

# Strategic Intelligence for Nonprofit Sustainability

## Spending and investing in today's world

---

### KEY POINTS

1. The toll taken by a “lost decade” of reduced fixed income yields, along with increased equity market volatility both provide reasons to revisit asset allocation and spending policies
2. Changes to the U.S. Tax Code have increased the stress on nonprofits by reduced contributions and sustainable spending concerns, which in turn heightens the imperative to reassess, reevaluate, and return to fundamentals of governance, spending policy, investment, and operations
3. Sophisticated portfolio modeling capabilities, available to Wilmington Trust clients, can illustrate the projected impact of changes to sustainability as far as spending policy, asset allocation, and investment strategy
4. As forecasts are inherently imperfect, nonprofits should seek to embed margins of safety in the construction of their investment portfolios and spending policies

**In this paper, we offer practical guidance for nonprofit executives, boards, and investment committees in an effort to help them meet their fiduciary responsibilities. We review the current environment, assess various options, offer our analysis of a way to look at spending levels and fund sustainability, and present the powerful potential of sophisticated portfolio modeling capabilities. We define sustainability as the maintenance over extended periods of a portfolio's purchasing power—that is, its *real* value.**

### Present state

Nonprofit organizations that seek to exist in perpetuity face an eternal dilemma: how to balance the desire to provide meaningful support for causes today while ensuring their own long-term viability. Aside from the need to preserve and grow principal, purchasing power must be maintained while funds are spent at a given inflation-adjusted rate over time, often without an end point. As an added hurdle, many nonprofits have experienced simultaneous reductions in donations and increased demand, either on the part of beneficiaries or due to budgetary issues. These pressures often manifest themselves in debates over philanthropic spending and sustainability. Furthermore, audit and regulatory concerns and “fiduciary fatigue” are driving increased demand for outsourced investment solutions. The imperative to reassess, reevaluate, and return to fundamentals of governance, spending policy, investment, and operations is heightened accordingly.

Today, surmounting all of these challenges is particularly daunting. Many boards, chastened by market risk in the wake of the financial crisis, resorted to or continued on with overly conservative portfolios comprised of high fixed income allocations. And now, 10 years later, a good number of these boards still cling to that which seems lower risk and remain hesitant to wade back into equities' waters—let alone the deeper but potentially richer seas that are alternative investments.

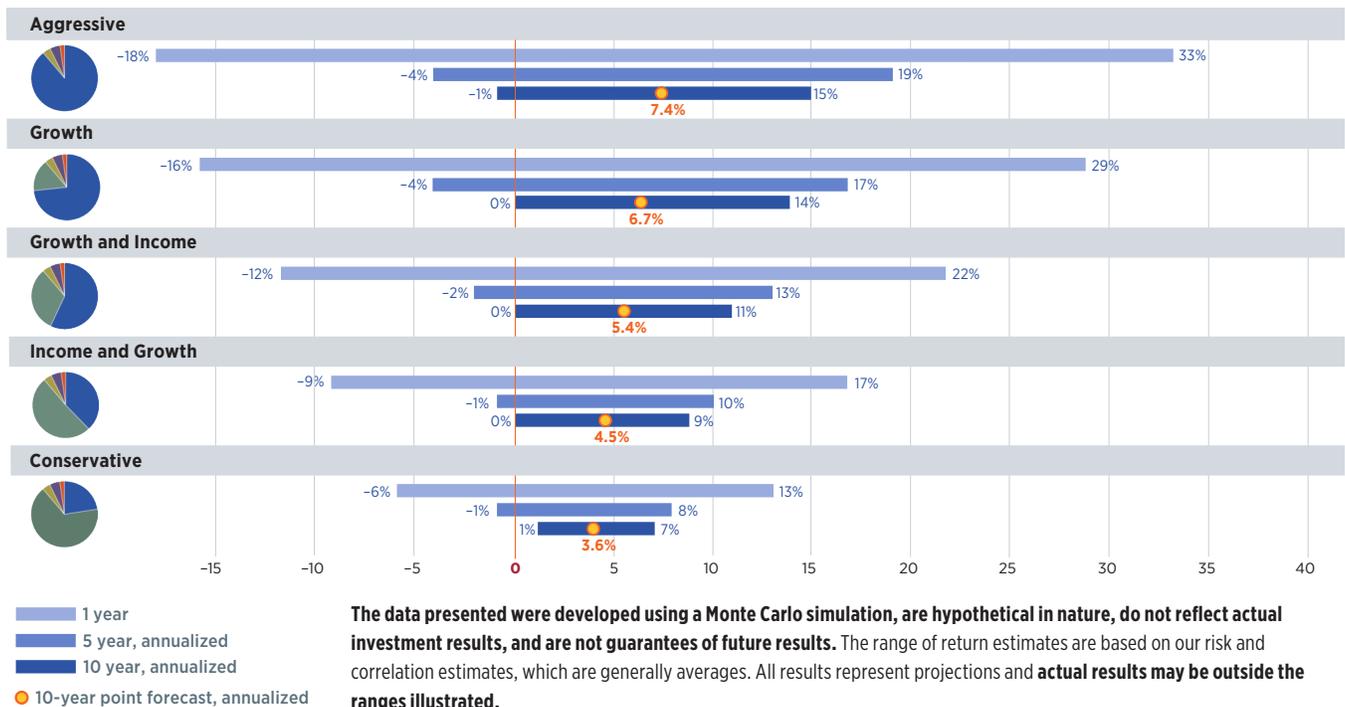
On the opposite end of the spectrum, a number of nonprofits have voted to increase their hedge fund exposure following a model popular with large Ivy League

Continued

Figure 1

**Estimated range of returns for Wilmington Trust Strategic Asset Allocations**

(Strategies for institutional portfolios, without hedge funds)



endowments which had thrived in the more traditional market environment seen earlier in the last decade. Post crisis, however, when economies and markets suffered major shocks and were not functioning normally, hedge fund manager skill—usually the chief determinant of returns—was overall unable to surmount those challenges.

Whether too conservative out of fear or too aggressive in an effort to make up for lost time, neither extreme is prudent going forward. It's essential to take a step back and revisit what it means to be intelligently diversified if a nonprofit is to be sustainable in today's world. Another challenge is the expectation for lower returns across asset classes. Still, there are strategic and investment management actions within a board's control that can help maximize success beyond mission adjustment, lowering spending, or raising more money.

