

Discussion:

Risk Spillovers
of Financial Institutions

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Main Idea

- Propose a model to measure spillovers/co-movements/conditional probabilities
- Impact of hedge funds, investment banks and commercial banks
- Interesting main idea
- Falls within a long tradition of papers on similar topics

One question from page 6

- “Summary statistics for January 1994 - March 2008 ... The investment bank returns are the value weighted returns of Morgan Stanley, Merrill Lynch, Goldman Sachs, Bear Sterns, and Lehman Brothers from CRSP.”
- Goldman Sachs had their IPO in 1999, and CRSP reports the range of available observations as starting 1999-05-04

Data

- “Studying hedge funds is more challenging ...Consequently, most studies of hedge funds thus rely on self-reported return data. We follow this approach and use the hedge fund style indices by Credit Suisse/Tremont. “ (page 5)
- Self-selection bias in data

Sample of related literature

- King, Mervyn A & Wadhvani, Sushil, 1990. "Transmission of Volatility between Stock Markets," *Review of Financial Studies*
- Longin F. and B. Solnik, 2000. "Extreme correlation of international equity markets," *Journal of Finance*
- Forbes K. and R. Rigobon 2000, "No Contagion, Only Interdependence: Measuring Stock Market Co—movements, *Journal of Finance*
- Hartmann P. & S. Straetmans & C. G. de Vries, 2004. "Asset Market Linkages in Crisis Periods," *The Review of Economics and Statistics*

Method: Quantile regressions

- “While quantile regressions are regularly used in many applied fields of economics, its application to finance has up to now been rather limited. Notable exceptions are econometric papers like Bassett and Chen (2001) and Chernozhukov and Umantsev (2001) as well as the working papers by Barnes and Hughes (2002) and Ma and Pohlman (2005). This is surprising to us, since the quantile of the return directly provides an estimate of the (negative of) Value-at-Risk, a widely used risk-measure. “

Robert F. Engle & Simone Manganeli, 2004, "CAViaR: Conditional Value at Risk by Quantile Regression,"
Journal of Business & Economic Statistics

Estimation is challenging

- There are issues with the statistical properties: e.g. the covar matrix depends on an estimate of the unknown conditional density of the error term. No direct test of the quantile regression derived parameter estimates. See e.g.
 - Powell, J. (1983), The Asymptotic Normality of Two-Stage Least Absolute Deviations Estimators, *Econometrica*, 51: 1596-75
 - Powell, J. (1984), Least Absolute Deviations Estimation for the Censored Regression Model, *Journal of Econometrics*, 25: 303-25
 - Powell, J. (1986), Censored Regression Quantiles, *Journal of Econometrics*, 32: 143-55
- Problems with quantile crossing
- Does not work well in intermediate to extreme quantiles (beyond 5%) because there are simply not enough data points to pin down an extreme quantile precisely with the Koenker & Bassett estimation function