

# INVESTMENT MALFEASANCE AND BREACH OF FIDUCIARY DUTY

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Arbitration cases submitted to the NASD generally cover the issues of negligence, breach of contract, breach of fiduciary duty, unsuitability, failure to supervise and misrepresentation. For most purposes, they all tend to say the same thing- a failure to gauge risk.

The bulk of cases involve common stock with mutual funds and annuities next in line. For most purposes, they all tend to say the same thing- a failure to gauge risk..

The essence of consumer complaints is the loss of funds due to a bad selection of assets. Everyone recognizes that equities can and do drop in value; that markets are volatile and are subject to various losses at any given point in time. What I am suggesting is that the use of investments or allocations for many consumer situations were inherently flawed from the outset since the risk level was either not described at all or were defective in their presentation whether offered verbally, in an individual written report, or provided by most independent software.

While the following may be described by pundits as a diatribe against brokers, planners, attorneys, et al, readers will simply find a factual identification of risk. It is a statement of fact that the elements of risk have not been taught to almost all in the industry- certainly not to brokers as part of initial training nor as part of mandatory continuing education. (Actually, the fundamentals of investing are not taught- alpha, beta, correlation, standard deviation, etc. as part of broker licensing.) There are various other programs that suggest that the subject matter is included in detail- but that is also a non item when viewed objectively. For example, no material in the CFP coursework- up to at least 2002- adequately demonstrates risk. Statements from a CFP "graduate" in 2004 indicated diversification was not taught. The Beebower review is wrong- hence so is the asset allocation "education". They cannot offer asset allocation modeling if risk is incomplete or wrong. Nothing is complete nor applied to actual situations. There is no material regarding the odds of loss (addressed below). Nor is there mandatory continuing education on risk. In essence therefore, there is very little knowledge base of risk at all.

What is provided to consumers is generally wrong and/or misapplied. Advisers, brokers, planners, attorneys, arbitrators, CPAs et al cannot claim to offer or review fiduciary services- actually any services regarding suitability- unless risk is understood and properly conveyed to consumers.

Before continuing with detail, and assuming the above is valid, "if risk is not taught to advisers, what is the legal imperfection that can be applied?". I surmise that a defense exists that the various governmental entities (SEC, NASD) do not require risk to be taught. However, then effectively all arbitration claims to the areas of suitability et al become moot. But if one is required to adhere to the law (investment must be suitable), ignorance is no excuse. Suitability and the associated requirements cannot be unilaterally released nor explained away by ignorance of basic risk. Such risk can be defined by statistical measures which can/must be submitted to consumers prior to a sale or application for their acceptance or denial. The detail- both positive and negative-

must be provided in full.

What about the supposed risk profiles required by brokerage firms? Are they valid for interpretations for risk? Generally no. While it is necessary to know a consumer's income and assets, it is actually reverse use to indicate the number of years of "investment experience or trading". Why? Because consumers do not understand the statistical basis for risk. They have little to no idea of the implications of their actions. They are swayed by human emotion that can violate most of the rational decisionmaking process. The B/D firms know this. A fiduciary must. There has been significant study of human interaction and emotionalism to risk starting even before Tversky and Kahneman in the 1970s through Thayer, O'Dean, Barber, Shiller, Gilovich and many, many more in 90s and 2000s. That is not to say that some elements of knowledge may not be evidenced by consumers, but it is limited in the extreme. If the brokerage and advisory entities have never been taught the fundamentals of investing, why should even less studious consumers be given the standing of "sophisticated." They cannot. Many have taken illogical, erroneous and unknowledgeable actions for one year and repeated it for five, ten or twenty years. Experience is not a precursor of investment knowledge nor competency. Anyone not grounded in the fundamentals of investing and/or being fluid with a financial calculator is not sophisticated. An understanding of risk is mandatory for a position of suitability.

This quote from Dr. Frederick Mark Gedicks, Professor of Law, BYU, succinctly puts a real life focus on the problem- "Although the online revolution has indeed afforded individual investors control of their investment portfolios and direct access to market information and services, profits have proven more elusive. Assembling drastically under-diversified portfolios, trading on impulse and rumor, and blithely leveraging their holdings with margin loans, many of these "self-directed" investors incurred substantial losses in self-managed accounts despite the relentless appreciation of equities during the 1990s. Others were misled by the initial appreciation of their holdings, misunderstanding this as confirmation that their risky strategies were sound, when in fact they were not. After the market turned in early 2001, it became clear that many self-directed investors lacked basic knowledge about securities markets and investing generally, and as a result incurred substantial losses when their under-diversified, speculative, and over-leveraged portfolios evaporated in the bursting of the technology bubble and the general market decline."

