Discussion on
MEASURING SPILLOVERS BETWEEN THE US AND EMERGING MARKETS

By Daniel Law

Disclaimer: The views do not represent views from any institutions but the presenter himself only.

Summary

- The paper addressed the 3 questions below:

1. Which asset markets are affected the most by shocks originating in the US and EMEs?
2. To what extent can spillovers be attributed to a specific market and region of economies?
3. Has the nature of spillovers changed since the tapering tantrum?

Summary

- Using methodology in Diebold and Yilmaz (2009, 2012), the authors estimated gross directional spillover index on weekly returns of market indices in two VAR models:
- One for cross-market analysis of US/EMEs and the other for individual bond yields of US/AEs/EMEs
- The gross directional spillover index was the share of the contribution from/to a country based on variance decomposition using GFVD (invariant of variable ordering versus Cholesky)

Summary

- **VAR1 (cross-asset)**
- Endogenous:
- Equities: S&P 500 and MSCI EM index (23 EMEs)
- Bond (LC total return indices): 7-10-year US Treasury index and GBI-EM Broad 7-10-year index (18 EMEs)
- FX: DXY index (USD vs 6 other major AE currencies)
- Exogenous:
- VIX and 10-year US Treasury term premium
- Sample period: Weekly returns during January 2002 to February 2015

- **VAR2 (individual bond yields)**
- Endogenous:
- 10-year zero-coupon sovereign bond yields of US and 7 other AEs and 19 EMEs
- The selection of EMEs was based on data availability and 1 out of 3 criteria: IMF's EMs/DMs or WB's law and middle-income countries; constituents of major EM bond indices; public debt >$10 bn with IG rating
- Exogenous:
- VIX, 10-year US Treasury term premium and the DXY index
- Sample period: Weekly returns during April 2007 to February 2016

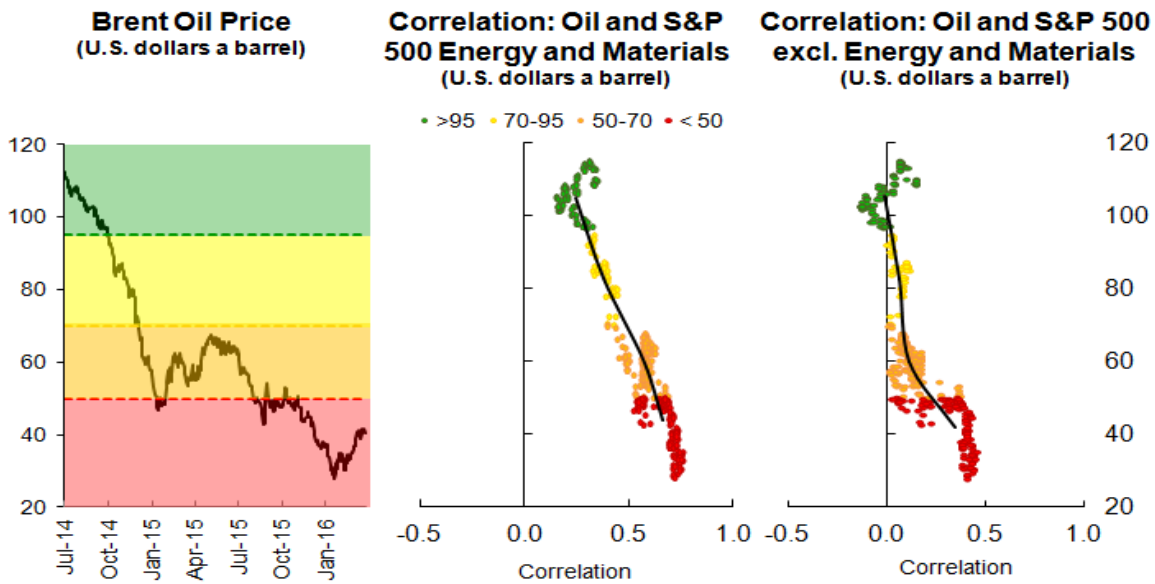
Summary

<u>Main Findings:</u>

1. Among Equities/Bonds/FX, spillover in bond markets from US/EMEs strengthened noticeably following the taper tantrum in May 2013
2. Among selected EME markets (EM Europe & Africa /Latam/Asia), EM Europe and Africa was more contagious and more responsive to US market shocks
3. Spillover from US to EMEs has increased while spillover from EMEs to US has also increased

