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# Discussant comments on

# FX co-movements: disentangling the role of global market factors, carry-trades and idiosyncratic components

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* These comments reflect the views of the author and not necessarily those of the BIS or of central banks participating in the meeting.

# FX Comovements: Disentangling the Role of Market Factors, Carry Trades and Idiosyncratic Components

Discussion by Ric Colacito

THE UNIVERSITY
*of* NORTH CAROLINA
*at* CHAPEL HILL

*Bank for International Settlements CCA Conference, Bank of Canada, Ottawa, 5/2011*

# Contribution

Decompose volatilities and correlations of FX excess returns into short- and long-run components.

1. Long-run volatility of common risk factors increased after 2008
2. Long-run volatility of idiosyncratic risk factors decreased after 2008
3. Long-run correlations increased after 2008
4. What macro variables can explain FX volatility?

# Comments

This methodology could have much broader implications for International Finance.

1. Benefits for asset allocation
2. Other relevant trends?
3. Determinants of FX volatility?

# Benefits for asset allocation: short-run

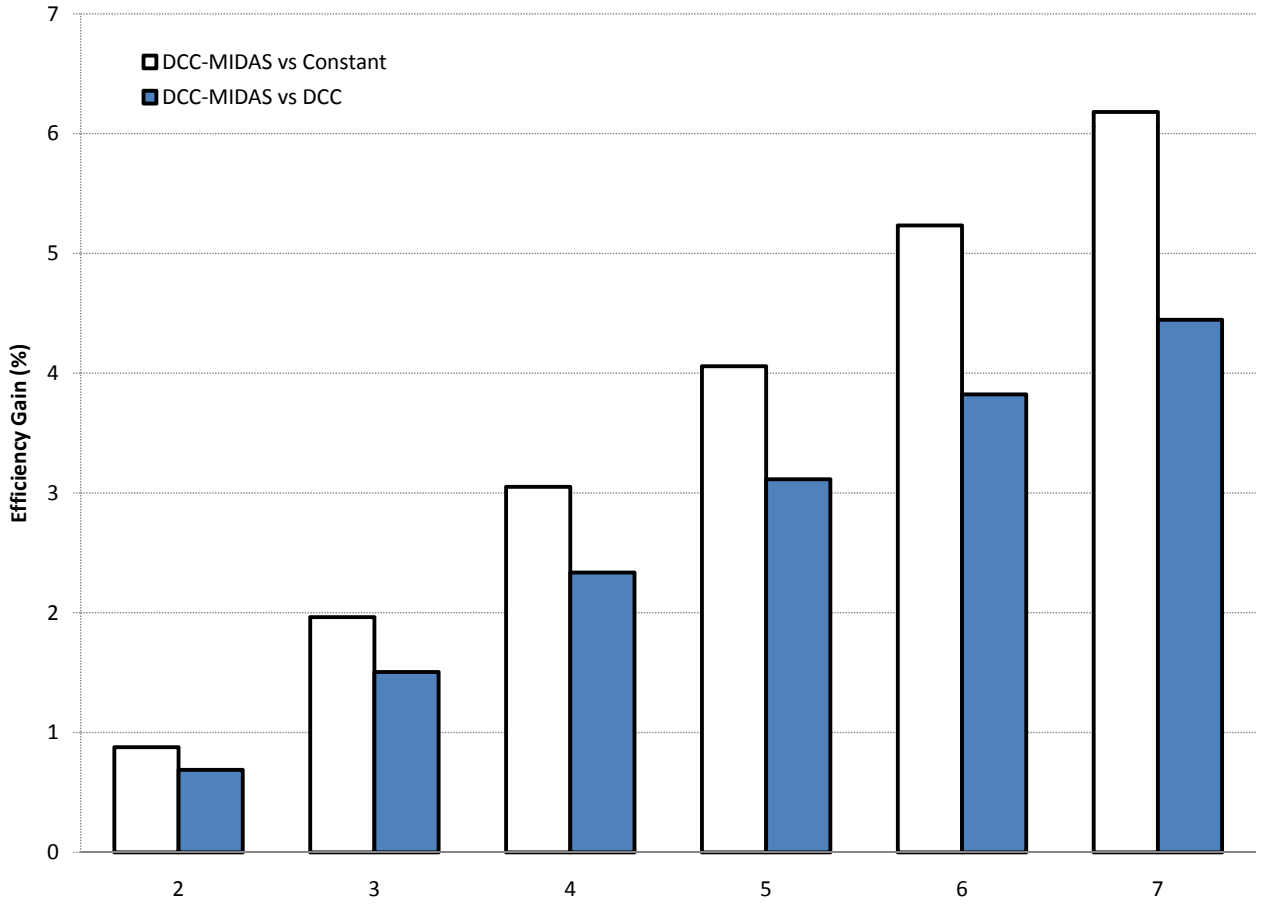
- A US investor chooses how much to invest in int'l stock markets.