One may attempt to point to the more "definitive" risk profile questionnaires used, generally, for more extensive advisory or planning work. Once again I will provide detail, but suffice to say, the questionnaires contain generally no objective statistical measures on which a consumer could evaluate the implications of their answers (nor for anyone else). Further, if the identification to risk and reward about a client were evident and direct, all questionnaires would be essentially similar. They are not. They are wildly inconsistent. And open to various and inconsistent interpretations by advisers. More importantly, I submit that there is very little of useful substance that a 10 to 12 question questionnaire is going to yield. Here is a question from a industry questionnaire prior to 2000 (attached). I state that it is similar to most other questionnaires.

There are four different \$10,000 investments over a one year period.

Portfolio A- Best gain= \$750. Worst gain= \$250

Portfolio B- Best gain = \$1,500. Worst loss = \$250

Portfolio c- Best gain + \$2,250. Worst loss= \$750

Portfolio D- Best gain = \$3,000. Worst loss \$1,250

Which would choose to invest in?

The "worst" loss of \$1,250 is a fraud- it actually references little more than a correction in the market (10%-

15%). Recent history clearly showed that a 25%+ loss is possible in one year (1974). History shows that a 45% loss in two years is possible (1973/74). The assumption by the adviser that a consumer would not care about this risk nor orient themselves differently given the real world implications is beyond comprehension. (The "worst" loss is not one standard deviation- it is at least three. See below for further detail)

And one other: Which of the following statements do you feel best describes you as an investor-

I prefer investments that are designed to provide stable returns with a minimal chance for loss on my investments;

I prefer investments that are designed to provide moderate returns even if I have to assume a greater chance for a loss;

I prefer investments that are designed to maximize returns and realize that such investments also carry the highest chance for a loss.

There is no definitive position that can be taken. Unless real life numbers are applied, there is no acceptable risk attitude that can be identified. It is similar to saying that diversification is "not putting all your eggs in one basket". That is superficial, sophomoric and effectively useless.

What about income? Certainly a mandatory area but it still provides little understanding of where the money is going nor what they are spending it on now or projected into the future.

Risk starts with an analysis of a detailed budget of current and projected retirement spending coupled with actuarial lifetimes, inflation rates, and investment returns (at a minimum). It is not what a client has done in the past, would like to do now nor, necessarily, would like to do in the future. It is what they can be "allowed to do" given the calculated numerical odds of success. (A formal budget is attached as reference). It is an important position that the significance of the statement be recognized. While younger "investors" may be able to take a more cavalier approach to risk, most over 50 years of age and those in retirement need to comprehend the implications of their actions. They do not have the luxury of time should losses occur. That said, they are incapable of the calculations indicating what needs to be done. Therefore almost all consumers do not have the capability to understand whether or what type of risk they need to take.

It is within that context that an advisor must know how to compute basic present and future value amounts to determine the minimum "kitty" needed at retirement. They must have some ability with a financial calculator. Software programs can and do such calculations millions of times each day but there is also no validation to the internal machinations. It is wrongly (and generally) conceded that whatever comes out of a computer must be correct. (From a statistician's professor- "You can use any calculator program on a test as long as you write the program. Otherwise you "don't know dirt about what the program tells to you".) While simple calculations can be easily verified, not so with programs presenting more complicated scenarios. They cannot be accepted *carte blanche*. All inputs and internal calculations must be verified. It is labor intensive- more succinctly, it requires a knowledge base far in excess of the norm in order to properly convey any inconsistencies (assuming they exist). It absolutely requires individual capability with a financial calculator. Additionally, many of the inputs are generally based on past history that has no basis to current economics. Morningstar reports cover almost all mutual funds. Yet the "star ratings" and returns all have to be based on past history- with no reflection of current economics or markets. Having explored numerous such inputs and programs, I can state that one or both has a tendency to be erroneous.

## **Diversification**

There are certain key elements to the definition of risk. The first is diversification. As stated, it is NOT, "don't put all your eggs in once basket." That provides nil statistical application. It is effectively useless in any formal proceedings. The question is "how many stocks do you have to have in a portfolio in order to insulate it from unsystematic risk." More colloquially, "how many stocks do you have to have in a portfolio for it to be properly diversified." The answer comes in stages. The first stage reflects pre Internet/pre computer technology and markets- say roughly before 1995. Before this period, day trading was limited; 24 hour international trading was also limited and the ability for the consumer to gather specific information regarding stocks, funds, statistics was effectively not available- or if so, extremely time consuming and expensive. So market movements were influenced by "old" data and "slow" trading". As the graph shows, it was possible to reach some level of diversification by purchasing about 15 stocks. However, the graph is not complete in that if the selections were highly correlated with each other, little diversification is accomplished. For example, if one chose stocks in autos, steel, rubber, glass, etc., the overall diversification is lost. Even if one did pick various industries- transportation, pharmaceuticals, finance- it is still necessary to have capability to analyze many, many different areas and companies. Consumers rarely have that capability. So do most others.

