Using a Trust's Investment Policy Statement to Develop the Portfolio's Appropriate Risk Level

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Editor's Note: Modern Portfolio Theory has become a customary tool used by investment professionals and, as such, constitutes an industry standard prudent fiduciaries cannot ignore. Further, the Prudent Investor Rule and Modern Portfolio Theory are inextricably intertwined. We have elected to publish four articles in consecutive editions of ACTEC Journal *in order to provide our readership with an understanding of Modern Portfolio Theory, demonstrate the necessity of applying this theoretical construct in accordance with the Prudent Investor Rule and apply this theory to other pertinent issues surrounding the administration and litigation of portfolios managed by fiduciaries. Sequential publication eliminates the need to redevelop Modern Portfolio Theory and other concepts in each article.* ACTEC Journal *readers will have the option of reviewing earlier articles to clarify any points of interest in subsequent articles.*

The first article, "Modern Portfolio Theory and the Prudent Investor Act," appeared in the ACTEC Journal, *Vol. 30, No. 4, and provided a foundation for understanding the underpinnings of Modern Portfolio Theory and how it should be applied under the Prudent Investor Rule. The articles to follow this current article are: "Computing Market Adjusted Damages in Fiduciary Surcharge Cases Using Modern Portfolio Theory" and "The Appropriate Withdrawal Rate: Comparing a Total Return Trust to a Principal and Income Trust."*

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I. Introduction

Lawsuits against fiduciaries develop quite often due to lack of an appropriate investment policy statement (IPS), failure of the trustee to follow the IPS after it has been developed and agreed to by the interested parties, or failure to communicate clearly realistic expectations. While development of an IPS is not required specifically by either the Restatement (Third) of Trusts (Restatement) or the Uniform Prudent Investor Act (Act), an agreed upon and appropriately constructed IPS can provide the trustee with a guide for portfolio formulation and management that is suitable for the trust.[1] For the IPS to be considered appropriately constructed, its contents must be consistent with tenets of the Prudent Investor Rule (Rule) and Modern Portfolio Theory (MPT).[2] Additionally, a well-constructed and clearly communicated IPS can assist in the defense of a trustee against unsuitability claims and potential damages.[3] Section II of this article will provide the rationale for developing an IPS and discuss in some detail three important elements that should be included.

A very difficult issue facing a trustee is the assessment of an appropriate risk level for a trust portfolio. Section III presents an approach to determining a trust's risk tolerance using the IPS's stated required rate of return based on the trust's income/spending level needs. This approach employs a simulation to demonstrate the probabilities of expected outcomes and demonstrates the impact of different risk level assumptions. Sections IV and V utilize a case example to show how this approach to risk tolerance can be used to develop and calibrate a trust's appropriate risk level. Section VI summarizes how the IPS can function as a management plan for the trust, the necessity for the IPS to be consistent with the Rule, (and, thus, its conformity to MPT), and the IPS's usefulness in reconciling the trust's desired rate of return with an appropriate risk level.

II. The Investment Policy Statement

A. **The Rationale for an Investment Policy Statement.** As indicated above, neither the Restatement nor the Act specifically requires the creation of an IPS. However, the Act says:

> Compliance with the prudent investor rule is determined in light of the facts and circumstances existing at the time of a trustee's decision or action and not by hindsight.[4]

One author states:

> Restatement Commentary notes that compliance with the standard of prudence is determined by the *trustee's conduct* in establishing and following the investment and management process required by the Act, not the *trust portfolio's performance.* In short, trustee liability hinges on process, not performance. The trustee ordinarily will be able to demonstrate prudence by addressing the considerations set forth in the Act and then documenting the reasonableness of its decision-making in response to them. This protects the trustee from surcharge when there's a subsequent decrease in trust portfolio performance. On the other hand, regardless of how successful portfolio performance, the trustee risks liability for failure to demonstrate that it established and followed the process required by the Act.[5]

Documenting the "facts and circumstances existing at the time of a trustee's decision or action" and "establishing and following the investment and management process required by the Act" are appropriate actions to be undertaken by the trustee. What better way for a trustee to document the investment and management process than creating a comprehensive, well-considered IPS and use it as the guide in making decisions related to the trust?

Aside from the issue of potential liability associated with the lack of an IPS, a poorly constructed IPS, or not following the guidelines established by the document, there is the important issue of the best way to

[1] The Employee Retirement Income Security Act of 1974 (ERISA) Sec. 402(b)(1) requires the establishment of a written funding policy but does not specifically require the development of an IPS.

[2] A discussion of the underpinnings of Modern Portfolio Theory and its basis in trust law appears in the first article in this series, Edward A. Moses. J. Clay Singleton, and Stewart A. Marshall, "Modern Portfolio Theory and the Prudent Investor Act," *ACTEC Journal,* Vol. 30, No. 4, p. 165-175.

