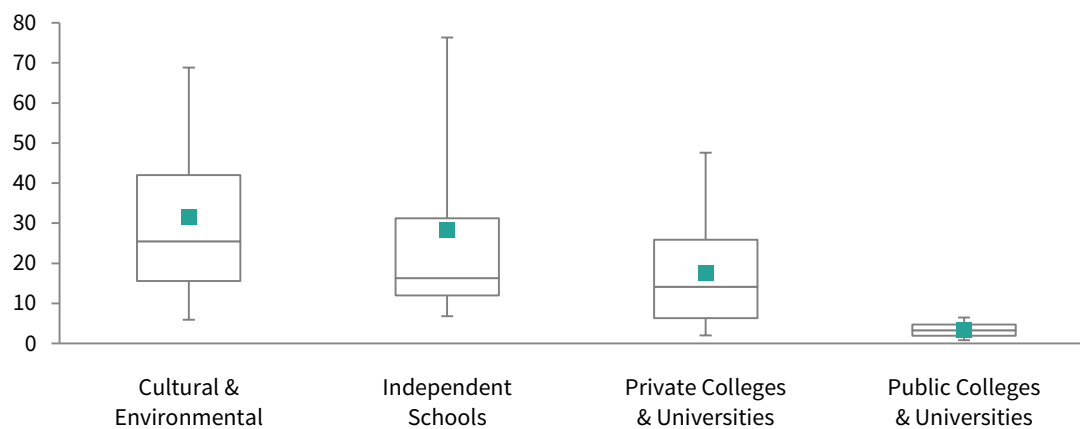
	Cultural & Environmental	Independent Schools	Private Colleges & Universities	Public Colleges & Universities
5th Percentile	68.8	76.3	47.6	6.5
25th Percentile	42.0	31.2	25.9	4.7
Median	25.5	16.3	14.1	3.3
75th Percentile	15.6	12.0	6.3	1.9
95th Percentile	5.9	6.8	2.0	0.8
Mean	31.6	28.2	17.5	3.4
n	*18*	*13*	*76*	*15*

Source: Spending policy data as reported to Cambridge Associates LLC.

FIGURE 11   LTIP SUPPORT OF OPERATIONS BY SPENDING RULE TYPE

2018 • Percent (%)
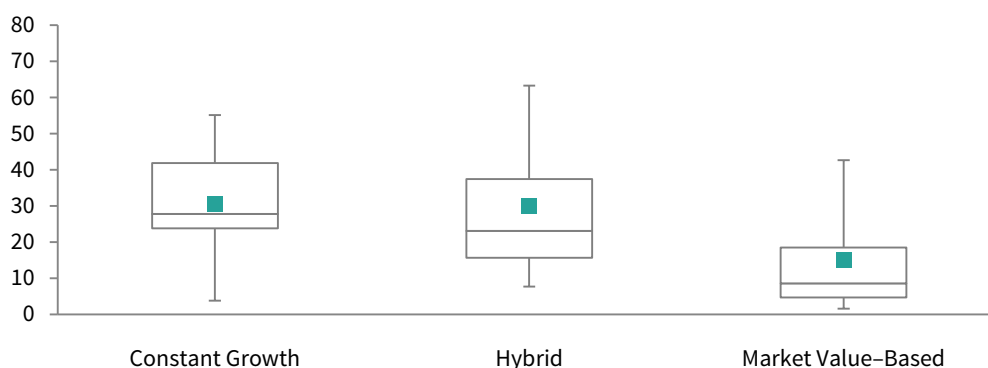
	Constant Growth	Hybrid	Market Value–Based
5th Percentile	55.1	63.3	42.7
25th Percentile	41.9	37.4	18.5
Median	27.8	23.1	8.6
75th Percentile	23.8	15.7	4.7
95th Percentile	3.8	7.7	1.6
Mean	30.6	30.0	15.1
n	*12*	*21*	*90*

Source: Spending policy data as reported to Cambridge Associates LLC.
Notes: LTIP support of operations is the proportion of the operating budget that is funded from LTIP payout. For the two institutions that reported "other" spending policies, LTIP support of operations averaged 11.1%.

