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Prudence in Trust Investment

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PRUDENCE IN TRUST INVESTMENT

The Prudent Man Rule requires a trustee, when investing trust corpus, to conduct himself faithfully and exercise the careful discretion of persons of prudence and intelligence.[1] The general guidance provided by the Rule, which was originally devised by courts to allow flexibility in investment,[2] has become largely inflexible and currently inhibits the use of modern investment techniques and theories. The courts' refusal to recognize the concept of an integrated investment scheme, i.e., "the portfolio theory of investment,"[3] decreases the efficiency of diversification and precludes the use of such valuable investment tools as short sales, margin transactions, and security options.

The basic duties imposed by law upon a trustee in his capacity as an investor are few. The trustee must look to the trust instrument for directions regarding the investments to be made.[4] If the trust instrument describes the investments which may be made, the settlor's directions must be followed.[5] Within the parameters described in the trust instrument, the trustee is under a duty to conserve the trust corpus and must select investments for the trust account with the care and skill that a person of ordinary prudence would exercise in dealing with his own property.[6] Unless the trust instrument specifies otherwise, the trustee is also under a duty to the beneficiaries of the trust to make the trust property productive.[7]

When the trust instrument is silent concerning the investment duties of the trustee, or gives only general directions, the law imposes a general standard of prudence in the selection of trust investments. Either judicially[8] or legislatively,[9] forty states have promulgated the

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[1] See, e.g., Harvard College v. Amory, 26 Mass. (9 Pick.) 446 (1830); CAL. CIV. CODE § 2261 (West 1954).

[2] See notes 30-40 and accompanying text infra.

[3] See notes 96-123 and accompanying text infra.

[4] G. BOGERT & G. BOGERT, THE LAW OF TRUSTS AND TRUSTEES § 681 (2d ed. 1966).

[5] Id.

[6] RESTATEMENT (SECOND) OF TRUSTS § 174 (1959). No account is taken of the particular acumen of the trustee. The standard is that of a man of ordinary prudence engaged, not in speculation, but in the production of reasonable current income consistent with the conservation of capital.

[7] RESTATEMENT (SECOND) OF TRUSTS § 181 (1959). See also Delaware Trust Co. v. Bradford, 30 Del. Ch. 277, 59 A.2d 212 (1948).

[8] See, e.g., Harvard College v. Amory, 26 Mass. (9 Pick.) 446 (1830); McCoy v. Horwitz, 62 Md. 183 (1884).

[9] See, e.g., CAL. CIV. CODE § 2261 (West 1954); Model Prudent Man Investment Act, cited in TEMPORARY STATE COMMISSION ON THE MODERNIZATION, REVISION, AND SIMPLIFICATION

Prudent Man Rule for determining acceptable investments.[10] The majority of the remaining ten states[11] have statutes which limit trust investment to a statutory or "legal" list when no specific instructions appear in the trust instrument.[12] Typical legal list investments include government, utility, and railroad bonds, and first mortgages on real property.[13] Consideration of both the prudent man standard applied to investments under an instrument specifying investment parameters and the same standard as imposed by most states in the absence of such specific instructions is combined for the purpose of this article. No distinction will be made between these standards because applications of the two are substantially identical.[14]

Part I presents a brief history of the prudent man standard and

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OF THE LAW OF ESTATES, THE PRUDENT MAN RULE FOR FIDUCIARY INVESTMENT, 2 N.Y. LEG. DOC., Rep. No. 6.12A, 188th Session 526, 556 (1965). The Model Act is reproduced in Appendix I *infra*. Congress has also adopted this standard for the investment of public and private retirement trust funds. Employee Retirement Income Security Act of 1974 § 404, 88 Stat. 829.

[10] G. BOGERT, *supra* note 4, at § 612, at 58, n.18 (Supp. 1974). *See, e.g.,* N.Y. EST., POWERS & TRUSTS § 11-2.2(a)(1) (McKinney 1971); PA. STAT. ANN. tit. 20, § 7302 (Supp. 1972).

[11] G. BOGERT, *supra* note 4, at § 612, at 58 n.18 (Supp. 1974). *See, e.g.,* ALA. CONST. amend. 40; GA. CODE ANN. § 108-417 (1973); N.J. STAT. ANN. § 15-1 (1953).

[12] Some of these jurisdictions have partial prudent man statutes which limit trustee investment outside of the legal categories to a specified percentage of the trust corpus. *See, e.g.,* N.J. STAT. ANN. § 3A:15-20 (Supp. 1972) (60 percent); WIS. STAT. ANN. §§ 881.01-.02 (Supp. 1972) (50 percent).

[13] *See, e.g.,* KY. REV. STAT. ANN. § 386.010 (1970); OHIO REV. CODE ANN. § 2109.37.1 (Page Supp. 1970). Much has been written severely criticizing legal list statutes; few states continue to have that form of regulation. *See, e.g.,* Stevenson, *Why the Prudent Man?,* 7 VAND. L. REV. 74 (1953); Note, *Common Stocks in Trusts,* 113 U. PA. L. REV. 228 (1964).

Even under a legal list statute the trustee must use due care and prudence in the selection of an investment on the legal list. *See* Delafield v. Barret, 270 N.Y. 43, 48, 200 N.E. 67, 68-69 (1936).

[14] A clear example of this identity can be found in Harvard College v. Amory, 26 Mass. (9 Pick.) 446 (1830). For a description of the factual situation surrounding the case, *see* text accompanying notes 15-26 *infra*.

While *Amory* involved a trust instrument expressly directing trust investment in common stocks, it soon became the seminal case for the application of the Prudent Man Rule to investments made in the absence of specific directions. It might appear that the two standards should be distinguishable. For example, if a court declared that all common stocks were imprudent investments, then such stocks would still be acceptable investments under a trust instrument like that in *Amory* but unacceptable under an instrument not expressly authorizing common stock investment. This distinction is illusory because even when the trust instrument expressly endorses a class of investments, such as common stock, from which investments may be selected, the trustee must show that each security he has chosen is a prudent investment. If all common stocks were imprudent investments, a fortiori, the trustee would be unable to show that any choice of common stock was prudent.

That is not to say that there could never be any distinction between the two standards. It is possible for the settlor to lower the standard of care a trustee must exercise, but attempts to do so are strictly construed and generally ineffective. RESTATEMENT (SECOND) TRUSTS § 174. Also, if the settlor specifically approves a particular security, there is generally no issue of prudence if the trustee makes a reasonable investment in that security. *See, e.g.,* Steiner v. Hawaiian Trust Co., 47 Hawaii 548, 393 P.2d 96 (1964), in which the trustee was directed to retain the stock of a particular pineapple company. The court did not consider the prudence of the pineapple stock investment per se, but it did consider the prudence of excessive concentration in the stock of a single issuer (the pineapple company).

explores the meaning of "prudence." Part II discusses the shift in legal theory to include equities as prudent investments. Part III articulates the weaknesses in the method currently used by courts to assess investment prudence in view of the exigencies confronting today's trustee-investor. Finally, part IV shows that the same factors which justified the creation of the Prudent Man Rule and its expansion to include equities will support its modification to encompass modern investment theories and techniques.

I. HISTORICAL DEVELOPMENT OF THE PRUDENT MAN STANDARD

A. Creation of the Standard

The Prudent Man Rule was first applied in 1830 in *Harvard College v. Amory*.[15] The suit arose when Harvard College and Massachusetts General Hospital, remaindermen of a testamentary trust, objected to an accounting by the trustee, Francis Amory. The trust instrument directed the trustee to

> loan . . . or . . . invest the [corpus] in safe and productive stock, either in the public funds, bank shares or other stock, according to [his] best judgment and discretion. . . .[16]

The trustee elected to fund the trust with investments held by the testator at his death, including common stock in a bank, an insurance company, and two manufacturing companies.

In the five years between the formation of the trust and the suit by the remaindermen, the trust paid all of its current income to the testator's wife, the income beneficiary. During those years, the trustee achieved an average rate of return of more than 10 percent on trust assets,[17] while the market rate of interest averaged 5 percent.[18] Over the same time period, however, the trust corpus declined in value by 40 percent. The remaindermen contended that the stocks held by the trust were improper investments and sought to surcharge the trustee. The court sustained the trustee's defense that the stocks were prudent investments, holding,

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[15] 26 Mass. (9 Pick.) 446 (1830).

[16] *Id.* at 447.

[17] Income payments for the five years totalled $20,493, or an average payment of $4,100 per year. The initial corpus amount was $50,000 (the $4,100 return constituting an 8.2 percent return), but, by the time of trial, the corpus had depreciated to less than $30,000. Therefore, over the five-year period the average corpus value was $40,000, and the average yearly return was $4,100, a yield of over 10 percent. The decline in corpus was attributable to a general decline in market value of common stock during the period. 26 Mass. at 449-51.

[18] 26 Mass. at 451-52.

> All that can be required of a trustee . . . is, that he shall conduct
> himself faithfully and exercise a sound discretion. He is to ob-
> serve how men of prudence, discretion and intelligence manage
> their own affairs. . . .[19]

While the holding in *Amory* applied to a case in which the settlor
had expressly authorized investment in common stocks, the proposition
that trust corpus could be invested in common stocks represented a
radical departure from the English rule, which was the majority rule
in the United States during the nineteenth century until displaced by
the Prudent Man Rule.[20] The English rule limited trust investment to
government bonds and various other government-backed securities,
notwithstanding instructions to the contrary in the trust instrument.[21]

B. Investment Objectives

To fully understand the factors that led the *Amory* court to reject
the English rule and to adopt prudence as the standard for trust invest-
ment, it is necessary to consider the nature and objectives of trust
corpus management. The primary objective is conservation of trust
corpus;[22] the secondary objective is the provision of reasonable income
for income beneficiaries.[23] Traditionally, conservation of trust corpus
was interpreted to require only that no decline in asset value occur.
Because of the courts' narrow view of the meaning of corpus conserva-
tion which excludes from consideration any change in purchasing
power caused by inflation or deflation, the rule commonly stated is
that the trustee should not be interested in increasing principal, but
should, instead, be interested in keeping principal intact while pro-

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[19] 26 Mass. at 461. The court did not rest its holding on the fact that the risk/return
trade–off was favorable, but instead on the finding that the level of risk assumed was not in
itself imprudent. The tendency of the courts in calculating the prudence of an investment is to
ignore its return and concentrate only on the level of risk involved. The probable reason for
this stance is discussed in note 129 *infra*.

[20] *See* Appeal of Hemphill, 18 Pa. 303, 305 (1852) (adopting the English rule in Pennsyl-
vania and citing New York and New Jersey cases previously adopting it).

[21] *See Ex parte* Cathorpe, 1 Cox Eq. Cas. 182 (1785). In 1886, the law was changed to allow
a settlor to specify nongovernment investments. Learoyd v. Whiteley, 12 App. Cas. 727
(1887). This common law limitation on authorized investments was made statutory in 1925
when public utility and railroad securities were made "legal list" investments. Trustee Act,
1925 (15 & 16 Geo. 5 c.19). For a more detailed discussion, *see* note 48 *infra*. The statutory list
scheme persisted in England until 1961, when a partial prudent man standard similar to the
one currently in effect in New Jersey (N.J. STAT. ANN. § 3A:15-20 (Supp. 1973)) was
adopted. Trustee Act, 1961 (9 & 10 Eliz. 2 c.61).

[22] Lockwood v. OFB Corp., 305 A.2d 636, 642 (Del. Ch. 1973); Miller v. Pender, 93 N.H.
1, 3, 34 A.2d 663, 665 (1943); King v. Talbot, 40 N.Y. 76, 88 (1869); RESTATEMENT (SECOND)
OF TRUSTS § 227 (1955); A. SCOTT, 3 THE LAW OF TRUSTS § 227 *et seq.* (3d ed. 1967).

[23] *See* King v. Talbot, 40 N.Y. 76, 88 (1869); Nirdlinger's Estate, 327 Pa. 171, 174, 193 A.
30, 32 (1937); RESTATEMENT (SECOND) OF TRUSTS § 227 (1959). A discussion of the desirabil-
ity of this priority of objectives is beyond the scope of this article.

ducing reasonable income.[24] Recently, a few courts have begun to expand the concept of conservation to include preservation of purchasing power,[25] but such decisions are not yet numerous.[26]

The primary focus of trust investment policy, therefore, is on the low-risk deployment of trust corpus. If this were the only consideration, trust investment would require no more than holding cash or an equivalent, the least risky of all investments.[27] However, the second objective, reasonable income, complicates investment decisions.[28] It is axiomatic that the expected return on a given investment is directly related to the risk assumed.[29] The balance between maximizing return and minimizing risk is the *sine qua non* of investment management.

The Prudent Man Rule is integrally linked to this balancing of purposes. Initially, it imposes a limit on the magnitude of risk a trustee may assume in choosing an investment for the trust account.[30] The acceptable magnitude of risk is that amount of risk which a prudent man would willingly accept if his primary investment objective were conservation of capital. The Prudent Man Rule then requires the trustee to make the trust assets productive within the limits of acceptable risk.[31]

As a general rule for the degree of risk which may be assumed by a trustee—*i.e.*, the prudent amount of risk—courts have stated that no trust assets should be diverted to "speculative" investments.[32] This,

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[24] *See, e.g., In re* Ward, 121 N.J.Eq. 555, 560, 192 A. 68, 71 (1936).

[25] Purchasing power risk is the risk that, due to inflation or deflation, the dollar invested today will not be able to purchase the amount of goods and services currently purchasable with one dollar when it is returned to the investor in the future. In an inflationary setting, the dollar value of the corpus might be preserved while the purchasing power declines. The latter concept has greater significance for the beneficiaries. *See In re* Mayo, 259 Minn. 91, 105 N.W.2d 900 (1960).

