

# ADDING VALUE

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## SUMMARY:

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This edition of ADDING VALUE addresses risk. We question why such a simple, one-syllable word is the nemesis of investors everywhere. Throughout history, despite mathematical tools developed solely for the measurement of risk, investors misinterpret or misunderstand this seemingly simple concept.

*ADDING VALUE is mailed quarterly to our clients and friends. The intent of this publication is to share some of our more interesting views and research with our clients.*

## First Quarter Investment Review and Outlook: Understanding Risk

In 1996, Peter Bernstein wrote a book titled Against The Gods: The Remarkable Story of Risk. His main thesis is that understanding and controlling risk is one of the central ideas that distinguish modern times from the distant past. He also shows that we place ourselves “at risk” by virtue of a faulty understanding “of risk.”

### **In the beginning...**

It took a long time to develop the mathematical tools we need to make probabilistic determinations...952 years to be exact! The process started in the year 1000 with the development of our Hindu-Arabic numbering system and reached a full mathematical conclusion in 1952 with Henry Markowitz' white paper “Portfolio Selection.” It was a rocky developmental road. For the first 600 years, the world grappled with acceptance of a numbering system. Obviously, without numbers, there are no odds or probabilities. In addition, it took a long time to develop an attitude about the future. After all, who does determine the future? Is it fate, the gods, or ourselves? Only when people believed that they could exert some control over the future did the ideas of risk management emerge.

After the first 600 years, where acceptance was at glacial speed, ideas emerged a little faster. In 1600, Pascal and Fermat developed probability theory, the first tool of risk management. This established the concept of choices. In early 1700, Bernoulli introduced the concept of utility, defined as the usefulness and satisfaction in the eyes of the risk taker. Bernoulli stated: “Although the facts are the same for everyone, the utility is dependent on the particular circumstances of the person making the estimate.” Not everyone values risk in the same way. Venturesome people place greater emphasis on a small probability of a large gain. For others, preservation of capital is the main goal. In almost all situations, individuals, when faced with two choices each having the same mathematically calculated outcome would choose the one

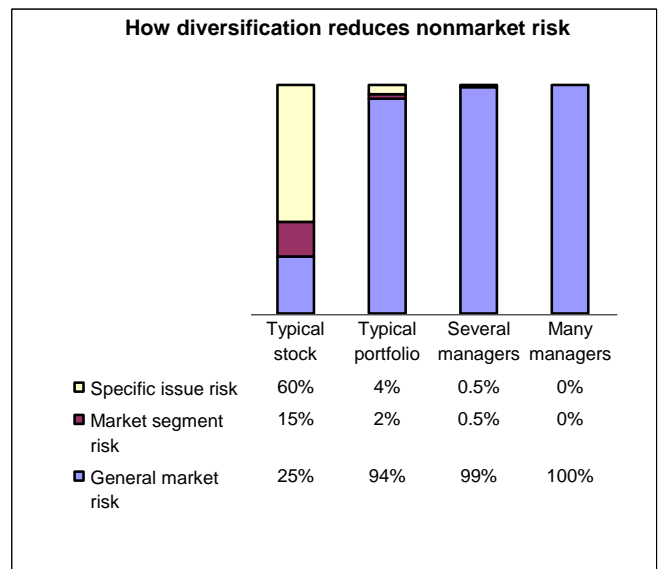
with the higher degree of certainty. In 1730, a French mathematician, Abraham de Moivre, introduced the concept of the normal curve, or bell curve, because of its resemblance to the shape of a bell. The bell curve looks at the distribution of events around the average. Uncertainty could now be measured. In a normal distribution, 68% of all observations will fall within one standard deviation of the average, and 95% will fall within two standard deviations. Today, standard deviation is one of the most widely used measures of investment risk. One hundred years later in approximately 1830, Francis Galton, uncovered another concept that is central to understanding risk, regression to the mean. This is the notion that trees never reach the sky. That what goes up, must then come down. Finally, in 1952, Henry Markowitz in a fourteen-page paper provided the mathematical and theoretical basis for portfolio diversification. His main theme was that a portfolio of securities was entirely different from holding individual high-risk names.

### Risk is a one syllable word

Risk is such a simple little word that it is amazing how long it took to define it. Further, there still remain many different interpretations of risk by different users. Let's be clear though, risk is different from uncertainty. Risk describes the expected payoffs when their probabilities of occurrence are knowable. Probability theory, utility, standard deviation, regression to the mean and diversification are all terms that are mathematically defensible. A good example is the actuarial mortality tables. The actuary does **not** know what will happen to Mr. Wright in 20 years, but does know quite precisely what will happen to 50 million people as a group in each year, including the 20<sup>th</sup>. Uncertainty is defined by Webster as a "complete lack of definite knowledge especially about an outcome or result." *Our biggest challenge as investors is to understand what risks are avoidable, which are acceptable, provided we are rewarded for taking them, and which are unknown.*