[3] Assessing damages are discussed in detail in the next article in this series, "Computing Market Adjusted Damages in Fiduciary Surcharge Cases using Modern Portfolio Theory."

[4] Uniform Prudent Investor Act, §8.

[5] Wendell Scott Simon, *The Prudent Investor Act: A Guide to Understanding,* 2002, Camarillo, CA, Namborn Publishing Co., p. 73.

manage effectively a trust's investments. An IPS can be likened to the strategic plan of a business. This plan, based on the business' Mission Statement, sets out the objectives of the company and the steps or processes necessary to achieve these objectives. This blueprint guides operational decisions that manage the business. The plan does not change, particularly in the short run, unless the facts and assumptions upon which the plan was formulated change significantly. The IPS serves the same function as the business' strategic plan, providing a guide for the consistent implementation of an investment strategy and preventing emotional reactions to events in the market place. This is not to say the IPS, like a strategic plan, never changes. It should be reviewed periodically and modified if the facts and assumptions warrant a change.

Finally, it should be stressed that "one plan does not fit all." Each trust, like each business, has a unique set of circumstances that warrant the development of an IPS tailored specifically to the needs of the trust. To use a "standard plan" approach or even a slight modification to a standard plan in developing an IPS for an individual trust is a recipe for mismanagement and disaster. The IPS must be individualized for each trust to reflect its unique characteristics.

B. **The Contents of an Investment Policy Statement.** Numerous articles and books have been written about the development and maintenance of an IPS.[6] Many of them are excellent guides for determining the contents of the IPS.[7] As indicated above, every trust has its unique characteristics and the IPS for the trust should be developed with these unique features in mind. For example, the content of an IPS for defined benefit plans, endowments, or foundations will differ markedly from the content of an IPS for an individual trust. Given the wealth of articles and texts available as a guide for developing an IPS, we will not elaborate here on the overall content of a well-constructed IPS. Section 2 of the Act provides an appropriate guideline for the necessary content. However, there are three components of an IPS that deserve elaboration and insight. Additionally, the order in which these specific components are developed is crucial. The three components listed below are arranged in the order in which decisions should be made.

1. **Selection of Asset Classes Included in the Portfolio.** Perhaps one of the trustee's most important investment related decisions is determining the appropriate asset classes to be considered for the trust. If the choices selected are too few, the probability of achieving a well-diversified portfolio is extremely low. As illustrated in the first paper in this series, the selection of asset classes to be considered for the portfolio creates the attainable set used in the construction of the Efficient Frontier.

Quite often after asset classes are identified, the trustee determines a strategic asset allocation among these asset classes without the benefit of an Efficient Frontier analysis and establishes the allowable deviations from that allocation. This approach is problematical because it can limit the Efficient Frontier and force the trustee's portfolio choices into too narrow a range of expected returns and risk levels.

Assume the trustee selects the asset classes in Chart II.1 and uses these asset classes to construct the Efficient Frontier. The result is the Unconstrained Efficient Frontier shown in Chart II.2. Alternatively, assume the trustee begins by selecting the seven asset classes in Chart II.1, establishes the strategic allocation, and assigns the lower and upper deviations shown.

Chart II.1

Strategic Asset Allocation and Allowable Deviations

	Lower Limit	Strategic Allocation	Upper Limit
Small Stocks	12%	15%	18%
Foreign Stocks	9	12	15
Large Stocks	30	35	40
Real Estate	8	10	12
Corp. Bonds	10	13	16
Govt. Bonds	8	10	12
T-Bills	3	5	7

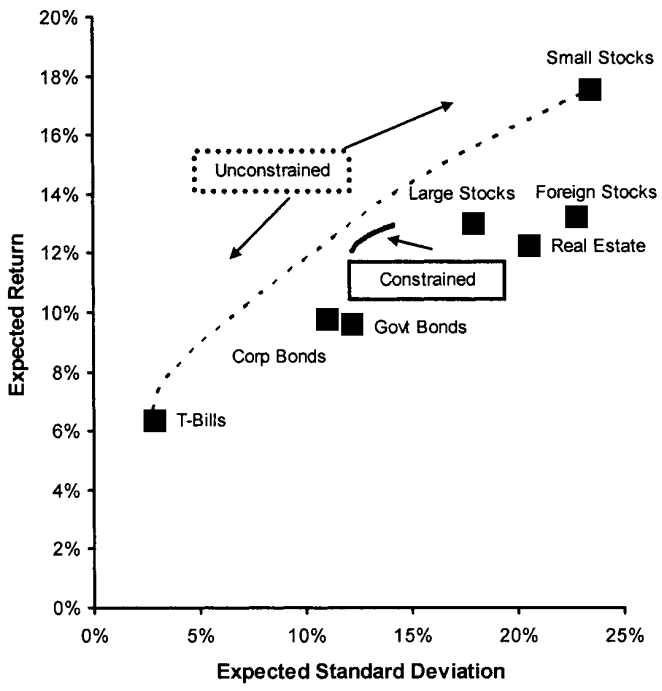
Using these allowable deviations as constraints (*e.g.* the 15% allocation to small stocks is limited to between 12% and 18%), a different Efficient Portfolio (labeled Constrained in Chart II.2) is generated. The Constrained Efficient Frontier is very short and the opportunities available to the trust are limited with respect to the portfolio's expected return and risk.