[26] *See, e.g., In re* Mayo, 259 Minn. 91, 105 N.W.2d 900 (1960); *In re* Carlisle's Will, 53 Misc. 2d 546, 278 N.Y.S.2d 1011 (1967).

[27] The only substantial risk involved in holding cash is purchasing power risk. While this risk is currently very great, purchasing power risk has historically been of negligible importance. R. ROBERTSON, HISTORY OF THE AMERICAN ECONOMY 471-96 (1964).

[28] *See* Nirdlinger's Estate, 327 Pa. 171, 174, 193 A. 30, 32 (1937), in which the court said, "Life tenants should not be required to starve in order that remaindermen may ultimately feast." *See also In re* Mayo, 259 Minn. 91, 105 N.W.2d 900 (1960).

[29] The direct relationship between return on an investment and the degree of risk assumed occurs because the vast majority of investors are risk averters; that is, for a given expected rate of return, the investor will choose that investment which offers the greatest expected return. The effect that this process has on the free market is to decrease the return on low-risk investments. *See* J. VAN HORNE, FUNCTION AND ANALYSIS OF CAPITAL MARKET RATES 43-45 (1970).

[30] *See, e.g., In re* Cook's Estate, 20 Del. Ch. 123, 171 A. 730 (1934); Mattocks v. Moulton, 84 Me. 545, 24 A. 1004 (1892); English v. McIntyre, 29 App. Div. 439, 51 N.Y.S. 697 (1898).

[31] *See, e.g.,* New England Trust Co. v. Paine, 320 Mass. 482 (1946); King v. Talbot, 40 N.Y. 76 (1869).

[32] *See, e.g.,* Murphy-Bolenz Land & Loan Co. v. McKibben, 236 S.W. 78, 80 (Tex. App. 1922), wherein the court stated,
There must be no speculation upon the part of the trustee in dealing with the

of course, merely restates the question.[33] Some courts have incorrectly equated speculation with risk.[34] In fact, all investments involve some degree of risk.[35] Speculation is more correctly defined as that magnitude of risk at which an investment ceases to be prudent.

Risk, in the economic sense, is defined as the dispersion of the probability distribution of an asset's future price about the expected

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> trust fund. The law does not give him the same freedom of choice in making investments which may be and often is exercised by prudent businessmen in the conduct of their own affairs.

What the court appears to have meant is that even a prudent businessman will incur speculative risks presumably because of his ability to withstand possible losses. But a prudent trustee will not take as much risk as a prudent businessman. A trust does not have the resources of a businessman that enable the latter to prudently incur speculative risk. *See also* Creed v. McAleer, 275 Mass. 353, 175 N.E. 761 (1931). *But see* Harvard College v. Amory, 26 Mass. (9 Pick.) 446, 461 (1830), wherein the court stated, "do what you will, the capital is at hazard."

[33] "Speculative" means no more than investment at a magnitude of risk which is greater than that which a prudent man would willingly assume. It is tautological to define imprudence as speculation. The real question is what is meant when courts use the terms "risk" and "speculation." *See* notes 34-40 and accompanying text *infra*.

[34] *See, e.g.,* King v. Talbot, 40 N.Y. 76, 85-88 (1869). In *King*, the court held investments in railroad stock, bank stock, and railroad bonds imprudent because the success of the investments depended upon the success of the business enterprises which issued the securities. Business ventures were found to be mere speculations by the court: ·

> [The] trustee is bound to employ such diligence and such prudence in the care and management, as in general, prudent men of discretion and intelligence in such matters, employ in their own like affairs.
>
> This necessarily excludes all speculation, all investments for an uncertain and doubtful rise in the market, and, of course, everything that does not take into view the nature and object of the trust, and the consequences of a mistake in the selection and the investment to be made. . . .
>
> [W]henever money is held upon a trust of this description, it is not according to its nature, nor within any just idea of prudence, to place the principal of the fund in a condition, in which, it is necessarily exposed to the hazard of loss or gain, according to the success or failure of the enterprise in which it is embarked. . . .

40 N.Y. at 85, 88. In essence, the court said that risk is speculation and that the trustee should avoid risky investments.

[35] Government bonds, the antithesis of speculation, are risky in at least two respects: (1) interest-rate risk, or the risk that interest rates will change and the value of the bond will likewise fluctuate; and (2) purchasing power risk, or the risk that a dollar will not purchase the same quantity and quality of goods in the future that it purchases presently. *See* Hoquet, *Capital Punishment or Appreciation,* 47 TRUST BULL. 76 (1967).

Interest rate risk and purchasing power risk are inevitable concomitants of all fixed-income securities. Corporate fixed-income securities are also subject to security risk—that is, the risk that the obligation will not be paid off in full at maturity.

Government securities are not totally free of security risk. This danger was noted in Harvard College v. Amory, 26 Mass. (9 Pick.) 446, 461 (1830):

> If the public funds are resorted to, what becomes of the capital when the credit of the government shall be so much impaired as it was at the close of the last [1812] war.

The Massachusetts court went so far as to find that private securities were safer than government securities in some respects. The court stated,

> There is one consideration much in favour of investing in the stock of private corporations. They are amenable to the law. The holder may pursue his legal remedy and compel them or their officers to do justice. But the government can only be supplicated.

26 Mass. at 460.

price;[36] that is, risk is a measure of the likelihood that the return realized on an investment will be either higher or lower than was expected at the time the investment was made. Government bonds are relatively low-risk because the likelihood of a return substantially different from the expected return is small. The expected return on a government bond is composed of the coupon rate of interest and the return of the principal amount at maturity. Neither of these components is likely to vary substantially. By comparison, the risk of a common stock such as KMS Industries is very high because the company's research into nuclear fusion may be very profitable if successful, but may bankrupt the company if it fails.[37] The return realized in the future will probably not be that which is expected by current investors.

The conventional measure of dispersion of a probability distribution is its standard deviation.[38] The standard deviation is a measurement

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[36] J. VAN HORNE, *supra* note 29, at 42. Risk is more clearly understood by visualizing a two-coordinate graph with possible future returns of the security plotted along the X-axis and the probability of a given return occurring plotted along the Y-axis. If possible returns sufficiently close together are graphed, a continuous line forming a curve will appear. The area under the curve between any two values for possible return (X) is the probability that the actual return will fall between those two possible returns. The expected return is the possible return (value of X) at the point where one-half the area under the curve lies to the right of the value and one-half lies to the left. Another way of viewing expected return is as the sum of the products of the various possible future returns times the respective probabilities of realizing those returns (*i.e.*, the weighted average of possible future returns). *See* J. FRANCIS, INVESTMENTS: ANALYSIS AND MANAGEMENT 253-54 (1972).

Obviously, if the probability of the expected value occurring is less than 100 percent, there is some "risk" that the expected value will not occur. The lower the probability that the expected value will occur and the more "dispersed" or spread out the probability distribution, the greater will be the "risk." A widely dispersed distribution means that no one value is highly likely to occur, but that there is a substantial possibility that one of the values that deviates from the expected value will occur. The economist uses a measure of the dispersion of the probability distribution, known mathematically as the standard deviation (*see* note 38 *infra*), as the measure of risk. *Id.* at 253.

Technically, risk involves situations in which the probability of a particular event occurring is known. When the probability is not known, the correct term for the situation is uncertainty. *See* R. LUCE & H. RAIFFA, GAMES AND DECISIONS 13 (1957). For the purpose of investment analysis, where the probabilities are obviously not known, investors are assumed to have formulated subjective probability distributions of possible returns from the holding of an asset. These subjective probability distributions are then used as best estimates of the actual probability distributions, facilitating economic analysis on the basis of risk. J. VAN HORNE, *supra* at 29.

[37] KMS is involved in research toward harnessing nuclear fusion in a commercially exploitable process. *See* Bylinsky, *KMS Industries Bets Its Life on Laser Fusion,* FORTUNE, Dec. 1974, at 149. Obviously, the probability dispersion of possible returns is great for KMS Industries. Is nuclear fusion commercially feasible? If so, will KMS discover the method? If it does, can it profit from its discovery or will the process become public property? If KMS profits, what will its profits be? These questions must be answered before it is possible to predict with reasonable certainty what KMS's future profits and stock price will be.

Similar questions can be asked about the prospects of any other corporation or issuer of securities. The precision with which the questions can be phrased and the specificity and accuracy with which they can be answered are inversely related to the dispersion about the expected return on the investment. The above questions are broad and incapable of accurate resolution. Therefore, the standard deviation about the expected return for KMS is large.

[38] The mathematical formula for the standard deviation of a probability distribution is:

which approximates the average deviation from the expected price. When expressed as a percentage standard deviation,[39] it enables direct comparison of the merits of different investments within the parameters of the risk/return trade-off. What is important for the purpose of the present discussion is not the precision with which risk can be calculated, but the concept of a definable measure of risk which can eliminate many of the problems of vagueness faced in discussing investment strategy.[40]

$$\sigma = \sqrt{\sum_{x=1}^{n} (R_x - \bar{R})^2 P_x}$$

where: $\bar{R}$ is the expected value, R_x is the return for the Xth possibility, P_x is the probability of occurrence of the Xth possibility, and n is the total number of possibilities.

In addition to the value of the standard deviation, investors may well be influenced by the skewness of the probability distribution. Skewness is best illustrated on an X-Y coordinate axis. A curve that is symmetrical about the Y-axis has no skew. A curve which has most of the returns which substantially deviate from the expected return clustered to the right of the expected return is said to be skewed to the right. Because right on the coordinate axis represents positive values—or actual returns in excess of the expected return—the prudent investor will assume a greater amount of risk (a larger standard deviation) if the probability distribution is skewed to the right than if it is skewed to the left. This is so because, while the risk in either situation may be the same, a probability distribution skewed to the right means that it is more probable that the actual return will be much greater than the expected return than it is that the actual return will be much less than the expected return. A probability distribution skewed to the left would involve more chance for returns much less than the expected return than would a probability distribution skewed to the right.

Some investors define risk as only the semivariance—that is, only the standard deviation of the probability distribution that represents actual values less than the expected return. Any possible actual value greater than the expected return is ignored because no risk is perceived in receiving more than was expected. While this concept of risk is not theoretically correct, it does explain what the average investor means by risk—*i.e.*, that he will realize less than expected. The semivariance (standard deviation for the distribution to the left, or less than, the expected value) is computed with the following formula:

$$SV(R) = \sum_{x=1}^{m} (R_x - \bar{R})^2 P_x$$

where m represents the last of the possible returns less than the value of $\bar{R}$. The remaining symbols are the same as were used in the standard deviation formula. J. VAN HORNE, *supra* note 29, at 41-47. *See also* H. MARKOWITZ, PORTFOLIO SELECTION 188-201 (1959).

[39] The percentage standard deviation is no more than the standard deviation (σ) as a fraction of the expected return ($\bar{R}$) multiplied by 100 to yield a percentage figure:

$$\text{Percentage Standard Deviation} = \frac{\sigma}{\bar{R}} \cdot 100$$

The percentage standard deviation is the measure that should be used in comparing investments. The absolute standard deviation is influenced by the price of the stock, which bears no relation to the economic risk involved. For example, a $300 stock will almost always have a larger standard deviation about its expected return than will a $5 stock.

Evaluation of the percentage standard deviation is the chief consideration once the investor has selected the magnitude of risk (standard deviation) he desires to assume. For a given value of the percentage standard deviation, the rational investor will always choose the investment with the greatest expected return. *See* note 129 *infra* for a discussion of the relation of prudence to rational behavior in this setting.

[40] In order to discuss minimizing risk and maximizing return, it is first necessary to know what the terms mean. "Return" has a well known definition as profit or loss. "Risk" is less

C. Process for Evaluating Performance

When a suit seeking to surcharge the trustee for imprudent investment performance is brought by the beneficiaries of a trust, the beneficiaries have the burden to prove that (1) an investment(s) was imprudent when made, and (2) that loss has been suffered on the imprudent investment, in order to prevail.[41] Courts generally state that a trustee may not "net" his investment performance by balancing gains on profitable investments with losses suffered on imprudent investments.[42] Properly viewed, the "anti-netting" doctrine is a rule for the

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well defined. The above discussion uses the economist's definition of risk. In essence, this is the risk that the courts have been talking about all along but which they have never clearly defined.

In the case of Harvard College v. Amory, 26 Mass. (9 Pick.) 446 (1830), the court recognized the prospect that the United States would be unable to honor its obligations and the investor in public debt would realize less than he had expected and thought assured. 26 Mass. at 460. The court was dealing with risk—in this case, a measure of the probability that an amount different (lower) from the expected return of principal and income payments would be received. As was seen in note 38 *supra*, this is no more than a verbal description of the standard deviation of the probability distribution about the expected return, or, more correctly, a verbal description of the negative semivariance of the probability distribution about the expected return.

[41] RESTATEMENT (SECOND) TRUSTS § 205 (1959). "Loss" has traditionally meant decline in the value of the investment. The author is unaware of any case awarding damages to beneficiaries for mere failure by the trustee to invest in assets which increased in value as much as prudent investments did, although § 205(c) of the RESTATEMENT states that such recovery has been awarded when a trustee has failed to carry out a specific command—the nonfeasance directly resulting in lost profits to the trust.