Discussion

- In the cross-asset VAR, commodity may be an important asset class to consider



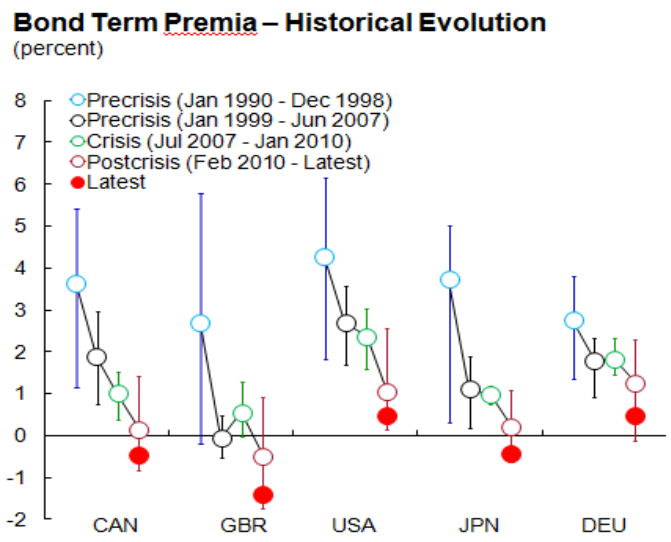
- The number of EMEs covered varies across asset markets. How do you expect any changes in results if using a more balanced sample (e.g. inclusion of FX index with EMEs' currency)?

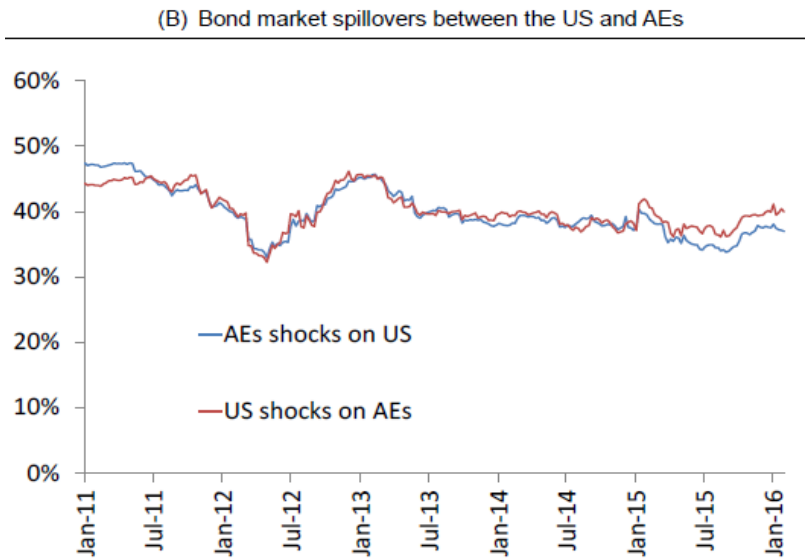
Discussion

- Structural interpretation for spillover index is difficult
- According to Diebold and Yilmaz (2009), the variation of spillover index may be associated with “more-or-less continuous evolution” in financial markets as well as “bursts that subsequently subside”
- Spillover index captures the explanatory power of other financial markets while the magnitudes and signs of the impact may be changing