[6] A search of Google.com, using the search term, "Investment Policy Statement," results in 3.96 million "hits." A search done within these results using the term, "IPS," provides 29.4 thousand references. Not all of these references are directly pertinent for developing an IPS; however, a sampling of these references indicated that many had appropriate content for this purpose.

[7] For an excellent reference on developing an IPS see Donald B. Trone, William R. Allbright, and Philip R. Taylor, *The Management of Investment Decisions*, 1996, Chicago, Irwin Professional Publishing, Chapter 5.

Chart II.2

Constrained and Unconstrained Efficient Frontiers



The better approach is to establish upper and lower limits *after* the optimum portfolio is selected from the Unconstrained Efficient Frontier. After all, upper and lower limits associated with the strategic asset allocation decision are nothing more than a guide to portfolio rebalancing.

2. **Determination of the Target Rate of Return for the Trust Portfolio.** Many factors enter into the selection of the target rate of return, some controllable by the trustee and others dependent on factors outside the trustee's control. Examples of the latter include expected inflation and a minimum level of administrative expenses. Controllable factors include the withdrawal rate, desired real growth in asset value (return above the rate of inflation and after withdrawals), and, ultimately, risk. As will be shown, determination of the target rate of return is subject to change once the risk level associated with this return is estimated.

3. **Determination of the Risk Tolerance for the Trust Portfolio.** Perhaps there is no more vexing problem for a trustee than determining an appropriate risk level for a trust portfolio. It is well known that trust beneficiaries desire high returns and low risk. It is an axiom of finance that return and risk move together; the higher the desired return, the higher the necessary exposure to risk. Thus, there is a tradeoff between desired return and risk. As demonstrated in the following sections of this paper, a trustee can estimate risk tolerance of the trust beneficiaries through an iterative process. This process involves determining initially the desired rate of return and then assessing the risk level required to achieve that return. If the risk is higher than a tolerable level, then the required return must be adjusted downward to accommodate a lowering of the risk. It is possible the opposite occurs. The initial required rate of return may suggest a risk level that is too low once consideration is given to "the purposes, terms, distribution requirements, and other circumstances of the trust." In this instance, elements of the return controllable by the trustee can be increased.

III. The Appropriate Level of Risk for a Trust Portfolio

A. **The Trust's Target Rate of Return.** Let us assume we have a well-considered IPS. This document would specify the trust's target rate of return consistent with the trust's goals and objectives. For example the investment policy of a trust with a single income beneficiary and remainder beneficiaries would be designed to provide as much periodic income as was consistent with the expected life of the trust, specific provisions and restrictions, the beneficiaries' needs, and the trustee's duty of impartiality. To be sustainable, the income target would also have to be consistent with both the corpus and the expected rates of return on the constituent asset classes to produce the specified level of income. Most income beneficiaries would like to have as much income as possible but that desire is limited by the amount of the corpus, the available rates of return, and the risk required to reach those rates. Assuming all parties have agreed on the trust's target rate of return, we can proceed to analyze the appropriate risk level. The risk level, in turn, provides feedback for the trustee's construction of the investment portfolio.

B. **Risk and Rate of Return.** In the first article in this series we introduced the Efficient Frontier. This technique finds the best possible combination of asset classes—best in the sense they all offer the lowest risk for their level of expected return. This collection of best portfolios is produced by examining all combinations of assets in the feasible set—those asset classes the trustee deems suitable possible investments. Although trustees who are experienced investment professionals could forecast and justify their own independent asset class returns, risks, and correlations, historical records are probably the best

source for these forecasts. The same history of asset class performance is widely available to everyone. For purposes of this article we will assume the trustee has determined departures from these numbers are unwarranted.

C. **Using the Historical Record.** Historical rates of return on seven popular asset classes are shown in Chart III.1. The column labeled average return shows the average annual return produced by the seven asset classes listed.

