Sustainable Payouts for Private Foundations

A Study Commissioned by the Council of Michigan Foundations

2016

Sustainable Payout for Foundations: 2016 Update

The Purpose of the 2016 Update

This paper serves as an update to the studies conducted in 2000, 2004, and 2013 which were commissioned by the Council of Michigan Foundations (CMF) at the request of its members. With each update, the data from the previous iteration had been updated and additional new data added in order to present the fullest possible picture. We think it fitting, therefore, to pause at the start and to summarize the data gathered in the original study and in each successive study. While the results are dynamic over time, they continue to point to the conclusions reached in the original 2000 study regarding a sustainable level of payout for private foundations.

The Purpose of the Original Study

At the request of several of its members, the Council of Michigan Foundations (CMF) retained CA in the late fall of 1998 to evaluate the private foundation payout rate required by the federal government, based on the real returns of a group of Michigan private foundations over a 25-year period. To that end, CA assembled and analyzed historical data from 48 Michigan foundations that had been in continuous operation since 1973, and included data up through the end of 1997 (a 25-year period).

For the purposes of the original study, three approaches were taken to answer the question of how much a fund can spend without depleting its real value over time[1]:

- Using historical index returns, the results of a hypothetical portfolio invested 65% in U.S. equities and 35% in U.S. bonds from 1969-1998 was reviewed to determine what would happen if a foundation's annual spending was set at various payout rates.

- The actual returns earned by the sample group of Michigan foundations over the period 1973-1997 were analyzed to test whether the actual experience of these foundations tracked closely with index results over the same period.

- In addition, the actual spending history of the sample foundations was analyzed over the same period to determine the foundations' ability to comply with the 5% spending rule given the market volatility of the preceding three decades.

[1] For the purposes of the actual historical *spending* analysis, data from all 48 foundations in the sample group were used. For the purposes of the actual historical *returns* analysis, returns data from 33 of the 48 foundations were used, excluding those 15 foundations with significant single-stock holdings. The results of the original study were published in April of 2000, and are available on the Council of Michigan Foundations website at *www.cmif.org/documents/payout.pdf*.

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2004 Update

CA conducted an update to the original study to include 5 additional years of data (1998-2002), in order to examine a 30-year period (as opposed to the 25-year period of the original study.) Again, the returns from a 65% Stock and 35% bond portfolio were calculated for the expanded period, and compared to the actual experience of a set of Michigan Foundations. As many foundations had moved to a higher equity allocation in search of higher returns, a 75% Stock/25% bond portfolio was also modeled. That higher equity allocation did not result in a meaningfully higher real (inflation-adjusted) return.

The update confirmed all of the major points of the original study: generally, a spending rate in excess of 5% is too high to provide confidence in the ability to maintain purchasing power in perpetuity, and the real returns of the sample 33 Michigan foundations did not support a spending rate of higher than 5%. The higher equity allocation over this expanded time period (now 30 years rather than the 25-year period

2013 Update

Given the extreme market movements during the financial crisis of 2008-2009, we updated the passive portfolio returns and the sample foundations' data to test whether the passage of eight more years of data (2003 – 2010) challenged the conclusions of the original report.

Additionally, it was felt that the aggregate average return of all private foundations (labeled here as "National Foundations" in Table 2) should be added to the study to test whether national data, as opposed to Michigan-specific data, exhibited a markedly different pattern of returns. This analysis was made possible by the inclusion of aggregate data for all private foundations in the Internal Revenue Service database available online. However, the aggregate national data were available beginning only in 1986 and ending in 2009. In order to include this data while insuring consistent time periods, the returns form the passive portfolios and the Michigan sample set were also calculated for that shorter (although still quite long-term) period.

For the longer 37-year period (1973-2010) the returns for Michigan Foundations were once again comparable to the returns achievable with either stock/bond blend. While the returns from both passive blends were less than 5%, the average return for the sample of Michigan Foundations was 5.11%

The shorter time period (1986 - 2009) once again provided similar results across the two passive blends and the two actively managed (Michigan sample and National sample), although the returns rose with the exclusion of the severe bear market of 1974-1975 and the period of higher inflation that followed.

2016 Update

In keeping with the April 2000 study as well as the 2004 and 2013 updates, Part I of this paper will focus on the actual investment returns of the Michigan sample group between 1973 and 2014, both in absolute terms and relative to the performance of two passive blends of stock and bond indices. As in previous studies, the passive portfolios modeled for comparison against the Michigan sample are as follows: one invested in 65% U.S. equities and 35% in U.S bonds, and the other invested in 75% U.S. equities and 25% U.S. bonds.