**Investment management**

Investors find themselves at a crossroads, facing both the end of a 30-year bull market for fixed income and the late innings of the longest economic expansion. Survey data gathered from 802 U.S. colleges and universities for the 2018 NACUBO-TIAA Study of Endowments® show that participating institutions' endowments returned an average of 8.2 percent (net of fees) for the 2018 fiscal year (July 1, 2017–June 30, 2018) compared with 12.2% for fiscal year 2017. The decline in year-over-year performance for U.S. college and university endowments was largely driven by lower returns from U.S. and international equities. While the mission-critical 10-year average annual return increased by 1.2 percentage points in fiscal year 2018 to 5.8%, it still fell short of the 7.2% average return institutions report targeting as a long-term return objective.

Continued

Figure 2

**Growth of \$10 million**

(Backtested performance January 2000–December 2018)



This example uses hypothetical backtested index returns and is not an indication of future results. Data shown above is for illustrative purposes only, reflecting the historical application of static allocations to index results, and do not reflect the results of actual investing from clients. The Optimized and Baseline portfolios were created with the benefit of hindsight and do not reflect the impact of material economic or market factors on investment decisions. The Optimized allocation includes asset classes that do not appear in the Baseline allocation, reflecting real asset and liquid alternative strategies. Data reflects index returns and are not reduced for the impact of fees, trading costs or any other expenses. Investor returns are reduced by such fees and expenses incurred in the management of an investment account and have a compounded impact over time. Similarly, the returns shown would be lower if the results reflected the deduction of advisory fees. See Additional Disclosures on page 11 for the limitations of backtested returns. Investing involves risk and you may incur a profit or a loss. Past performance cannot guarantee future results.

Source: WTIA.

To fulfill their long-term missions, endowments and foundations will be pressured to look past spending policies to a full list of options. A major force over which there is significant control relates to nonprofit investment management. Figure 1 shows the expected returns of various strategies ranging from conservative to aggressive projected over time. It illustrates that the 7.2% return NACUBO survey participants feel is required to meet sustainability targets is less likely achieved the more conservative the strategy.\* Simply increasing exposure to equities, or other risk assets, which is reasonable given the often interminable time horizon available to the nonprofit investor, likewise increases the anticipated return—along with expected risk.

**Managing drawdown exposure**

Investors often equate “risk” with “volatility,” but that isn’t the whole story. While the potential ups and downs of daily markets provide one measure of risk, seeking to reduce volatility alone can result in a misleading picture of loss potential. Another measure considered to be more reflective of what most investors truly care about is portfolio drawdown exposure—significant capital loss as a result of sharp peak-to-trough market decline over a fixed period. We saw only too well in the financial crisis just how debilitating drawdown can be to portfolio asset values.

Not only are outsized drawdowns extremely difficult to recover from as a practical matter, in many cases they may prompt even experienced investors to withdraw from the markets at just the wrong time. Any temptation to buy high (crowd-following) or sell low (fear-motivated) is precisely what institutional investors seeking to preserve and grow assets should not be doing. Conversely, mitigating drawdown can have transformative, positive effects (Figure 2). How can you mitigate drawdown exposure? Well, of course, there are no foolproof solutions, but enhanced diversification may help.\*\*

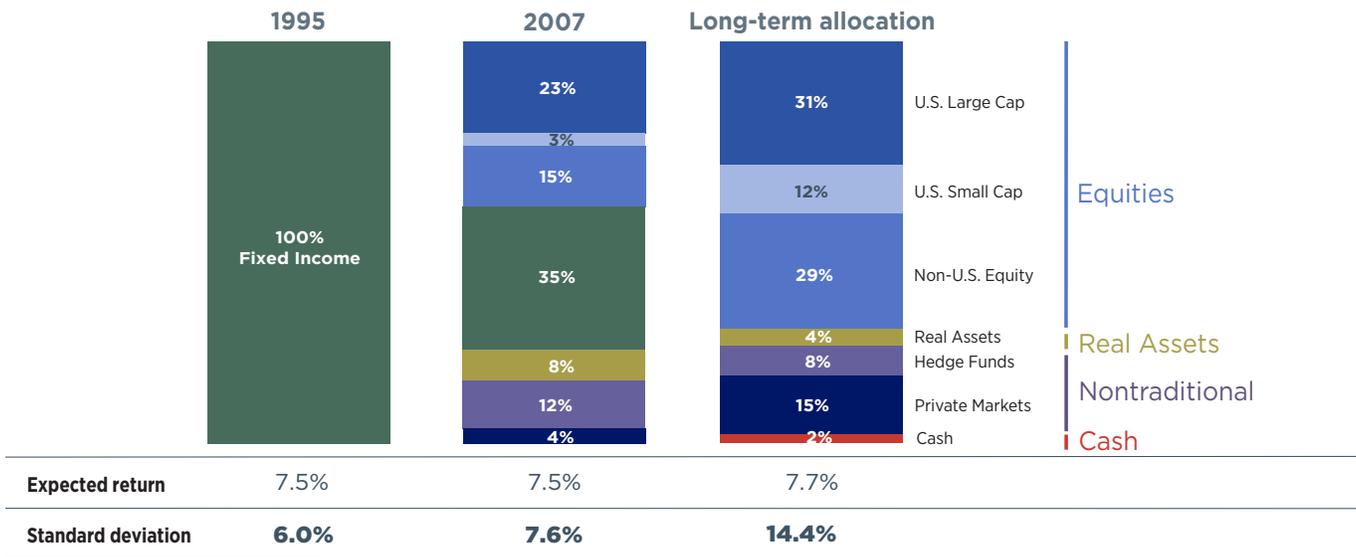
\* 2018 NACUBO-TIAA Study of Endowments, <https://www.nacubo.org/Research/2019/Public-NTSE-Tables>.

\*\*Asset allocation and diversification cannot ensure a profit or guarantee against a loss.

Continued

Figure 3

**Contrary to years past, an all-bond portfolio will no longer achieve return goals; today, a robust asset class mix is essential**



For illustrative purposes only. Actual results vary from forecast results, and other allocations may have performed better than those illustrated.