Though a little premature in the commentary at this point due to its sophistication, here is a quote from Professor Benoit Mandelbrot regarding the calculations necessary to figure out an element of risk- "First, as Markowitz himself pointed out, it is not certain that using the bell shaped curve is the best way to measure stock market risk; it is easy but not necessarily right. Second to build efficient portfolios, you need good forecasts of earnings, share prices, and volatility for thousands of stock. Otherwise garbage in, garbage out. Finally, for each stock, you must laboriously calculate its covariance with, or how it fluctuates against, every other stock. For a thirty stock portfolio, about the minimum needed to make the numbers work well, that means 495 different calculations of mean variance and covariance. For the entire NY Stock Exchange, 3.9 million calculations. And because prices change, the exercise needs constant repetition."

No matter, the 15 stock diversification is no longer current. Due to the proliferation of the computer and the launch of the Internet came the "ability" to view millions of pieces of information (not necessarily knowledge). Couple this with the start of 24 hour international trading and more caused a lot more trading in individual securities. (See comment by Gedicks above.) While the overall risk of the entire market is roughly the same, it now requires at least 50 stocks to reach the same level of diversification as previous. (See article by John Y. Campbell , Martin Lettau, Burton G. Malkiel and Yexiao Xu: This paper uses a disaggregated approach to study the volatility of common stocks at the market, industry, and firm levels. Over the period from 1962 to 1997 there has been a noticeable increase in firm-level volatility relative to market volatility.) Other studies suggest from 100 to as many as 350 stocks. But no matter the number, the increase makes the ability by consumers to pick so many various companies unthinkable.

No one can say that they are a sophisticated investor unless they know diversification by the numbers. No broker can gauge risk of a single security by itself or within a portfolio without this express statistic and its written statement of risk to a prospective consumer. The industry has not been required to do this- it is not even taught. Nonetheless, I believe the lack of formal statistics to be a significant breach to a consumer. If a sale is to be suitable, risk of holding singular securities must be accounted for.

## **Correlation**

Unfortunately for all concerned, correlation is one of the more difficult areas to grasp while also being one segment of current information that is almost impossible to gather. It refers to the attempt to find other securities

or funds that do not move in necessarily the same manner at the same time for the same reasons or in the same amount. In building a portfolio, you are attempting to utilize different investments so that if one doesn't necessarily do well for whatever reason, the other one(s) might since they are not tied to the same underlying issues. For example, U.S. stocks might react unfavorably to U.S. changes in interest rates, but Korean stocks may not do anything at all but move independently due to conditions in Southeastern Asia. Admittedly, with the world becoming "smaller" and with instant transmission of almost all data, many countries and investments may be impacted by another country's idiosyncrasies, politics, or economics and tend to do the same thing.

A correlation of +1 indicates perfect positive correlation- the investments move exactly in the same direction; a -1 indicates a perfect negative correlation- investments will move in a negative direction to each other. Most portfolios end up with random correlations with a positive correlation leaning. But correlations take time to analyze- generally a year. So by the time a "trend" is identified, too much time may have elapsed for it to be statistically valid. It does make calculations imprecise- but "you have to start somewhere" and it is necessary to utilize the statistics available. The quote that an "investment selection is as much an art as it is a science" is quite true. That said, however, it is mandatory to understand the science and its limitations before one applies emotional (and unknowledgeable) strategies.

### **Efficient Frontier**

Markowitz proposed the efficient frontier as a way of reducing risk for any given return. For example, instead of buying solely stocks, it may be possible to combine stocks and bonds together and yield a higher return and with less risk. In statistical terms, this effect is due to lack of covariance. The smaller the covariance between the two securities -- the more out of sync they are -- the smaller the standard deviation of a portfolio that combines them. The ultimate would be to find two securities with negative covariance (very out of sync: the best years of one happen during the worst years of the other, and vice versa).

Certain financial plans may contain commentary on the Markowitz theory and that the proposed allocations reflect the insights of the Nobel award winner. But once again the information is outdated at the time it is used. There is no question that the information is viable to some degree, but even if valid at point "zero", it will become outdated at some short point thereafter. In our new Internet and computer economy, that time frame may be almost nil. So we come back again to who is the sophisticated entity selecting the portfolio? There are next to no consumers who have even heard of the Efficient frontier- fewer still that know the limitations. Therefore the adviser must provide the initial commentary to such constraints of the Efficient frontier and indicate the implications of risk going forward. If no monitoring is anticipated nor offered by the adviser, the risk of economics, suitability, rebalancing, volatility and, particularly, the impact of 1973/74 must be presented in a clear and concise real life application to the consumer so they "know" what to expect in a major downturn. (Of course, the statistics for 2000- 2002 can be used for current positions. My intent is to show that the historical statistics and the subsequent financial implications were well known prior to that debacle.)