As noted above, a 65/35 hypothetical portfolio was chosen because it approximated the average asset allocation of the original sample group. A 75/25 hypothetical portfolio was added in the 2004 study in order to examine the implications of a higher level of portfolio risk. In our experience, most foundations have a level of portfolio risk (in this study and more broadly across the U.S.) that typically falls somewhere between these two hypothetical portfolios. Additionally, since Internal Revenue Service (IRS) aggregate data on U.S. private foundations has become widely available in the years since our original study, we have again tested the results from the Michigan sample and the hypothetical portfolios against a national sample. As with the 2013 Update, the time periods available for the national data were slightly different.

Part II then examines the direct effects of various payout rates on real payout levels and market values of the two hypothetical portfolios noted above, and we report the expected multi-year returns of these two portfolios as indicated by our proprietary asset class return assumptions.

Conclusions

The inclusion of updated market data through 2015 confirms the major points of both the original 2000 study as well the updates of 2004 and 2013.

- The actual return experience of a sample of Michigan foundations does not support a spending rate higher than 5%. The average annualized return, adjusted for inflation, for the sample foundations for the period 1973-2015[2] is 5.28%, only slightly above the IRS mandated payout rate of 5%.

- The return experience of a sample of Michigan foundations is consistent with that of aggregate private foundations nationwide. Additionally, the nationwide IRS data for private foundations indicates a persistently higher payout rate when compared to Michigan foundations for the period for which data is available (1985-2009). The data also suggest that foundations as a whole have been willing to spend in excess of the federally mandated 5%

[2] In the 2004 update paper, CA found that, adjusted for inflation, the same sample group had an average annualized return of 5.08% for the period (1973-2002). In the original study, CA found that, adjusted for inflation, the same sample group had an average annualized return of 5.27% for the period (1973-1998).

payout level during the time period, highlighting that many foundations may consider the 5% legal requirement payout rate as a minimum or 'floor' when establishing spending practices.

- Updated simulations using historical hypothetical portfolio data from 1969–2014 confirm that a 5% payout rate makes the goal of maintaining purchasing power in perpetuity somewhat challenging. The addition of four additional years of return data (2011-2014) confirms that the market value of a fund earning index returns and paying 5% annually during this period would end up below its 1973 value in real terms by 2010. This conclusion holds for both the 65/35 and 75/25 hypothetical portfolios. Additionally, our proprietary models would indicate that earning a return in excess of an inflation-adjusted 5% will be challenging in the future as well.

Part I. 2016 Update Study

Return Experience of the Response Pool

Prior to the original publication of our study in 2000, much of the analysis regarding the sustainable level of spending for private foundations was done by modeling passive index returns. Tables 1 – 4 below summarize the data from the original study and subsequent updates. As such, it illustrates the extent to which actual returns of the Michigan sample group mirrored those of 75/25 and 65/35 hypothetical portfolios described above. For the sake of comparison, we have included all results (the 1998 Study, 2004 update, 2013 update and 2016 update) in Tables 1 and 2, with Table 1 showing the longest time frame.

Michigan Sample

As in previous periods, during the nearly 40-year period between 1973 and 20014, real foundation returns for the Michigan group closely tracked the performance of the passive indexes. In the shorter time frame that begins in 1986, the real return for the sample foundations exceeded real 5% due to the exclusion of the 1970s bear market.

National Foundations

Looking beyond the sample of foundations based in Michigan, we applied the same analysis using data from a national aggregate of private foundations obtained from the IRS. As noted above, only data beginning in 1986 was available for this particular analysis. Returns are IRS estimates for all domestic private foundations based on IRS methodology.

Once again, the results confirm that the return experience of the Michigan foundations closely reflects that of private foundations nationally, with the shorter time period producing similar results.

Table 1: Returns Generated Have Been Time Period Sensitive

Real (Inflation Adjusted) Returns for the Market and for Private Foundations

Study Date (Time Period Covered)	65% Stocks/35% Bonds	75% Stocks/25% Bonds	Michigan Sample Set
1998 (1974 - 1997)	6.00%		5.27%
2004 (1973 -2002)	5.17%	5.20%	5.08%
2013 (1973 - 2010)	4.82%	4.94%	5.11%
2016 (1973 - 2014)	5.35%	5.55%	5.28%

1998 Study	Compared 65/35 portfolio with Michigan Sample set
2004 Study	Added 75/25 portfolio and updated data to capture "dot.com" bubble
2013 Study	Updated data from 1998/2004 studies to capture financial crisis
2016 Study	Updated data from previous studies