[42] See Vest v. Bialson, 293 S.W.2d 369, 379 (Mo. 1956); State ex rel. Bottcher v. Bartling, 149 Neb. 491, 500-501, 31 N.W.2d 422, 428 (1948); Pennsylvania Co. for Ins. on Lives & Granting Annuities v. Gillmore, 142 N.J. Eq. 27, 47, 59 A.2d 24, 37 (1948); RESTATEMENT (SECOND) OF TRUSTS § 213 (1959); Comment, An Examination of the Rule Which Forbids a Trustee to Offset His Investment Losses Against His Investment Gains, 1972 U. ILL. L. FORUM 784 (1972). Cases are compiled at Annot., 171 A.L.R. 1422 (1949). But cf. MacBryde v. Burnett, 132 F.2d 898 (4th Cir. 1942).

A minor exception to this rule is noted in A. SCOTT, *supra* note 22 at § 213, as follows:

> Where breaches of trust are separate and distinct breaches of trust, [the trustee] is not permitted to balance the losses against the gains, but if the breaches of trust are not separate and distinct, he is accountable only for the net gain or chargeable only with the net loss.

The factors determining whether the breaches are distinct or not include:

> (1) Whether the breaches of trust relate to the same or to different parts of the trust property; (2) Whether the breaches of trust arise out of successive dealings with the same property or its products; (3) The amount of time elapsing between the breaches of trust; (4) Whether there has been an accounting between the breaches of trust; (5) How the trustee has dealt with the property or its product between breaches of trust; (6) Whether the trustee intends to misappropriate trust property, or intends to commit a breach of trust, although not intending to misappropriate trust property, or does not intend to commit a breach of trust; and (7) Whether the breaches of trust are the result of a single-policy on the part of the trustee.

See, e.g., MacBryde v. Burnett, 132 F.2d 898 (4th Cir. 1942); McInnes v. Goldthwaite, 94 N.H. 331, 52 A.2d 795 (1947); English v. McIntyre, 29 App. Div. 439, 51 N.Y.S. 697 (1898).

The case of English v. McIntyre offers an interesting example of the use of this exception. English involved a trustee who entered into a series of stock transactions that totally dissipated the trust corpus. The major question before the court did not concern the prudence of the investments made—the imprudence was assumed—but, instead, involved the measure of the surcharge damages. The trustee contended that his liability should be no greater than

assessment of damages and has no moment in the test for prudence. However, as a corollary to this rule, the courts also require that each investment meet the Prudent Man Test on its individual merits.[43] The reasoning behind these two rules was articulated in *Creed v. Mc-Aleer*,[44] as follows:

> [A] trustee must exercise reasonable skill and prudence and sound discretion in making or retaining each investment and is chargeable with any loss by failing to do so. . . . The gain in each investment belongs to the trust estate and in no way can a trustee reap a personal profit from it. . . . A trustee cannot offset a loss for which he is liable by a gain belonging not to him but to his cestui.[45]

The court thought that the rule measuring the prudence of individual investments was logically tied to the rule which prohibited the netting

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the initial corpus amount. The beneficiaries argued that the correct measure was the total amount lost due to imprudence. These computations differed because the trustee had realized profits on some of the transactions; those profits were subsequently lost, increasing the amount lost to a figure greater than the initial amount. The trustee prevailed. The court found the entire series of speculations were but one breach and surcharged accordingly.

English is important because it shows that in some circumstances a court might be willing to consider trustee performance on a portfolio basis rather than the typical security-by-security approach. However, the great majority of cases has not extended the "netting" principle beyond fact situations similar to *English*. *See* Comment, *supra*.

[43] *See* A. SCOTT. *supra* note 22, at § 227.

[44] 275 Mass. 353, 175 N.E. 761 (1931).

[45] 275 Mass. at 362-63, 175 N.E. at 764-65. *See also* Cuyler's Estate, 5 Pa. D.&C. 317, 319 (1924), in which the court stated,

> It seems to me to be inconsistent to maintain that the consequences of one unauthorized act should be mitigated by the more fortunate results of another, and if we consider the case from the standpoint of public policy, on which all these principles ultimately rest, this conclusion is greatly strengthened, for if a trustee who has made an unauthorized and losing investment and knows that he may recoup the loss by better luck in another, he would certainly be tempted to embark on another enticing speculation, which as holding out a prospective profit, would be attended with further and perhaps, even greater risk to the trust funds.

This result is attacked in Comment, *supra* note 42. The author argues that while most courts would approve a trustee's investment in a mutual fund, if a trustee were to directly purchase the stock held by almost any mutual fund, some of the individual investments would be found to be imprudent. The author advocates a "net result" approach to investment prudence but fails to come to grips with any meaningful rationale for adopting it.

The salient theoretical difficulty with most arguments advanced by "netting" advocates is that they confuse the netting rule with questions of prudence (an understandable failing considering that most courts have made the same mistake). The anti-netting rule is not based on prudential considerations. It misses the point to arge that mutual funds can be prudent investments, though their performance is a net result of investment in many varied securities, and because trust portfolios are analogous to mutual funds, trustees should be allowed to net their investment performance also. Furthermore, the relevant time period for assessing prudence is the day the investment was made. New England Trust Co. v. Paine, 320 Mass. 482, 70 N.E.2d 6 (1946); *In re* Ward, 121 N.J. Eq. 555, 192 A. 68 (1936); Bank of New York v. Spitzer, 43 App. Div. 2d 105, 349 N.Y.S.2d 747 (1973). The investment result is entirely irrelevant to the prudence of an investment when made.

of investment results. This reasoning has been widely accepted although its validity remains questionable at best.[46]

II. THE SHIFT TO THE PRUDENT MAN STANDARD

A. Creation of the Standard

An understanding of the nature of risk is necessary for an examination of the factors which led the Massachusetts court to replace the English rule[47] with the Prudent Man Rule. The primary consideration for the adoption of the English rule was that only government-backed investments were deemed sufficiently safe to justify their inclusion in a trust portfolio.[48] A secondary consideration was the desire of the English Parliament to maintain a market for government securities.[49]

English government obligations were considered "safe" because they involved little risk; that is, the chances were slight that the expected return would not be realized. The English courts, and later Parliament, chose to limit the magnitude of risk a trustee could incur to the risk inherent in government securities.

Economic factors, more than legal theory, caused the Massachusetts court to search for the rationale underlying the English rule. In *Amory*, the court had questioned the security of United States government obligations.[50] Eight years later, the same court in *Lovell v. Minet*,[51] found that no public security in this country featured risk as low as that of English government obligations.[52] It was clear to the Massachusetts court that it was not feasible to require American trustees to find investments involving as little risk as that inherent in English government securities. Rather than adopt an inflexible sub-

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[46] The court appeared to reason that because it does not want to allow losses on imprudent investments to be set off against the gains on other investments, it must evaluate the prudence of each investment without regard to any others. *Cf.* Comment, *supra* note 42. This is a non sequitur. Even if prudence were decided by evaluating an investment not as an individual investment but as one investment in a portfolio of investments, losses on imprudent investments could be attributed to the trustee without allowing the use of gains to offset the losses. No other justification for the rule has been offered.

[47] *See* note 21 and accompanying text *supra*.

[48] Shattuck, *The Development of the Prudent Man Rule for Fiduciary Investment in the United States in the Twentieth Century*, 12 OHIO ST. L.J. 491 (1951). The particularly conservative stance Parliament adopted can be attributed to the contemporary demise of two notorious investment schemes, the South Sea Bubble and the Tulipomania. *See* J. CARSWELL, THE SOUTH SEA BUBBLE (1960); C. MACKAY, MEMOIRS OF EXTRAORDINARY POPULAR DELUSIONS AND THE MADNESS OF CROWDS 85-92 (1852).

[49] Shattuck, *supra* note 48.

[50] 26 Mass. (9 Pick.) 446, 460 (1830).

[51] 37 Mass. (20 Pick.) 116 (1838).

[52] *Id.* at 119.

stitute standard at an arbitrary level of risk higher than that for English
government securities, the Massachusetts court adopted a flexible
standard, defining the maximum allowable magnitude of risk as the
amount of risk a prudent man would willingly incur.[53] Under the
Prudent Man Rule, any type of investment, including equities, was
permissible so long as the individual investment was prudent.

B. Equities as Prudent Investments

Although most courts first allowed investment in common stocks
at the same time they adopted the Prudent Man Rule, the Rule is not
synonymous with equity investment.[54] Under the rule, investment may
be made in equities, such as common stocks, only when the risk in-
curred in making the investment is of a magnitude the court deems
prudent.[55] The court's allowance of investment in common stock in
Amory[56] was based on the finding that the stocks chosen by the trustee
represented investments which men of discretion and intelligence
would deem prudent,

> not in regard to speculation, but in regard to the permanent dis-
> position of their funds, considering the probable income as well
> as the probable safety of the capital to be invested.[57]

For years after the *Amory* decision, few other courts would have
found even the least risky common stock to be a prudent investment.
For example, in 1869, the Court of Appeals of New York dealt with

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[53] 26 Mass. (9 Pick.) at 461. Other American courts adopted an inflexible substitute
standard geared to the risk inherent in U.S. Government securities and first mortgages. *See*
Appeal of Hemphill, 18 Pa. 303 (1852).

[54] *See* Lovell v. Minet, 37 Mass. (20 Pick.) 116 (1838); King v. Talbot, 40 N.Y. 76 (1869).
While the two concepts are not synonymous, they are often closely associated. Under the
pure prudent man standard, common stocks as a group may be found to be so risky as to be
imprudent investments. Adoption of the Prudent Man Rule does not guarantee that common
stocks will be permissible investments. However, the history of the Prudent Man Rule shows
that most states followed the English rule or a statutory list of authorized investments before
the adoption of the Prudent Man Rule. Stevenson, *Why the Prudent Man?*, 7 VAND. L. REV.
74 (1953). Adoption of the Prudent Man Rule was triggered by the realization that prudent
investments were no longer limited to fixed income securities, and, in fact, that fixed income
securities themselves were of questionable prudence in light of the inflationary conditions of
recent years. *See, e.g., In re* Mayo, 259 Minn. 91, 105 N.W.2d 900 (1960); TEMPORARY STATE
COMMISSION ON THE MODERNIZATION, REVISION, AND SIMPLIFICATION OF THE LAW OF ES-
TATES, THE PRUDENT MAN RULE FOR FIDUCIARY INVESTMENT, 2 N.Y. DOCUMENTS, 6.12A
(1965). Because of this realization, and the fact that most prudent man statutes list common
stocks as possible investments, the Prudent Man Rule has incorrectly been equated with
common stock or equity investment. *See generally* Note, *Trust Fund Investment in New
York: The Prudent Man Rule and Diversification of Investments,* 47 N.Y.U.L. Rev. 527
(1972).

[55] *See* Harvard College v. Amory, 26 Mass. (9 Pick.) 446 (1830).

[56] *Id.*

[57] *Id.* at 461.

this issue in *King v. Talbot*.[58] The settlor had given his trustee full discretion in investing the trust corpus. The trustee invested in the stock of a canal company, three railroad companies, and one bank. The trial court found that at the time the investments were made, all the securities were in good repute and were proper and desirable investments, though by the time of trial all had declined in value from their purchase prices. On review, the Court of Appeals first determined that it would follow the prudent man standard, expressly overruling the English rule which had prevailed in New York.[59] The court then concluded that common stocks were not prudent investments.[60] Implicit in the court's opinion is the premise that the risks inherent in common stocks are greater than those a prudent trustee would willingly assume.

The analysis which led the *King* court to conclude that the trustee's investment was imprudent reveals the specific risk factors inherent in common stocks in the middle of the nineteenth century but which, at a suitable level of generality, are operative factors in prudent trust management today.[61] The court's major focus in measuring risk was the bondholder's certain power to reclaim his principal at a future date, as opposed to the stockholder's merely contingent return of principal upon the sale of his stock. Courts which have emphasized return of principal in evaluating the prudence of an investment have traditionally considered two major factors of risk attributable to stock ownership: marketability and enterprise stability.

The marketability of an asset is determined by the ability of the owner to convert it to cash.[62] The factors which comprise marketability risk are the discrepancy between fair market value and the price realizable on an immediate sale and the amount of time required to sell the asset.[63] A centralized market greatly increases the marketabil-

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[58] 40 N.Y. 76 (1869).

[59] *Id.* at 85.

[60] *Id.* at 88. The court said:

> [W]henever money is held upon a trust of this description, it is not according to its nature, nor within any just idea of prudence, to place the principal of the fund in a condition, in which, it is necessarily exposed to the hazard of loss or gain, according to the success or failure of the enterprise in which it is embarked, and in which, by the very terms of the investment, the principal is not to be returned at all.

Id. at 88.

[61] In part IV *infra* these risk factors will be traced to the present and explored to see how they apply to modern investment securities and techniques. *See* notes 173-190 and accompanying text *infra*.

[62] J. VAN HORNE, *supra* note 29, at 119.

[63] These two factors are not unrelated. If an investor is willing to lower the price he will accept, he will probably be able to shorten the time between the offering and sale of the asset. Alternatively, if an investor is patient, he will be more likely to obtain a price commensurate with fair market value. A similar analysis applies if the investor is purchasing an asset, with delay increasing as the offered price decreases.

ity of an asset. However, in 1848, few common stocks were listed on stock exchanges.[64] The predecessor of the modern New York Stock Exchange was founded in 1792[65] for trading in government bonds.[66] This aspect of the exchange's activity predominated for most of the nineteenth century,[67] with few common stocks traded on the New York exchange until the late 1800's.[68] Without a recognized market, trading in stocks was inefficient and involved a considerable risk of marketability, a risk greater than that for corporate and government bonds which were listed on exchanges.