For clarification purposes, all valid financial and investment plans tend to address correlations and other such fundamentals in some fashion (though not correctly). My point is that the maintenance of a portfolio in times of changing economics requires vigilance. Market timing- the intent of picking stocks and funds with the thought of fast profits- is rarely workable. Rebalancing- adjustments at an annual basis to supposedly reflect changes in risk- is most appropriate. (But the point of this entire commentary is the knowledge and competency to do so.) However, rebalancing can actually increase risk and loss to the point of retirement failure. That it may be difficult to analyze the economic scenario while it is occurring is no defense for not trying.

## Portfolio Risk and standard deviation

A portfolio may consist of individual stocks, bonds, mutual funds and more. For the purposes of the following, I will assume that the element of stock diversification has been properly addressed and will skip to the next level of risk identification.

There are many areas of risk- economic, business, financial, governmental, etc. and each of these must be addressed uniquely to a consumer's holdings. However, there is one type of definition that is currently being used by the industry as an overall indication of risk- though with general incompetency. It's called standard deviation. While it does provide a gauge of volatility, that's about it. Unfortunately, the description of standard deviation requires a much greater definition and interpretation than offered.

Standard deviation is a reflection of volatility. The standard bell shaped curve is the visual example of how it works. Literally everything that statistically happens falls into the middle of such a curve with lesser amounts at the edges. (They all don't look so neat, but this is fine for the initial example.) In regards to securities, the average return is around 10% with return variations of 21% on each side (-11% to +31%). However that range represents just 68% of all occurrences and is referred to as one standard deviation. It is important to note that distinction since it is NOT all volatility- just a little over 2/3rds (the shaded area). A more complete percentage is two standard deviations which represents 95% of probabilities. This is sometimes used in a few consumer articles, but rarely. Three standard deviations represents 99% but is usually identified only in professional articles. However, it is obvious that three standard deviations- essentially 100% of the volatility- is necessary to represent the complete risk to consumers. (Note the intentional miscategorization in the last sentence- the use of the term "risk" in place of standard deviation or volatility. Readers must understand the limitations of improper terminology.)

As stated, the graph represents a perfectly symmetrical curve, neatly packaged with even distributions on either side. But for purposes of real life risk, it is not so consistent. Various interpretations abound as to the skewness at the extreme. The full measure of risk may be established by the evidence provided in "The (Mis)Behavior of Markets" by Professor Benoit Mandelbrot. His work shows that the odds of risk of loss is huge- far beyond the cursory representations of most texts. Though that element may be too advanced for most judicial purposes, such new analysis cannot be removed from current thinking.

The basics of standard deviation go one step further- though without a full understanding of the following paragraph, it clearly reflects a distortion of risk by many planners. Standard deviation is reduced the longer you hold a security. The statistical support is as follows: assume a standard deviation of 30%. If the security was held for five years, the standard deviation is reduced to "only" 13.42%. (Divide the annual deviation by the square root of the years held- in this case 5 years. That number is 2.236. And if you held it for 10 years, you divide by 3.16 for a volatility of just 9.48%. If you had started with just 20% volatility, then a 5 year deviation would result in a 8.94% volatility and a 10 year deviation of only 6.32%.) The appearance to the novice should be evident- simply buy and hold on to a portfolio and the "risk" will be reduced each year to a most acceptable level. This is how risk has been presented. It is wrong. As stated, standard deviation is not risk. Secondly, the risk of loss actually goes up over time. Use whatever statistics you want to sway the numbers to an investment- the bottom line to the consumer is the risk of loss of their funds. That's what they want to know- whether they will have enough money to live on- and what the adviser will do to ameliorate losses if and when a bad period occurs during the anticipated hold period.

Actually an investor can expect about 50% less funds than anticipated. I submit that there is a fiduciary duty to provide this material to clients. But it is not done. Why? Well, first and foremost, the fundamentals of investing have never been taught to brokers. A series 7 rep has not been taught diversification, beta, alpha, correlation, standard deviation etc., and, quite importantly, has no inherent ability with a financial calculator from standardized licensing training. There is no compulsory education in this area at all for securities brokers nor insurance agents. This statistic is not in the CFP required study.