EFFECTIVE SPENDING RATES

At what rate have institutions actually spent from their LTIP? The effective spending rate can help answer this question. The effective spending rate is calculated as the total annual spending distribution as a percentage of the beginning market value of the LTIP. In 2018, the average effective spending rate was 4.7% for the 109 institutions that provided data for past ten years (Figure 12).

Though the effective spending rate calculation is based on the most recent year's beginning LTIP market value, most institutions use an average market value that spans multiple years when determining the annual spending distribution. When the most recent year's beginning market value is higher than the average market value from the smoothing period, the effective spending rate will be lower than the target rate in the spending policy, and vice versa. Fiscal year 2010 is a classic example of this inverse relationship between the directional trend of effective spending rates and LTIP growth rates. Effective spending rates spiked upward in 2010 as steep portfolio declines resulting from the global financial crisis began factoring into spending policy calculations. In 2018, the mean effective spending rate declined by 30 bps, which was primarily attributable to growth in portfolio market values for the fiscal year.

FIGURE 12 MEAN ANNUAL EFFECTIVE SPENDING RATE

2009–18 • Percent (%) • n = 109
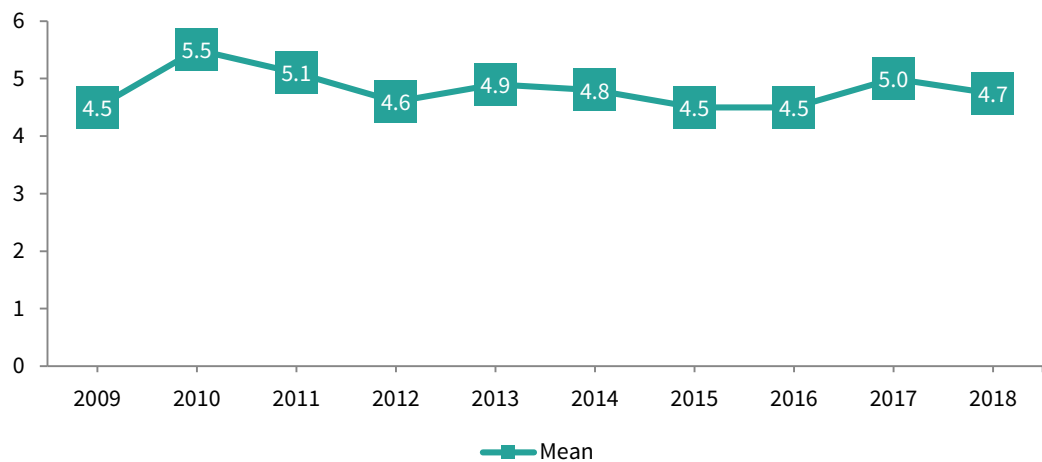
Source: Spending data as reported to Cambridge Associates LLC.
Note: Data represent the average of 109 institutions that provided effective spending rates for each year from 2009 to 2018.