Chart III.1

Annual Historical Returns on Seven Indices*
All statistics in %

	Average Return	Standard Deviation
Small Stocks	17.52	23.47
Foreign Stocks	13.20	22.85
Large Stocks	12.94	17.97
Real Estate	12.19	20.59
Corp Bonds	9.62	11.21
Govt Bonds	9.56	12.11
T-bills	6.35	2.90

* Chart III.1 is based on actual annual returns from 1972 through 2003.

This chart makes three main points:

1. **Lessons from the Historical Record.** First, this historical experience sets the range of returns that have occurred and, therefore under our assumptions, are likely to occur on average in the future. Trustees seeking a17.5% rate of return, for example, would have to invest the entire portfolio in small stocks. This approach, of course, would be contrary to the Rule's emphasis on diversification. A diversified portfolio would have to accept a more modest return objective.

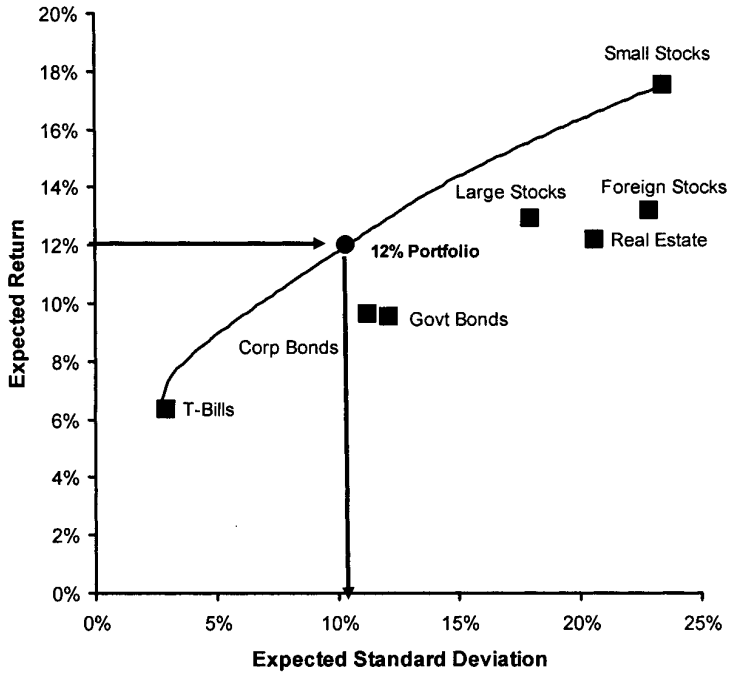
2. **Asset Class Risk and Return.** Second, every target rate of return carries some risk. Even a portfolio dedicated to Treasury bills carries some risk, as the standard deviation column in Chart III.1 suggests. The standard deviation indicates the amount of variation around the annual average return. Every asset class has a standard deviation. Common investment practice is to take this standard deviation statistic as a measure of risk. This statistic produces an intuitive ranking of returns to these asset classes in that most people recognize bonds are more risky than Treasury bills, real estate is more risky than bonds, and stocks become more risky as one moves from large stocks, to foreign stocks, to small stocks.[8] Experience with the capital markets reflects the interaction of millions of investors and billions of dollars over many years. We can, therefore, use this historical information to translate the trust's expected return requirement into a risk level.

3. **An Alternative Portfolio.** Finally, if we assume the trust's target rate of return is 12% per year we could construct a portfolio that was invested 93% in real estate and 7% in corporate bonds (.93 x 12.19% + .07 x 9.62% = 12%). This portfolio, however, would carry more risk (*i.e.*, be less efficient) than other portfolios that are expected to produce a rate of return of 12%. The trustee should use the Efficient Frontier to discover the portfolio that provides the least risk with an expected return of 12%. Chart III.2 shows such an Efficient Frontier.

D. **Using an Efficient Frontier.** The Efficient Frontier shown in Chart III.2 was developed following the process discussed in the first article of this series. To find the risk level associated with the efficient portfolio that produces an expected return of 12%, locate the portfolio on the Efficient Frontier that produces 12% (labeled "12% Portfolio") and read down to determine the risk level. In this example the 12% Portfolio has the asset allocation shown in Chart III.3 with an expected standard deviation of 10.4%.

[8] Chart III.1 shows the historical standard deviation for government bonds is slightly larger than the standard deviation for corporate bonds. Intuitively, however, government bonds should be less risky (i.e., should have a smaller standard deviation). This anomaly in standard deviation as a risk index is probably due to the underlying characteristics of the asset class index. In this case corporate bonds are represented by only the most credit-worthy bonds, only slightly more risky than government bonds. This result also shows that working with history does not always produce intuitive results. The absolute difference in standard deviation between government and corporate bonds, however, is small, much smaller than the difference between Treasury Bills or between bonds and real estate. Despite this drawback in working with historical data, the benefits to the trustee of verifiability and documentation far outweigh occasional counter-intuitive anomalies.