Here are the statistical measures of standard deviation and projected losses. (Admittedly, the opposite side is true of returns. It is possible to have a huge amount of money during retirement and at death. But that is not the real world of planning during retirement- it is to have enough funds given most market calamities.) The longer you hold a security, the greater the risk of a major loss. Assuming a 20% initial standard deviation and a hold period of five years, one uses the formula  $(1 - .0894)^5$  and it yields .626. This means that the final five year wealth may be only 63% of projected (and that is just for one standard deviation- a 68% probability in itself. If one uses three standard deviations, the risk is even greater). The statistic represents a 37% loss from projected value- far greater than a one year 20% swing. Per Investments by Bodie, Kahn and Marcus, Richard Irwin Inc. 1989, page 224, ".....time diversification does not reduce risk. Although it is true that per year average rate of return has a smaller standard deviation for a longer time horizon, it is also true that the uncertainty compounds over a greater period of years. Unfortunately, this latter effect dominates in the sense that the total return becomes more UNCERTAIN the longer the investment horizon". "Investing for more than one holding period means that the amount at risk is growing. This is analogous to an insurer taking on more insurance policies. The fact that these policies are independent does not offset the effect of placing more funds at risk." I emphasize the date of the book of 1989. The formula for the position of loss is not a new calculation just "invented". It has been known far in advance of the 2000- 2002 financial debacle but remained universally unacknowledged by the securities and planning industries. Consumers are unaware of this material. They cannot be expected to search it out either. However, true advisers must seek it out, understand it, use it and properly convey the implications to consumers.

If one takes a 20 year hold period, the risk of loss (obviously) increases. For long term consumers who are under the guise of a continued buy and hold, the risk of a loss is so excessive as to make a retirement a far greater risk proposition that has ever been addressed by the industry. Assume a 20% initial standard deviation and a 20 year period. The standard deviation drops to 4.47%. The appearance of low risk. But the risk of loss is calculated by  $(1 - .0447)^{20} = .40$ . That means that the end result could be only 40% of what is expected (and this is based on just one standard deviation). This is critical information to any investor. It is mandatory that an investor be presented a detailed statement of this statistical risk. These numbers are not far fetched nor purely theoretical with no application to real life. In fact, it is the reality that these numbers have a direct bearing on the lives of hundreds of thousands of consumers and literally all retirees. As well as pension plans. That is exactly what happened in 2000- 2002 and will happen again.

Many brochures talk about standard deviation but give the reader no real life example of what in the world they are talking about- probably because they don't know or can't explain it. Standard deviation may be taught in some element to others, but having discussed this with many- and certainly with brokers, planners and insurance agents - they still don't have a clue to the real world application of risk. They do not use a financial calculator. They have never heard of Zvi Bodie. They do not know of the "fallacy of time diversification." Therefore, they have breached their duty to consumers for not knowing what they are doing. I do admit that such knowledge is not easy to understand or utilize- certainly if the adviser is not conversant with a financial calculator. And I do admit that a formal presentation will take more time, cause more anxiety and, possibly, eliminate some sales of

products and services. So be it- such an endeavor is the only way to validate suitability.

### Monte Carlo Analysis

This is a computer analysis of thousands upon thousands of various statistical probabilities. The chart shows the results of one trial. (No matter the number of calculations, the general probabilities are similar). As shown, an investor could end up with huge amounts of money. But that is not what the consumer needs to address- it is what they need to do to survive most market situations. It is 'what are the statistical odds of making it through retirement'. Basically, if a retiree takes out no more than 4%+ of their asset base annually, they have a 95% chance of success in making it through retirement. Monte Carlo analysis has only recently been "approved" by the NASD for use with consumers but the statistical dynamics have been known and used for years.

(Computations of past 20 year rolling periods produce about the same 4%+ activity.) Admittedly, few brokers may have familiarity with the numbers or calculations. Once again, no matter. As a fiduciary- even to address suitability- such odds of success must be addressed to consumers.

But that is not the end of risk. Note that Monte Carlo provides numbers over long periods of time. It does nothing to gauge the risk that occurs at any given point in time nor what needs to be done to avoid a financial debacle. The point of this is the turmoil of 1973/74 which, obviously, was known to all securities participants. During a period of less than 2 years, the market lost over 45%. Such calamity might fall within the 5% of statistical odds in Monte Carlo that a retirement will not work. But since it is a real life scenario- and could occur at any time- the adviser is mandated to refer to this and indicate what will be done by the adviser. Or that the adviser is not monitoring the account and will do nothing. The normal position of "don't worry, the market will come back" is absolutely unacceptable. It is true that the market has always come back- but that does not necessarily have anything to do with the retirees money. And that is effectively the sole concern for almost all retirees.

1. Here is "stay the course" in 1973/74.

Assume \$125,000 with \$12,500 removed annually and a 4% inflation factor.

(You can follow the same line of reasoning with an asset base of \$1,250,000 and a \$125,000 annual budget)

Year	S&P 500	Loss	Total Addition (Reduction)	Remaining
1973	-17.37	(-19,541)	(\$32,041)	92,959
1974	-29.72	(23,763)	(\$36,763)	56,196
1975	31.55	13,464	-55.72	56,140
1976	19.17	8,066	(5,993)	50,146
1977	-11.50	(-4,085)	(18,707)	31,438
1978	1.06	172	(15,034)	16,404
1979	12.31	73	(15,741)	662
1980	25.77	No Money Left	-----	-----
1981	-9.73	No money left	-----	-----

2. Here is "stay the course" for 2000- 2002.

Assume \$125,000 with \$12,500 removed annually and a 4% inflation factor.