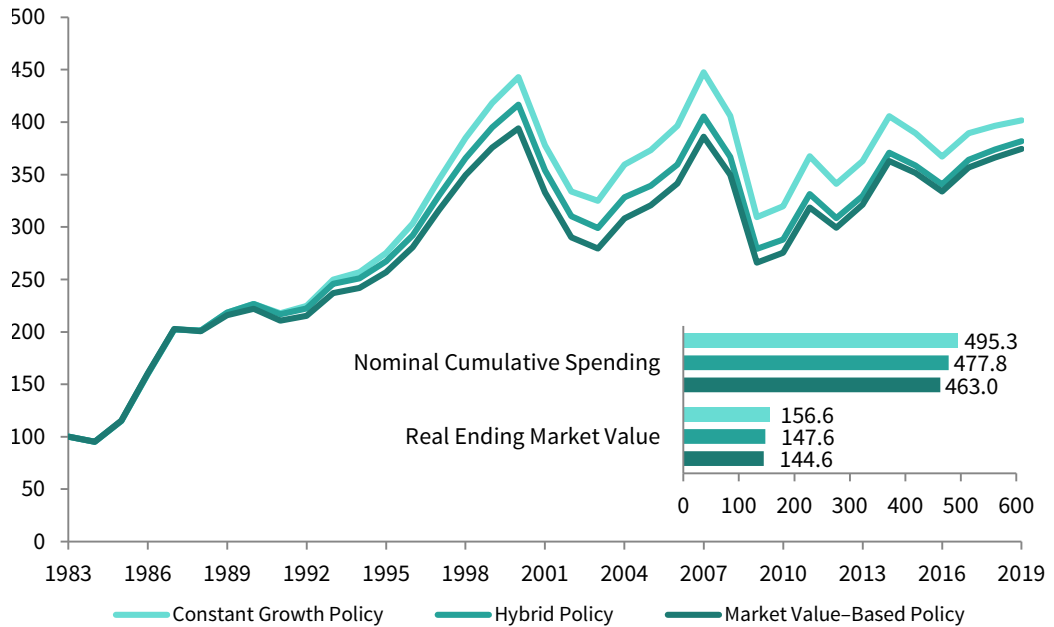## Short-Term Implications of Policies Built for the Long Term

Over the long term, each of the spending policies described in this report—market value, constant growth, and hybrid—provide some balance between preservation of purchasing power and reliable spending support for the institution (Figure 13). Modeling a simple portfolio and the most frequently adopted policy for each rule type over a historical long-term horizon, we see that all of the policies would have generated similar amounts of cumulative spending, and resulted in real growth in purchasing power.[3]

Spending policy, like investment policy, is a long-term decision that should be implemented with an expectation that the policy will be durable and applied consistently. To select a policy that can serve the institution in the long term, fiduciaries need to understand how the policy will behave in short-term periods, particularly in different market conditions that include volatility. Spending distributions are a component of the annual institutional budget, so fluctuations can have significant impact on the enterprise. Policy choices that protect the enterprise from volatile spending can lead to more fluctuations in the portfolio market value. Conversely, policies that prioritize maintenance of purchasing power preservation may deliver more fluctuations in spending.

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3   The analysis assumes a starting market value of $100 million on June 30, 1982. The market value–based rule applies a spending rate of 5% to a trailing 12-quarter average. The constant growth rule distributes 5% market value in year one and increases annual spending at the rate of inflation, defined as CPI-U Growth, with spending reset to a cap (6%) and floor (4%) of a 12-quarter trailing endowment market value where applicable. The hybrid rule distributes 5% in year one and is a blended rule that uses the CPI-U for the constant growth portion (70% weighting) and 5% of a trailing 12-quarter average market value for the market value portion (30% weighting), no collar. The evaluated portfolio is 70% global equities (MSCI World Index [Net]) and 30% US bonds (Barclays Government/Credit Index).