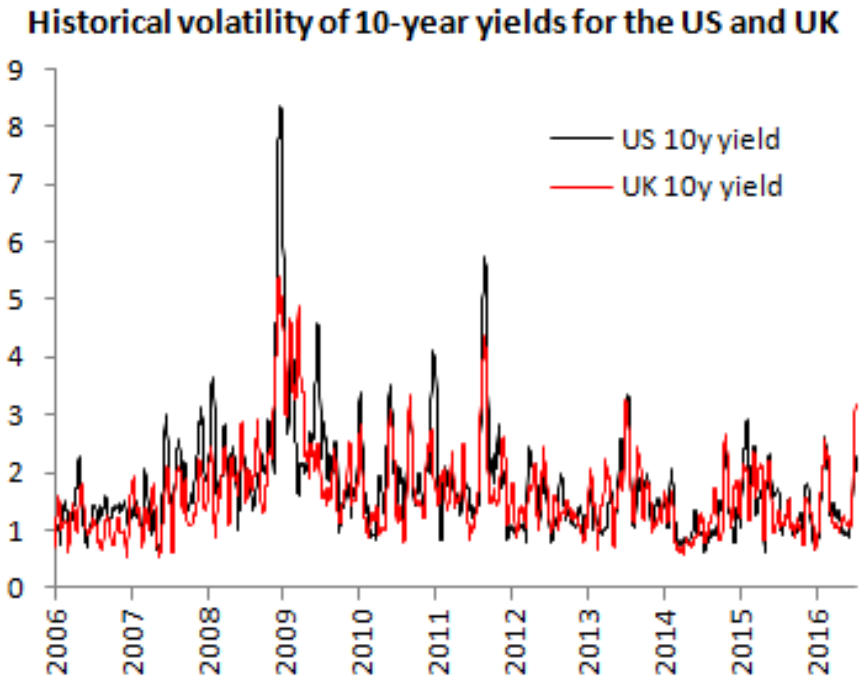
Discussion

- Spillover in sovereign bond yields = Spillover in policy?
- Given higher explanatory power from EMEs, how about the sign and magnitude of impulse response for returns in US?
- The increase of spillover from EMEs was actually the decrease of spillover from US itself and other AEs
- Falling term premia across US/AEs suggest changes in policy transmission and lower market volatility while EMEs may experience higher volatility since Taper Tantrum





Discussion


Historical volatility of 10-year yields for the US and UK
US 10y yield
UK 10y yield
0
1
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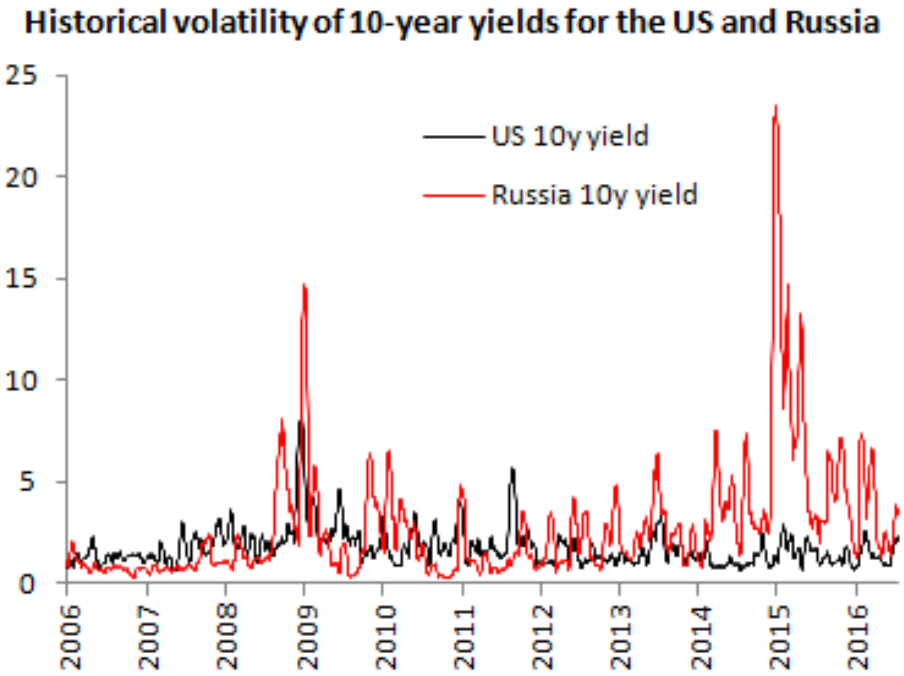
Historical volatility of 10-year yields for the US and Russia
US 10y yield
Russia 10y yield
0
5
10
15
20
25
2006
2007
2008
2009
2010
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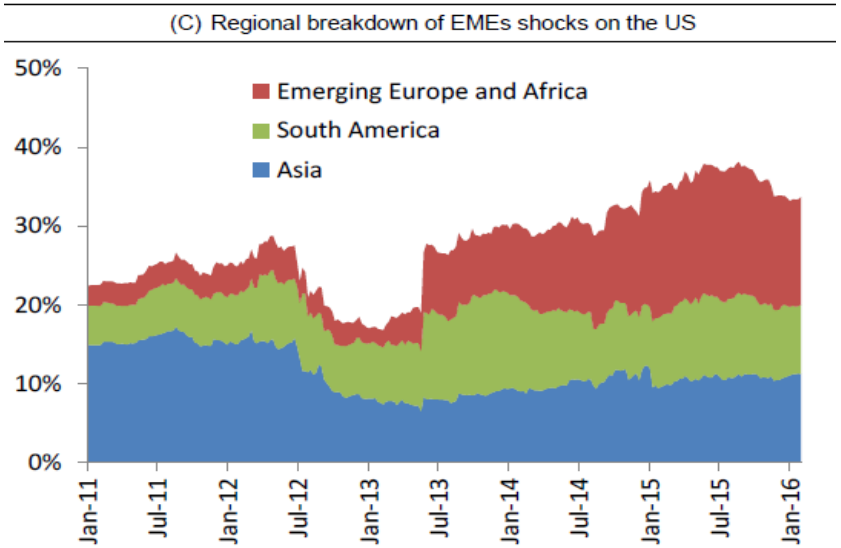
2012
2013
2014
2015
2016