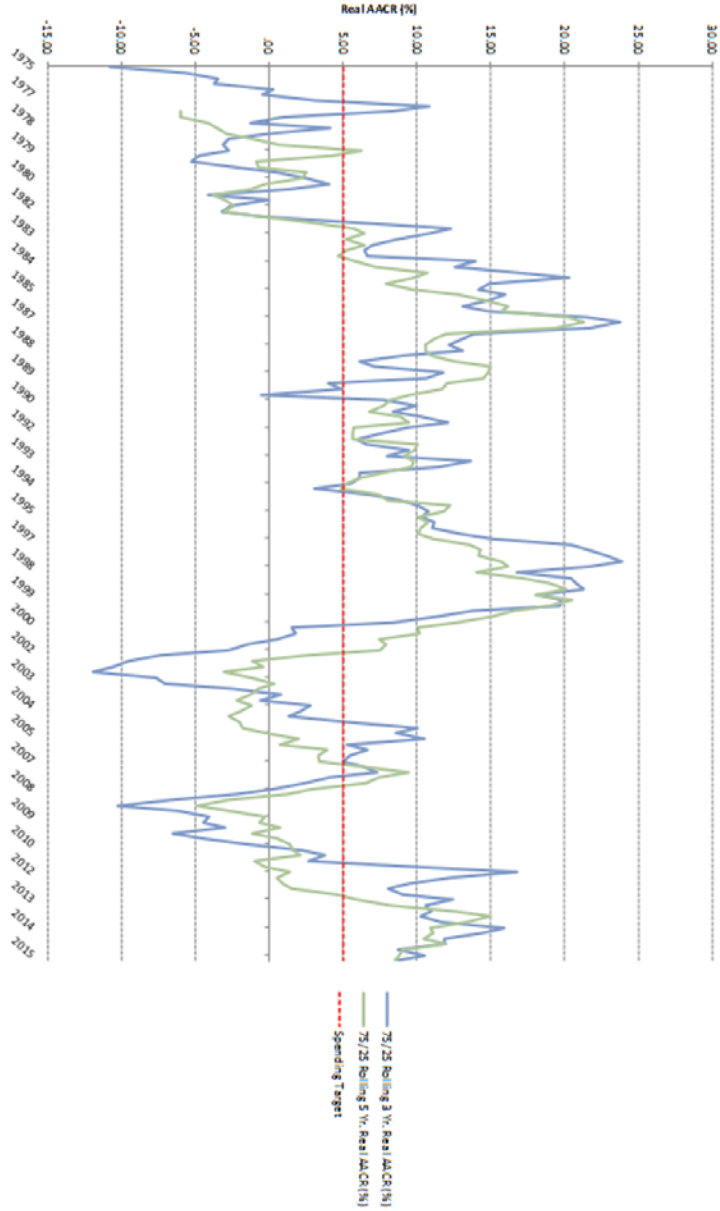
Table 2: Returns Generated Have Been Time Period Sensitive

Real (Inflation Adjusted) Returns for the Market and for Private Foundations

Study Date (Time Period Covered)	65% Stocks/35% Bonds	75% Stocks/25% Bonds	Michigan Sample Set	Large National Foundations
2013 (1986 - 2009)	6.18%	6.35%	6.64%	6.49%
2016 (1986 - 2012)	6.03%	6.21%	6.47%	6.51%