Year	S&P 500	Withdrawal	Total Addition (Reduction)	Remaining
2000	-9.1%	(12,500)	(\$23,750)	101,250

2001	-12	(13,000)	(\$24,150)	77,100
2002	-22	(13,520)	(30,212)	46,888

At the end of 2002, the retiree is out of luck. A retiree would need a gain of almost 30% just to break even with the following year's inflated withdrawal. Not going to happen. It is no consolation that an adviser may state that "I told you this could have happened." It is no solace to funds that are gone.

3. Will this market drop happen again? Absolutely. When? Obviously unknown. But if such losses occur at the "wrong" time, retirees will not have enough money to live out their lifetime. Such exposure to risk has to be acknowledged in all training.

Pundits will say that it is impossible to know when the economy is bad. Admittedly it is not easy. But if an adviser provides a plan- even suggestions- they have a duty to validate the position. It may require a review of FED policy as a precursor to advice. It may require review of leading, coincident and lagging indicators. It will require a lot of effort beyond the normal capacity of most entities. So be it- some things are simply hard to do. But the potential of economic mess prior to March 2000 was obvious (inverted yield curve). The additional loss in November and December 2000 made the economic conditions more pronounced.

### **Rebalancing**

Almost all financial plans identify rebalancing as a method of correcting imbalances in allocations as time goes forward. One plan noted, "At times, investor's instincts lead them to invest when the market has been good and to pull their money out when the market has declined. While that investment method may feel right, it is a virtual guarantee of trouble. The "gut level" technique may lead you to buy high and sell low. The strategic asset allocation plan provided here can serve to guide you to a disciplined long term investment approach."

There are a couple positives and one specific negative with the statement. First, if the commentary is to scare consumers from making specious adjustments, perhaps that is O.K.. Consumers are apt to do the wrong thing at the wrong time- they react emotionally to the market since they know little about it. And just about nothing about risk. Another positive is to let the professionals handle rebalancing. I do not dismiss that save for the fact that few professionals have been taught risk. Hence the positive can become a negative. And the comment addresses "guarantee of trouble" regarding what can actually happen if one rebalances during a period of particularly bad economics. Note the term, economics. Market gyrations happen all the time. Market corrections of 10% or so are commonplace and reflect, in part, an inefficient market that is trying to become efficient. However, there are greater periods of uncertainty that are not directly evidenced by the market. They may be represented by periods of economic flux that bear greater impact on the movement of all areas- unemployment, interest rates, capacity, productivity rates, manufacturing and so on. These significant downturns are not market movements per se but severe economic developments that will invariably impact the market since the companies universally mirror economic trends. If the trends continue for an extended period, so will the market. Such trends were identified in literally every statistical element in 2000 and were amply presented in the press, FED documents, economic statistics and more. That the March 2000 drop was an aberration could have been true- but in going months forward, a softening of all the economic indicators was evident. Caution was advised. Advisers were indicating that buy and hold was a strategy and "confusing" the commentary with marketing. Buy and hold might work for those with an unlimited investment period. But a retiree does not have that luxury. The retiree has a finite time frame since they not only must recoup any losses in a short period of time but are also taking funds out from a depleting asset. Professionals advisers were completely aware of the fallacy of buy and hold. The professional is universally the sole entity with the (supposed) ability to know the statistical history of

the market and economy and in receipt of extensive data covering same.

Here is the analysis of the problem with rebalancing in a down economy. Say you started with 100,000 in the S&P 500 at the beginning of 2000. You lost 9% (round numbers) in 2000. Now you are at \$91,000. Next year, you lose 12% and are down to \$80,000. And you are still told to stay in the market because it will come back. In fact, if you were doing rebalancing you would be putting MORE money into a market and an economy that was experiencing a downturn. But we'll just leave it at \$80,000 at the beginning of 2002. However now you are down another 22% at the end of 2002 to \$62,500. So in three years, you are down about 40% overall in your equities. But do you know what percentage you have to earn to get back to break even? 61.6%. The odds of high returns similar to the 90's just to get back to where you started with is almost complete folly in a reasonable time frame. We are in a new period where growth will be much lower. There is a probability that another economic debacle will happen again in the near term. It's just pure numbers. It is a statistical fact. That an adviser was not taught past history, the ability to interpret the data or the understanding why it was so important does not release the adviser from the fiduciary duty of addressing such obstacles and applying activity to reduce exposure to the portfolio. Buy and hold is NOT a defense even if consumers were told that was the adviser's philosophy. Consumers expected competency and they had a right to know the implications of bad times and the activity of the adviser. The adviser was always cognizant of 1973/74. They knew what could happen and had a duty to protect clients by establishing criteria to keep losses to a minimum. Note that I am not expecting perfection- that is impossible. But advisers had to have a process in place that would be utilized when there was an inverted yield curve; high unemployment; high interest rates; etc.