Chart III.2
Efficient Frontier Using Historical Annual Returns for Seven Indices*



* Chart III.2 is based on actual annual returns from 1972 through 2003.

Chart III.3

Allocation of the Efficient Portfolio with an Expected Return of 12%

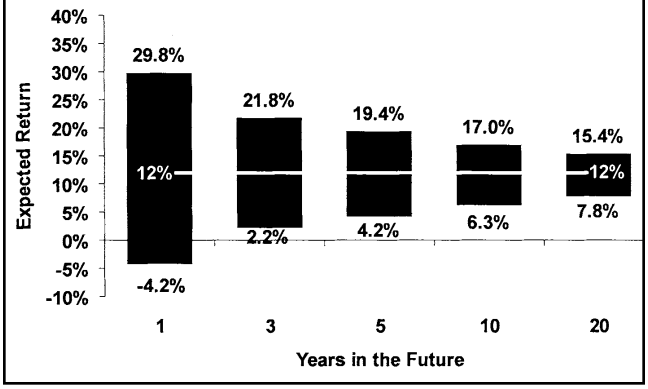
Asset Class	Allocation
Small Stocks	34%
Foreign Stocks	10%
Large Stocks	0%
Real Estate	0%
Corp Bonds	0%
Govt Bonds	37%
T-bills	19%

This portfolio is diversified and may be judged by the trustee to be suitable.[9]

E. **Calibrating the Trust Portfolio.** The trustee can now review the efficient portfolio and judge whether the risk implied by the target rate of return is suitable. For many trustees and beneficiaries the concept of risk is more difficult than the concept of return. Chart III.4 shows how the portfolio displayed in Chart III.3 can be helpful in calibrating the risk.

Chart III.4

Forecast Range of Efficient 12% Portfolio Returns from One to Twenty Years in the Future



[9] In this discussion we ignore portfolios in the neighborhood of the Efficient Frontier. These portfolios are covered in the first article in this series. Our discussion here would not change materially if we chose a neighboring portfolio that might have a more intuitive asset allocation.

Chart III.4 shows forecast returns for one, three, five, ten, and twenty years into the future for the 12% Portfolio shown in Chart III.3. The heights of the bars above each year represent a likely range of returns. This range covers 90% of possible outcomes, *i.e.*, from the 5th to the 95th percentile of the simulated distribution. The top and bottom of each year's range are labeled, as is the expected return of 12%. For example, forecast returns one year hence are expected to range from -4.2% to 29.8% with an expected return of 12%. These numbers were developed using a mathematical process that takes the forecast return (12% per year) and standard deviation (10.4% per year) of the portfolio in Chart III.3 and simulates how this portfolio might perform in the future. The expected return becomes more likely as time passes while the absolute dollar variance of possible results also grows.[10] Using this information the trustee can calibrate the portfolio's risk.

F. **Making Risk More Real.** Measuring risk with statistics like standard deviation is not easily understood by most people. The forecast range of portfolio returns, however, is easier to understand. In Chart III.4 we see within the forecast range of returns a negative return is likely only for the first year.[11] Certain situations, however, would define a return less than cash (or Treasury Bills) as a relative loss. Trustees with investment experience, for example, might be expected not only to avoid losses but to earn a return greater than Treasury Bills, the lowest risk alternative. In these cases, and using the average return in Chart III.1, the trustee might look at a return of 6.35% or less as a loss. Chart III.4 suggests that under this definition of loss, this portfolio carries considerable risk.

G. **Finding an Acceptable Portfolio.** While the portfolio in Chart III.3 is not immune from negative returns, a trustee should at least begin with an examination of the efficient portfolio. If this portfolio is not satisfactory the trustee should look at other efficient or near efficient portfolios that have returns somewhat less than 12% as they will entail less risk. Through a process of trial-and-error the trustee can find a portfolio that has acceptable levels of both expected risk and return. Because these two factors are inextricably linked, compromises are almost always necessary. The following section describes a case scenario that illustrates these points.

IV. Case Scenario

Husband (H) was divorced from his first wife (W1) during 1994. He has three living adult children from his first marriage to W1. He made a cash settlement with W1 and pays no alimony nor does he have any continuing financial obligations to her.

During 1998, H marries his second wife (W2). At that time, his net worth approximates $5 million exclusive of his home (valued at $500,000) and tangible personal property including mostly household effects and automobiles worth approximately $100,000.