Table 3: Simple 75/25 Blend Earns More than 5% Only About 60% of the Time

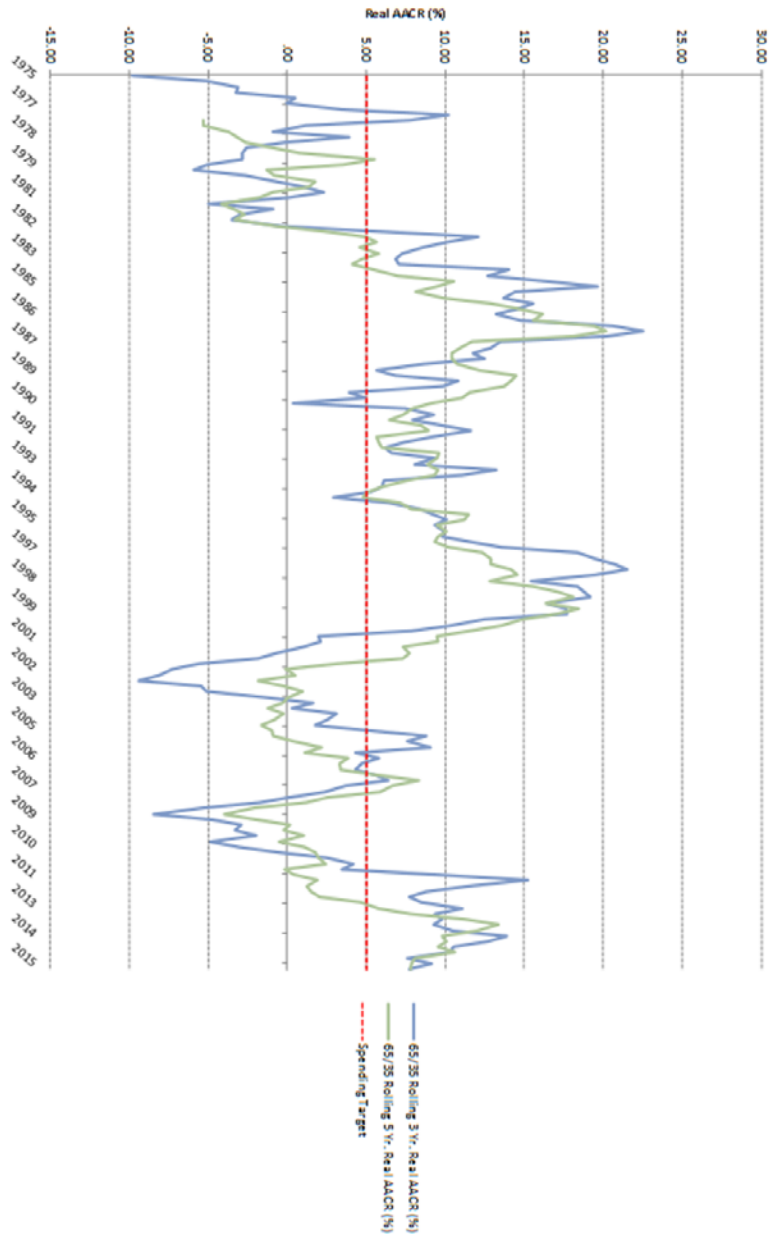
Raising the payout requirement would reduce the probability of being able to maintain purchasing power.



Note(s):
1. Analysis is from January 1, 1973 - March 31, 2016 and employs quarterly data periodicity.
2. Stocks returns are simulated by S&P 500 Index. Bond returns are simulated by Barclays Government/Credit Index.
3. Of the 162 quarterly data points for simulated trailing 3 year annualized returns over the analyzed time period, 98 are greater than or equal to 5.0% real (60.4%).
4. Of the 154 quarterly data points for simulated trailing 5 year annualized returns over the analyzed time period, 92 are greater than or equal to 5.0% real (59.7%).

Table 4: Simple 65/35 Stock/Bond Shows Similar Results

Range of possible outcomes is narrower, but possibility of earning payout plus inflation still challenging.



Note(s):
1. Analysis is from January 1, 1973 - March 31, 2016 and employs quarterly data periodicity.
2. Stocks returns are simulated by S&P 500 Index. Bond returns are simulated by Barclays Government Credit Index.
3. Of the 162 quarterly data points for simulated trailing 3 year annualized returns over the analyzed time period, 96 are greater than or equal to 5.0% real (59.3%).
4. Of the 154 quarterly data points for simulated trailing 5 year annualized returns over the analyzed time period, 89 are greater than or equal to 5.0% real (57.8%).

It is worth noting the influence of the 1970s on these data. When results can be shown (either for the passive index blends or Michigan Foundation experience) for a period that includes the 1970s, (Table 1) the results are notably lower than an analysis of returns (either hypothetical or actual) that excludes that period (Table 2). Unlike other post-World War II time periods, the 1970s included a period of sluggish economic growth and higher than average inflation. We would against caution against placing too much reliance on the shorter time seriesn shown in Table 2 for fear of underestimating the effects of such a period on long-term returns.

Conclusion

The initial conclusions of the 1998 study and the 2004 and 2013 updates are confirmed by the addition of additional years of data and a robust national sample of foundations. In 1998, we noted that modeling based on passive indexes was likely to provide a reasonable approximation of actual foundation experience. We also concluded that, in order for foundations to be sustainable over long periods of time, a payout rate in excess of 5% is not likely to maintain the real portfolio market value over the long term. As we have pointed out in this update, the probability of maintaining purchasing power at even the 5% level is not high. Furthermore, the return experience of Michigan foundations closely reflects that of a robust national private foundation sample, suggesting that the same conclusions apply on a national scale.