### Tenet No. 1: Diversification

Diversification provides a "free lunch" to investors. It may have taken Markowitz 952 years of development to come up with the mathematical and theoretical basis for portfolio construction, but his work merits our attention now. This concept allows us to combine a group of high-risk individual securities into a relatively low-variance (risk) portfolio. The key to the whole formula, that extra smidge of understanding, is that the variance of a portfolio is less than the weighted average of its individual pieces so long as you minimize the covariance or correlation among the returns of the individual pieces. This same formula holds true for asset classes (domestic large cap, international, real estate, etc.) as well as for individual stocks (GE, Merck, Disney, etc.) If the technique is used properly (a big "if"), an investor can avoid those risks for which there is no recompense and accept only the risk which is and should be rewarded. At Wright Associates, we have spent a career lifetime understanding how to minimize this correlation. We are not slow learners; it just is not as easy as it appears to be! One diversification trap that snares the unwary is excessive diversification. As Warren Buffett states: "...that is madness." The optimal diversification strategy is as follows:



## Tenet No. 2: Volatility

Let's pick on Abraham de Moivre, and his legions of bell curve followers, for a minute. It was a good idea to derive a formula to measure differences from the average or mean. However, volatility per se, whether it is related to weather, portfolio returns, or the timing of one's morning newspaper, is simply a benign statistical probability factor that tells us nothing about risk until coupled with consequence. Here we go again; as in the diversification example above, that extra little smidge of understanding is really the key to applying this concept of investment analysis. *What is the specific consequence whose probable occurrence should concern us?* Well, it is not the same for everyone. The idea of a 60% equity/40% fixed income mix is nonsense. For instance, for retirees the consequence of having incorrect volatility is to run out of cash before you die. For a pension plan, the consequence for incorrect volatility is to have insufficient assets reserved to provide retirement benefits to retired employees. For an endowment, the consequence of incorrect volatility is to have to ask patrons for more money because the original development effort was wasted. There is no "one-size-fits-all" answer to this equation; most situations are unique. If you know your spending needs and position your account accordingly, a financial cataclysm won't do you in.

## Tenet No. 3: Regression to the Mean

Thank you, Mr. Galton! You gave us a brilliant formula in 1830 that investors have been pondering ever since. We know physically that there are limitations to trees growing forever, but it is a little harder to envision limitations in a stock price. Mr. Galton's formula is the statistical root concept of value investing. Isn't it better to buy an undervalued stock (buy low) and watch it move to full value (sell high)? What then explains the fully documented fact that investors tend to buy mutual funds only after periods of good performance only to see performance change for the worse

after purchase? Peter Bernstein in his book provides three reasons why regression to the mean can be so frustrating. "First, it sometimes proceeds at so slow a pace that a shock will disrupt the process...The second reason is that the regression may be so strong that it goes through the mean or fluctuates with irregular deviations on either side of the mean...Third, the mean may be unstable." Here we go again, it is not enough to know the mathematical formula, we really must have the extra smidge of wisdom to be able to apply the formula practically. If you pay too much for a business, even if it is an excellent company, you'll get a poor return on what you paid. It's that simple.

## Value Investors

So, after reviewing the great mathematical formulas of the last 1000 years, we still are having problems with that single one-syllable word, risk. It seems as though despite the quantitative applications, risk is really in the eyes of the beholder. This line of thinking takes us to a different group of pioneers who believe that portfolio risk is best managed by studying the companies within the portfolio rather than studying the history of stock prices and risk formulas. This select group includes, among others: John Maynard Keynes, Ben Graham, Warren Buffett, Marty Whitman, Chris Browne, and Mason Hawkins. Keynes insisted that each investment be selected on the basis of "safety first." Ben Graham described the "margin of safety" as the central concept of investing. He says: "A true margin of safety is one that can be demonstrated by figures, by persuasive reasoning, and by reference to a body of actual experience." Warren Buffett's concern with uncertainty is best described in his two rules of investing. The first rule is "Never lose money." The second rule is: "Never forget rule number one." Marty Whitman has coined the mantra "safe and cheap." These rules, promulgated by successful investors, imply that a more than ordinarily successful investment operation depends on the fundamental analysis of the business, not on the

market risk; and on minimizing risk, rather than seeking it out.

## Conclusion

What is our perspective on risk when constructing portfolios? Well, we have distilled all the above information into three broad concepts. First, we construct diversified portfolios, paying strict attention to the covariance of the managers and asset classes. We know the covariance of managers because of our investment consulting experience, where we spent over seven years interviewing at least 150 managers per year. The demonstrably lower volatility of these portfolios has allowed clients to take withdrawals for a longer period of time compared to portfolios with the same return levels but higher volatility. Second, we seek out managers who apply a much higher level of fundamental analysis to the individual securities in their portfolios. We are not looking for closet indexers. Rather, these managers look at a stock as a fractional ownership in a business rather than a piece of paper traded for a quick buck. Their stock selection process emphasizes safety which is achieved through a thorough understanding of the business in relation to the price paid. In this case, we are seeking to use

the higher volatility of the stock price to our advantage, most often when the volatility is on the downside. Third, we individually construct each portfolio to the specific client needs. True, we could be more efficient and make more personal money with an assembly line process, but that is not why we are in the business. We want each and every client to be able to achieve their individualized goals. At Wright Associates, we have learned through experience, history, and constant portfolio review that the crucial factor in investment management is not to manage rates of return, but to manage market risk on an individualized basis.

Sincerely,

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