But the losses are even worse with rebalancing. It's not just the fact that money was left to continually lose. It is the fact that, if one rebalanced a portfolio to maintain a specific risk profile, then more money was introduced into the market while the world fell apart.

Let's review another portfolio of 70% stocks and 30% bonds starting in 2000. The 70% of equities might have half of that in large cap funds, 20% in small cap, 15% in whatever. The same with the bond section. But I will just use the S&P 500 for the equities. Assume there was \$100,000 total in the portfolio at the beginning of 2000 with \$70,000 in equities. At the end of 2000, stocks were down 9.1%. So the equity side dropped \$6,370. I'll assume the bond side stayed stable. The essence was that the equity side was now too LOW and you would have to BUY another \$6,370 of stocks/funds to get back up to the 70/30 split. So now what happens in 2001? The S&P loses another 12%- and as should be obvious, so does the inclusion of the new \$6,370. Now the equity side is now down by \$8,400. Since you are using the standard rebalancing format, you have to buy \$8,400 more stock/funds to build yourself up again. Now go through 2002. The S&P dropped another 22% and your \$70,000 is now down another \$15,400. You go out and buy another \$15,400 of stock/funds to get back to the position of equity and risk that your adviser had indicated was necessary or appropriate for your financial situation. This does not make any rational sense. Why would anyone put more money into an inherently bad economy? Simple. They had been led to believe that the best allocation was one that stayed the course (no change) or to rebalance (normally) at the end of one year. Or that it is always good to buy when the market is low. But it should be perfectly clear- if you do so in an economy that is tanking- your risk of loss gets greater since you are committing funds at the worst possible time. Additionally, neither of these scenarios addresses the withdrawal of funds for retirement at the same time.

## **Budget**

The most critical planning element for retirees- a formal budget. More definitively, a specific retirement budget.

There is just no way to figure out risk and suitability unless you can reasonably and rationally innumerate how much the client needs for retirement. While I certainly submit that an explicit budget can be "off" even at the beginning of retirement, nevermind over a period of 20/30 years, it is mandatory that a solid attempt be made for this number. It does no good to apply any suitability characteristics unless you know- via a budget analysis- just how much was needed (Social Security excluded). With that, and effectively only that, can an adviser determine the risk necessary for a lifetime (caveats addressed further). For example, if the client needs \$40,000 a year at retirement, inflation is 3.5%, investment returns are 7% and the actuarial lifetime is 25 years, the "kitty" needed is \$670,000 (rounded). Perhaps some retirees have that effective kitty and are relieved that they will "make it". But these statistics are based on a flat rate or return- which has no bearing to real life. (Note that a 7% return cannot be made up by bonds. Equities are mandatory in order to provide the return needed for a retirement over a period of 20+ years.) Such an allocation- which I submit is needed by many retirees due to limited and inadequate assets- is at risk whenever a 1973/74 scenario was to happen again.

No period of time has seen a 7% flat rate annual return. If that is the extent of the analysis and presentation, the fiduciary breach is apparent. Volatility dominates. Somebody, some entity at some official/professional level has to be knowledgeable that such presentation will not hold up under any past history.

The adviser commentary such as "the planning function calls for assistance of a retirement professional who can assist retirees in finding the 'proper' investments for their needs" are nice words. But, I repeat, no formal budget, no 'proper' investments or allocations. Therein is the crux of the plaintiffs complaint. Just what was done? Certainly a plan had to incorporate exactly what risk is.

From here we go back to the house of Monte Carlo. If the 4% maximum payout statistic has merit, the retiree will need \$1,000,000 in order to have an acceptable retirement (\$40,000 excluding Social Security). Few retirees will have the extent of those assets. If the adviser did NOT address the proper assets and risk therefore and the retiree got caught in a bad period of the economy, is it the retirees fault for it all going wrong? Or attempting a higher risk when the "trusted" plan falls flat? Actually, the flat rate of return plan was a fraud- the retiree would was rarely going to make it.

Sure the retiree may have done something beyond acceptance, but the adviser has to have presented the caveats of investing. Yet none- at least very few- have ever defined the risk of LOSS. Per Investments by Bodie Kane and Marcus, "the impact of a one time standard deviation over the entire portfolio could reduce the amount anticipated by almost 50%." So now what if the retiree takes on extra and unacceptable risk? Was it the retirees fault that they were never told about the risk? No- it was the advisers lack of knowledge, competency and fiduciary duty.