IRS Payout Requirements

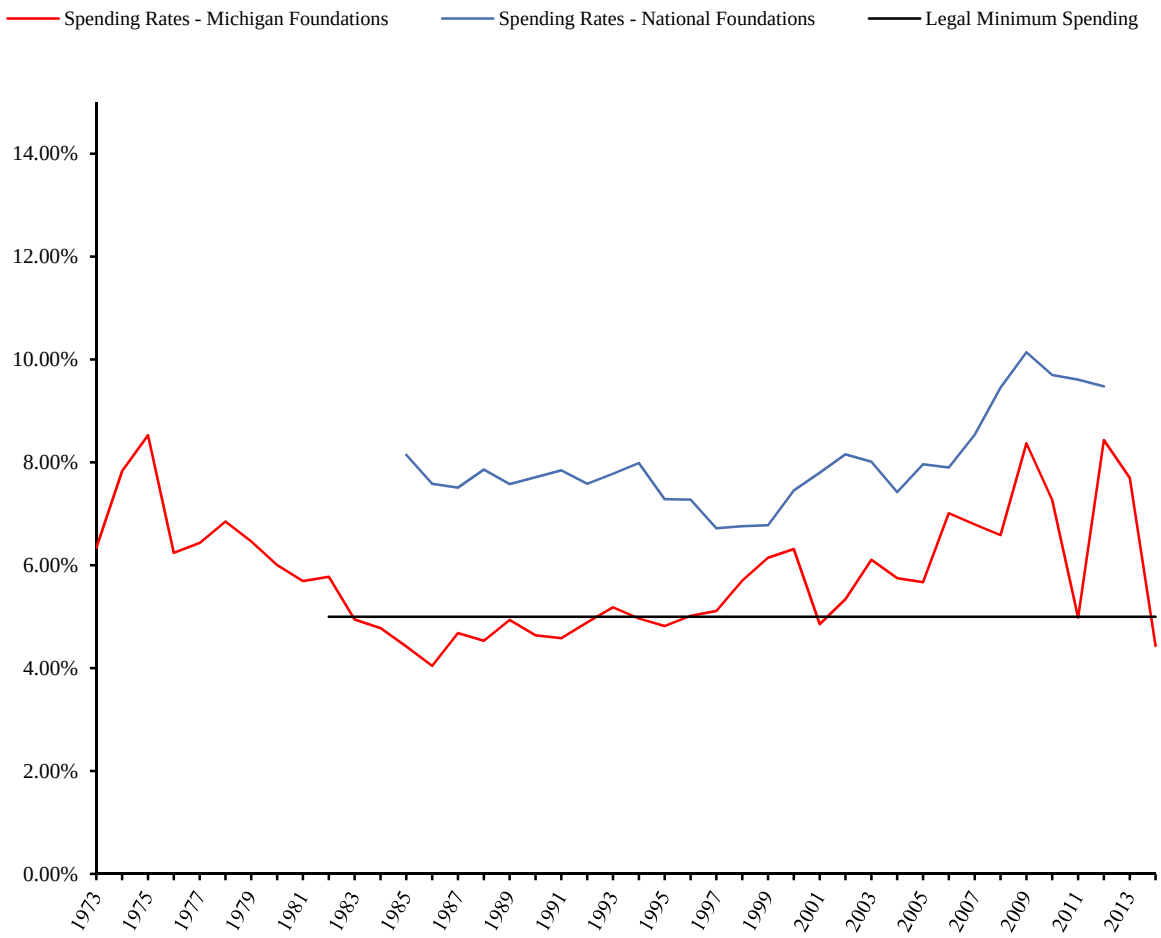
While the return experience of the two hypothetical portfolios and the sample of Michigan and national foundations exhibited similar returns over long periods of time, payouts were more variable. Table 5 plots the weighted average payout ratio for the Michigan foundation sample group from 1973 to 2014, and the National Foundation weighted average payout ratio from 1986 to 2010. A horizontal line is drawn beginning in 1982 to indicate the period in which the 5% payout rule was in force. As noted in the original report, prior to 1983, actual payout rates averaged 6.6%, since payout requirements mandated that either the higher of adjusted net income (including interest and dividends) or a "minimum investment return" ranging from 4.4% to 6% be spent. Average payout between 1983 and 1993 was actually *below* the 5% level for the following reasons:

- The IRS allowed carry-forward credits for over disbursements in years prior to 1982.

- Higher bond and equity valuations, coupled with a one-year grace period for payout requirements, resulted in effective annual disbursements of less than 5%. In the five years following 1993, payout rates hovered around the 5% mark with relatively little volatility.

Table 5

Foundation Real Weighted Returns & Spending Rates



Since the mid-1990s however, the payout rate, both in Michigan and nationally, has been well above the minimum. As noted in previous versions of this report, the 5% rate would appear to be acting as a floor, not a ceiling.

Aggregated weighted average payout rates for national foundations are shown only for the period 1986 to 2010 since data only from this period was available from the IRS. Returns are IRS estimates for all domestic private foundations based on IRS methodology.

