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RISK AND INVESTOR BEHAVIOUR

Rather than shrinking risk, the behaviour of 'following the herd' by investors adds to it.

THERE IS, THEREFORE, A PARADOX AT PLAY: THE ACT OF CHARACTERIZING A PORTFOLIO AS "SAFE" ACTUALLY MAKES IT RISKY!

There are three precepts of modern finance and portfolio management. First, portfolio risks are simply a function of the volatility of individual instruments in the portfolio and their covariance. Second, investors should select a set of instruments that, as a portfolio, maximizes returns for a given level of risk—mean-variance optimization. Third, investors should manage the selected investment portfolio within a risk management budget. On this front, Value-at-Risk (VaR) is gaining prominence. This risk reporting measure requires re-estimating, often daily, the likelihood of a loss based on past returns and risks. If volatilities and covariances of the securities in the portfolio rise, then risks rise. And, if the risk budget is breached, investors should reduce risk by selling volatile and/or highly correlated securities in their portfolios.

THE PROBLEM

This all sounds very scientific and practical. However, the problem is that the process whereby investors identify and select the same portfolio actually changes the risk characteristics of the portfolio. Consider what happens when we put modern finance theories into practice. Using the same data of past returns, volatilities, and covariances, investors effectively come up with the same portfolio. Now consider what happens when bad news strikes one of the portfolio's assets. The asset's value falls in a volatile manner, which may lead the investor to overstep his risk budget.

VICIOUS CIRCLE

To reduce risk, the investor must then sell this asset and perhaps others in the portfolio as well. This will lead correlations between the assets in the portfolio to rise. And this process is not happening with just one investor, but among several investors because they all chose the similar portfolio. One can see how this can quickly turn into a vicious circle. A rise in market volatility pushes some investors beyond their risk limits. These investors are forced to sell the same assets at the same time. This leads to a further rise in volatilities and covariances and pushes even more investors beyond their risk limits.

A PARADOX

There is, therefore, a paradox at play: the act of characterizing an investment portfolio as "safe" actually makes it risky! What drives this paradox are aspects of investor behaviour that are not taken into account by modern portfolio theory. First, investors view past returns, volatilities, and correlations as "givens," independent of their decisions. Second, the price of computing power and data has fallen dramatically. Using similar information, technology, and preferences, investors come up with similar portfolios. Third, the occurrence of investor herding changes the statistical properties of the "optimal" portfolio.

In a world in which modern risk management practices are gaining a wider following, understanding investor behaviour is ever more crucial. Timely insights into portfolio flows and positioning can help to alert institutional investors of growing risks that are not readily discernible through historical volatilities and covariances. ■