

THE MEANING OF RISK

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The Meaning of Risk

Webster's dictionary defines risk as the possibility of suffering harm or loss. While Webster's is not infallible, we believe this definition is reasonably close to a common sense definition of the term. Thus, financial risk is the possibility the money (or at least enough of it) is not there when you need it. This is different from the academic finance definition in which risk is defined as the volatility of returns of one stock or portfolio as compared to a larger universe of stocks. The following is not meant to be a treatise on the topic, as entire books can be and have been written on the subject. It is meant to illustrate a few of the important ways we think about the risks in your portfolio, how our thoughts differ from some conventional views, and perhaps most importantly addresses our expectations (or more specifically, our lack thereof) about the future volatility of portfolios we manage.

For a businessperson, the word "risk" usually requires an adjective to specify which type of risk is being considered. For instance, when a banker makes a loan, the primary concern is whether the borrower will pay back principal and interest (with the rate of interest set to compensate for the pure time value of money, expected inflation, and an appropriate premium reflecting the probability the borrower may default). Also of concern is the collateral that serves to limit loan losses should the borrower default. These considerations are termed *credit risk*. Furthermore, the banker often holds a portfolio of loans with fixed long-term rates, while the funding for these loans is typically short-term in nature. Thus, there is exposure to *interest rate risk* should short-term rates rise significantly. At other times, the banker may have bought a pool of loans, determining the price by making certain assumptions about the credit quality as well as the duration of the portfolio. Should interest rates fall significantly, the portfolio's value could be subject to *prepayment risk*. Not surprisingly, the banker will often attempt to mitigate certain risks by entering into derivative contracts. However, it is very hard if not impossible to be completely hedged. It is difficult to control one variable without affecting another. For instance, in hedging interest rate risk, it is very likely the banker has introduced *counterparty risk*, the possibility that the other party to the derivative transaction will be unable to perform its obligation. Other businesses have different risks, and a businessperson often must choose which risks are acceptable and those that are unacceptable. When we analyze a company, we want to understand to the best of our ability the various risks to which our business is exposed, and how management deals with them.

In contrast, academicians have sought a single statistic to measure risk that encompasses all the myriad risks a businessperson would consider. Using past price data, the standard deviation of returns is calculated in the belief that this reflects the risk that was taken, and presumably is reflective of the risk that exists in the future. The theory that is proposed about why all this makes sense ties in with the efficient market hypothesis. Supposedly, "rational profit maximizers" quickly impound new information into stock prices such that, at any point in time, the market price is the single best estimate of the value of an enterprise. Because news, by definition, arrives randomly, stock prices will follow a "random walk" and the price movements effected by the rational trading on news will reflect the inherent risk. Logician and philosopher Bertrand Russell once said, "It has been said that man is a rational animal. All my life I have been searching for evidence which could support this." Like Russell, our observations of human behavior (including our own upon self reflection) indicate that while humans would like to maximize their wealth, the assumptions they are always informed and rational recalls the saying, "Grant me three assumptions and I'll prove to you the moon is made of bleu cheese."

Modern portfolio theory (MPT) does not stop with applying standard deviation to a single stock. MPT contends what matters is not the volatility of any single stock, but also how each stock correlates with others. If the correlation is less than perfect, investors can eliminate stock specific risk by holding a diversified portfolio, leaving only "market risk". Taking the argument to its logical conclusion, MPT contends that investors should combine a portfolio consisting of all risky assets with a risk-free asset according to their own tolerance for risk. Einstein said, "While all models are wrong, some are useful." In our opinion, the academic model for risk certainly qualifies for the former, but not the latter. Furthermore, we believe the cause for this error in human judgment is man-with-hammer syndrome, "To a man with a hammer, every problem looks like a nail." Having acquired the mathematical skills necessary to perform such statistical analyses, it feels a shame not to use them, irrespective of the utility.