Sources: Barclays/Bloomberg, Wilmington Trust Capital Markets Forecasts for 2007–2008 and 2016–2017.

Investing involves risks and you may incur a profit or a loss.

**Asset allocation and diversification**

For decades, fund assets were allocated with a simple stock/bond split, which had 1988–2016 returns of 11.8% and 6.6% (S&P 500 index and Bloomberg/Barclays U.S. Aggregate Bond Index, respectively). Those asset classes were not traditionally “correlated,” meaning they did not move in lockstep; when one outperformed, the other underperformed, and vice versa. Then along came the housing, credit, and financial crises followed by the Great Recession. We learned the hard way that diversification was more important than ever, yet it needed to be redefined, more nuanced, and artfully applied. The utility of taking what was effectively a blunt instrument to chop holdings into stocks and bonds (classic garden-variety “balanced” portfolio), was outmoded and, as such, no longer likely to possess the requisite risk/return attributes to achieve investment return goals (Figure 3). We have observed that, in the face of this mounting evidence in support of the benefits of increased diversification, a surprising number of smaller funds have yet to increase diversification efforts.

There is simply no way to predict with certainty which asset class (and subasset class) will come out on top from year to year. It’s important to capture the upside of those that

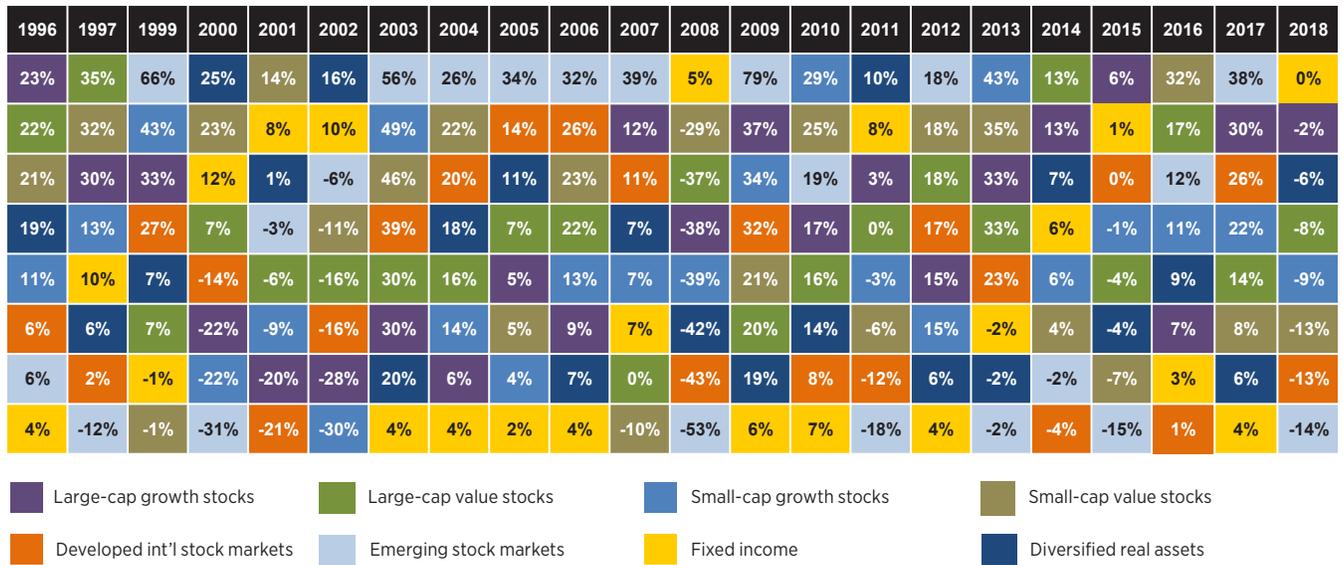
perform well in a particular year while providing downside protection in the form of robust diversification, as asset classes cannot be counted on to turn in repeat performances—good or bad—on a consecutive basis over time. A portfolio that consists of purely large-cap U.S. stocks and government bonds, for instance, would be considered concentrated, not well-diversified. Compared to a diversified portfolio, a concentrated one may bring higher returns for a certain period of time, but may expose the portfolio to larger drawdowns. The diversified portfolio is likely to provide better risk-adjusted returns in the long run. Smaller losses during market downturns allow for greater compounding (more assets stay in the portfolio, and are able to continue growing).

The need to diversify is clear not just across—but within—asset classes, such as equities. Figure 4 breaks down the asset class into different market capitalizations; and region or country, such as U.S., international developed markets, and emerging markets. Beyond the potential to enhance returns, the benefit of being well diversified is to provide your portfolio with exposure to asset classes whose returns are less correlated with equities and fixed income, thereby reducing portfolio volatility and drawdown exposure.

Continued

Figure 4

**Asset class returns vary dramatically from year to year**



The chart depicts the total returns of various asset classes, as measured by unmanaged market indices. It is not possible to invest directly in an index, and index results do not reflect the deduction of any fees. The following indices serve as proxies for the asset classes: Russell 1000® Growth Index and Russell 1000® Value Index (U.S. large-cap growth and value stocks); Russell 2000® Growth Index and Russell 2000® Value Index (U.S. small-cap growth and value stocks); MSCI EAFE® (net) Index (developed international stocks); MSCI Emerging Markets (net) Index (international stocks in emerging markets); Barclays Capital Aggregate Bond Index (investment grade bonds); and Diversified Real Assets—a blend of 50% Citigroup U.S. Inflation-Linked Securities Index, 30% FTSE™ NAREIT Equity Index, and 20% Goldman Sachs Commodity Index; rebalanced monthly. The accuracy of data provided by third-party vendors is not guaranteed. Past performance cannot guarantee future results.

Source: Ibbotson Associates.

**Alternative investment solutions still important**

The 8.2% average return for the 2018 NACUBO group was achieved with an asset allocation of: domestic equities (16%), fixed income (8%), international equities (20%), alternative strategies (52%), and short-term securities/cash/ other (4%).

While the 2018 NACUBO average allocation to alternatives among college and university endowments was over 50%, many other nonprofit funds currently have an allocation to alternatives substantially below that amount with others now considering their first investments in alternatives. Further, among funds with \$10–\$250 million in assets, allocations to alternative strategies are even lower, which suggests there may be opportunities to increase where appropriate. The allocation to alternatives for the NACUBO group varied by fund size with funds of \$100–\$250 million at 27%; \$50–\$100 million at 22%; \$25–\$50 million at 16%; and under \$25 million at 11%.