$$\begin{aligned} \min_{w_t} \quad & w_t' H_t w_t \\ s.t. \quad & w_t' \iota = 1 \end{aligned}$$

- $H_t$ is the conditional covariance matrix
- Conditional variances follow GARCH(1,1).
- Conditional correlations:
  1. Constant
  2. DCC (mean revert to unconditional correlations)
  3. DCC-MIDAS (mean revert to time-varying correlations - functions of low-frequency variables.)
- Weekly data for G-7 countries from 1988 to 2009.

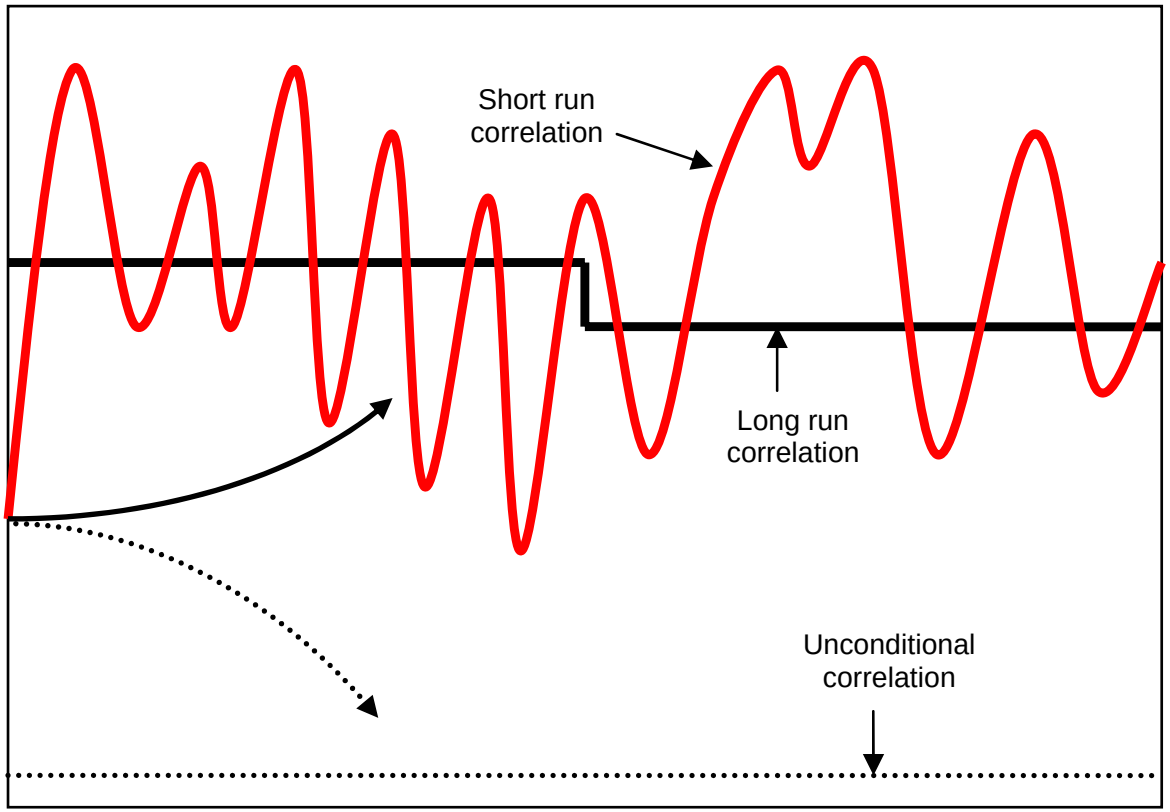
# Efficiency gains

How much smaller is the realized portfolio volatility?



# Benefits for asset allocation: long-run

- What are the benefits if the investment horizon is longer than a week?
- Hard to tell, but benefits are likely to be even larger!