Part II. 2016 Update Study

The Effect of Various Spending Rates on Real Payout Levels and Fund Market Values

Since the analysis in the previous section demonstrated that hypothetical portfolios approximates the return history for both the Michigan and national samples, we can use the same hypothetical portfolios (65/35 and 75/25) to illustrate the effect of market cycles on foundation assets and payout over long periods of time. This is shown in Table 6 and 7, in which we model the 65/35 and 75/25 hypothetical portfolios, respectively.

Findings from 1969 – 2014

- The period shown here begins towards the end of the great bull market of the 1950s and 1960s. By 1968, the diversified Michigan foundations we surveyed had over 50% of their assets allocated to equities, virtually all invested in U.S. stocks. In the decade of the 1970s that followed, stocks posted anemic nominal returns and negative *real* returns. The bull market between 1998 and 2000 resulted in a brief recovery of real spending rates and fund market values, bringing all funds except the one spending 7% above their 1969 payout levels for the first time in 30 years. This holds for both the 65/35 and 75/25 hypothetical portfolios. Following the tech bubble crash, the early 2000s brought all funds, except for the 4% spending fund, back down to sub-1969 market value levels for both the hypothetical portfolios. In other words, only the funds with 4% spending rate recovered from the periods of pronounced market volatility to fully preserve purchasing power.

- Markets rebounded between 2002 and 2007, but the financial crisis of 2008 again brought a decline in real fund values.

- By the end of 2010, real inflation adjusted spending for each of these funds remained *below* the 1969 level of 5%, with the sole exception of a hypothetical fund spending 4% for *both* the 65/35 and 75/25 indexed portfolios.

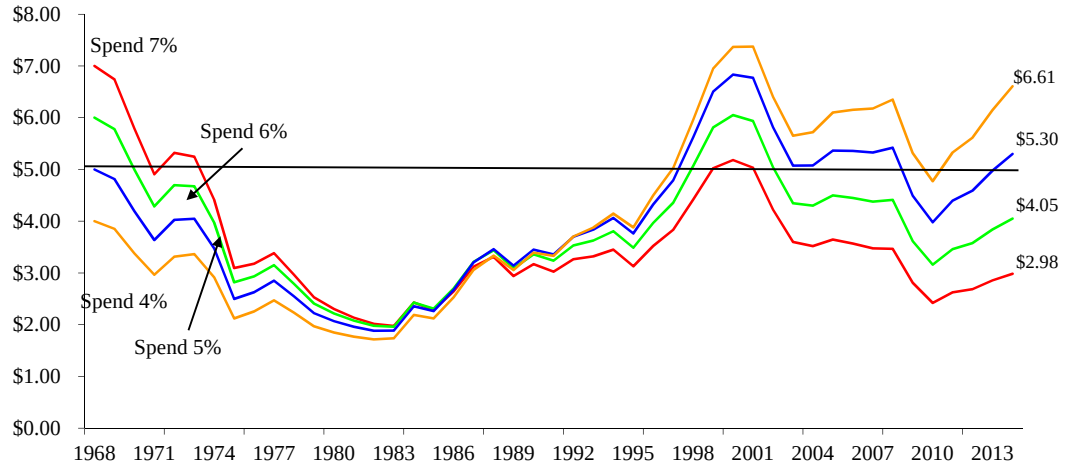
- As of 2010, only the 4% fund had preserved its real wealth since 1969 after enduring periods of protracted market volatility. For the 65/35 portfolio that spent at the 5% mandated level, this implies a 13% decline in real market value from 1969. For the more aggressively invested 75/25 portfolio, this implies a 9% drop in real market value.

- Since the 2010 update (2011-2014), there was a strong rebound in market returns which lifted the 4% spending rate well above its (inflation adjusted) 1969 level, and brought the 5% rate just over that same level.