Another disadvantage of investment in unlisted securities was vulnerability to stock manipulation and fraud. Although exchanges were not totally effective in eradicating fraud and manipulation, the listing requirements they imposed[69] and the activities of trading specialists[70] decreased the possibility that fraud could be successfully perpetrated.

Enterprise stability, the second major source of risk for stockholders, is important because investment in common stocks exposes funds to the hazard of loss from the failure of the issuing enterprise.[71] To some extent, a corporate bond is also dependent on the success of the debtor enterprise and, of course, a government obligation is dependent on the success of the issuing government. But common stocks are more responsive than bonds to the fluctuation of the fortunes of a business. Should a company fail and terminate its active operation, the bondholders will be paid in full out of the assets before the stockholders receive anything. Alternatively, if the company should prosper,

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[64] *See* H. NEILL, THE STOCK EXCHANGE (1950).

[65] Originally the New York Stock Exchange was called the Tontine Coffee House Company. *Id.* at 16.

[66] *Id.* at 19.

[67] *Id.* at 111-12.

[68] At the opening of the nineteenth century there were only six or eight listed stocks, and these were all banks and insurance companies. The first manufacturing stock was not listed until 1815. *Id.* at 30-31. By 1892, three-fourths of the value of all securities listed on the exchange was still in the form of private and government bonds. *Id.* at 111-12.

[69] Contemporary listing requirements for the New York Stock Exchange involve the number of shares outstanding, the number of shares in the hands of the public and dispersion of these shares among holders of round lots (100-share multiples), the frequency of reporting to shareholders, and the assets and earnings history of the corporation. *See, e.g.,* CCH N.Y.S.E. GUIDE, ¶ 2495 A-2501A (1974). These requirements ensure that only larger corporations with a history of good earnings are listed. They also ensure that only companies which report their activities to the stockholders and which have a large number of stockholders will be listed. All of these factors make fraud and manipulation more difficult, though not impossible, to accomplish. *See* H. NEILL, *supra* note 64, at 324-28.

[70] One specialist is responsible for making a market in the stock of each listed corporation. The specialist will devote all of his time to trading in one or perhaps two issues. Typically, buy and sell orders to brokers do not perfectly coincide. When there is an imbalance, the specialist stands ready to buy or sell, as may be required, in order to balance the market. The specialist must keep well informed about the corporation and about the market in its stock. This makes it exceedingly difficult to manipulate the market unless the specialist is one of the manipulators. J. FRANCIS, *supra* note 36, at 37.

[71] *See, e.g.,* Mattocks v. Moulton, 84 Me. 545, 24 A. 1004 (1892).

the bondholders will receive no more than the principal amount of their bonds plus interest, while the return a stockholder can expect is theoretically unlimited. It is easy to see from these considerations that the dispersion of possible returns about the expected return (*i.e.*, the risk) is much greater for stocks than for bonds. For any given corporation, the stock in that corporation inherently involves more enterprise stability risk than a bond secured by the same corporation.

In the nineteenth century, enterprise stability was a particularly important investment factor because most companies and many industries were in their formative stages and equity investment represented true "venture capital."[72] Young corporations tend to be unstable and risky. Their future is less predictable than is the future of mature corporations which have established manufacturing facilities, sales forces, and markets.[73] The same is true of a young economy. For most of the nineteenth century, the American economy was young and unstable.[74] The economy was largely unregulated, allowing for rapid and destructive fluctuations in the economic well-being of the nation which directly affected the financial well-being of private corporations. Businesses, because they were small and lacked geographic and product–line diversity, were more susceptible to economic adversity than are large corporations today.[75]

Another important risk factor was not considered by the court in *King v. Talbot*.[76] This factor is purchasing power risk, which is inherent in any security but is most severe in fixed income securities such as bonds. Purchasing power risk is the risk that inflation will cause a fixed income or principal investment to be worth less in terms of goods and services as time passes.[77] This risk factor was overlooked in *King* because persistent inflation was not a problem when the case was decided. In 1869, deflation was as likely as inflation.[78] In fact, the price level in 1916 was the same as it was in 1776.[79] While the inter-

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[72] *See* P. SAMUELSON, ECONOMICS 89 (9th ed.) (1970); A. CONARD, AMERICAN ECONOMIC HISTORY 26-64 (S. Harris ed. 1961).

[73] Less predictability means greater risk. If the results of operations are unpredictable, it is highly unlikely that the expected return will be realized, and the standard deviation from the expected return will be high. *See* note 37 and accompanying text *supra*.

[74] *See generally* R. ROBERTSON, HISTORY OF THE AMERICAN ECONOMY (1964).

[75] *Id.*

[76] 40 N.Y. 76 (1869).

[77] *See* note 25 *supra*.

[78] That is not to say that purchasing power risk did not exist. It did, but the court overlooked it largely because prolonged periods of inflation or deflation were unknown, and bonds were long term instruments which were immune to short-term price index fluctuation if held to maturity; that is, the standard deviation of fixed income securities was not greatly affected by purchasing power risk. *See* note 31 *supra*. *See generally* B. MITCHELL & L. MITCHELL, AN AMERICAN ECONOMIC HISTORY (1947).

[79] P. SAMUELSON, *supra* note 72, at 254.

vening period witnessed substantial price index changes, the net long-term change was negligible.[80]

C. *Changing Market Conditions*

The conditions present when *King* was decided were soon to change. Industries matured[81] and industry leaders appeared that became large national and international firms.[82] The larger firms were able to diversify horizontally, adding stability to the companies.[83] With size and diversity came the ability to compensate for problems that would cripple and destroy smaller businesses.[84]

Not only were individual industries maturing, but so was the economy itself. It became larger and better able to withstand and compensate for periodic low points in the business cycle. One factor that added to the stability of the economy as a whole was increased government intervention to counter cyclical fluctuations.[85]

In addition to economic regulation by the government, there was also a growth in regulation of securities. A number of stock exchanges arose that provided varying degrees of regulation of the securities they listed.[86] But the most important regulatory scheme was provided by the Securities Act of 1933[87] and the Securities Exchange Act of 1934.[88] In addition to creating the Securities and Exchange Commission to act as an overseer of the securities market, the securities acts promulgated rules for filing and reporting information. The acts created an unprecedented flow of information to investors. With this information and information supplied by increasingly numerous private investment advisory services, trustees became more knowledgeable about the risks they assumed in investing in a particular security.[89]

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[80] *See* P. SAMUELSON, *supra* note 72, at 254.

[81] *See, e.g., In re* Dickinson, 152 Mass. 184, 25 N.E. 99 (1890); Roberts v. Michigan Trust Co., 273 Mich. 91, 262 N.W. 744 (1935). *See generally* A. CONARD, *supra* note 72; B. MITCHELL & L. MITCHELL, *supra* note 78; P. SAMUELSON, *supra* note 72.

[82] *See In re* Dickinson, 152 Mass. 184 (1890); Roberts v. Michigan Trust Co., 273 Mich. 91, 262 N.W. 744 (1935); *In re* Mayo, 259 Minn. 91, 105 N.W.2d 900 (1960). *See generally* A. CONARD, *supra* note 72.

[83] *See In re* Mayo, 259 Minn. 91, 105 N.W.2d 900 (1960). *See also* R. ROBERTSON, *supra* note 74; A. CONARD, *supra* note 72.

[84] *See In re* Mayo, 259 Minn. 91, 105 N.W.2d 900 (1960); R. ROBERTSON, *supra* note 74; A. CONARD, *supra* note 72.

[85] *See* R. ROBERTSON, *supra* note 74; A. CONARD, *supra* note 72.

[86] *See In re* Ward Estate, 121 N.J.Eq. 555, 192 A. 68 (1936); R. SOBEL, THE BIG BOARD (1965).

[87] 15 U.S.C. § 77a *et seq.* (1971).

[88] 15 U.S.C. § 78a *et seq.* (1971).

[89] *See In re* Mayo, 259 Minn. 91, 105 N.W.2d 900 (1960). Dissemination of information is to be distinguished from advice. Advice is mere opinion, while the information required to be disseminated under the Securities Act of 1933 is primarily factual. Advice is, historically, of little value. *See* V. ZARNOWITZ, AN APPRAISAL OF SHORT-TERM ECONOMIC FORECASTS (1967). Whether it is prudent for a trustee to rely on the advice of investment services should be a question of fact for the courts to decide.

Securities regulation also made fraud and manipulation more difficult, though not impossible.

Finally, the years following the 1929 depression brought a change in the concept of purchasing power risk. The ensuing period of nearly forty years of uninterrupted inflation is unique in American history.[90] The impact of long–term inflation was noted by the Minnesota Supreme Court in the case of *In re Mayo*.[91] In *Mayo*, the trust instrument instructed the trustee to invest exclusively in real estate mortgages and bonds. The trustee abided by the instructions for twenty years, during which he earned a respectable rate of return and conserved the trust corpus. Unfortunately, the corpus he had conserved had lost one-half its purchasing power by 1959. The beneficiaries of the trust sought to amend the trust instrument to include equities as possible investments. The court upheld the beneficiaries' request, stating that a court's highest duty is to give effect to the donor's dominant intention as gathered from the trust instrument as a whole.[92] Applying that rule, the court found that the settlor's intention would be frustrated if the trustee were not allowed to invest in securities which could offset the loss of purchasing power caused by inflation. The court concluded that investment circumstances had changed so much in the twenty years since the trust was established that equity required amendment of the trust instrument.

In many states, the pressure of prolonged inflation triggered repeal of legal list statutes[93] and the reversal of cases which had limited acceptable investments to fixed income securities.[94] In other states, the change was triggered by much broader considerations. Specifically, these states found that the risk inherent in common stock investment had decreased to a point where many common stocks were prudent investments. This was especially true in the late 1930's and early 1940's when a rash of suits was initiated seeking to surcharge trustees for losses suffered during the stock market collapse and depression of 1929-32.[95]

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[90] *See* P. SAMUELSON, *supra* note 72 at 89.

[91] 259 Minn. 91, 105 N.W.2d 900 (1960).

[92] 259 Minn. at 95, 105 N.W.2d at 903.

[93] *See, e.g., In re* Flynn's Estate, 205 Okla. 311, 237 P.2d 903 (1951); N.Y. Laws of 1950, ch. 464 (repealing the former legal list and instituting a partial prudent man standard). *See* Stevenson, *supra* note 13, at 91-92, for a listing of dates when various states adopted the Prudent Man Rule. This listing is updated in G. BOGERT, *supra* note 4, § 612 at 58, n. 18 (Supp. 1974).

[94] *See, e.g.,* Rand v. McKittrick, 346 Mo. 466, 142 S.W.2d 29 (1940); Sheets v. J.G. Flynt Tobacco Co., 195 N.C. 149, 141 S.E. 355 (1928).

[95] *See, e.g.,* Rand v. McKittrick, 346 Mo. 466, 142 S.W.2d 29 (1940); MICH. COMP. LAWS ANN. § 555.201 (1968) (first enacted 1937); TEX. CIV. STAT. § 7425 b-46 (Supp. 1974) (first enacted 1945).

The courts and legislatures were reluctant to surcharge a trustee who had made a reasonable investment in common stocks, which later turned sour, solely because common law or statute proscribed investment in all common stocks. Adoption of the prudent man standard followed naturally from the realization that the weakness of the previous law was that it categorically outlawed investment in a large group of securities which had become prudent investments and were increasingly valuable sources of protection for corpus asset value, given the maturity of many industries and the economy as a whole, the high marketability guaranteed by major exchanges, and the ever increasing regulation of the securities industry and the economy as a whole. Also, the onset of sustained inflation made equity investment crucial for investors wishing to counteract the declining purchasing power of the dollar.

III. WEAKNESSES IN THE ENFORCEMENT OF THE PRUDENT MAN STANDARD

After considering the historical genesis of the Prudent Man Rule and analyzing the forces which motivated its adoption, it should be possible to observe that courts are currently applying the standard erroneously. The rule was created to afford flexibility to the investment process, but it is being used today to prevent the application of modern investment techniques and theories. In some respects, the rule has become nearly as inflexible as the legal lists it replaced.

A. Portfolio Investment Theory

An important part of the prudent man standard, as it is applied by most courts, is that the prudence of each investment is judged on its individual merits.[96] This approach is commendable when it is compared with classifying investments on the basis of the nature of the security—i.e., whether it is a bond, a mortgage, or a common stock. However, it is the wrong test for the courts to apply when assessing the merits of an integrated investment plan.

Within the last twenty years, investment management theory has changed radically.[97] Stocks were once evaluated on their individual merits, but are now scrutinized as part of an integrated portfolio of

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[96] See notes 42-46 and accompanying text supra.

[97] See generally Note, Trustee Investment Powers: Imprudent Application of the Prudent Man Rule, 50 NOTRE DAME LAW. 519 (1975). The first work articulating the merits of covariance analysis was Markowitz, Portfolio Selection, 7 J. FIN. 89 (1952). This work signaled the beginning of a new era of investment analysis. Cf. Note, Fiduciary Standards and the Prudent Man Rule Under the Employment Retirement Income Security Act of 1974, 88 HARV. L. REV. 960 (1975).

investments.[98] Modern investment theory views risk not only with respect to individual securities, but also as portfolio risk—*i.e.*, the standard deviation about the expected return of the portfolio as a whole.[99] The goal of a rational investor is the greatest return on his entire portfolio for a given amount of risk.[100] This is the same goal that the trustee should entertain, with the qualification that the magnitude of risk for the trust investor be within the bounds of prudence.[101]

Because of the trend to consider investment as an integrated plan, it is important to consider how the risk of a portfolio compares to the risk of its components. The risk of a portfolio of securities is rarely the arithmetic sum of the risks of the component investments.[102] Portfolio risk is dependent upon the correlation or covariance among the individual investments,[103] as well as the risk of each component. In other words, the risk of an investment as part of a portfolio is related to the covariance of that investment with other investments in the portfolio.

