Paper Discussion
Volume Volatility in dual Markets: Lessons from Chinese ADRs
Malay K Dey and Chaoyan Wang

K. Kiran Kumar
National Institute of Securities Markets
What Do the Paper Do??

- Examines volume-volatility dynamics between 14 Chinese ADRs listed on NYSE and those of their underlying H-shares listed on Hong Kong Stock Exchange.
  - Uses daily closing prices from ADR listing date to October 2006
  - Tests for the support of MDH or SIA hypothesis
    - Performs Granger causality tests between volume and volatility
  - Uses Bivariate-GARCH framework to look at return and volatility dynamics between ADRs and underlying H-shares
    - Tries to capture leverage effects
    - Allows for expected and unexpected components of volume

- Overall, sounds like a good paper.
  - However, authors need to fix some methodological issues before proceeding further.
Issues / Critiques

Mostly on methodological issues

- Non-overlapping trading hours between SEHK and NYSE
- Decomposition of Volume into expected and unexpected
- Bi-variate GARCH specification

Minor issues

- Documentation of results
  - Model fit / Residual diagnostics
  - Little more on Institutional details and on extent of ADRs trading
  - Tables need to be self-sufficient
  - Need to fix typos and omissions in references list
Non-overlapping trading hours

- Hong Kong Stock Exchange and NYSE don’t trade at the same time. On any given day $t$, NYSE opens after the close of Hong Kong stock exchange.
- Paper don’t consider this.
  - Way to Fix: To model short-term dynamics between the markets, consider:
    - Decompose daily returns to Overnight and daytime returns

Expected and Unexpected components of Trading Volume is done by fitting an ARMA model. However, its well-known case that Volume is related to past returns and vice versa.

- Fixing the issue: Expected and Unexpected components can be more precise when past stock returns are augmented in ARMA model as explanatory variable.
  - Note: Bessembinder and Seguin (1993) don’t do this, but the literature has moved very far since then.
Main Issues / Critiques…

- Bi-variate GARCH specification
  - Objective of the paper is to model short run dynamics between ADRs and their underlying H-shares
  - But employs Diagonal VECH GARCH specification where it will not allow for volatility spillover effects
    - Way to Fix:
      - Employ BEKK or DCC specification of MGARCH model

- Minor Issues / Critiques
  - Table 5 – Granger Causality results
    - No mention in the paper about $h_t^2$
    - Symbol not defined
    - How the volatility measured on daily basis
Minor comments

Residual diagnostics of GARCH models are not included.

- Mere reporting likelihood values don’t convey much.
  - Report LB statistics for residuals as well as squared residuals

More details need to be known for the reader

- How large is Chinese ADRs trading relative to H-shares trading?
  - Enough trading activity need to be there for volatility spillovers across markets

References are not complete

- Dey and Wang (2009); Xu and Fong (2002)

Tables need to be self sufficient and need to fix some typos