FIGURE 13 NOMINAL MARKET VALUE
USD Millions

Nominal Cumulative Spending
495.3
477.8
463.0

Real Ending Market Value
156.6
147.6
144.6

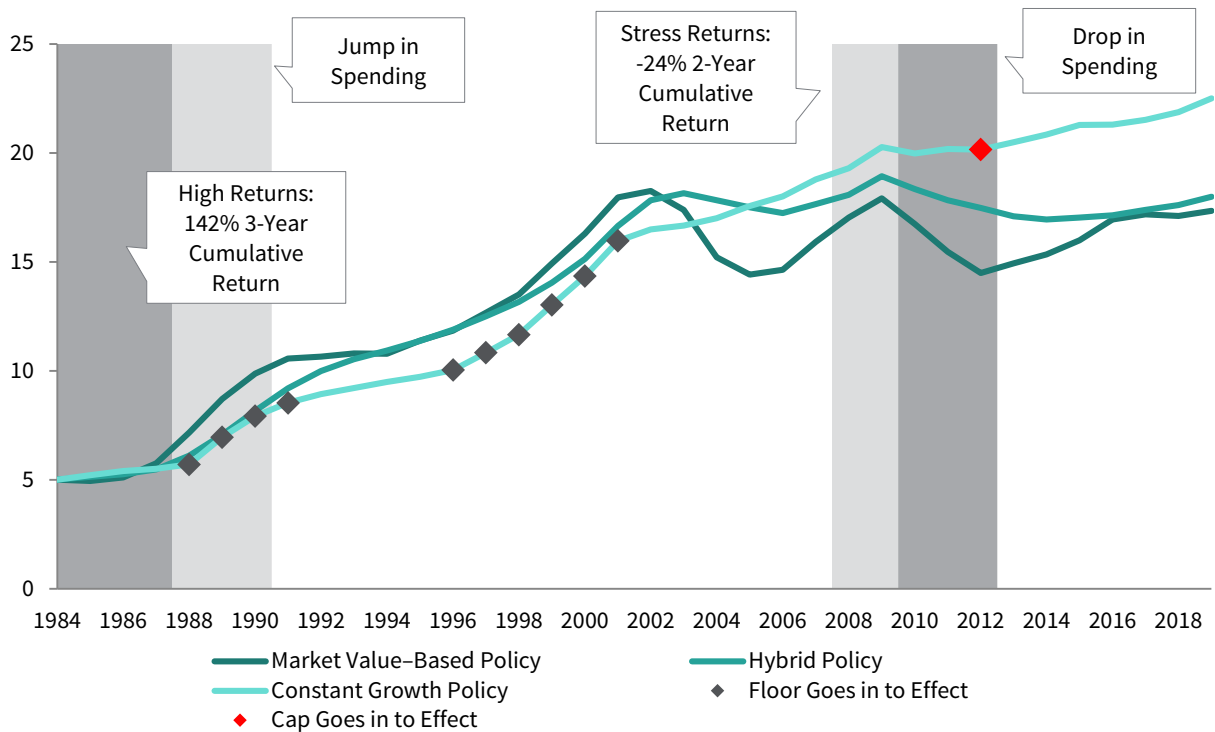Constant Growth Policy   Hybrid Policy   Market Value–Based Policy

Source: Cambridge Associates Spending Model.

In this section, we consider how the different rule types respond to extreme short-term performance changes, and the implications for spending and endowment value. Figure 14 presents the long-term view of annual spending for the three policy types, and highlights the implications of a high-return and low-return period. After the high-return period from 1984 to 1987, spending increased for each of the rules, but the market value rule spending increased at the fastest rate because it was linked most closely to growing portfolio value. Following the steep market declines from 2007 to 2009, constant growth rule spending continued at similar levels, while the market value rule quickly decreased spending to match the dwindling endowment level.

FIGURE 14 NOMINAL ANNUAL SPENDING
1984–2019 • USD Millions

Jump in Spending

High Returns: 142% 3-Year Cumulative Return

Stress Returns: -24% 2-Year Cumulative Return

Drop in Spending

Market Value–Based Policy · Hybrid Policy · Constant Growth Policy · Floor Goes in to Effect · Cap Goes in to Effect

Source: Cambridge Associates Spending Model.

ZOOMING IN ON HIGH RETURNS

During the high-return period, the spending from the market value rule climbed quickly, as it tracked to the rising market value. Since the rate of inflation was drastically lower than the investment returns of this period, the inflation factor of the constant growth rule would have kept spending much lower than that of the market value rule. Instead, the spending collar essentially transformed the constant growth rule into a slightly less predictable market value rule, with the floor of the collar raising spending to 4% of a trailing 12-quarter average. The hybrid rule yielded spending that fell between the amounts calculated by the market value and constant growth rules. As Figure 15 shows, the higher spending of the market value rule portfolio led to a slower rate of total asset growth during this period and a lower market value compared to the other two rules.