H and W2 have a prenuptial agreement that provides, inter alia, for the following testamentary dispositions. After distributions of tangible personal property (including household effects and automobiles) and excluding any principal residence (homestead), H may use the full amount of his remaining unified credit as he chooses but subject to the lesser of a minimum of $4 million or all of H's remaining estate (*i.e.*, mostly listed securities) being funded into a QTIP trust. He will create a QTIP trust with an independent trustee. As is required, W2 will receive all income from the QTIP but distributions of principal will be in the trustee's discretion for her health, education, maintenance, and support. At W2's demise, any remainder may pass as H directs in his testamentary document. W2 may use the homestead during her lifetime unless unoccupied for more than six months. She is to maintain the homestead during her occupancy. She will receive also the household effects and any vehicles owned by H.

W2 and H live happily thereafter until H dies unexpectedly during 2004 at the age of 75. W2 is 64 years old. She has approximately a twenty-year life expectancy.

V. The Role of the Trustee

A. **The Initial Portfolio.** The trustee in this scenario as part of the development of an IPS must determine the feasible set of asset classes, make forecasts of return, risk, and correlation, and decide on an appropriate portfolio. For purposes of illustration we will continue to assume the seven asset classes in Chart III.1 constitute the feasible set and that the historical record of asset class returns is an appropriate forecast. To help W2 better understand the implications of the trustee's decisions, the situation is recast in terms of dollars. The trustee starts with the efficient portfolio in

[10] Imagine tossing a coin. After four tosses, despite the fact that probability of heads and tails is equal, you would not be surprised if the number of heads was not exactly four. The number of heads, however, cannot be much different than two. After four hundred tosses the number of heads should be close to two hundred but the difference can be much greater than two.

[11] We use "likely" to imply within the confidence interval from 5% to 95%. Negative returns are possible in any year. In this example only in the first year is there greater than a 5% probability of a negative return. We apologize if this generalization of probabilities offends statisticians but we believe a detailed treatment of the underlying distributions and associated probabilities is unnecessarily confusing in this context.

Chart III.3, based on an initial interpretation of W2's desire for income from the trust. The trustee includes an annual withdrawal from the trust and calculates how this portfolio will behave to show to W2 and the children of W1.

B. **Choices Available to the Trustee.** The ability of any portfolio to provide income to the beneficiary and principal to the remainder beneficiary is a function of three choices:

- The amount of investment risk in the portfolio. The more risk the portfolio takes on, the higher rate of expected return and the wider the range of possible portfolio values. Risk is expressed through the range of values.
- The income distributed from the portfolio. The more income distributed, the less likely the portfolio will be able to sustain that income and maintain principal.
- The time horizon. The longer the time horizon the more opportunities to build principal but also the more likely the portfolio will be dissipated by income demands, risk or both.

C. **Calibrating the Risk and Return of the Trust Portfolio.** For the purposes of illustration we will assume the income distributions and time horizon are fixed. The trustee must then calibrate the portfolio's risk to balance desires of the income and remainder beneficiaries. To simplify the presentation we will assume W2 requests $480,000 annually.[12] In an ideal world with perfect forecasting, therefore, the portfolio would be returned to $4 million at the beginning of the second (and every) year and the income beneficiary would receive $480,000 (12% x $4 million) at the end of the first (and every) year. Under our assumptions at the end of the first year the portfolio would have a 5% chance of being above $5.194 million ($4 million growing at 29.5 percent from Chart III.4) before the year-end distribution of the $480,000 and a 5% chance of being below $3.832 million ($4 million falling at 4.2 percent from Chart III.4) before the year-end distribution of the $480,000. These extreme values are calculated from the expected return (12%) and risk (standard deviation) of the portfolio.[13] Continued withdrawal of $480,000 might be acceptable if the portfolio ends up on the high side, at $5.194 million before the year-end distribution of $480,000 because the portfolio is expected to earn 12% the following year, ending the second year at $4.799 million after the withdrawal. Alternatively the $3.832 million portfolio will not earn enough to cover the withdrawal of $480,000, ending the second year at $3.274 million after the withdrawal.[14] A few bad years in a row and it is highly unlikely the portfolio will ever return to $4 million.

D. **Helping the Beneficiaries Understand the Implications of Their Choices.** At this point the trustee should present these forecasts to the beneficiaries. In all likelihood the remainder beneficiaries will not be happy about endangering principal. Under our assumptions the only choice left open to the trustee is to reduce the portfolio's risk, which reduces the expected return. Selecting a portfolio with an expected return of 10%, for example, reduces the risk to principal.

E. **Components of the Rate of Return.** The rationale for changing the expected rate of return can be found in the origins of the rate of return itself.[15] Expected returns on default risk-free instruments (*e.g.*, short-term government bonds) are generally assumed to be the combination of a real risk-free rate[16] (also called the time value of money) and expected inflation. Expected returns on risky assets, like those in the portfolios in which most trustees invest, are assumed to carry risk premiums above the default-free rate. These risk premiums vary depending on the extra risk presented by each asset class. High quality corporate bonds, for example, would carry a small risk premium compared to the risk premium for common stocks. The expected return on the 12% portfolio used here for illustration carries a risk premium above the real return and expected inflation. If the sum of these two factors is 5%, then a 12% portfolio would have a risk premium of 7%.