Covariance[104] is a technical term, but it is not difficult to understand. If X and Y are two stocks with covariance of $+1$, when X increases 10 percent, Y will also increase 10 percent. If the covariance is -1,

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[98] *See* H. MARKOWITZ, *supra* note 38; Tobin, *Liquidity Preference as Behavior Toward Risk*, 25 REV. ECON. STUD. 65 (1958).

[99] *See* J. VAN HORNE, *supra* note 36, at 42.

[100] *See* note 29 and accompanying text *supra*.

[101] *See* notes 22-40 and accompanying text *supra*.

[102] J. VAN HORNE, *supra* note 36, at 42-43. The author explains as follows:

The expected value of return for a portfolio is simply the sum of the expected values of returns for the financial assets making up the portfolio. The standard deviation [risk], however, is not the sum of the individual standard deviations, but

$$\sigma = \sqrt{\sum_{j=1}^{m} \sum_{k=1}^{m} A_j A_k r_{jk} \sigma_j \sigma_k}$$

where m is the total number of financial assets under consideration, A_j is the proportion of total funds invested in financial assets j, A_k is the proportion invested in financial assets k, r_{jk} is the expected correlation between returns for financial assets j and k, σ_j is the standard deviation about the expected value of return for financial asset j, and σ_k is the standard deviation for financial asset k.

See also Note, *The Regulation of Risky Investments*, 83 HARV. L. REV. 603 (1970). *See* notes 103-09 and accompanying text *infra* for an intuitive discussion of the above formula.

[103] J. VAN HORNE, *supra* note 29, at 43.

[104] The measure of covariance can be intuitively understood by considering some examples. Stocks such as Ford and GM have a positive covariance approaching one. For most given external stimuli, the stocks can be expected to react in the same way. This is true because both stocks are highly dependent upon the sale of automobiles. Any factor affecting the sale of automobiles will affect both stocks in the same way. On the other hand, Ford and Kelloggs would appear to have negligible covariance. Factors affecting the sale of cars do not have the same effect on the sale of breakfast cereals.

The precise calculation of covariance is beyond the scope of this article. For a simplified procedure for making such a calculation, *see* Sharpe, *A Simplified Model for Portfolio Analysis*, 9 MANAGEMENT SCI. 277 (1963). Sharpe's model is based on the estimated correlation between each security under consideration and the Gross National Product (GNP). The estimate of correlation between a security and the GNP underlying the computation of covariance is, of course, subject to error. The estimate is made by correlating past market data with the index chosen for the comparative computation (the GNP in the case of Sharpe's

for a 10 percent increase in X, Y will decrease 10 percent. To use an extreme example, if the X-Y covariance is -1 and equal sums of money are invested in each, there is no possibility of loss. On the other hand, there is no possibility of capital gain because each increase in the value of X corresponds to a decrease of a like amount in the value of Y. This holds true even though X and Y individually may be extremely risky investments.

The addition to a portfolio of a stock which negatively covaries with stocks already in the portfolio will actually reduce the risk of the portfolio as a whole.[105] For example, assume for the sake of simplicity that there exist two stocks, A and B, and a trust portfolio consisting of common stock in A. A manufactures cars and earns its greatest profits (and the stock price reaches its highest level) when the Gross National Product (GNP) is rising. B, on the other hand, prints food stamps for the government and earns its greatest profits (and the stock reaches its highest level) when the GNP is declining. It can easily be seen that A and B negatively covary. By adding B to a portfolio consisting solely of A, the risk of the portfolio declines. This is true because of the contraction of the dispersion of possible actual returns different from the expected return. For example, should the GNP and, consequently, the return on A, be lower than expected, the return on B will be higher than expected. The difference between the actual return and the expected return on the portfolio will be less than the difference which would have occurred had the portfolio remained invested solely in A.[106]

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model). While this derives a precise figure for past correlation, the best that can be said for its future predictive efficacy is that relative movements rarely change and that in the past this has been a very reliable indicator. *See generally* Fama, *Risk, Return and Equilibrium: Some Clarifying Comments,* 23 J. FIN. 29 (1968); Lintner, *Security Prices, Risk, and Maximal Gains from Diversification,* 20 J. FIN. 587 (1956); Sharpe, *Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk,* 19 J. FIN. 425 (1964).

[105] J. VAN HORNE, *supra* note 29, at 43, states,

By diversifying its holdings to include financial assets with less than perfect positive correlation among themselves, the risk averse economic unit [*i.e.,* the investor] is able to reduce the dispersion of the probability distribution of possible returns for its portfolio in relation to the expected value of return for that portfolio. In so doing, it reduces the risk of holding financial assets. However, this diversification must be among the right financial assets. It is not enough for an economic unit simply to spread its endowment among a number of financial assets; diversification must be among financial assets not possessing high degrees of positive correlation among themselves. It is evident from [the equation in note 102 *supra*] that the dispersion of the probability distribution for a portfolio could be reduced to zero [*i.e.,* no risk] if financial assets with negative correlation could be found.

Id. at 43 (footnote omitted).

[106] In the situation posed, the risk and, more specifically, the chance for loss has been lessened by the addition of B. But risk also refers to the chance for gain greater than expected. This chance for greater profit has also been reduced by the addition of B.

It is not the purpose of this example to imply that risk should be reduced to zero whenever possible. The example only illustrates the importance of covariance in assessing whether an

Most investments positively covary, but it is not necessary that the securities in a portfolio negatively covary for the benefits of efficient diversification to be realized.[107] As long as covariance is below +1, the risk of the portfolio will be less than the sum of the risks of the component members. The lower the covariance, even if positive, the lower will be the risk of the portfolio as a whole.[108]

The courts have long recognized a duty on the part of the trustee to diversify investments[109] but have consistently failed to recognize that the underlying value in diversification is minimizing covariance. Diversification among investments which have unitary covariance is useless.[110] Courts have failed to recognize the underlying rationale of

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investment may be prudent or not. For a further example, assume that A has a standard deviation greater than that which a prudent man would willingly assume. Suppose, too, that by the addition of a small number of shares of B, the risk of the portfolio as a whole could be reduced to a prudent level. When B is added, the expected return is reduced but remains higher than the expected return on any other investment the trustee could make while assuming the same magnitude of risk. In such a situation, retention of A and purchase of B would be rational and prudent investment strategy, though A, judged on its individual merits, is an imprudent investment.

Under the current enforcement of the Prudent Man Rule, the fact that the addition of a stock such as B reduces the risk of the portfolio to a prudent level does not save the trustee from surcharge if A should decrease in value. It is fair to ask whether the result reflects a true understanding of risk.

[107] *See* J. FRANCIS, *supra* note 29, at 253-54.

[108] *Id.* This can easily be shown by considering the equation for the standard deviation of a portfolio of investments set forth in note 102 *supra*. Factor r_{jk} is the covariance between assets j and k. Any value of r_{jk} less than one reduces the product of the factors within the radical and, consequently, the value of σ. The lower the value of r_{jk}, the more σ is reduced. If r_{jk} is negative for all or substantially all assets j and k, risk is zero (the actual value of σ would be imaginary in some instances but for the purposes of investment analysis, imaginary numbers can be equated with zero). *See also* H. MARKOWITZ, *supra* note 38, at 188-201.

[109] *See, e.g.,* Mandel v. Cemetery Bd., 185 Cal. App. 2d 583, 8 Cal. Rptr. 342 (1960); Steiner v. Hawaiian Trust Co., 47 Hawaii 548, 393 P.2d 96 (1964); *In re* Dickinson, 152 Mass. 184, 25 N.E. 99 (1890); *In re* Mueller's Estate, 28 Wis. 2d 26, 135 N.W.2d 854 (1965). For an example of a statutory requirement of diversification, *see* Employee Retirement Income Security Act of 1974, 88 Stat. 829, § 404.

The RESTATEMENT (SECOND) OF TRUSTS § 228 (1959) states the general rule as follows:
 Except as otherwise provided by the terms of the trust, the trustee is under a
 duty to the beneficiary to distribute the risk of loss by a reasonable diversifica-
 tion of investments, unless under the circumstances it is prudent not to do so.
But cf. In re Saeger's Estates, 340 Pa. 73, 77, 16 A.2d 19, 22 (1940), in which the court noted,
 It is entirely true that many financial authorities advocate wide diversity of
 investment. It is equally true that others as strenuously affirm the contrary and
 agree with the familiar admonition of the late Andrew Carnegie, "Put all your
 eggs in one basket and watch the basket . . . ."
See also Mazzola v. Meyers, —Mass.—, 296 N.E.2d 481 (1973); Commercial Trust Co. v. Barnard, 27 N.J. 332, 142 A.2d 865 (1958); *In re* Estate of Gottschalk, 167 Misc. 397, 4 N.Y.S.2d 13 (1938). Cases are compiled in Annot., 24 A.L.R.3d 735 (1965).

[110] J. VAN HORNE, *supra* note 29, at 43. Professor Francis calls this type of behavior "naive diversification," which he defines as " 'not putting all the eggs in one basket,' or 'spreading the risks.' " J. FRANCIS, *supra* note 36, at 395.
 Naive diversification implies that a portfolio made up of 200 different securities
 is ten times more diversified than a portfolio make [*sic*] up of only 20 different
 securities (it will be shown later . . . that this is not necessarily true).
Francis' studies show that the total risk of most securities can be divided into two parts: systematic risk and unsystematic risk. Systematic risk is that portion of risk that is correlated

diversification in much the same way that the nineteenth century courts failed to recognize the rationale underlying the English rule on trust investments.[111]

The case of *Steiner v. Hawaiian Trust Co.*[112] illustrates a typical court's treatment of diversification. In *Steiner*, a settlor formed four trusts, each with 80 percent of its assets invested in the stock of a pineapple company and 99 percent of its assets invested in Hawaiian corporations. The trust instrument gave the trustee the discretion to vary the securities in the trust but required that most of the pineapple company stock be retained. In accordance with these directions, the trustee retained the pineapple company stock, which subsequently decreased in value. In an action for breach of trust, the court found the trustee was imprudent in not consulting with the settlor concerning the over-concentration in pineapple company stock. The court held the trustee had breached his duty to diversify and awarded damages to the beneficiaries.

In *Steiner*, the value of diversification is easy to understand. Eighty percent of the portfolio had a covariance of +1.[113] The remainder of the stocks were in various industries, but almost all were Hawaiian corporations dependent upon the economic well-being of the state.[114]

The court in *Steiner* recognized the need for diversification into securities not dependent upon the pineapple industry and Hawaii but

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with the market. That is to say, systematic risk is that portion of variation in a security's return which is attributable to fluctuations in the securities market. Unsystematic risk is that portion of risk which is uncorrelated with the market, or that portion which is attributable to the unique characteristics of the issuer. For example, the systematic risk inherent in Ford Motor Co. common stock is attributable to the general rise and fall of prices on the New York Stock Exchange. The unsystematic risk inherent in Ford includes risk due to such factors as the health of Henry Ford II and property taxes in River Rouge and Dearborn, Michigan.

According to Francis:

> Naive diversification will usually decrease the unsystematic portion of total risk toward zero until as many as 15 securities are added to the portfolio because unsystematic risk is (by definition) uncorrelated with the market. . . . Adding more than 15 securities to a portfolio cannot be expected to reduce its unsystematic risk or to increase it in most cases.
>
> . . . [P]ortfolio managers should not become overzealous and spread their assets over too many different assets. If 10 to 15 different assets are selected for the portfolio, the maximum benefits from naive diversification have most likely been attained—further spreading of the portfolio's assets is *superfluous diversification* and should be avoided. [emphasis in original]

Id. at 396-98. Systematic risk is not reduced through naive diversification. Diversification on the basis of covariance analysis does reduce systematic risk, however, and for this reason has acquired the title "Efficient Diversification." *Id.* at 399-411.

[111] *See* notes 47-53 and accompanying text *supra*.

[112] 47 Hawaii 548, 393 P.2d 96 (1964).

[113] By definition, a stock's covariance with itself is +1.

[114] For example, one investment was an Hawaiian bank, dependent for a large portion of its business on pineapple companies and their employees. The fortunes of the bank strongly correlated with the fortunes of the pineapple companies.

failed to state its finding in terms of covariance analysis. The level of understanding at which the courts currently apply the duty of diversification, as in *Steiner*,[115] allows only part of the benefits of diversification to be realized.[116] Courts following the Prudent Man Rule allow diversification into any security which, if judged on its own merits without regard to the portfolio to which it is added, would be a prudent investment.[117] This is a result of applying the rule prohibiting the offset of losses against gains, in fact a principle for calculating damages,[118] to the evaluation of prudence; it is logically unsound.[119]

The objective of diversification is to reduce the risk of the portfolio below the arithmetic sum of the risks of its component investments.[120] This is done through investment selection designed to minimize the covariance of the constituent securities in the portfolio.[121] Normally, it will be possible to find investments which are prudent when judged on their own merits and which also will have low covariance with the other investments in the portfolio. Often, however, the best investments for minimizing the risk of the portfolio while maximizing return are investments which may involve an imprudent magnitude of risk when considered without regard to the portfolio to which they are to be added.[122] By disapproving trustee investment in such securities, courts proscribe the most rational and prudent investments trustees could make.[123]

B. Modern Investment Techniques

By failing to recognize the utility of covariance analysis, the courts have denied trusts not only the full benefits of portfolio diversification but also the benefits of modern investment techniques such as margin

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[115] *See* note 110 *supra*.

