**COLLOQUIUM**

Nadia Vozlyublennaia

Professor of Finance, Texas Tech University

**“Cross-sectional and time-series regression-based tests of the CAPM with non-zero pricing errors”**

Thursday, November 6, 2008 at 3:30 p.m. in CH 107

Refreshments will be served in Math 238 at 3:00 p.m.

**Abstract**

We show that in the presence of non-zero pricing errors, the Fama-MacBeth cross-sectional regression-based test is very likely to either reject the CAPM when it

(almost) holds or accept the model when it largely fails. We argue that removing the time dimension in a cross- sectional regression-based test of a model defined in terms of time-series moments is the root of the problem. The reason is that the relevant information contained in the pricing errors and in deviations from the CAPM equilibrium is either disposed of or modified in the test. This modification is related to the cross-sectional distribution of beta. We investigate the power and size of the Fama-MacBeth test at various magnitudes of CAPM pricing errors, and at various degrees of their correlation with betas. We assess the test’s sensitivity to changes in the cross-sectional distribution of beta and its behavior when the time or cross-sectional dimension is changed. We show that in the absence of terms, which create statistical problems, the Fama-MacBeth test reduces to a t test on the mean of the risk factor. We construct an ’ideal’ cross-sectional t test, which lacks any statistical issues, and show that conclusions about the model based on the estimate of the coefficient on beta can still be misleading.