Discussion

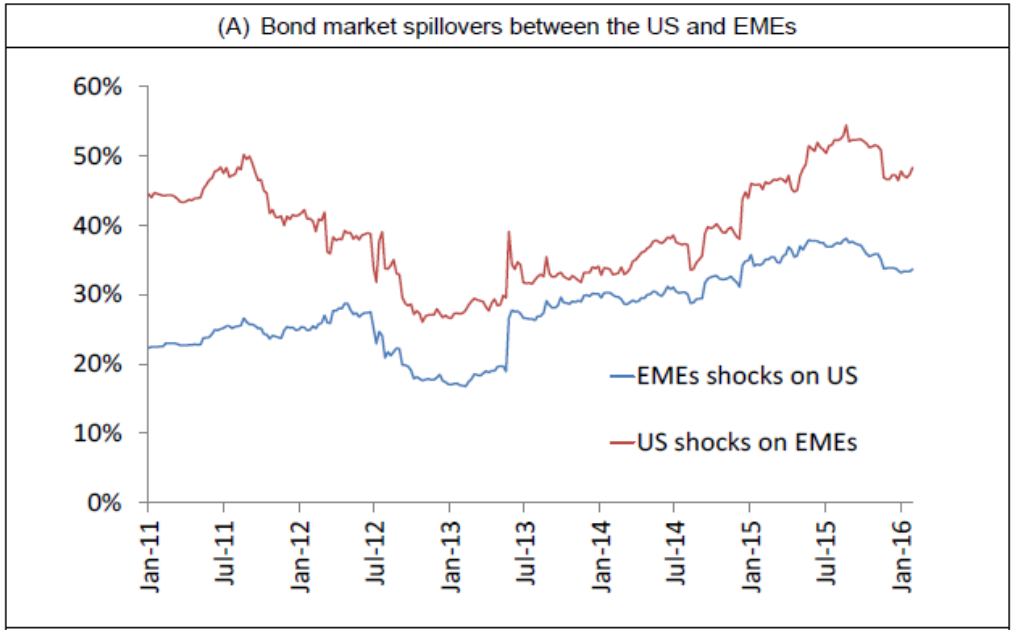
- How to interpret the share of contribution from EMEs given uneven bond market size? If not size, what matters? Any views on China's spillover on US?
- EM Europe and Africa (Turkey, Poland, South Africa, Russia, Hungary and Czech): $860 bn
- South America (Brazil, Mexico Colombia, Chile and Peru): $1840 bn
- Asia (China, India, South Korea, Indonesia, Philippines, Hong Kong, Thailand and Singapore): $3761 bn



Discussion

- Why gross return spillover is better than alternatives?
  - Volatility spillovers
  - Net spillover (to minus from), which fell in H2 2013, rebounded in 2015 but still below Jan 2011 level

Figure 3 Individual bond yield VAR result



Comments

- The paper is timely and nicely written
- It provides some evidence of increased financial linkage among US and EMEs based on Diebold and Yilmaz (2009), especially after the Taper Tantrum in May 2013
- It is useful for policy discussion while the changes in transmission mechanism can be considered for future study