Effective spending, which is calculated as a percentage of the portfolio's beginning year market value, averaged 4.2% for the market value rule from 1984 to 1987, and 3.6% and 3.4% for the hybrid and constant growth rules, respectively. As we saw in Figure 12, there is an inverse relationship between the directional trend of effective spending rates and portfolio growth rates. That is why each of these rule types, despite being anchored to a target 5% spending rate in some manner,[4] had effective spending

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4   Both the market value and hybrid rules have at least some portion of their spending based on 5% of a trailing 12-quarter market value average. The constant growth rule uses a spending collar that ensures spending falls within a range of the 12-quarter market value average. The midpoint of that collar is 5%.

rates that were well below that target level during this high return period. Institutions, particularly those with constant growth and hybrid policies, may be asked why they do not have higher levels of spending given the rapidly growing endowment. As these lower rates of spending during high return periods are balanced by higher rates of spending during low-return periods, it is important to educate stakeholders about the strategy that led to implementing a spending policy and how the rule supports longer-term goals.

FIGURE 15 NOMINAL ANNUAL SPENDING: TOTAL PERIOD CHANGE AND MAXIMUM ANNUAL CHANGE
June 30, 1987 – June 30, 1991 • USD Millions
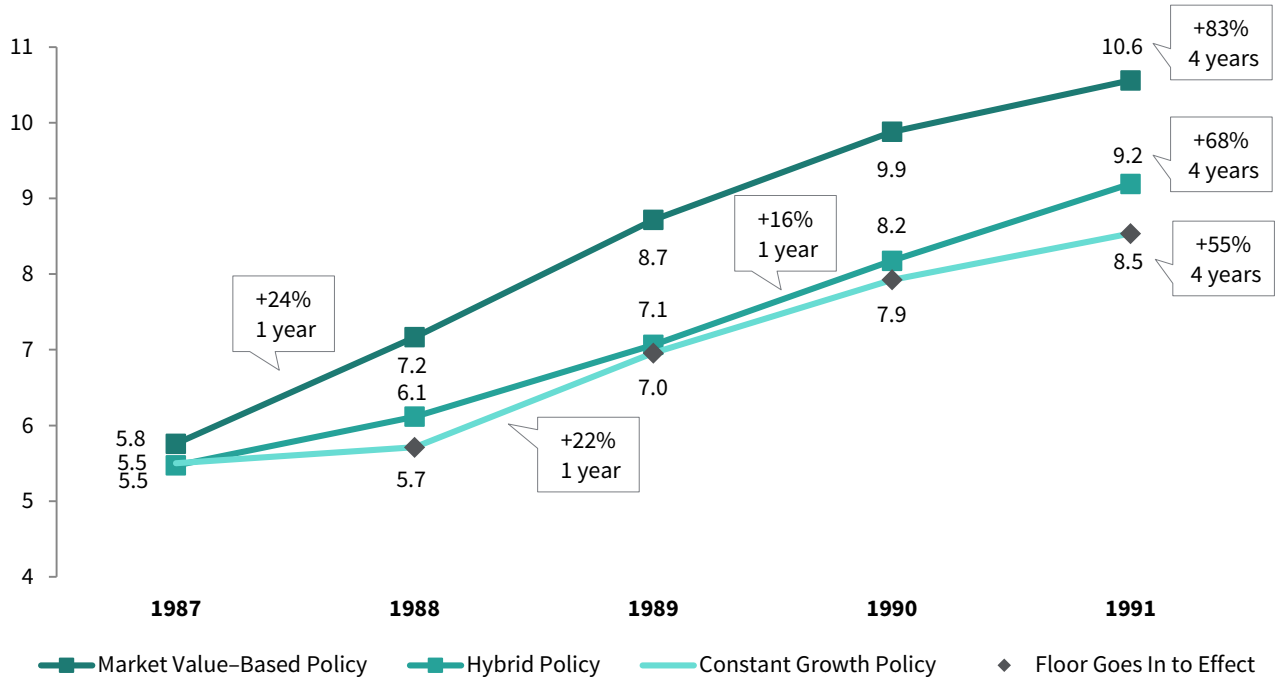
Source: Cambridge Associates Spending Model.