We realize discussions of modern portfolio theory and standard deviation might seem esoteric. Before moving to how some of this affects how we "manage risk" in your portfolio, I'd like to relate an experience of mine. A human resource professor gave our class a list of fifteen everyday items such as a bottle of water, a mirror, a whistle, etc. and asked us to *individually* rank each item in order of importance if we were stranded in the desert. The class was then divided into groups of five, told to first discuss each item, then as a *group*, re-rank the list. After all groups had done so, we compared individual and group rankings to a list prepared by Joe Outdoorsman (not his actual name), a survival expert. The point of

the experiment was to examine whether group discussion and decision-making would improve a desired end result, in this case the chance for survival. As I recall, this was the outcome in our class (and I'm confident it is in a great many cases, otherwise human resource professors wouldn't still be doing it). Each group list was "better" than the *average* of the individual member lists in that group and in some groups may have even been better than *all* the individual member lists, a fairly eye-opening result. While the intention was to examine organizational behavior in management, it could easily be relevant to the stock market as well. It describes how a group (stock market participants interacting to find the "correct" price) might come to a better decision than the average of the individual members in the group. The stock market is competitive—investors seek new information that might provide an edge—and the experiment certainly seems to lend empirical support to why markets are *often* relatively efficient.

But I could not help wondering: What if the survival expert himself had been in our class. Would he have been able to persuade the other members of his group of his expertise? Would his list have been "dumbed down" by compromising with other group members? What if there had been no "expert" to consult? What if two "experts" had been consulted, and their rank orders differed significantly (the expert's order was not based on any immutable laws of the universe; rather, it involved subjective judgments such as whether a mirror would be more helpful in signaling help than a bottle of water would help stave off dehydration)? The important question in market efficiency is not whether it is sometimes efficient, but whether it is *always* efficient. If you have expertise superior to the market (either current knowledge or a more accurate prediction of the future), there is no reason to need an opinion poll to judge a correct course of action.

We'll try to relate some of these concepts to how we've managed your portfolio. When we originally bought PacifiCare in the Focus Fund in November 2000, we viewed it as a risky situation. After reporting a severe earnings shortfall, the stock price had dropped to under \$11 per share from over \$60 per share months before. Here lies the seductiveness of measuring risk by stock price volatility. Volatility sometimes appears to be a reasonable proxy for risk. A news announcement occurred, and investors clearly were reacting and attempting to impound the information in the price. The open question is whether the new price was a correct assessment, an overreaction, or perhaps even an underreaction. A momentum investor would sell the stock immediately, regardless of price, assuming the market gets these things right. A value investor assumes nothing. There is an unknown probability that the downside risk is just as great at \$11 per share as it was at \$60 per share: 100%. The challenge is to decide whether an approximate value of the business, given the present facts and assumptions about the future, can be ascertained. We felt there was considerable business risk, as management did not appear to have a complete handle on its medical costs, a dangerous position for a HMO transitioning from capitated contracts, and maturing debt created some liquidity concerns. These judgments were made in a manner as divorced as possible from the stock price action. If we had no idea what the business might be worth, we simply would have passed. In this case, with the aid of a contact closely following the industry, we concluded that weighted for (subjective) probabilities, the potential reward exceeded the downside risk substantially. We wouldn't have had a clue what the future volatility of the stock price might be. If we were forced to guess, we probably would have assumed it would continue to be quite volatile.

PacifiCare's stock price recovered into the high 30's and we sold some of our position. Of course, we may have been more in harm's way than we realized, but it is impossible to prove either in the positive or negative. Moving forward in time, PacifiCare's stock once again (more gradually this time) declined to about \$15 per share. Emulating Charles Darwin, we sought information that would contradict our belief PacifiCare was still worth at least \$30 per share. We were unable to find anything of substantive concern, and in fact the liquidity concerns had lessened and profitability appeared to be improving. If asked why PacifiCare had traded lower, our most honest response would have been "you'd have to ask the people involved in the transactions how each arrived at the price." This is impractical of course, but if sellers were asked, I'm confident many of the reasons offered would have put a lot of arrows in the quiver of Bertrand Russell. Importantly, this illustrates how the academic definition of risk produces absurdities. Had PacifiCare just continued at \$30 a share, academic definitions would have seen it as less risky at \$30 than it is for the knowledgeable buyer who could now own it at \$15!