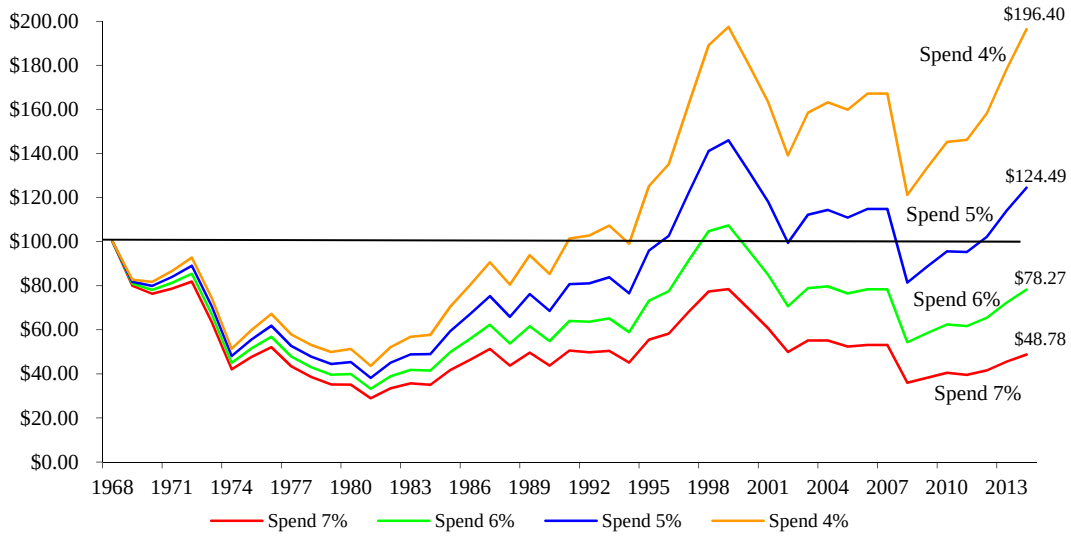
- If we assume foundations can achieve a moderate increase in portfolio return without an attending increase in portfolio risk through access to top quality investment managers and

Table 6: Hypothetical 65/35 Portfolio
Spending x% of a Four Quarter Average Market Value
(Calendar Years 1969-2014)

Real Spending



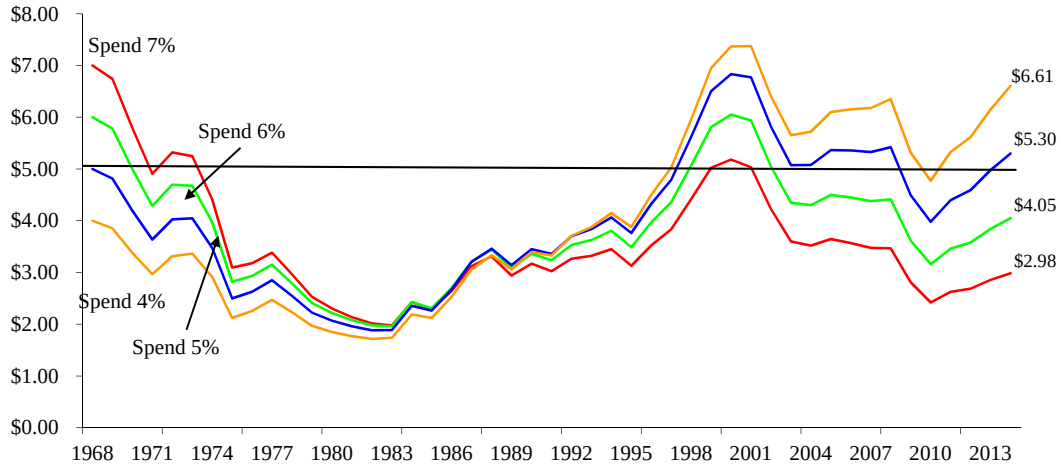
Real Fund Market Values After Spending



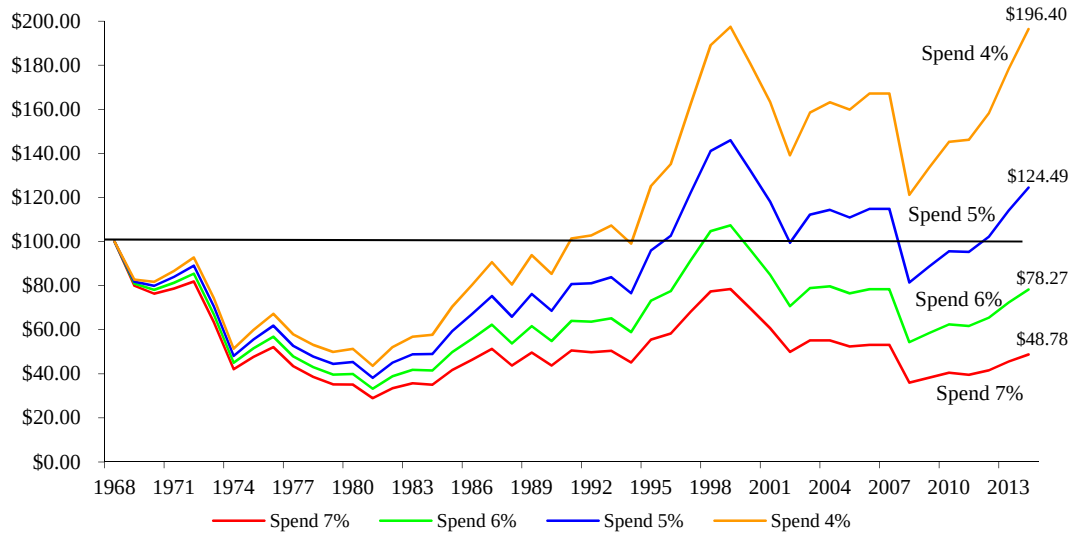
Assumptions:
- Begin with $100 million on January 1, 1969.
- Constant asset allocation of 65% U.S. stocks and 35% U.S. fixed income rebalanced to target policy each year.
- Performance is based on annual market index data.