Volatility on the upside is typically not seen as a problem for investors, but a closer look at annual spending through the high-return period illustrates how swings in the market can affect an institution's budget. Spending from all three rule types increased substantially over this four-year period, with the market value rule increasing the most (83%). If an institution becomes accustomed to endowment distributions that increase by such a large percentage over a short period of time, it may then feel shocking to have smaller increases in spending, or even decreases, in subsequent years. Institutions that have a high reliance upon the endowment in the operating budget will feel the impact of volatility the most.

ZOOMING IN ON LOW RETURNS

Following the negative performance of 2008 and 2009, each of the spending policies would have reduced spending (Figure 16). In the case of the constant growth policy, this was due to deflation in fiscal year 2009[5] and the trigger of the spending cap in 2012, which reset spending to a lower level. For the market value rule, the decline in portfolio values was responsible for the reduction in spending. The combination of deflation and market value declines factored into the decrease in spending under the hybrid rule.

5   CPI-U was -1.43% for the fiscal year ending June 30, 2009.

FIGURE 16   NOMINAL ANNUAL SPENDING: TOTAL PERIOD CHANGE AND MAXIMUM ANNUAL CHANGE
June 30, 2009 – June 30, 2012 • USD Millions
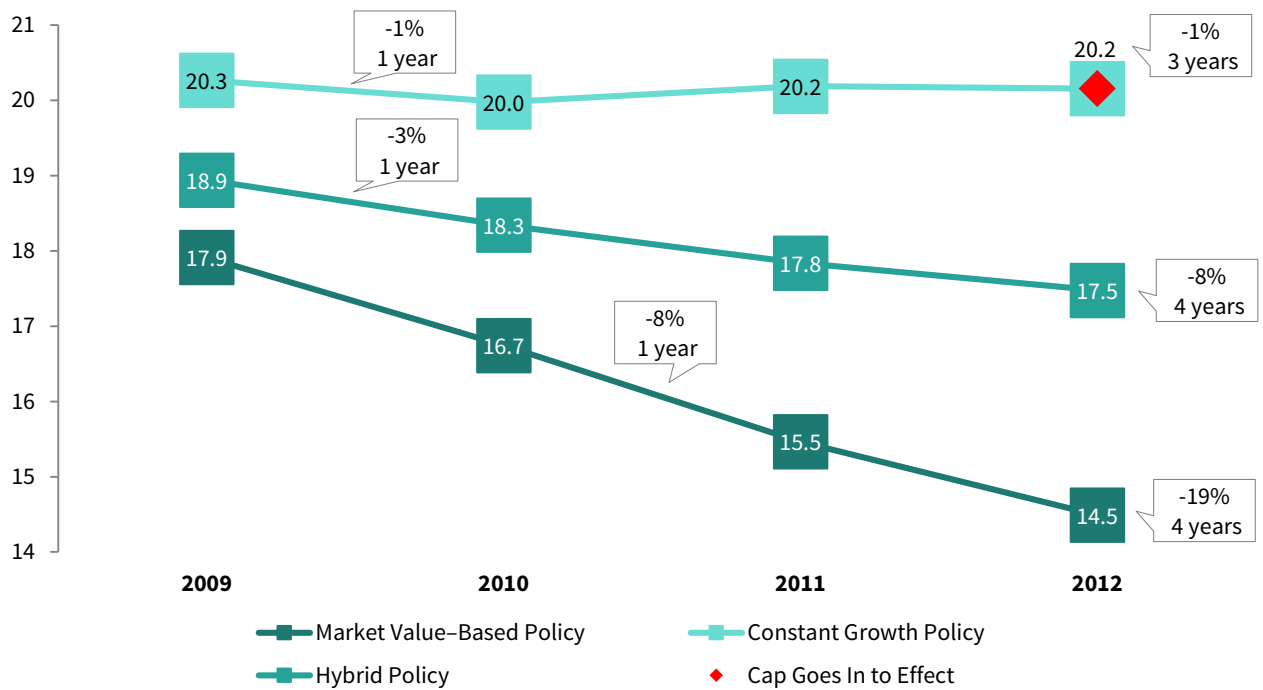
Source: Cambridge Associates Spending Model.