A more recent purchase is Johnson and Johnson. It appears to possess low business risk (although there are many examples of great companies that don't stay great, evoking the question of whether they were truly great in the first place), has a AAA balance sheet, and a price we believe is below its value. Yet, if you were to measure the historical beta (how the stock price has moved relative to the market), J&J has probably exhibited no less risk than the average company. If we had to guess volatility going forward, we suppose it would be less volatile than average. However, given we believe it is worth more than the current price, should we be surprised if it suddenly became volatile to the upside (which is also counted in academic notion of risk)? At any point in time, we might own a portfolio whose characteristics more closely resemble PacifiCare, Johnson & Johnson, or most likely something in the middle. What matters most is valuing businesses well enough that averaged out, we should produce attractive returns. If done well, this is the best protection against your financial risk.

Several implications follow from the above discussion:

Implication #1: It is dangerous to *assume* that results achieved under one set of circumstances in the past have any bearing on future results, especially if given a different set of circumstances. Sometimes the past should be a very good indicator of the future. In other cases, there is likely reason to believe the future will look nothing like the past. One must figure out the important factors to consider when assigning *ex ante* (before the fact) probabilities.

Implication #2: Diversification is necessary, but the required amount depends on the certainty (properly assigned) you have regarding an investment and on its relative superiority to the next available alternatives. It might appear, then, that we are in partial agreement with modern portfolio theory on diversification. Alas, we believe it is more akin to a patient for whom the prescribed medicine is working even though the diagnosis is completely wrong. If we found an opportunity we felt was a near certainty, and that opportunity stood out as dramatically better than any other with which we were aware, we would want to be decidedly non-diversified. In practice, there are degrees of certainty, and it will not be often that we think we have found a Michael Jordan lay-up when everything else appears to be a full court heave.

Implication #3: Risk is inextricably linked to your time horizon. Short-term price movements are not predictable. However, for the buyer of a business whose intrinsic value far exceeds the purchase price, the underlying economics of the business will be the ultimate arbiter of value. As Benjamin Graham famously said, "In the short term the market is a voting machine; in the long term it is a weighing machine."

(There are financial economists who have argued *time diversification* is fallacious. Relying on a few assumptions (the accuracy or relevance of which we would question), it can be shown mathematically that "risk" actually *increases* over time because the dispersion of possible terminal wealth diverges from the expected terminal wealth as the investment horizon expands. This is beyond the scope of this piece, but those interested should feel free to contact us for more information.)

Implication #4: When evaluating prospective managers, it is most productive to spend time thinking about whether they have the ability to value businesses and judge managements, the temperament to think independently, remain open-minded enough to recognize new information and reconsider original hypotheses, especially when the new information is discordant, the integrity to truly act as a fiduciary, and are free of conflicts of interest. Less useful is applying arcane formulae to past pricing data in an *ex post* (after the fact) attempt to measure "risk".

Implication #5: In the business world, exact probabilities of future events are not given; thus, be wary of those who try to measure it with great precision. While it is not necessary or even possible to come up with exact figures, thinking in terms of general probabilities and the potential downside is very likely the most effective way to "manage risk". *Business risk* (the certainty of the cash flows produced by the underlying business), *mismanagement* (a sound business is operated poorly, capital is allocated foolishly, or the business rewards are "skimmed off the top" and not channeled to owners), *financial risk* (how the business is financed and whether an exogenous shock could put the equity holder in jeopardy), and *liquidity risk* (the ability to convert the investment to cash) are the primary risks to consider. In addition, the purchase price must be sensible to avoid valuation risk. **Years of economic progress can go unrewarded for an investor paying too high an initial price for even a great business.**

Implication #6: Volatility in your portfolio can provide a test of mettle. We hope to pass these tests. It is sometimes uncomfortable to have a former fellow shareholder sell out at a price that is not consonant with what you believe it is worth (especially when your cost basis is significantly higher). If someone does not know the business well, it is understandable they might wonder what the seller knows that he does not. But as Benjamin Graham stated, "You are neither right nor wrong because the crowd disagrees with you. You are right because your data and reasoning are right." Some people seem to like to look back at portfolio returns and examine how they bounced around in an effort to see what risk was taken. What risk the portfolio *did* take is likely an entirely different, unknowable question. We recognize this view might be considered unconventional. Still, we believe the operative phrase is "it's alright to *look* foolish, as long as you aren't *being* foolish."

Tom

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