

## FQ Perspective

by Max Darnell

Many investors had felt that by spreading their investments across many asset classes – by investing in a wide array of betas – that they would avoid the risk of an across-the-board decline in their investments. They thought that they had avoided the problem associated with putting all their eggs in one basket as the adage advises.

When most assets did fall together in largely simultaneous fashion in the midst of the recent credit crisis, investors rated diversification a failure, and cried out in frustration that correlations had all converged on one. “Diversification failed this year,”<sup>1</sup> was the title of a New York Times article in the business section in November last year. In another, more recent article,<sup>2</sup> one of the large university endowments explained that “diversification had failed to protect its asset values.” This sentiment was, and is, entirely common. If their eggs were all in different baskets, then it would appear that they were somehow all tied together sharing a common fate when their fates were assumed to have been independent of one another instead.

There are several aspects of this that are wrong. Diversification didn’t fail; the metaphor of eggs in different baskets doesn’t accurately capture the purpose of diversification; and those weren’t betas that they diversified across when spreading their risk across different asset classes.

Let’s start with the last point first. In our industry, we speak incessantly about betas. There’s “beta” by which people mean to refer to “equity market beta;” there’s “bond beta,” “commodity beta,” “emerging market beta,” and “hedge fund beta;” and there’s “exotic beta” or “alternative beta” which includes “carry beta,” “convertible arbitrage beta,” “credit beta,” and so on. These are all assumed to be different sources of return, which should mean that their rewards represent compensation for taking on distinct sources of risk. (Investors all too often fail to ask the question, “What risk am I being compensated

for?” and when they do ask, they all too often fail to get to the root nature of the risk, satisfied instead with the empty answer that, in tautological fashion, simply references the type of financial instrument as though “by investing in credit I’m taking credit risk,” or “by investing in equities I’m taking equity risk,” answers the question. By delving no deeper than that, investors often don’t, therefore, tend to be in a position to judge whether the sources of the rewards are, in fact, distinct.)

The problem, of course, is that none of these are betas. None. And mistaking them for betas leads to the incorrect assumption about how they will behave in combination.

We need to recall the original meaning of beta. Beta is a measure of exposure an asset or portfolio carries to systematic risk. Systematic risk is the risk you get paid to take because it is that risk that remains after idiosyncratic risk has been dissolved through diversification. As a reminder, idiosyncratic risk is that risk that is peculiar to an individual asset or asset class. You don’t get paid for taking idiosyncratic risk because you can diversify those risks away. Notice the word “away” in that sentence. It is not that we are placing these risks – these treasured eggs – in different baskets for safekeeping. On the contrary, we’re trying to get rid of them because we won’t be compensated for holding them. Diversification is not an act of “spreading” risk around, rather it is a process of “dissolving” diversifiable, idiosyncratic, and uncompensated risk.

When stocks are combined with bonds, each dissolves some portion of the idiosyncratic risk of the other. Some are not accustomed to thinking of idiosyncratic risk existing at the asset class level, but that’s due to the erroneous association of “beta” with asset class. There are, indeed, risks that are peculiar to, i.e., idiosyncratic, the asset classes themselves, and that risk can be dissolved when combined with counteracting idiosyncratic risk attached to other asset classes.



The interesting question to ask then is what is this “beta matter” that remains after idiosyncratic risk has been dissolved or diversified away? We know that the risk that remains attached to this beta matter is compensated risk, so the question is, what are we being compensated for?

We’re being compensated for taking an array of risks that include risk related to the uncertainty of economic growth, uncertainty in the profitability of economic activity, uncertainty in the default potential of debt – corporate and sovereign, and etc.

The rewards associated with taking on these risks will vary for two simple reasons. First, as the perceived magnitude of these risks varies, so will the magnitude of the rewards. Second, the reward will rise and fall as the appetite for taking on this risk falls and rises across time. With respect to the former, the reward per unit of risk is constant through time, but the reward rises and falls proportional to the level of perceived risk. As perceived risk of nearly all types of risk rose during the credit crisis, for example, prices of financial assets had to fall to provide an increased level of forward looking compensation. To the degree to which perceived risk changes in differentiated fashion across different assets or asset types, idiosyncratic adjustments occur. We think that changes in perceived risk should be thought of as primarily idiosyncratic events, but risk contagion does occur which makes it look more systematic, causing prices across the board to adjust similarly and simultaneously.

With respect to the latter reason for rewards changing - the one that we’re most interested in here, in fact – changes in risk appetite cause the reward per unit of risk to vary. When investors are less risk seeking, and/or when they in aggregate are not capable of bearing as much risk as before, then the rewards per unit of risk must rise. We think that changes in risk tolerance should primarily be thought of as systematic since changes in risk appetite tend to affect all investment opportunities simultaneously. But since relative preferences for investments with different risks and risk levels may also be affected, we would observe idiosyncratic adjustments as well.

The point is that beta matter is subject to contagion effects with changes in perceived risk and/or expected return, and it is subject to systematic adjustments when either/both absolute or relative preferences change. Therefore, we should fully expect that the price of beta matter to undergo significant changes, particularly when investors’ appetite for risk changes. We shouldn’t be surprised to find

that risk we are being compensated for bearing is risky. We wouldn’t be compensated for it if it wasn’t.

In short, diversification is not intended to be a tool for risk avoidance. Rather, it is meant to be used as though it were an acid that dissolves away impurities, i.e., uncompensated risk, leaving a pure risk that is more desirable principally because we are rewarded for holding it. The remaining risk will be risky. Otherwise, we wouldn’t be compensated for it.

### Endnotes

<sup>1</sup>Waki, N. (2008, November 7). *Diversification Failed This Year*. New York Times. Retrieved from <http://www.nytimes.com/2008/12/07/business/worldbusiness/07iht-markets08.1.18458573.html>

<sup>2</sup>Fabrikant, G. (2009, September 22) *University Funds Report Steep Investment Losses*. New York Times. Retrieved from [http://www.nytimes.com/2009/09/23/business/economy/23endowment.html?\\_r=1&scp=1&sq=diversification%20failed&st=cse](http://www.nytimes.com/2009/09/23/business/economy/23endowment.html?_r=1&scp=1&sq=diversification%20failed&st=cse)