As we continue our analysis over a long-term horizon, the low-return period illustrates the differences between the main priorities of the policy types. The constant growth policy went into the downturn with the highest market value because of lower effective spending in the prior high-return periods. While spending dropped precipitously for the market value rule during the low-return period, it remained relatively steady for the constant growth rule. In the last year, the cap on the constant growth policy kicks in to keep spending within the 6% market value collar. Despite higher spending, the constant growth policy still ends with a higher value than the market value and hybrid rules.

The hybrid policy reduced spending, but less dramatically than that of the market value rule, which saw a decrease of 19% from 2009 to 2012. Institutional budgets are not likely to decrease year-over-year in line with markets, so a decrease of as much as 19% over a short time period for an important revenue source would likely create a financial strain on the institution. The more gradual reduction in spending provided by the hybrid rule may give the institution time to reduce expenses, or find other sources of funding to replace the reduced endowment distribution.

WHAT ARE THE CHANCES?

The market value policy presents the highest probability of experiencing a decline in endowment spending of more than 10% over a five-year (short-term) period (Figure 17).[6] The probability of this drop with a constant growth policy with the collar is 11%, slightly higher than the 10% probability of the hybrid rule. If the collar is not in place, the constant growth rule would be more consistent, and the probability of this kind of decline drops to 5%. The trade-off for the higher probability of spending declines is greater market value preservation during low performance periods.

6   Based on a Monte-Carlo simulation using Cambridge Associates' long-term return and standard deviation assumptions by asset class for a 70/30 portfolio composed of global equities and US government bonds. Return and standard deviation assumptions are long term and can be unstable over shorter time periods. The simulation calculates the probability that the nominal annual spending distribution generated by the given policy will decline by more than 10% from a peak at any point during a five-year period.

FIGURE 17   PROBABILITY OF A SPENDING DECLINE OF MORE THAN 10% AT ANY POINT DURING A FIVE-YEAR PERIOD

USD Millions
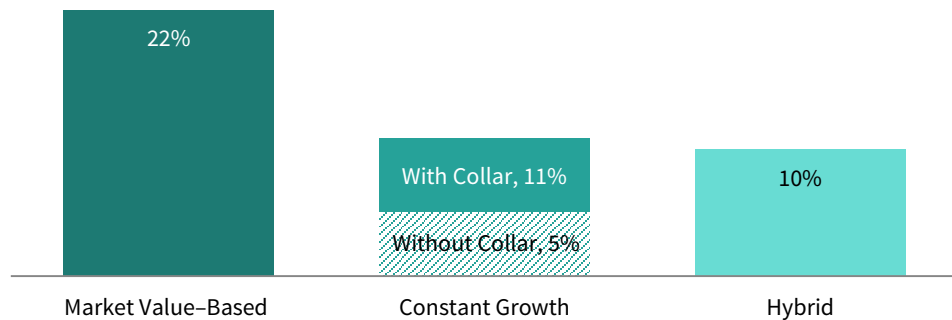
Source: Cambridge Associates Spending and Shortfall Model.

Conclusion

Spending policies work best when they are aligned with the role of the endowment, long-term goals, and near-term budgetary needs. Spending volatility may be acceptable in short bouts if reliance is low and/or there are other sources of revenue to replace endowment spending when there is a shortfall. If consistent spending is a priority, an acceptable tradeoff may be market value fluctuations. Certainly, the rate of spending associated with the rule type is another critical determinant in the spending and portfolio value outcomes.

When selecting or re-underwriting a spending policy, decision makers may want to consider the following short-term considerations:

- Will we adhere to the spending policy during market extremes?

- Does the institution have liquidity from other sources that could backstop the budget if endowment spending diminishes?

- Can the institution tolerate fluctuations in annual spending, even for short periods of time?