This statement is corroborated by 2000- 2002 (actually planning for past history). Most "advisers" want to state that the 44% losses sustained during that period were merely reflective of the economy and a bad market. Nope- they were consistent with the economy and the losses sustained in a similar period of 1973- 1974. What was indicated to retirees regarding an initial wholesale slaughter of their retirement assets? If one is a professional adviser, it is mandatory to address risk. And it is necessary to adjust the allocation to reflect what devastation might occur.

Assume \$670,000 with an initial \$40,000 withdrawal indexed for inflation

Year	S&P 500	Loss/gain	Total Addition (Reduction)	Remaining
1973	-17.37	(-116,000)	(\$156,000)	514,000

1974	-29.72	(-153,000)	(194,000)	319,600
1975	31.55	100,000	57,000	376,000
1976	19.17	72,000	28,000	404,000
1977	-11.50	(46,000)	(92,000)	312,000
1978	1.06	3,000	(44,000)	268,000
1979	12.31	33,000	(16,000)	252,000
1980	25.77	65,000	15,000	267,000
1981	-9.73	(26,000)	(77,000)	190,000

In 9 years, the portfolio has shrunk \$480,000. Even if the portfolio then returned a flat 7% rate, it would last just about another 5 years. No matter how you run the numbers, the assets will be gone roughly 10 years before the retiree is 'scheduled' to die. Is the rationale and defense merely an unacceptable past history? Or that the 'market always comes back?' No- training and presentation of risk is mandatory by the adviser PRIOR to 2000- 2002. After all, the inverted yield curve in early 2000 was so obvious with its risk projection, no one could have missed the historical implications of a major downturn. But is this historical position presented in any courses- including those for CFPs? No. The sophomoric defense commentary that "gee, everyone knows the market goes up and down" and "the market always comes back" are illogical and almost wrong for most retirees. It is whether or not the retiree's MONEY will ever come back. Big difference.

This commentary could go on and on. But the point is clear- all of these issues have to be addressed if an adviser can relinquish the responsibility to a investor/client/retiree. There is limited adviser defense if a formal budget was not done. A percentage of current expenditures is rarely satisfactory. There is very limited defense in the use of a flat rate of return. There is some offset with a Monte Carlo analysis- but that is generally a computerized plan that, while it does indicate volatility and risk, does nothing to help ameliorate the economic scenario such as 2000- 2002. A plan has to incorporate far more than stay the course during financial devastation.

Putting assets into various allocations serves no purpose unless the risk of success is identified with real life applications. Advisers knew or should have known of the implications of 1973/74 and had a duty to acknowledge same to retirees. Also to reflect what they would do should such scenario happen again. Otherwise they and their firms are liable. That a "plan" cost only \$500 or \$250 or whatever and that the retiree should have known they weren't going to get much for that price has no validity as a defense. Retirees- effectively all clients- are novices as to risk. Further, they "trusted" the adviser.

I have a great difficulty in looking at an agent and its firm when they are woefully negligent in the knowledge necessary to understand risk. If you do not know diversification, you cannot determine risk. If you do not know risk, you cannot determine suitability. Worse yet for a plaintiff's claim, I have never even yet met a securities attorney who knew what diversification was by the numbers. Not one who understood risk. It's not available with a law degree. None of this has been presented to arbitrators either as formal education. I attempted to present some of the basics as part of NASD training over 10 years ago and was told it would never happen because "it would slow sales". Invariably true- but the omission of factual data to arbitrators is a breach unto itself. I have not even met a securities attorney who had and could effectively use a financial calculator.

The bottom line is that almost all cases before arbitrators are classically risk oriented. Ninety nine percent of consumers do not understand the risk implications of a single stock or a portfolio because it universally has never been identified to them. They are not sophisticated with the nuances of a budget or its implications even if

they had capability with a financial calculator- which they do not. The problem is that the gross numbers of advisers do not have such capability either. They have never been taught risk nor its real life implications. Software programs are notoriously flawed. Just about all Internet retirement programs are so far removed from reality as to be useless. I assume that some private programs address the risk of loss, but do not know of any. Even if such loss is identified, so what? It is the additional review of economics and what the adviser needs to do to protect retirees from financial devastation that is the key.

This is not an indictment of the industry or its agents in and of itself. It is merely a factual presentation of what risk is and the fact that the industry has not required an understanding of its inherent usage. One does not need to invoke an extreme position of a breach of fiduciary duty. The knowledge base for suitability is already lacking.

That arbitrators, attorneys, judges, expert witnesses et al also are deprived of knowledge and competency is no defense. Diversification, standard deviation, alpha, beta, correlation, Markowitz, Sharpe ratio and more must be taught to all industry participants in a real life element. It cannot be assumed that consumers have ever heard of any of them- even if so, that they understand the implications.

I end with the same position: If you do not know diversification, you cannot determine risk. If you do not know risk, you cannot determine suitability. A defense of ignorance in this mandatory area is no defense at all.