It’s important to remember that, as in all investing, success with “alternatives” (also referred to as nontraditional investments) varies, depending upon the particular investment. This asset class comprises liquid alternatives

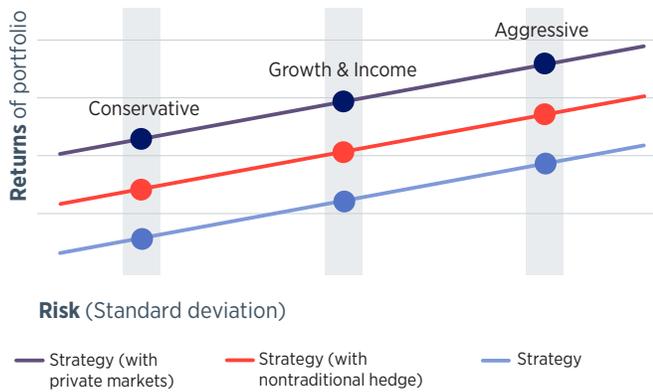
(the majority of those in the NACUBO study), as well as private markets, real assets, and hedge funds. Certain alternatives may increase the level of risk, but they can also offer higher returns with less volatility.

Qualified investors, generally those with over \$25 million in assets, may do well to consider private market solutions. The addition of private markets increases projected returns at all levels of risk (Figure 5). In addition to greater operating and development risks, complex and illiquid nontraditional investments often have high minimum investment entry requirements. However, they can also offer a broader opportunity set—as far as the universe of private companies and physical assets that are available compared to public markets. Another advantage is informational: While publicly registered securities must simultaneously disclose performance data to all investors and may not disclose material non-public information to just a select few, a private business will typically disclose to potential buyers all of its financial records as part of the due diligence process, providing them with deep, unique insights into valuation.

Continued

Figure 5

**Efficient frontier illustration**

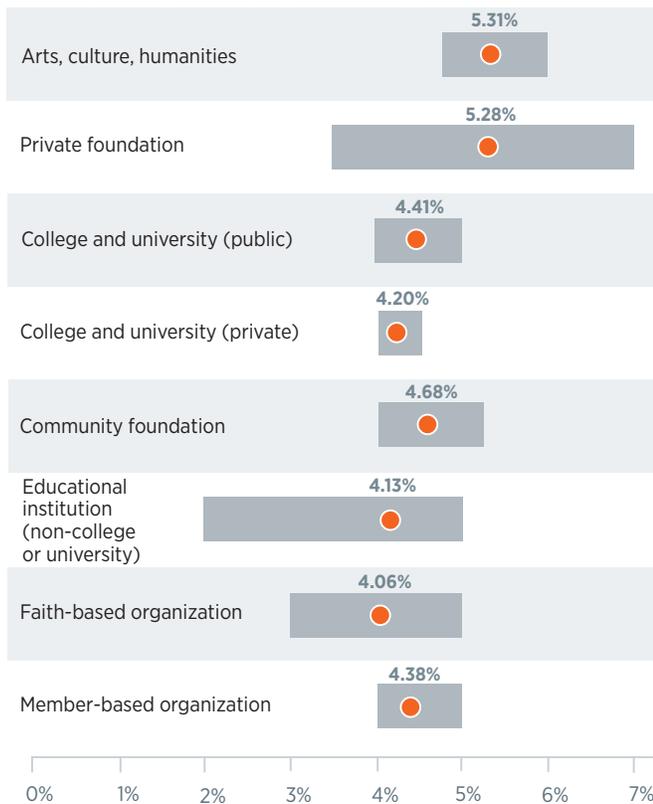


The above chart is for illustrative purposes only. Adding alternatives to a portfolio does not guarantee a decrease in overall portfolio risk or an increase to portfolio return. See the Disclosure section at the end of this presentation for more information about standard deviation and efficient frontier.

In general, increasing diversification can lead to portfolios with better risk-return outcomes. A portfolio is considered efficient if it has the highest level of return for its level of risk.

Figure 6

**Annual spending rates by organization type**



Source: 2016 Nonprofit Survey Series, “Answers to Key Questions about Managing Nonprofits” (updated June 30, 2019).

**Spending policies**

Many organizations design spending policies that seek to maximize annual support for their cause or organization without jeopardizing the long-term viability of the fund. Sustainability in relation to spending policy refers to the ability to maintain a rate of spending in real terms over time, which by extension implies the funds will be there to do so.

Certain aspects of spending policy sustainability—such as the inflation rate and, to a great extent, market volatility—are outside the nonprofit leadership’s control. Contrast that to the spending rate, which is largely within the leadership’s control (subject to the mission’s constraints and fundraising/contributions). Investment returns are both outside and inside of their control, as there is a certain ability to reduce their impact through diversification and asset allocation.

**What is the directional trend for spending rates today?**

While university endowments show a moderate increase, a 2018 survey showed that nonprofits have largely kept annual spending rates the same, although those who have made changes increased rather than decreased spending rates (Figure 6). Aside from private foundations, which are required to spend 5% annually, various industry surveys show that most nonprofits aim for a spending rate between 4% and 5%. They typically employ one of four strategies:

- **Straight percentage:** This approach simply applies a flat percentage, say 5%, to the last year-end market value to calculate the spendable dollar amount. In this way, more dollars are made available in good return years and fewer when markets are down. The potential variability in spending presents challenges for organizations that rely upon a specific level of support for annual operating budgets that are not tied to financial markets. Periods of increased market volatility heighten the impact of this approach on budgetary constraints.
- **Moving average:** This method is used by over 79% of funds, according to the 2017 NACUBO report. To counter some of the fluctuation found in the straight percentage approach, many funds introduce a smoothing factor which instead applies the spending rate to the average fund value calculated over a period of immediately prior years. The result is a more consistent spending amount each year.