[116] *Id. See also Safety in Numbers*, FORBES, July 1, 1974, at 78.

[117] *See* notes 43, 96-97, 115, and accompanying text *supra*.

[118] *See* note 45 *supra*.

[119] *See* notes 43-46, 96-97, and accompanying text *supra*.

[120] *See* notes 97-104 and accompanying text *supra*.

[121] *See* notes 102-106 and accompanying text *supra*.

[122] This is true because most stocks covary to a high positive degree with the Gross National Product, and, therefore, closely covary with one another. *See* J. FRANCIS, note 36 *supra*, at 397. One exception to this rule is a group of stocks known as "staple stocks." Staple stocks are issued by companies which manufacture the staples of life such as food, drugs, and cigarettes. They are much less likely to rise and fall with the GNP because demand for their products depends more on the change in population than on consumers' spending power. Staple stocks are an example of stocks which have low covariance with most other stocks but which generally are prudent investments on their own merits.

An example of investments which covary negatively with the GNP are short sales and puts. What these investments involve and why they covary negatively with other investments and are considered speculative is discussed in part III *B infra*.

[123] *See Safety in Numbers*, FORBES, July 1, 1974, at 78.

transactions,[124] short sales,[125] and security options.[126] All of these have traditionally been considered speculative forms of investment,[127] yet all can minimize the risk of a portfolio when properly used.

Margin is a leverage technique used by investors to increase the potential for profit with a concomitant rise in the magnitude of risk. For example, if investor A, with $1,000 to invest, thinks that price of X Corp. stock will increase, he may purchase $1,000 worth of X Corp. stock. If, however, A is adamant in his conviction, he may wish to purchase $2,000 of X Corp. stock in order to double his gain when the stock price goes us. To do this, A may borrow from his broker the second $1,000 needed to purchase the additional X Corp. stock. The broker will retain the entire $2,000 of X Corp. stock as security for the loan. Using borrowed money to purchase stock which is then pledged as collateral for the loan is known as margining.[128]

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[124] Merrill Lynch, Pierce, Fenner & Smith, Inc. v. Bocock, 247 F. Supp. 373 (S.D. Tex. 1965); English v. McIntyre, 29 App. Div. 439, 51 N.Y.S. 697 (1898); Shaner Estate, 26 Pa. D.&C.2d 450 (1961). See also J. LORING, A TRUSTEE'S HANDBOOK 199 (1962).

An additional problem, not considered in this article, is that many states prohibit a trustee from borrowing money unless the settlor has expressly conferred this power upon him. Other jurisdictions find the power to mortgage (borrowing through pledging trust assets) implied in the power to sell. See G. BOGERT, supra note 4, § 136; RESTATEMENT (SECOND) TRUSTS § 191 (1959).

[125] See, e.g., Merrill Lynch, Pierce, Fenner & Smith, Inc. v. Bocock, 247 F. Supp. 373 (S.D. Tex. 1965).

[126] See, e.g., Equitable Trust Co. v. Delaware Trust Co., 30 Del. Ch. 118, 54 A.2d 733 (1947); English v. McIntyre, 29 App. Div. 439, 51 N.Y.S. 697 (1898); Moore v. Trainer, 252 Pa. 367, 97 A. 462 (1916); Trogden v. Williams, 144 N.C. 192, 56 S.E. 865 (1907). See also J. LORING, supra note 124. But cf. Loud v. St. Louis Union Trust Co., 313 Mo. 552, 281 S.W. 744 (1926).

[127] See, e.g., Merrill Lynch, Pierce, Fenner & Smith, Inc. v. Bocock, 247 F. Supp. 373 (S.D. Tex. 1965), in which a trustee gave his broker discretion over investment of the trust corpus. The trustee, of course, remained responsible for any improprieties in the investment of the funds. The broker purchased stocks on margin and sold stocks short. The court found margin accounts and short sales speculative or, in the court's words, "rank gambles." Id. at 379. The court held such tactics to be improper where the investment of trust funds is concerned.

[128] Brokers are willing at any time to loan money for such a transaction. The broker benefits from increased trading commissions and from the interest charged on the loan. The interest charged varies with the size of the margin account but is normally within a range of ¼ to 1¼ percent above the prime rate.

The maximum amount of money brokers can lend to investors is set by the Federal Reserve Board. See FRB, THE FEDERAL RESERVE SYSTEM: PURPOSES AND FUNCTIONS 55-57 (5th ed. 1963). This rate is usually in the range of 10 to 50 percent of the value of security the investor puts up as collateral.

Obviously, with A fully margined (that is, he has borrowed as much as possible), should the value of his stock decline even slightly, A's collateral would fall below the amount necessary to sustain the loan. The Federal Reserve Board recognized this problem and requires no additional collateral should the value of the stock margined fall. However, banks and brokers, for their own protection, have set what is known as the maintenance margin rate at a figure much lower than the original margin rate. This means that the amount of collateral necessary to sustain the loan is not as great as that necessary to secure it in the first place. Commonly, the maintenance margin rate requires that the value of the collateral be approximately 30 percent greater than the amount of the loan outstanding. If the minimum security level is violated, the loan will be called (or foreclosed) and the security sold to repay the loan. Id.

The potential advantage of margining is that the investor will realize the appreciation on both the stock purchased with his own money and that purchased with the money lent to him by the broker. His potential loss, on the other hand, is also increased, because he will realize the depreciation on both blocks of stock.

The risk the investor assumes is similarly increased. The increase in risk is best observed through example. Assume Z Corp. stock currently sells at $10 per share. The expected return in two years is $2 per share (*I.e.*, adding to the expected selling price all dividends expected to be paid over the two-year period, the stock is expected to sell at $12 per share.). The standard deviation of the stock for the two—year period has been computed to be $3 per share. Investor T could, under the applicable margin laws, purchase one share of Z Corp. stock, investing $10 plus commissions; or he could purchase two shares of Z Corp. stock, investing $10 and borrowing the remainder of the purchase price from his broker. Under the first approach, the expected return would be $2 and the standard deviation $3. Under the second plan, the expected return would be $4 and the standard deviation $6. The magnitude of risk (standard deviation) in the second plan is double that of the first, though the amounts invested are identical.[129]

An example of the attitude of courts toward the margin technique is the case of *Merrill Lynch, Pierce, Fenner & Smith v. Bocock*.[130] There, the court held that margin purchases pushed the risk inherent in common stock investment to a magnitude beyond the maximum level a prudent man would willingly assume. The court did not consider

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[129] It is true that the expected return has also doubled and that the percentage standard deviation (*see* note 39 *supra*) has remained constant. But in determining prudence the courts have traditionally been interested only in the magnitude of risk assumed relative to the amount invested—that is, the absolute value of the standard deviation relative to the sum invested. *See In re* Cook's Trust Estate, 20 Del. Ch. 123, 124, 171 A. 730, 731 (1934). The absolute value of the standard deviation in the above example has doubled while the amount invested remained unchanged.

The percentage standard deviation is the measure of risk relative to the expected return. It is irrational for an investor, presented with two investments bearing equal risk, to choose the one with the lower expected return for his portfolio. Arguably, it is also imprudent. For a number of reasons, the courts have never carried the test for prudence beyond the mere constraint on the absolute level of risk. The main reason is the premise that the primary purpose of trust investment is the conservation of trust corpus. *See* note 22 *supra*. While there is a duty to produce "an" income, there is no duty to produce the greatest income possible commensurate with the risk assumed. For that reason, the concept of return relative to risk has never been a major consideration for the courts.

The most cogent argument for sustaining judicial nonintervention in the risk-return trade—off area is that to do otherwise would amount to imposing a duty to invest in only a select group of investments—*viz.* those with the most efficient (lowest risk, highest return) risk-return ratio. The latter policy would severely toughen the standards for trust investment and represent a marked departure from the broad guidelines and the policy considerations behind them articulated in Harvard College v. Amory, 26 Mass. (9 Pick.) 446 (1830).

[130] 247 F. Supp. 373 (S.D. Tex. 1965).

whether a limited use of margin, which increased the magnitude of risk only slightly, would be permissible. Instead, it categorically rejected the use of margin as being an imprudent investment technique.

Short sales are a second modern investment method. A short sale is the sale of borrowed stock.[131] The investor who purchases stock does so with the idea that the stock will go up. By contrast, the investor who sells stock short does so with the idea that the stock will go down. He plans to repurchase an equal number of shares at a lower price and use them to repay the loan of the stock he sold originally, with a net profit on the two transactions.

Because risk on a short sale is measured the same way as risk for a purchase,[132] the risk for both is the same for any given security.[133] However, because many courts and investors think of risk only as the risk of loss,[134] it is quite common to find statements concerning the excessive risk of short selling as compared to purchasing the same security long.[135]

Using semivariance risk analysis which measures only the risk of loss,[136] it is possible to see why short selling is viewed as very different from ordinary purchasing. Semivariance analysis is concerned only with the portion of the probability distribution which represents returns lower than those expected. In a normal purchase situation, the maximum potential loss is the full purchase price of the stock. On the other hand, the potential loss on a short sale is, for analytical purposes, unlimited because the potential loss is limited solely by the maximum price the stock can reach. Courts worried only about the possibility of loss on individual securities have consistently found short sales imprudent.[137]

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[131] The investor "borrows" stock from another investor who owns it long (An investor who owns stock is said to be "long" that stock. This is in contradistinction to an investor who is "short," or who has sold stock he never owned.). "Borrowing" is arranged by stock brokers, who encourage short sales because they earn commissions both when the stock is sold and when it is subsequently purchased to repay the loan. Typically, the broker obtains the stock from the accounts of customers who have left their stock with the broker as security for margin purchases. The lender is not notified that his stock has been loaned, and the borrower is unaware of the identity of the lender. The entire transaction is handled by the broker. The investor normally must put up the entire sale price of the stock as collateral for the loan. The investor may, however, margin the short position in the same way a long position is margined. FRB, *supra* note 128, at 55-57. *See also* R. WHITNEY & W. PERKINS, SHORT SELLING: FOR AND AGAINST (1932).
[132] *See* note 42 *supra*. *See also* H. MARKOWITZ, *supra* note 38, at 188-201.
[133] *See* H. MARKOWITZ, *supra* note 38, at 188-201.
[134] *See* note 38 *supra*.
[135] *See* notes 121 and 123 *supra*.
[136] *See* note 38 *supra*.
[137] *See* text accompanying notes 125-127 *supra*. Another factor leading courts to proscribe short selling is American sentiment, right or wrong, that stocks always go up in the long run. This sentiment is reinforced by the finding in a recent study of the New York Stock Exchange by a team of researchers from the University of Chicago that the average annual return on

Security options are a third modern investment technique. Options are contracts which entitle the holder either to purchase[138] or to sell[139] a given quantity of stock for a set price at or before a definite date in the future.[140] Security options are considerably riskier than the common stock underlying them. The reason for the difference in risk can best be shown by considering a call option. A typical call entitles the holder to purchase 100 shares of a given stock for a set price any time on or before a prescribed date.[141] Usually, the price at which the call may be exercised, known as the striking price, is the market price of the common stock at the time the call was issued.[142] Calls are sold for premiums, (*i.e.*, consideration for the option), the amount of which is determined by the price and volatility of the underlying stock, the market rate of interest, and the length of time before the call option expires.[143]

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listed common stocks during the period of 1926-1965 was 9.3 percent. Fisher & Lorie, *Rates of Return on Investments in Common Stocks: The Year-by-Year Record*, 1926-65, 41 J. Bus. 291-316 (1968).

However, the 9.3 percent figure is an average. It does not mean that every stock always goes up in the long term. Entire industry groups, such as railroads and steels in the 1950's, and bowling, cement, airlines, and automobiles in the 1960's would have made good long-term short sales.

However, there is a more fundamental theoretical reason why short sales should not be declared per se imprudent. The imprudence of a short position rests upon the conclusion that it is imprudent to sell the underlying stock. Such a conclusion must be made on a case-by-case basis and can not validly be made a general conclusion.

[138] Options entitling the owner to purchase stock include warrants, rights, calls, Chicago Board Options Exchange (CBOE) options and American Stock Exchange (ASE) options. Very little difference exists among the five classifications. A warrant is normally longer term than any of the others and entitles the holder to purchase a given amount of stock at a set price (the strike price) any time before the date of expiration (some warrants are perpetual). A right is a short-term warrant, usually expiring within thirty days after issuance. Warrants and rights are normally issued by the corporation whose stock may be purchased by their exercise.

Calls, CBOE, and ASE options are distinguishable from each other only on the basis of where they are traded. All three are issued by private investors who put up security with their brokers to ensure the delivery of the stock in the event that the option is exercised or by brokers themselves who speculate for their own account. If the holder of an option exercises it, the seller-issuer must deliver the shares of stock "called." This is usually accomplished by buying the stock on the open market. Calls are traded over-the-counter. CBOE options are traded on the Chicago Board Options Exchange, and ASE options are traded on the American Stock Exchange. Calls, CBOE, and ASE options usually expire thirty days, ninety days, six months and ten days, or one year after issuance. *See* J. FRANCIS, *supra* note 36, at 92-103.

[139] Options entitling the holder to sell stock are called puts. They are traded over-the-counter only. They are issued by private investors (or put-and-call dealers who speculate for their own account) who put up security with their brokers to insure that if the put is exercised, sufficient cash will exist to pay the holder the stated sum for his shares. The procedure is similar to short selling. *See* note 128 *supra*. Puts are normally issued for time periods of ten days, thirty days, ninety days, six months and ten days, or one year. *See* J. FRANCIS, *supra* note 36, at 92-101.