As beneficiaries consider alternative portfolios they usually focus on expected return. In our example if the trustee explains that the 12% expected return has at least three parts (default risk-free, expected inflation, and risk

[12] For the purpose of this illustration W2 has requested an annual constant withdrawal rate equal to $480,000, based on H and W2's spending patterns during their marriage. This amount is anticipated to be in excess of the annual income earned by the trust. Appropriate and fair withdrawal rates are the focus of the fourth article in this series, "The Appropriate Withdrawal Rate: Comparing a Total Return Trust to a Principal and Income Trust."

[13] This calculation assumes the returns are randomly drawn from a lognormal distribution, a standard assumption in finance.

[14] $5.194 million minus $480,000 = $4.714 million returning 12% = $5.279 million less the withdrawal of $480,000 = $4.799 million. $3.832 million minus $480,000 = $3.352 million returning 12% = $3.754 million less the withdrawal of $480,000 = $3.274 million.

[15] The theory of the expected rate of return is attributed to Irving Fisher and is called the Fisher equation. This equation says that the expected rate of return on default-risk free (government) bonds is the sum of the real risk-free rate of interest and expected inflation. Although the ability of this theory to forecast interest rates is the subject of continued debate, it is widely accepted as descriptive.

[16] "Real" is used here in the sense of the pre-inflation return and "risk-free" denotes no possibility of default (*i.e.*, government bonds).

premium), the beneficiaries may be better able to understand how lowering their expected return also lowers the risk premium. Lower risk means lower and more stable returns, as the 10% portfolio identified in Chart V.1 illustrates.

F. **The Optometrist Approach.**[17] The efficient portfolio with an expected return of 10% selected from the Efficient Frontier shown in Chart V.1 has a 5% chance, before the $400,000 distribution (10 percent of $4 million), of ending the year above $4.861 million and a 5% chance of being below $3.968 million.[18] By the same assumptions we used earlier the income beneficiary withdraws the expected return or $400,000 at the end of every year.

In this case the portfolio will be worth either $4.507 or $3.524 million at the end of the second year.[19] Like an optometrist asking, "Can you see the chart better now?" the trustee can ask the beneficiaries: "The higher expected return portfolio carries the possibility of a higher dollar value if things go well but a lower dollar value if things go poorly. Which do you like better, the 12% or the 10% portfolio?" Chart V.2 shows the results graphically.[20]

The 10% expected return portfolio has lower forecast highs and higher forecast lows and a better chance of preserving the principal over time at a sacrifice of $80,000 in annual income for W2.

G. **Communicating with the Beneficiaries.** We present this discussion about calibrating portfolio risk not because most trustees use this process but because they should. Communicating return to beneficiaries is generally less difficult than helping them understand risk. Using a dollar range of possible future wealth can be effective in documenting that the trustee has discussed the implications of the asset allocation

Chart V.1
Efficient Frontier with 10% and 12% Portfolios*

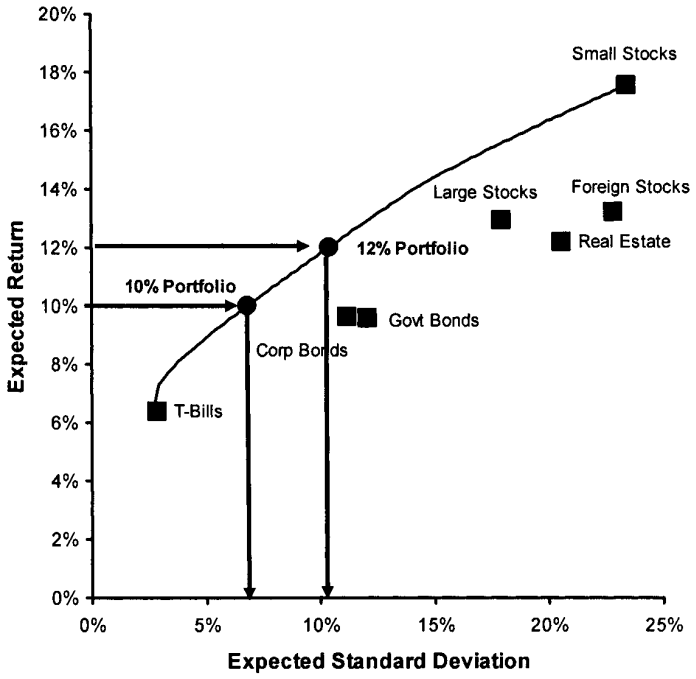
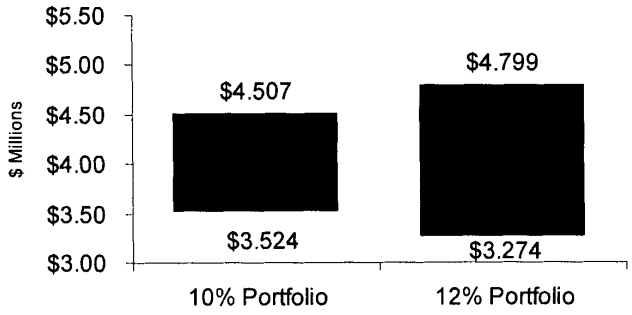