- Are we willing to deplete market value in lower return environments? ■

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PARTICIPANTS

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Fallon Paiute-Shoshone Tribe
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Linda Hall Library Trusts
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Ravinia Festival Association
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The Lawrenceville School
The Loomis Institute
The Madeira School
Park Tudor Trust
Phillips Exeter Academy
The Pingry School
Punahou School
The Roxbury Latin School
Salisbury School
St. Paul's School
Western Reserve Academy
The Winsor School
Xaverian Brothers High School

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Hawaii Pacific Health
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Lifespan Corporation
Maine Medical Center
Mayo Clinic
Partners HealthCare System, Inc.
Saint Francis Foundation
The Sealy & Smith Foundation
Shore Regional Health
Spastic Children's Endowment Foundation

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American Jewish Joint Distribution Committee
Animal Rescue League of Boston
Armenian Church Endowment Fund
Catholic Church Extension Society
Archdiocese of Chicago
Claremont University Consortium
Episcopal Divinity School
Federation of Protestant Welfare Agencies
HighGround Advisors
International/American Association for Dental Research
Mission Diocese Fund
Massachusetts Society for Prevention of Cruelty to Animals
Lucile Packard Foundation for Children's Health
Diocese of Providence
Saint Thomas Church
Southern Poverty Law Center
Sunflower Foundation Health Care for Kansans
Parish of Trinity Church in the City of New York
United Methodist Health Ministry Fund
United States Tennis Association
Catholic Diocese of Wilmington

Appendix: Collars, Caps, and Floors

MARKET VALUE–BASED SPENDING POLICIES

COLLARS (n = 4)	CAPS ONLY (n = 8)	FLOORS ONLY (n = 3)
• 3.0% – 6.0% of current MV	• 110% of prior year's payout	• 100% of payout from 2005–06
• 90% – 107% of prior year's payout	• 105% of prior year's payout	• 100% of prior year's payout *(n = 2)*
• 100% – 110% of prior year's payout	• 104% of prior year's payout	
• 100% – 110% of prior year's payout	• 103% of prior year's payout	
	• 5.3% of current MV	
	• 5.5% of 20-quarter average MV	
	• 6.25% of ending year MV	

Collar: 100% – 106% of prior year's payout, and cap at 7% of 48-mon avg MV.
Caps Only: Spending rate may not exceed 10% of prior year spending rate. If the results from using only the average market value of either the final four quarters or eight quarters alone would be a decline in distribution from the prior year, then the distribution may not exceed the prior year's level.

CONSTANT GROWTH SPENDING POLICIES

COLLARS (n = 18)	
• 4.5% – 5.5% of 3-year average MV *(n = 2)*	• 3.75% – 4.75% of beginning year MV
• 4.5% – 5.5% of 20-quarter average MV *(n = 2)*	• 3.5% – 5.5% of 3-year average MV
• 4.5% – 6.5% of 4-quarter average MV	• 3.0% – 6.0%; time period not specified
• 4.5% – 5.5% of 12-quarter average MV	• 3.0% – 5.0%; time period not specified
• 4.0% – 7.0% of beginning year MV	• 3.0% – 5.0% of beginning year MV
• 4.0% – 6.5% of 3-year average MV	• 3.0% – 4.4% of 12-quarter average MV
• 4.0% – 6.0% of beginning year MV	
• 4.0% – 6.0% of 3-year average MV	
• 3.75% – 5.0% of 12-quarter average MV	

Floor: 4.5% of 8-quarter average MV; Cap: if spending is greater than 5.5% of 4-quarter average MV, then reduce spending to 3% year-over-year.

HYBRID SPENDING POLICIES

COLLARS (n = 11)	
• 3.0% – 6.0% of beginning FY MV	• 4.0% – 6.0% of current MV
• 3.75% – 5.75% of the MV 1 year prior to the beginning of the fiscal year	• 4.0% – 6.0%; time period not specified
	• 4.0% – 6.5%; time period not specified
• 4.0% – 5.5%; time period not specified	• 4.5% – 6.0%; time period not specified *(n = 2)*
• 4.0% – 5.75% of year-end MV	• 4.75% – 5.75% of current MV
• 4.0% – 6.0% of 12-quarter average MV	

Source: Spending policy data as reported to Cambridge Associates LLC.
Note: Each cap, floor, and collar listed is for one institution except where noted.