[140] *See* H. SCHULTZ, FINANCIAL TACTICS AND TERMS FOR THE SOPHISTICATED INTERNATIONAL INVESTOR (1974).

[141] H. FILER, UNDERSTANDING PUT AND CALL OPTIONS 18-19 (1966).

[142] P. SARNOFF, PUTS AND CALLS 9 (1968).

[143] *Id.* at 100-04.

The premium paid for the call is the only investment that the purchaser needs to make.[144] For that premium, the purchaser is put in the position of a person holding 100 shares of the underlying stock, except that he is exposed to no risk of loss other than the loss of the premium he paid. Commonly, the premium on a six–month–and–ten–day call is about 10 percent of the value of the underlying stock.[145] The increased risk occurs because the standard deviation about the expected return of the call is almost as great as the standard deviation about the expected return of the 100 shares of stock. For each one dollar deviation between the actual return and the expected return on a share of stock, there is a $100 deviation on the call. Because the net investment in a call is approximately one-tenth of the investment in the 100 shares of stock, the call has a much greater relative risk.

Considering the preceding analysis, it is not difficult to see why courts so readily denounced margin transactions, short selling, and security options as unfit for trust investment. Each of these techniques, when judged in the abstract, has been shown to entail more risk than a straight purchase of the underlying security.[146] But when margin, short selling, and security options are evaluated on the basis of modern investment theory, considering each investment's covariance with other investments in the portfolio as well as its individual risk and return,[147] they can be shown to be prudent investments. More importantly, these techniques can be shown to be essential to the most efficient deployment of trust funds.

A good illustration of the potential value of these techniques is the process of convertible hedging. Hedging refers to the technique of purchasing one security and simultaneously selling a second security which closely covaries with the first. Convertible hedging involves the purchase of a convertible debenture, preferred stock, or security option and the simultaneous sale (the exact order or timing is insignificant) of the security into which the former is convertible.[148]

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[144] If and when the call is exercised, the purchaser must pay the option price (strike price per share multiplied by 100 shares) before receiving the stock. But he can simultaneously sell the stock in the open market so that no further money need be put up. Of course, if the purchaser decides to hold the stock rather than sell it immediately he must make the further investment of the amount of the option price.

[145] See Wall St. J., Jan. 17, 1975, at 25, col. 2. The premium for a call on any given stock will vary with the going rate of interest.

[146] Short selling entails more risk only if the semivariance measure of risk is utilized. See note 132 and accompanying text supra.

[147] See notes 148-70 and accompanying text infra.

[148] Convertible debentures are unsecured general obligations of a corporation which may be used at face (par) amount to purchase shares of common stock in the corporation. For example, a $1,000 par amount 5 percent convertible debenture which is convertible into twenty shares of common stock entitles the holder to $50 per year interest just as any

An excellent opportunity to demonstrate the use of a convertible debenture hedge occurred in 1972 involving the securities of Illustrated World Encyclopedia, Inc.[149] Illustrated World's major business was the publication, sale, and distribution of encyclopedias in supermarkets. It had a history of sporadic earnings[150] and wild changes in the price of its common stock.[151] In summary, its common stock had many of the characteristics of an investment which would be imprudent in the setting of a trust account. On August 14, 1972, Illustrated World's common stock closed at $5½ per share.[152] On the same date, its convertible debenture[153] closed at $650 per $1,000 par amount of debenture.[154] The debenture paid $75 interest annually and was convertible into common stock at the rate of 111.111 shares of common per $1,000 par of debenture.

The bond's yield of $75 for each $650 invested (11½ percent[155]),

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ordinary debenture would. At maturity, the debenture will be redeemed by the corporation for $1,000. The convertible feature enables the holder, at his option, to exchange the bond for twenty shares of the common stock in the corporation at any time prior to maturity of the debenture. This is done by sending the debenture certificate to the company and asking for its common shares in return.

[149] The name was changed to Magnus International, Inc., in January 1974. This illustration is not the only available example of a profitable convertible hedge. Hundreds of potentially profitable hedges exist at any given time. *See* VALUE LINE CONVERTIBLE SURVEY, vol. 5, no. 39 (Oct. 21, 1974). Illustrated World is merely an extremely effective example of how risky securities can be combined to virtually eliminate risk while retaining an above average return.

[150] While it was not a newly organized corporation, it lost money in 1971, 1972, and 1973. As of December 31, 1972, it had a retained earnings deficit of almost $1,000,000.

[151] A five-year range appears as follows:

Price Range:	1973	1972	1971	1970	1969
High	4¾	15½	12⅛	18¼	19
Low	¾	3¼	5	6	10¼

STANDARD AND POOR'S INDUSTRIAL MANUAL 1974 at 3300.

[152] Wall St. J., Aug. 15, 1972, at 29.

[153] The Illustrated World Encyclopedia, Inc., 7½ percent convertible subordinated debenture due in 1991 was issued February 4, 1971. A three-year price range for the debenture appears as follows:

Price Range:	1973	1972	1971
High	68	171	127
Low	34½	55⅛	77½

STANDARD AND POOR'S INDUSTRIAL MANUAL 1974 at 3300.

[154] Wall St. J., Aug. 15, 1972, at 30.

[155] Current yield is computed by dividing the coupon interest paid each year ($75) by the price of the debenture ($650). The coupon rate is the figure that appears in the description of the debenture—*i.e.*, Illustrated World 7½'s 1991. This figure represents the percent of par which the company will pay the holder of the bond each year notwithstanding any fluctuations in the interest rate.

The total yield includes more than the current yield. The debenture sold at $650 but would be redeemed for $1000 in 1991. The yield to maturity, or total yield, includes the current yield plus the pro rata portion of the expected net increase in price which must inevitably occur before maturity. Normally, the yield to maturity is relevant only when the investor contemplates a long-term holding of the bond. In the interest of simplicity, the yield to maturity has been deleted from the accompanying discussion and only the current yield is computed.

was much higher than the market interest rate of approximately 6 percent.[156] However, because of the earnings history of the company and the dramatic fluctuations in the debenture's price, the risk involved in a purchase of the debenture was substantial; that is, the dispersion of the probability distribution about the expected return was substantial.[157] In fact, the risk involved in purchasing the debenture probably exceeded the level of prudence, in light of the fact the dispersion of the debenture's probability distribution was greater than that of most stocks.

Notwithstanding its riskiness, the Illustrated World debenture presented the perfect hedge situation. The convertible security was high yielding and closely covaried[158] with the underlying stock which paid no dividends. An investor wishing to hold the debenture for its high yield could easily reduce the risk of his portfolio by selling the stock short. One possible hedge in this situation could involve the purchase of one debenture on margin. The margin ratio on convertible debentures at the time was 50 percent.[159] This means that the investor could put up $325 of his own money and borrow the remaining $325 from a broker.[160] Simultaneously, the investor could sell 100 shares of Illustrated World stock short, receiving $550.[161] The proceeds of the short sale would not be received in cash by the investor. The Federal Reserve Board requires that the proceeds remain in the investor's account with the broker as a credit balance.[162] Because the investor owned long the equivalent of what was sold short, no further security on the short sale would have been required.

The net effect of the transaction would leave the investor's account with his broker showing ownership of one debenture, a short position of 100 shares of common stock, a $325 debit balance (the amount the investor owes the broker for the loan given to purchase the debenture), and a $550 credit balance (the amount the broker owes the investor

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[156] A Treasury Note maturing in 1976 could have been purchased on August 15, 1972, at a price which would have yielded a 5.86 percent return. Wall St. J., Aug. 16, 1972, at 30.

[157] *See* notes 156 and 153 *supra*.

[158] *See* notes 157 and 153 *supra*. The reason it closely covaried was that the holder could convert the debenture into 111.111 shares of stock at anytime. This meant that the debenture always sold for at least the price of 111.111 shares of stock. In fact, the debenture was usually worth more because it paid interest and the stock paid no dividends. At prices over $500 for the debenture, however, the interest paid was a minor factor in determining the price of the bond as compared to the value of the underlying stock, primarily because the yield alone could not justify a price this high on a debenture as risky as the one involved.

[159] FED. RESERVE BULL., Sept. 1973, at A10.

[160] *See* note 128 and accompanying text *supra*.

[161] Commission costs would have reduced the amount received upon sale of the stock and increased the cost of the debentures. For the purpose of illustration, the commission costs have been ignored.

[162] *See* FRB, *supra* note 128.

for the sale of the stock). The account with the broker would show a net credit; that is, the broker would owe the investor more than the investor owed the broker. Therefore, the investor would be charged no interest.[163] The investor would have invested a total of $325 (plus commissions). For this investment, he would receive $75 interest per year and pay nothing to the lender of the common stock because the common stock paid no dividend.[164]

The effective yield on the investment would be 23 percent,[165] with minimal risk involved. If the price of the stock went up, causing a loss on the short sale, the price of the debenture would also go up, substantially offsetting the loss. If the price of the debenture went down, causing a loss on the debenture, the price of the stock would also drop, creating a gain on the short sale.[166] This happens because the stock and bond are highly positively correlated. Reversing the sign of the covariance on the stock by selling it short, the two investments become highly negatively correlated.[167] In fact, short selling is one of the few methods of obtaining investments that are negatively correlated with others in a portfolio in order to substantially reduce portfolio risk.[168]

Margining was used in the Illustrated World example to maximize return. The same hedge could have been accomplished without the use of margin, but the required investment would have been $650 rather

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[163] Normally, interest is paid on the debit balance. *See* note 128 *supra*. Because there is also a credit balance in this situation, brokers offset the two before computing the interest which is owed.

[164] *See* note 131 *supra*.

[165] The $75 yearly interest payment is divided by the $325 investment to arrive at this figure.

[166] Specific examples of this correlation are readily observable. At the market low for Illustrated World in 1973 (common ¾, debenture 34½), the net capital profit, ignoring commission, would have been $170, or a gain of approximately 50 percent on the amount invested. At the 1972 high (15½ and 171, respectively), the net profit, ignoring commissions, would have been $60, or a gain of approximately 15 percent on the amount invested. In fact, in only one circumstance would a capital loss have been sustained. If Illustrated World had declared bankruptcy and the debenture creditors were paid nothing, a capital loss of $100, or approximately 30 percent of the amount invested, would have been sustained. The probability of the latter occurrence was, of course, very small because it is extremely unusual for a bankruptcy dividend to creditors to equal zero. A bankruptcy dividend as low as ten cents on the dollar would have shielded the investor from any loss of capital whatsoever.

[167] For example, assume stocks A and B have a covariance of $+1$. If B is sold short, its movements relative to A do not change. If A goes up 10 percent, B goes up 10 percent. But, if an investor is short B and it goes up 10 percent, he has a 10 percent loss. Therefore, the B short and the A stock covary to the extent of -1. No portfolio risk occurs because every dollar of loss on B is offset by a dollar gain on A.

[168] The practical problem of risk reduction consists in finding investments that negatively covary. No group of stocks has ever been found that negatively covaries with another group. *See* Jensen, *Risk, the Pricing of Capital Assets, and the Evaluation of Investment Portfolios*, 42 J. Bus. 167-247 (1969); J. FRANCIS, *supra* note 36, at 397. Techniques such as short selling, selling calls, CBOE and ASE options, and buying puts are some of the few known ways of securing investments which negatively covary with common stocks.

than $325, and the percentage returns would have been reduced by one-half. But when the magnitude of risk is negligible in the first place, the effect of doubling the risk by borrowing one-half the investment[169] is only to increase the magnitude of the risk by a negligible amount. In such cases, margin may be a prudent technique for the trustee–investor to use.[170]

The traditional method of analyzing each investment independent of other investments in a portfolio poses an additional hurdle to the acceptance of short selling and security options as appropriate trust investment techniques. Neither a short sale nor an option contract produces current income. The gain (or loss) from either accrues as a capital change.

It is well established that trustees have a duty to make the trust corpus productive,[171] and courts have construed this to mean that trust assets must produce current income.[172] Because short sales and options produce capital changes rather than current income, they fail to meet the requirement when viewed as individual investments. However, the real purpose of these techniques is to reduce overall portfolio risk through low or negative covariance with other securities in the portfolio and allow the trustee to include securities that might be imprudent investments when considered on their individual merits but which have higher rates of return than could be earned on prudent investments.

IV. COURTS SHOULD ADOPT MODERN INVESTMENT ANALYSIS AND TECHNIQUES

A. Covariance Analysis

In the past 150 years, courts and legislatures have twice modified the standards for trust fund investment in recognition of the fact that the law did not allow sufficient flexibility to the trustee. The first

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[169] See notes 128-129 supra.

[170] Security options can also be used in hedging operations to reduce risk. P. SARNOFF, supra note 142; H. FILER, supra note 141. Options covary with the stocks underlying them. By holding a common stock and selling a call option of the same issue, it is possible to lessen the covariance within the portfolio.

Another popular type of option hedge involves the retention of government or corporate bonds in conjunction with the purchase of security options. One major risk factor inherent in bonds is purchasing power risk, which can be offset by the purchase of an option on common stock which can be expected to appreciate during inflationary periods. H. FILER, supra note 141.

[171] See A. SCOTT, supra note 22, at § 240.

