



Séminaire du CIRRELT Seminar

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MODEL-FREE LEVERAGE EFFECT ESTIMATORS AT HIGH FREQUENCY

ABSTRACT: We consider a new nonparametric estimator of the leverage effect, which uses the data on stock prices as well as a certain volatility instrument, such as the CBOE volatility index (VIX) or Black-Scholes implied volatility. The theoretical justification for the new estimator exploits the relationship between the volatility instrument and the spot volatility, together with a certain invariance property of the spot correlation. We derive the asymptotic distribution of the estimator and find that it has good numerical properties in finite samples. We compare this instrument-based estimator with the nonparametric price-only leverage estimator. We demonstrate empirically and in simulations that the price-only estimator is substantially less precise than the instrument-based estimator. Finally, we use the new estimator to provide time series of monthly leverage effects of the S&P 500 index from 2003 to 2012 using two different volatility instruments. We also find that the credit risk, liquidity, and the debt-to-equity are important determinants of the leverage effect.

Joint work with Dacheng Xiu (at Chicago Booth) available at

https://www.webdepot.umontreal.ca/Usagers/kalnina/MonDepotPublic/Kalnina_Xiu.pdf

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<https://www.webdepot.umontreal.ca/Usagers/kalnina/MonDepotPublic/home.htm>

VENDREDI / FRIDAY

6 décembre 2013 /
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10h30

Salle / Room 5441
Pavillon André-Aisenstadt
Université de Montréal

Ouvert à tous / Open to all

Organisateurs / Organizers
Claude Comtois
Bernard Gendron



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