STATISTICS DEPARTMENT COLLOQUIUM

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Talk: 4:00 PM – *Science Center 309*
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"The Quant Delusion: Financial Engineering in the Post-Lehman Landscape"

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ABSTRACT

There has been much discussion recently amongst financial engineers ("quants") about the limitations of quantitative models for pricing derivative securities. As Emanuel Derman has written, "The most important questions about any model are: What does it ignore and how wrong is it likely to be?" The financial markets have shown an uncanny ability to provide the answers to these two questions, especially to quants who did not ask them in the first place.

The recent dislocations in the financial markets, especially since the bankruptcy of Lehman Brothers in September 2008, are significantly changing the landscape for financial engineering and are challenging fundamental assumptions behind the application of quantitative models – for example, the existence and uniqueness of a risk free rate and the law of one price. Generally accepted logical arguments for assessing value have been shown to have limited validity.

We present an empirical review of recent market phenomena that illustrate this shifting landscape, focusing on events in fixed-income markets. We suggest some possible causes of these phenomena, in particular describing constraints that currently affect a broad range of market participants. We discuss whether such a landscape is likely to persist into the future.