Continued

## Active or “passive” investing? The debate continues.

Post the Great Recession, which left a tsunami of hesitant investors and shriveled portfolios, many sought refuge in the seemingly safer “passive” mutual and exchange-traded funds which seek to merely track (versus beat) an index. The popularity of the passive approach—still very much in play today—was also driven by lower fees and, more precisely, an inability on the part of many active managers to prove that returns justified the higher cost. However, it is important to recognize that a solely passive approach may elevate drawdown risk by creating an unintentional overexposure to the higher-priced securities that are major components in capitalization-weighted indices.

Active managers try to mitigate drawdown risk by excluding—or including—particular companies based on a variety of factors, such as differentiated business models, sustainable or consistent earnings, strong financial metrics, and experienced, high-quality management teams. It is worth noting that a study by preeminent finance and investment experts found active management and asset allocation were equally important in determining portfolio return differences within a peer group, once market movements were removed.\*

Of course, there are caveats: the success of active management depends in part on the skill of the particular manager, coupled with the fact that not all types of investments and markets respond as well to active management as, say, fixed income. This is an asset class where active management is often advantageous, as managers can assess issuer creditworthiness and scrutinize other characteristics for securities they feel are most likely to offer the potential for reduced risk and enhanced returns.

Where does that leave us? Perhaps it isn't a matter of active or passive, but rather active and passive solutions to implement investment strategy cost efficiently with the opportunity to enhance returns while also managing drawdown exposure.

- **Inflation factor:** This approach increases prior-year spending by applying an inflation factor such as the CPI (Consumer Price Index) or HEPI (Higher Education Price Index) to the dollar amount spent in that year. While this method ties spending more closely to operating costs and budgets which increase with inflation, among other factors, it is not linked to the investment experience of the fund and may therefore impact fund sustainability over time. Perhaps for this reason, it is the least popular method: It offers a stable source of funds in the early years, but does not provide for an adjustment in negative return years.
- **Hybrid method:** Yale University is credited with a hybrid spending rate calculation which combines the moving average and inflation adjustment methods discussed above. The result of each is weighted and combined at a set percentage to generate that year's spending rate. For example, one might specify that the annual spending rate would be the sum of 80% of the inflation factor approach

(prior year's spending plus inflation) and 20% of the moving average (annual spending rate times the average fund value over a specified number of years prior). The inflation adjustment of prior year's spend helps smooth spending for budgeting purposes, and the moving average component introduces an asset value recognition reflecting market returns. Investment committees can choose which to weight more heavily based upon their organization's circumstances. Yale University's leadership among large endowments for institutions of higher learning generates academic interest in the hybrid method, but according to the NACUBO study, its use is limited among average-sized endowments.

Whatever spending rate is chosen for the investment policy, flexibility is the watchword for the investment committee because, as we know, while markets may appreciate over time, asset values will fluctuate, and demands on the fund will vary. Careful attention to monitoring results, in relation to spending and future objectives for the fund may suggest periodic changes in spending rates or, more broadly, spending policy.

\* The Financial Analysts Journal, “The Equal Importance of Asset Allocation and Active Management,” James X. Xiong, CFA, Roger G. Ibbotson, Thomas M. Idzorek, CFA, and Peng Chen, CFA, DOI: March/April 2010, Vol 66, No.2:18-20.

Investing for today and tomorrow can be complex, requiring careful forecasting of expected rates of return, volatility, and inflation, the informed assumptions about capital markets, as well as thoughtful analysis of various spending choices.

---

#### Important considerations

There are a number of critical factors to consider when projecting the sustainability of nonprofit spending:

- **Spending policy:** Boards of directors, staff, and advisors must focus significant attention on spending policy—the one driver of sustainable spending that may be wholly within an organization’s control. The absolute level of spending and the nonprofit’s tolerance for volatility in spending must both be considered.
- **Investment policy:** With rising uncertainty and the prospects for lower investment returns, investment decision making may be harder than ever. Similarly, investment policies that merely extrapolate past performance may be riskier than ever. A realistic, forward-looking approach to the financial markets is vital.
- **Efficiency:** Like profit-oriented companies, nonprofits also must seek ways to improve operational efficiency. Lower operating costs may enable more philanthropic spending or curb demands for withdrawals on investment portfolios.
- **Fundraising:** If investment returns lag and the demands of beneficiaries for support is elevated, nonprofits may be motivated to find new ways to earn and collect donations. Many are starting to consider ways to grow their endowments through fundraising, which can increase their

annual payouts. Some nonprofits are initiating endowment capital campaigns, while others are focused on planned giving strategies, which allow key donors to leave funds through their estate plans and other vehicles. Others are building their quasi-endowment through yearly surplus funds or the sale of assets. Exploring these various endowment fundraising strategies is a best practice today.

- **Mission:** In some cases, the pressures of a weak economy and modest investment returns may prompt questions about whether the organization ought to seek to operate in perpetuity or do the greatest possible good over a finite lifetime.

#### Modeling can bring it all together—future state is here

Investing for today and tomorrow can be complex, requiring careful forecasting of expected rates of return, volatility, and inflation, the informed assumptions about capital markets, as well as thoughtful analysis of various spending choices.

Financial modeling can combine these dynamic elements to yield projections of sustainability to help the committee to visualize the impact of various choices. Alternatively, those nonprofits that spend at fixed rates can assess the probability of sustaining the inflation-adjusted value of their portfolios, when given careful, realistic assumptions for financial market returns and inflation. In our view, either approach should be an improvement over an assumption that the past performance of a given asset mix—and the spending it supported—will repeat.

Sophisticated modeling tools are useful in order to help a board or governing committee see the implication of strategic decisions on spending policy, the perpetuity of the fund, and the ability to sustain spending rates in real terms. Some standard projections we developed using our capabilities and capital market assumptions appear in Figure 7. They are meant to show the effect of different strategic asset allocations, on long-term results at three different spending rates: 3%, 4%, and 5%.

