



The Sensitive Side of Markets

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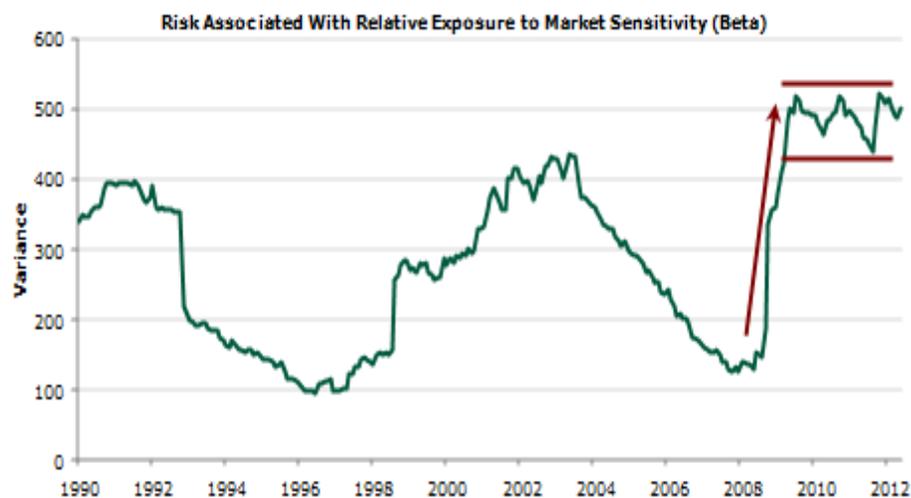
Risk management has been an important topic of discussion within the investment community the past few years. Yet, the definition of risk management encompasses a range of tools and concepts. The inputs used to describe risk can take on very distinct meanings for different investment styles/strategies. However, the underlying goals are usually quite similar, to minimize the quantity and magnitude of negative returns. Sometimes that is measured in relative terms and other times absolute.

A key feature of most equity risk management structures is describing and controlling a portfolio's market sensitivity to a target benchmark. This is important because unless market timing is an inherent part of a manager's investment strategy, sensitivity is a risk consideration rather than a return seeking input. The most commonly used measure of market sensitivity is beta, which is a fairly simple mathematical value. The concept originated as a key component of the research behind the Capital Asset Pricing Model, a theory taught in beginning investment classes that attempts to explain price movement.

Historically, the importance of managing market sensitivity has been somewhat cyclical but the spike in risk experienced in 2008 in conjunction with the financial crisis has not abated. Instead, the relative importance of managing your market sensitivity risk has remained elevated. The chart below measures the total risk associated with a standard unit of exposure to beta. This risk jumped to all time highs in late 2008/early 2009 and has remained there through May of this year. In this environment, the penalty for a portfolio taking an incorrect beta exposure is quite large. Thus the extra attention it is getting at present.

Of even greater interest in our research efforts is the fact that just prior to the current elevated period the risk associated with beta early in 2008 was near an all-time low, from a purely statistical standpoint. This highlights a key reason many risk management tools fail during crises. Since they are estimating forward sensitivity using past relationships they are dependent on those relationships persisting into the future. When you get such a sharp change in the sensitivity to a variable as we experienced in 2008 it results in an under estimation of the impact, leading to much higher portfolio volatility than was predicted. Late in 2008 risk models were telling us there was little penalty for being wrong about beta so many portfolio managers did not control it in portfolio construction. When the impact of this sensitivity measurement jumped those managers were blindsided.

In addition to the aggregate level of risk changing dramatically during the crisis, the composition of where that risk originates changed as well. The chart bottom left displays the aggregate beta by sector both before and after 2008. Sectors typically thought to be more defensive in nature, such as consumer staples and utilities, have remained so post-2008. But commodity-sensitive sectors, like energy and materials, have developed a market sensitivity profile more akin to technology stocks. This is an important consideration for investment managers as they build and manage portfolios from a risk context. Sectors they historically thought of as a safe haven now yield volatility they may not have controlled for in the past.



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“Value-at-Risk” and “Gaussian Copula” are concepts bandied about in the press as guilty culprits of causing financial institution failure. However, the real fault lies not with the risk models themselves but in the over-confidence and mis-understanding of the users of what causes them to fail in their prediction of risk into the future. Managing market sensitivity has a significant role to play in controlling portfolio risk. But users need to understand the limitations and those failure points.