Table 7: Hypothetical 75/25 Portfolio
Spend x% of a Four Quarter Average Market Value
(Calendar Years 1969-2014)

Real Spending



Real Fund Market Values After Spending



Assumptions:

- Begin with $100 million on January 1, 1969.
- Constant asset allocation of 65% U.S. stocks and 35% U.S. fixed income rebalanced to target policy each year.
- Performance is based on annual market index data.

- alternative asset classes, the 5% spending rate may be *just* low enough to preserve purchasing power over the long term. If, however, the legally required spending rate increased to 5.5% or 6%, our analysis suggests foundations may not be able to preserve their real wealth over time. If foundations are not able to preserve their wealth over time, their ability to execute on their stated missions falls commensurately.

- As the data and graph suggest, a high payout rate will initially provide higher levels of spending, but will over time erode the value of both the fund and the absolute level of dollars being paid out from the fund. Conversely, a lower payout rate will enable the fund to accumulate value and will result in higher absolute levels of real spending in the future.

Future Return Expectations

Finally, using CA's proprietary asset class return assumptions[3], we calculate the real expected compound returns for hypothetical 65/35 and 75/25 portfolios, and find that they are 4.9% and 5.2%, respectively, over the long term. The main objective of our asset class assumption is to present a base case of equilibrium returns. In particular, equilibrium assumptions are independent of current valuations, targeted toward a generic 25+ year time horizon and with a risk premium between global bonds and global stocks that is reasonable and represents our long-term expectation. Given these return expectations going forward, our models suggest that the probability of maintaining purchasing power at a payout rate of 5% is about 50% over the next 5 to 25 year time frames, as summarized in Chart 3 below.

Probability of Maintaining Purchasing Power

Index Portfolio	5 Years	10 Years	15 Years	20 Years	25 Years
65%/35%	49%	48%	48%	47%	47%
75%/25%	50%	51%	51%	51%	51%

Implications

This study provides quantitative analysis on the investment portfolio performance and payout rates for both a sample of 48 Michigan foundations through 2014 and a larger sample of over 30,000 national foundations through 2010. Our extension of the time period to include the most recent

[3] The inputs used in this modeling exercise represent our current estimates of long-term (25-year) equilibrium real rates of return. This includes a real arithmetic average return of 7.00%, 3.00% and 1.00% for U.S. Equity, U.S. Fixed Income, and U.S. Cash, respectively, as well as an inflation rate of 3.00%. The original report included modestly higher equilibrium real arithmetic average returns of 7.75%, 3.75%, and 1.00% for U.S. Equity, U.S. Fixed Income, and U.S. Cash, respectively, as well as an inflation rate of 3.00%.

financial crisis and recovery corroborates the conclusions reached in our previous research in 1998 as well as in subsequent updates. While nominal returns of foundations have been adequate, the data suggests that the combination of inflation and mandated annual payouts may erode foundations' real wealth over time.

Because foundations generally exist to serve a stated social good or purpose in perpetuity, their real wealth over the long term is often central to their mission. Put simply, foundations' real wealth is a function of three variables: nominal investment returns, inflation, and payout rates. While the first two are unpredictable in the short run, one may reasonably assume that over longer periods they may interact to produce an annual real return between 5% and 6.5%. Our analysis supports this not only theoretically but also empirically. Payout rates are the only element of relative certainty of these three variables and as the evidence suggests, unsustainable rates may permanently impair foundations' portfolios.

While some foundations admittedly are set up to liquidate over time, most donors create foundations with the goal of pursuing their missions in perpetuity. For foundations to maintain intergenerational equity, spending rates should not exceed the expected real return. Boosting returns to a level sufficient to justify increases in spending would likely require taking on considerable risk in a foundation's portfolio, which many may not be positioned to implement or monitor effectively. As such, our analysis again confirms that a payout rate higher than 5% may compromise foundations' ability to sustain the grant-making capacity of their endowments over the long term.