Importantly, the chart also shows the projected impact of adding nontraditional hedge and private markets investments to the asset mix. The numbers on top of each bar are the probabilities, expressed as a percentage, of sustaining the portfolio’s inflation-adjusted value over each period. A probability of greater than 50% in this type of modeling

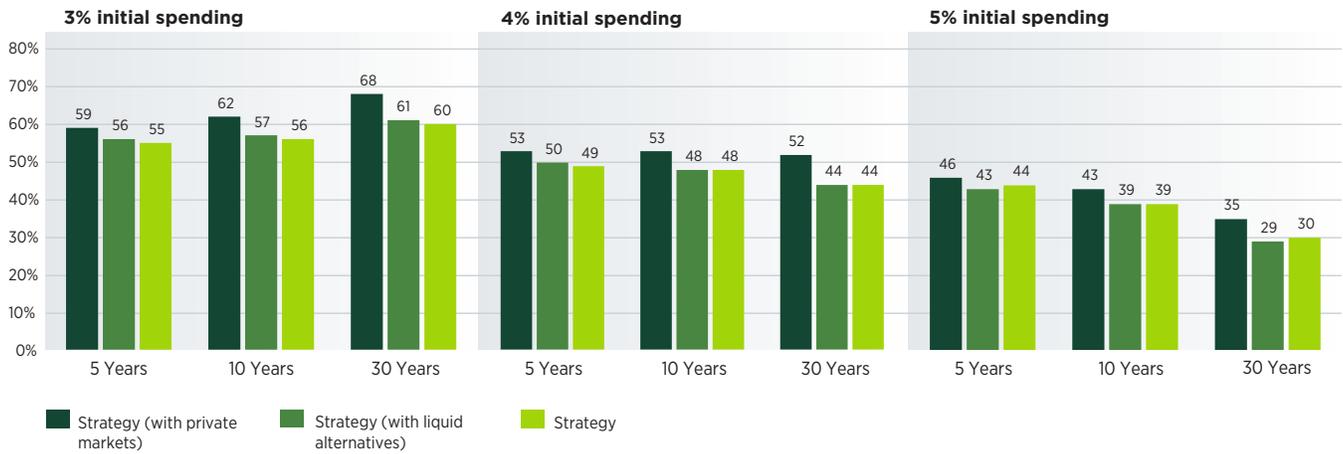
Continued

Figure 7

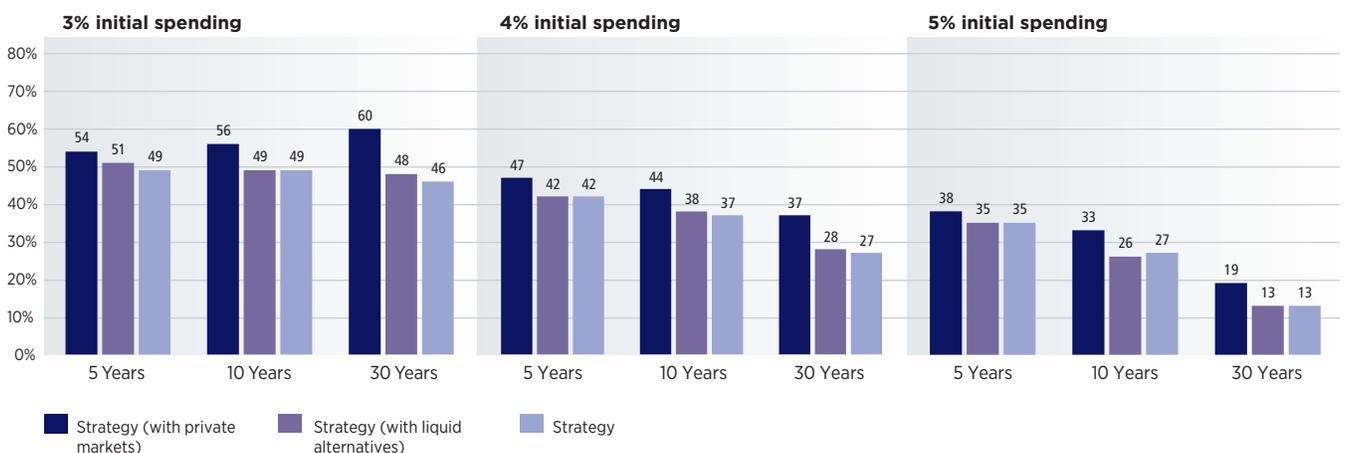
**Illustrative sustainable spending rates**

Probability of maintaining a portfolio's real (inflation-adjusted) value after initially spending 3%, 4%, or 5% of its value and thereafter increasing the dollars withdrawn by an assumed inflation rate

**Growth Strategies for institutional portfolios**



**Growth and Income Strategies for institutional portfolios**



We assume withdrawals are increased annually to keep pace with inflation. Specifically, we assume a 2.0% increase in the amount withdrawn each year. The Monte Carlo simulation presented here, developed using forecast data, assumes constant spending (adjusted for inflation) over time, with withdrawals of income and, as necessary, principal. The data shown are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. Results for all asset mixes represent projections and actual results will vary. Advisory fees, transaction costs, and other potential expenses are not considered and would reduce returns, and thus probabilities. Various other assumptions are made in the forecasting and optimization process used as the basis for this analysis. A complete explanation of the assumptions underlying this report is available upon request.

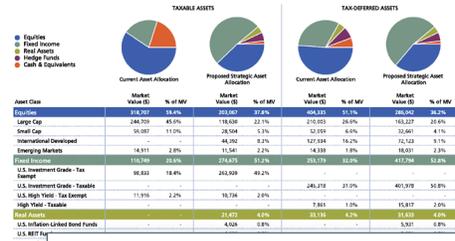
There is no assurance that any investment strategy will succeed. Investing involves risks and you may incur a profit or a loss.

See page 11 for more information on Monte Carlo simulations and strategy descriptions.

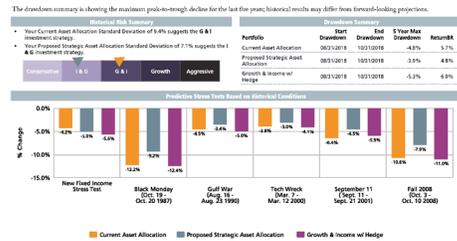
Source: WTIA, "Forecasted Returns and Sustainable Spending," 2017.