[172] See, e.g., Delaware Trust Co. v. Bradford, 30 Del. Ch. 277, 59 A.2d 212 (1948); A. SCOTT, supra note 22, at § 240.

change was a shift from the fixed standard of the English rule to the flexible standard of prudence.[173] The second major change was the acceptance of equities as prudent investments.[174]

The past willingness of the courts and legislatures to adapt to changing investment conditions is a strong argument in favor of continued adaptation as new investment techniques and theories are shown to be reliable. Because economic conditions are placing increased pressure on trustees to improve their investment performance,[175] it is no longer defensible to exclude portfolio theory based on covariance analysis from the list of analytic tools used by the courts to determine the prudence of investments.

The heart of covariance analysis is the idea that an investment should not be evaluated without regard to other investments in the portfolio.[176] However, it is easy to understand why the Prudent Man Rule was originally enforced on an individual merit basis. When decisions such as *Creed v. McAleer*[177] and *Cuyler's Estate*[178] were rendered, the principles of covariance analysis had not been articulated.[179] Indeed, because of the paucity of data on security movements and the unpredictability inherent in a young economy, it is doubtful that there could have been accurate covariance analysis even as late as 1931.[180]

Since 1931 covariance analysis has become feasible. There has been a major advance in the use of mathematics and statistics to analyze economic and financial relationships.[181] Such breakthroughs as the quantification of risk[182] and the computation of correlation

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[173] *See* part II *A supra.*

[174] *See* part II *B supra.*

[175] Inflation and the prolonged decline in stock prices have made investors more conscious of investment performance. *See, e.g.,* Wall St. J., Feb. 26, 1975, at 1, col. 6.

[176] *See* part III *A supra.*

[177] 275 Mass. 353, 175 N.E. 761 (1931). *See* note 44 and accompanying text *supra.*

[178] 5 Pa. D. & C. 317 (1924). *See* note 45 *supra.*

[179] Professor Harry Markowtiz's book, PORTFOLIO SELECTION: EFFICIENT DIVERSIFICA-TION OF INVESTMENTS (1959), is probably the first widely circulated work basing investment theory on covariance analysis. The work is regarded as seminal in the field of modern investment analysis. *See* J. VAN HORNE, *supra* note 29, at 45-47.

[180] *See* notes 181-184 and accompanying text *infra.* For covariance analysis to be successful, it must be possible to calculate at least vaguely accurate correlation coefficients. Of course, calculation of the covariance between a stock and a short in the same stock is no problem. But the correlation of industries within the economy is relevant when calculating the covariance of two stocks, and for this calculation a relatively stable and mature industrialized economy is a prerequisite to accuracy. *Cf.* Note, *Prudent Trustee's Investment in Common Stock—Permissive or Mandatory?,* 52 Nw. U.L. REV. 788, 790 (1958).

[181] *Compare* J. KEYNES, THE GENERAL THEORY OF EMPLOYMENT, INTEREST AND MONEY (1936) *with* F. LUTZ, THE THEORY OF INTEREST (1967), *and* H. MARKOWITZ, *supra* note 38.

[182] *See* Fama, *Risk, Return and Equilibrium: Some Clarifying Comments,* 23 J. FIN. 29-40 (1968); Jensen, *Risk, The Pricing of Capital Assets, and the Evaluation of Investment Portfolios,* 42 J. BUS. 167-247 (1969).

coefficients[183] have enabled modern economists to see through old mis-
conceptions and mathematically discern economic and financial
relationships.[184]

All of these factors support the conclusion that covariance analysis
has become feasible and reliable and that the portfolio theory of
investment should be accepted as part of the tools of a prudent trustee-
investor.

B. Modern Investment Techniques

If covariance analysis is recognized to be a proper method of risk
evaluation, the acceptance of margin, short sales, and security options
as proper investment techniques will depend on the related factors of
information availability and marketability.[185] With respect to both of
these, there is at present no essential difference between traditional
stock ownership and transactions involving the modern forms of
investment.

Extensive information on short sales and security options is avail-
able to the prospective investor. The short positions in many listed
securities are published fortnightly by the New York and American
Stock Exchanges.[186] This information, as well as watchdog efforts by
the SEC, protects against the occurrence of a short squeeze.[187] Quota-
tions for security options are also readily available. CBOE and ASE
options are quoted daily in the Wall Street Journal, and the prices of
puts and calls can be obtained from a broker upon request.

Marketability involves access to information but also requires the
existence of a forum in which to trade. The greatest change in the
marketability of option contracts has been the formation of active
secondary markets.[188] CBOE and ASE options are now freely traded

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[183] *See* Sharpe, *A Simplified Model for Portfolio Analysis,* 9 MANAGEMENT SCI. 277-93 (1963).

[184] G. CLARKSON, PORTFOLIO SELECTION: A SIMULATION OF TRUST INVESTMENT 2-3 (1962). Of course, the extensive use of mathematics made today would have been impossible without the computer.

[185] Security of the enterprise is no longer considered as a separate risk factor because it is included in the analysis of risk and covariance.

[186] The short position is the number of shares of the stock sold short. Only short positions in stocks which have more than 20,000 shares sold short or whose position changed by more than 10,000 shares during the one-month reporting period are published. *See, e.g.,* Wall St. J., Nov. 22, 1974, at 12, col. 2.

[187] A short squeeze occurs when there are more shares sold short than there are shares actually available for sale in the market. For example, if 30 percent of a company's shares are sold short to *Y*, and *Y* already owns 80 percent of the company, then *Y* can demand delivery of the shares and refuse to sell any of his stock at a reasonable price. Because 110 percent of the stock is either sold to *Y* or already owned by him, many of the short sellers will ultimately have to deal with *Y*, and they can expect to pay a substantial price to extricate themselves from the squeeze. *See, e.g.,* Northern Securities v. United States, 193 U.S. 197 (1904).

[188] The term "secondary market" refers to an organized trading market that handles transactions after the original issuance of securities. Before the CBOE was organized in 1974, the only options available other than warrants and rights were puts and calls. These were

on centralized markets whose existence not only ensures an efficient forum for trading but also makes trading volume statistics available to the public.[189]

Short sales are only slightly less marketable than ordinary purchases. It is as easy to cover a short sale as it is to make an ordinary purchase, but the Securities and Exchange Commission rules require that the original short sale of the stock can be made only on an up-tick—that is, an increase in price from the previous reported sale.[190] In practice, this slight limitation in marketability is an insignificant deterrent to short sales. Because marketability for short sales and options is essentially the same as it is for stock ownership, there is no reason to discriminate against these forms of investment when they can be used to reduce net portfolio risk.

C. Objections to Broadening the Prudent Man Rule

Objections to broadening the scope of the Prudent Man Rule usually take three forms. The first assertion is that to allow "speculative" investments in the trust portfolio is antithetical to the objective of conserving trust corpus. This objection is the weakest of the three. It can be answered by the demonstration that the addition of certain "speculative" issues to a portfolio reduces the risk of the portfolio as a whole.[191] The essence of the portfolio theory is that the risk of a portfolio as a whole can be reduced by combining a security (whether speculative or not) with other securities with which it negatively covaries. Also, the addition of a highly risky security with low positive covariance can increase the risk of the portfolio less than would the addition of a low-risk security with high positive covariance.

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issued by New York speciality firms, but little trading occurred after issuance. In most cases, the option could not be sold before maturity. See J. FRANCIS, *supra* note 36, at 92. Without an active secondary market, marketability risk was high because there was little chance of selling an option at a reasonable price before its expiration. The formation of the CBOE in 1974 and the initiation of option trading on the American Stock Exchange in January 1975, supplied the much needed secondary market.

Warrants have been traded on the American Stock Exchange for years and on the New York Stock Exchange since 1972. Both secondary markets are active. Traditionally, even most over-the-counter warrants enjoy active secondary markets.

[189] Possibly the most familiar source of these statistics is the Wall Street Journal.

[190] Rules 10a-1 and 10a-2, promulgated pursuant to the Securities Exchange Act of 1934, 15 U.S.C. § 78a *et seq.* (1971), regulate short selling. An up-tick can be as small as ⅛ point (12½ cents per share). See H. SCHULTZ, FINANCIAL TACTICS AND TERMS FOR THE SOPHISTICATED INTERNATIONAL INVESTOR 163 (1974). Short sales on up-even-ticks are also allowed. This means that if the transaction immediately prior to the last sale was an up-tick and the short sale is to be consummated at the same price as that sale, it may proceed.

The purpose of this requirement is to stabilize the market and reduce panic selling which would rapidly accelerate as the price continued to drop. Currently, some upward movement is necessary before the short sale can occur.

[191] See notes 94-106 and accompanying text *supra*.

A second assertion is that any standard allowing for the inclusion of speculative securities as prudent trust investments would open the floodgates to unlimited inclusion of speculative investments. This assertion ignores the underlying premise that each investment must be prudent. The addition of a high-risk investment that greatly increases the net risk of the portfolio remains an imprudent act. Under portfolio theory, each investment must still be prudent. The difference is that, using covariance theory, prudence is judged with respect to the position of the security within the portfolio as well as with respect to the security's individual merits.

The final claim is that a broader interpretation of the Prudent Man Rule might require the trustee to be an investment counselor. This would be an undesirable result because many trustees are not professionals.[192] However, the courts have recognized that prudent investment is not unrelated to the acumen of the trustee and the size of the trust.[193] The Prudent Man Rule is currently construed to give the trustee the option of making any prudent investment but not to require him to make the most prudent one. Furthermore, one of the most important reasons for recognizing a broader interpretation of the Rule is that many trustees are professionals and should be allowed to use all of their expertise to benefit trust beneficiaries.

V. CONCLUSION AND PROPOSED CHANGES

If the prudent man standard is to survive as a desirable guide for trust investment, it must incorporate modern theories of investment as knowledge in the field expands and improvements are shown to be reliable. Covariance analysis and the portfolio theory of investment are just such improvements. They have been shown to be essential to the goals of trust corpus management and should be accepted by the courts.

Existing prudent man statutes can easily be read to permit the proposed expansion of the rule. The statutes require only that each investment made be one that persons of prudence, care, and discretion would make for their own accounts. It has been amply demonstrated that investments made under the portfolio method of investment are eminently prudent.

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[192] For an articulation of this contention, *see* Note, *Trust Fund Investment in New York: The Prudent Man Rule and Diversification of Investment*, 47 N.Y.U.L. REV. 527, 542 (1972).

[193] *See* Comment, *Investment Duties of Trustees and the Problem of Unduly Conservative Trust Investments*, 61 MICH. L. REV. 1545, 1557 (1963); Note, *Prudent Trustee's Investment in Common Stock—Permissive or Mandatory?*, 52 NW. U.L. REV. 788, 797-98 (1958).

However, because judicial recognition of these arguments is unpredictable, trustees will continue to be deterred from using covariance theory or modern investment techniques until legislative action is taken. For this reason, express statutory recognition of these improvements is required. It must be clear, however, that any statute is an illustrative rather than an exclusive listing of acceptable investment procedures. Appendix I sets out the Model Prudent Man Act on which most present statutes are based. A proposed alternative to this Act is presented in Appendix II.

The prudent man standard was once a model of efficiency and adaptability. Legal doctrines have deprived the standard of its former flexibility. If it is to remain a realistic standard in the future, the portfolio approach to investment must be encouraged.

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APPENDIX I

MODEL PRUDENT MAN INVESTMENT ACT[194]

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Section 1. In acquiring, investing, reinvesting, exchanging, retaining, selling and managing property for the benefit of another, a fiduciary shall exercise the judgment and care under the circumstances then prevailing, which men of prudence, discretion and intelligence exercise in the management of their own affairs, not in regard to speculation but in regard to the permanent disposition of their funds, considering the probable incomes as well as the probable safety of their capital. Within the limitations of the foregoing standard, a fiduciary is authorized to acquire and retain every kind of property, real, personal or mixed, and every kind of investment, specifically including, but not by way of limitation, bonds, debentures and other corporate obligations, and stocks, preferred or common, which men of prudence, discretion and intelligence acquire or retain for their own account.

Section 2. Nothing contained in this act shall be construed as authorizing any departure from, or variation of, the expressed terms or limitations set forth in any will, agreement, court order or other instrument creating or defining the fiduciaries' duties and powers, but the terms "legal investment" or "authorized investment" or words of similar import, as used in any such instrument, shall be taken to mean any investment which is permitted by the terms of section one hereof.

Section 3. Nothing contained in this act shall be construed as restricting the power of a court of proper jurisdiction to permit a fiduciary to deviate from the terms of any will, agreement or other instrument relating to the

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[194] The Model Act is found in TEMPORARY STATE COMMISSION ON THE MODERNIZATION, REVISION, AND SIMPLIFICATION OF THE LAW OF ESTATES, *The Prudent Man Rule for Fiduciary Investment*, 2 N.Y. LEG. DOC., Rep. No. 6.12A, 188th Sess. 526, 556 (1965).

acquisition, investment, reinvestment, exchange, retention, sale or management of fiduciary property.

APPENDIX II
PROPOSED PRUDENT MAN ACT

Section 1. A fiduciary holding funds for investment may invest the same in whatever forms of investment would be acquired by prudent men of discretion and intelligence in such matters, who may consider not only the individual merits of the investment but the merits of the investment as part of a portfolio of investments, and who are seeking a reasonable income and the preservation of their capital and its purchasing power. Within the limitations of the foregoing standard, a fiduciary is authorized to acquire, retain, sell, mortgage, pledge, and option every kind of property, real, personal or mixed, and every kind of investment.

Section 2. Nothing in this act shall be deemed to limit the effect of any will, agreement, court order or other instrument creating or defining the investment powers of a fiduciary, or to restrict the authority of a court of proper jurisdiction to instruct the fiduciary in the interpretation or administration of the expressed terms of any will, agreement or other instrument or in the administration of the property under the fiduciary's care.

—Thomas D. Johnston