*Chart V.1 duplicates Chart III.2 with the addition of the 10 % Portfolio

Chart V.2
Comparison of the Forecast Range of Values at the End of Year Two for the 12% and 10% Efficient Portfolio Returns*



*The end of year two values are after the year-end distributions for year two.

[17] This characterization of the portfolio problem as analogous to being fitted for glasses was originated by Richard Thaler.

[18] The estimate of the efficient portfolio's year-end high and low values followed the same procedure used earlier for estimating these values for the portfolio with a 12% expected return. The standard deviation of the portfolio with the 10% expected return is 6.8% compared with the standard deviation of the 12% portfolio, 10.4%.

[19] $4.507 million = $4.861 million minus $400,000 = $4.461 million returning 10% = $4.907 million less the withdrawal of $400,000 and $3.524 million = $3.968 million minus $400,000 = $3.568 million returning 10% = $3.924 less the withdrawal of $400,000.

[20] In Chart V.2 we used the upper and lower 5% probability limits of the distribution similar to Chart III.4 except here we used one year instead of one through twenty years and dollars instead of returns in percent. We use a one-year instead of a twenty-year context to reduce the complexity of the time horizon and focus on what happens when the trustee asks the beneficiaries whether the expected outcomes are acceptable. We use dollars because they are usually easier for beneficiaries to understand.

decisions, risk level, time horizon, and withdrawal rates with all interested parties. Failure to do so may leave beneficiaries without a solid understanding about the implications of the trustee's choices. A lack of understanding can lead to disappointment, recrimination, possible litigation cost, and potential liability for the trustee.

VI. Conclusions

A. **The Investment Policy Statement.** A well-constructed and implemented IPS is an important, albeit not legally required, step in a trustee's conduct in managing a trust's investments. It provides a guide for consistent implementation of an investment strategy based on circumstances associated with that particular trust and prevents irrational reactions to events in the market place. An IPS also provides a blueprint for documenting decisions and an effective means of communicating with the trust's beneficiaries. The appropriate contents of an IPS are well documented in the literature. When constructing an IPS, the trustee should pay particular attention (in the following order) to selection of potential assets to be included in the portfolio, determination of the target return and assessment of the appropriate risk tolerance. The selection of the portfolio's potential assets determines the attainable set which in turn determines the Efficient Frontier. Estimation of the target return identifies the appropriate portfolio on the Efficient Frontier. This efficient portfolio defines the initial strategic asset allocation. The location of the portfolio on the Efficient Frontier can be used to assess the portfolio's expected risk for that return. Upper and lower limits around this strategic allocation can then be used to establish when portfolio rebalancing should be undertaken.

B. **Determining the Appropriate Level of Risk.** The desired return and risk are inextricably related; the higher the required return of a portfolio the higher the risk exposure of the portfolio. Using this return to locate a suitable portfolio on the Efficient Frontier allows the trustee to identify the expected risk of the portfolio expressed in terms of its standard deviation. While the standard deviation is a common indicator of risk used by academics it can be difficult for a beneficiary to appreciate its significance. Using a simulation it is possible to convert this risk measure into potential ending dollar values for the portfolio. The higher the risk level the larger the potential future fluctuations in the portfolio's dollar value. The trustee, in consultation with the trust beneficiaries, can determine whether these potential ending dollar values are acceptable. If the potential loss of portfolio value is deemed to be unacceptable, then the target return of the trust must be reduced in increments until an acceptable level of risk is determined. It is also possible the initial target return estimation results in potential portfolio fluctuation estimations that are below a level of tolerance. In this case, the target return can be increased resulting in higher portfolio risk.

C. **The Act, MPT, IPS, and the Trustee.** The Act expects trustees to exercise their investment judgment but they are ultimately judged on process. While assessing risk is undoubtedly the most difficult task facing a trustee, the standard is one of conduct, not results. MPT is embedded in the Act and the Restatement, providing the trustee with a systematic process for calibrating risk in an investment portfolio. In the light of MPT and the extensive literature on construction and use of an IPS, it will become increasingly difficult for trustees who operate without these tools to sustain the position they followed processes required by the Act.