Continued

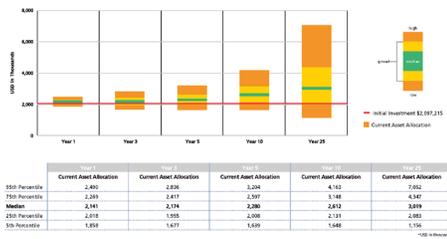
### Asset Allocation by Tax Status



### Historical Risk Summary



### Projected Portfolio Value - by Year



The Paragon report uses hypothetical examples in conjunction with forecasts for inflation, economic growth, asset class returns, volatility, and correlation. It provides you with general financial planning information to serve as one tool in helping you develop a strategy for pursuing your financial goals. It is not intended to provide specific legal, investment, accounting, tax or other professional advice. For specific advice on these aspects of your investments, you should consult your professional advisors.

indicates that success is more likely than not. Analyses such as these can be customized to reflect a given fund's particulars and prove valuable in orienting the investment committee to a discussion of risk and return within the context of objectives. Monte Carlo simulations such as those used to generate the charts in Figure 7 can help decision makers assess the probabilities of potential outcomes and varying risk impacts of different scenarios.

In any case, nonprofits should not assume that past financial market results will repeat but should seek informed forecasts of financial market returns. And, since forecasts are inherently imperfect, entities should seek to embed margins of safety in the construction of their spending policies. A degree of flexibility should be factored in to account for potentially lower contributions during periods of market under-performance, thus helping to perpetuate the current degree of spending without having to dip into the principal or adjust liabilities.

### Conclusion

In projecting and planning for sustainability spending, the breadth of computations required stretch from performing simple estimates on individual securities to the far more complex issues that involve estimating future drawdown risks and optimizing performance. To help our clients in those endeavors, we designed Wilmington Trust's Paragon™ (Portfolio Analysis, Risk Assessment & Goals Optimization) analysis. Our proprietary portfolio planning software is infused with the deep economic and market intelligence of our economists and investment professionals. It has the ability to build in additional layers of risk to test the potential wealth outcomes of theoretical portfolios, seeing how they stack up in challenging markets through its interactive "what-if" analysis, and comparing the results to those of your current portfolio.

**To see how Paragon may help mitigate portfolio drawdown exposure and improve nonprofit sustainable spending, reach out to a Wilmington Trust advisor.**

## Disclosures

Wilmington Trust is a registered service mark. Wilmington Trust Corporation is a wholly owned subsidiary of M&T Bank Corporation. Investment management and fiduciary services are provided by Wilmington Trust Company, operating in Delaware only, and Wilmington Trust, N.A., a national bank. International corporate and institutional services are offered through Wilmington Trust Corporation's international affiliates. Loans, credit cards, retail and business deposits, and other business and personal banking services and products are offered by M&T Bank, member FDIC.

This article is for informational purposes only and is not intended as an offer or solicitation for the sale of any financial product or service. This article is not designed or intended to provide financial, tax, legal, investment, accounting, or other professional advice since such advice always requires consideration of individual circumstances. If professional advice is needed, the services of a professional advisor should be sought.

The information in this commentary has been obtained from sources believed to be reliable, but its accuracy and completeness are not guaranteed. The opinions, estimates, and projections constitute the judgment of Wilmington Trust and are subject to change without notice.

**Investment products are not insured by the FDIC or any other governmental agency, are not deposits of or other obligations of or guaranteed by Wilmington Trust, M&T or any other bank or entity, and are subject to risks, including a possible loss of the principal amount invested.**

### Asset allocation strategies

#### *An overview of our asset allocation strategies:*

Wilmington Trust offers seven asset allocation models for taxable (high net worth) and tax-exempt (institutional) investors across five strategies reflecting a range of investment objectives and risk tolerances: Aggressive, Growth, Growth & Income, Income & Growth, and Conservative. The seven models are High Net Worth (HNW), HNW with Liquid Alternatives, HNW with Private Markets, HNW Tax Advantaged, Institutional, Institutional with Hedge LP, and Institutional with Private Markets. As the names imply, the strategies vary with the type and degree of exposure to hedge strategies and private market exposure, as well as with the focus on taxable or tax-exempt income. On a quarterly basis we publish the results of all of these strategy models versus benchmarks representing strategic implementation without tactical tilts.

Model Strategies may include exposure to the following asset classes: U.S. large-capitalization stocks, U.S. small-cap stocks, developed international stocks, emerging market stocks, U.S. and international real asset securities (including inflation-linked bonds and commodity-related and real estate-related securities), U.S. and international investment-grade bonds (corporate for Institutional or Tax Advantaged, municipal for other HNW), U.S. and international speculative grade (high-yield) corporate bonds and floating-rate notes, emerging markets debt, and cash equivalents. Model Strategies employing nontraditional hedge and private market investments will, naturally, carry those exposures as well.

**Each asset class carries a distinct set of risks, which should be reviewed and understood prior to investing.**

#### *Allocations:*

Each strategy is constructed with target weights for each asset class. Wilmington Trust periodically adjusts the target allocations and may shift away from the target allocations within certain ranges. Such tactical adjustments to allocations typically are considered on a monthly basis in response to market conditions. The asset classes and their current proxies are: large-cap U.S. stocks: Russell 1000® Index; small-cap U.S. stocks: Russell 2000® Index; developed international stocks: MSCI EAFE® (Net) Index; emerging market stocks: MSCI Emerging Markets Index; U.S. inflation-linked bonds: Bloomberg/Barclays US Government ILB Index; international inflation-linked bonds: Bloomberg/Barclays World exUS ILB (Hedged) Index; commodity-related securities: Bloomberg Commodity Index; U.S. REITs: S&P US REIT Index; international REITs: Dow Jones Global exUS Select RESI Index; private markets: S&P Listed Private Equity Index; hedge funds: HFRI Fund of Funds Composite Index; U.S. taxable, investment-grade bonds: Bloomberg/Barclays U.S. Aggregate Index; U.S. high-yield corporate bonds: Bloomberg/Barclays U.S. Corporate High Yield Index; U.S. municipal, investment-grade bonds: S&P Municipal Bond Index; U.S. municipal high-yield bonds: Bloomberg/Barclays 60% High Yield Municipal Bond Index / 40% Municipal Bond Index; international taxable, investment-grade bonds: Bloomberg/Barclays Global Aggregate exUS; emerging bond markets: Bloomberg/Barclays EM USD Aggregate; and cash equivalents: 30-day U.S. Treasury bill rate.

### Forecasted returns

Forecasted returns reflect the informed judgments and opinions of Wilmington Trust about likely future capital market performance.

No assurance can be given as to the actual future market results or the results of Wilmington Trust's investment strategies or products. Strategy forecasts are derived from the expected return and volatility assumptions in Wilmington Trust's Capital Markets Forecast 2016-2026, which is available at [www.WilmingtonTrust.com](http://www.WilmingtonTrust.com) or upon request.

Forecasts are subject to a number of assumptions regarding future returns, volatility, and the interrelationship (correlation) of assets, among others. Actual events or results may differ from underlying estimates or assumptions, which are subject to various risks and uncertainties. No guarantee or assurance can be given as to actual future market results or the results of any investment product or strategy. Similarly, a Monte Carlo Simulation can be applied to illustrate planning principles, but will not help investors "beat" the market and is not a guarantee or assurance of the future performance of any investment or strategy.

### Projected performance and sustainable spending

All forecast performance and performance-based results reflect the assumption of a long-term investment horizon (seven years), which is presumed to encompass at least one full market cycle. Forecast results do not represent the results of actual trading using client assets, but reflect Wilmington Trust projections regarding likely future capital markets performance.

Continued

Projected performance ranges and sustainable spending probabilities are the result of applying forecast inputs to a Monte Carlo simulation—a mathematical analysis using randomly selected values for a model. This type of analysis can be useful if the situation contains elements of uncertainty that are difficult or too mathematically complex to reproduce. A Monte Carlo simulation is produced by projecting a situation many times and then measuring the number of simulations resulting in particular outcomes. Results represent the 5th through the 95th percentile of these simulations, where the top 5% and bottom 5% of results are ignored as “outlier” events. Monte Carlo analysis is applied to illustrate planning principles and will not help investors “beat” the market, does not reflect the performance of actual investments, and is not a guarantee of the future performance of any investment or strategy.

All results assume reinvestment of any dividends and other earnings, plus annual rebalancing. It may not be practical to actually rebalance a portfolio at the same interval, which will affect results. No brokerage commissions, reflecting the costs of rebalancing holdings, are included in simulation results. Transaction costs, advisory fees, and any other expenses will reduce returns and lower probabilities.

Actual results will vary from forecast results. In the course of implementing a given asset allocation, clients could select among a number of investment vehicles or strategies, each of which would contribute differently to overall results. The returns for individual clients will vary depending upon the performance of each actual investment vehicle or activity, any restrictions, inception date, timing of rebalancing, actual expenses and fees, and other factors.

### **Details on the baseline and drawdown optimized portfolios’ performance shown on page 3.**

**There is no representation that these results could, or would, have been achieved** had the allocations been used over the period presented. It is provided solely as a general picture of market behavior and the interactions produced across asset classes. Actual results for securities investments would be expected to vary, sometimes materially, from the index assigned. There is no assurance that a given index will accurately reflect the past or future performance of any strategy or asset class for which it serves as a proxy.

These illustrations use backtested index performance. Backtested results are calculated by the retroactive application of a model constructed on the basis of historical data, and are therefore hypothetical in nature. Changes in these model’s assumptions could have a material impact on the backtested returns presented. Certain assumptions have been made for modeling purposes and are unlikely to be realized. No representations and warranties are made as to the reasonableness of the assumptions.

Backtested performance is developed with the benefit of hindsight and has inherent limitations. Specifically, backtested results do not reflect actual trading or the effect of material economic and market factors on the decision-making process. Since trades have not actually been executed, results may have under- or overcompensated for the impact, if any, of certain market factors, such as lack of liquidity, and may not reflect the impact that certain economic or market factors may have had on the decision-making process. Further, backtesting allows the security selection methodology to be adjusted until past returns are maximized.

These backtested performance data assume a single investment and involve no subsequent cash balance or cash flows in relevant calculations. Variable cash flows resulting from actual implementation of the model over time will create a material distortion from the backtested performance data as represented herein.

Indices and asset allocations used in the Baseline portfolio are as follows: IA SBBI US 30 Day T Bill TR USD (2%); S&P Municipal Bond Intermediate Total Return (35.2%); Russell 3000 Total Return (40%); MSCI ACWI Return Index (22.8%).

The Optimized portfolio includes asset classes that do not appear in the Baseline portfolio, reflecting real asset and liquid alternative strategies. Indices and asset allocations used in the Optimized portfolio are as follows: S&P Municipal Bond Intermediate Total Return (40%); Russell 1000 Total Return (25%); Russell 2000 Total Return (10%); MSCI EAFE Net Return Index (7%); MSCI Emerging Markets Net Return Index (2.6%); S&P USA REIT USD Total Return (4.2%); and 50% HFRX GL Total Return Index/50% HRRX Abs Total Return Index (11.2%).

**Optimized and Baseline portfolio allocation data reflect index returns and do not represent the results of actual management of client assets.** Fees, costs, and expenses would reduce the returns shown—and have a compounded effect over time.

**Return data** assume the reinvestment of any dividends and other earnings and monthly rebalancing. It may not be practical to rebalance an actual portfolio at the same interval, which will affect results. No brokerage commissions, reflecting the costs of rebalancing holdings, are included in the illustration. Transaction costs, along with any other applicable fees or expenses, will reduce returns.

**Impact of fees:** The following is a hypothetical example of the impact over time of fees charged to a client’s account. It is not meant to suggest actual fees, which may vary, and does not reflect actual returns. Assuming an initial investment of \$1,000,000 account value and an average annual return of 10%, an annual fee of 100 basis points (i.e., 1.00%) would result in account level fees of \$10,641 the first year, \$35,351 over three years, and \$65,458 over five years. A schedule of Wilmington Trust’s fees is available upon request.

**Indexes are not available for direct investment.** Investment in a security or strategy designed to replicate the performance of an index will incur expenses, such as management fees and transaction costs, which would reduce returns.

### **Efficient frontier**

A line developed by plotting asset mixes, ranging from conservative to aggressive, that provide the best tradeoff between risk and return. These efficient asset mixes provide (1) the maximum possible assumed return for a given level of risk and (2) the minimum possible level of risk for a given level of assumed return. Return volatility, as measured by **standard deviation**, is often used as a proxy for illustrating risk. Volatility serves as a collective, quantitative estimate of risks present to varying degrees in various asset classes (e.g., liquidity, credit, and default risks). Certain types of risk may be underrepresented by this measure.

Third-party trademarks and brands are the property of their respective owners.