# Asset Allocation: bottom line

- What are the financial benefits of decomposing volatilities and correlations into short- and long-run components?
- Comparison of methodologies?
- Why focus only on carry-trade?
- What fraction of the results is driven by emerging markets?

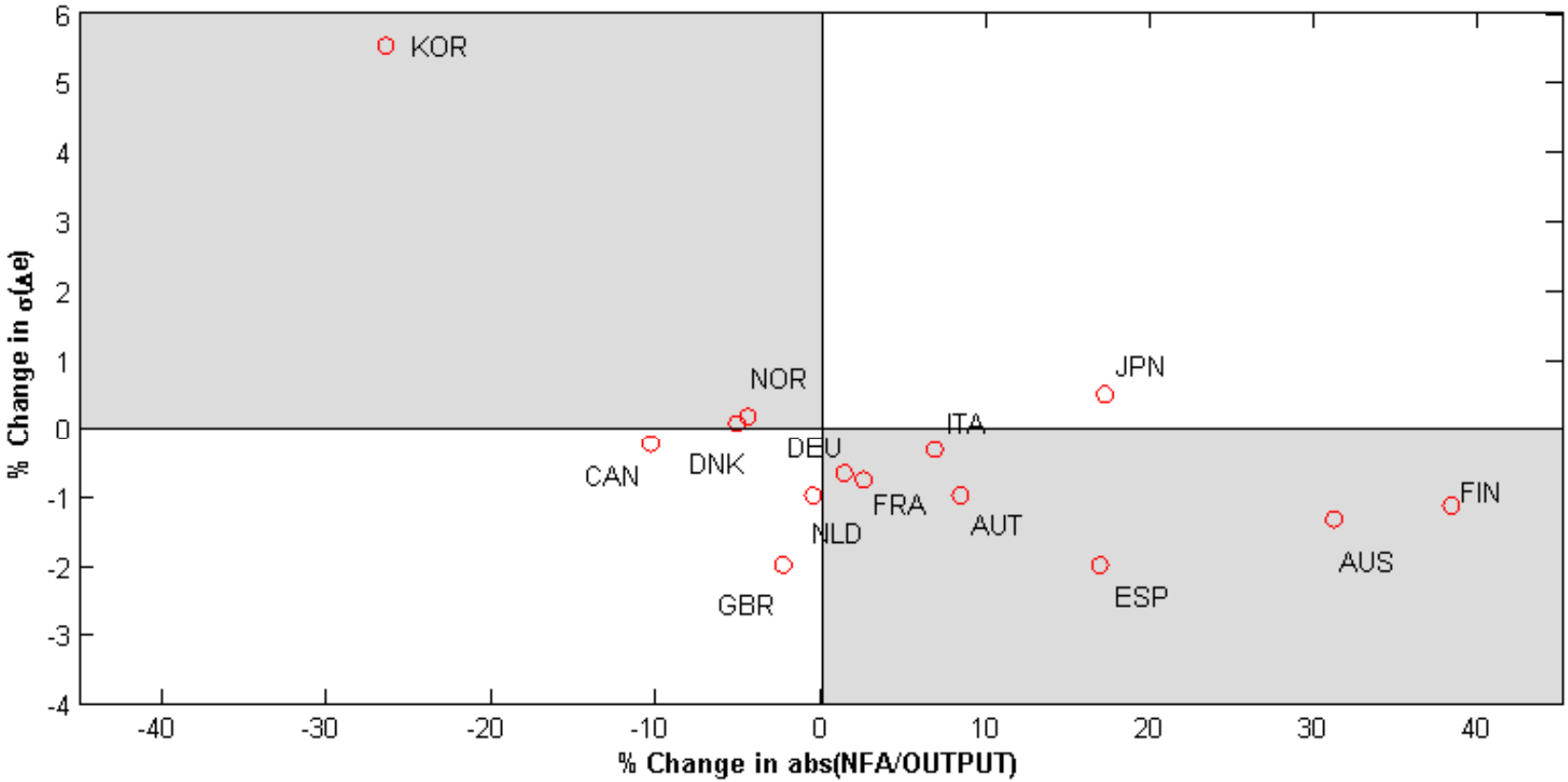
# Other trends?

Are there other relevant empirical relationship between macro and financial variables?

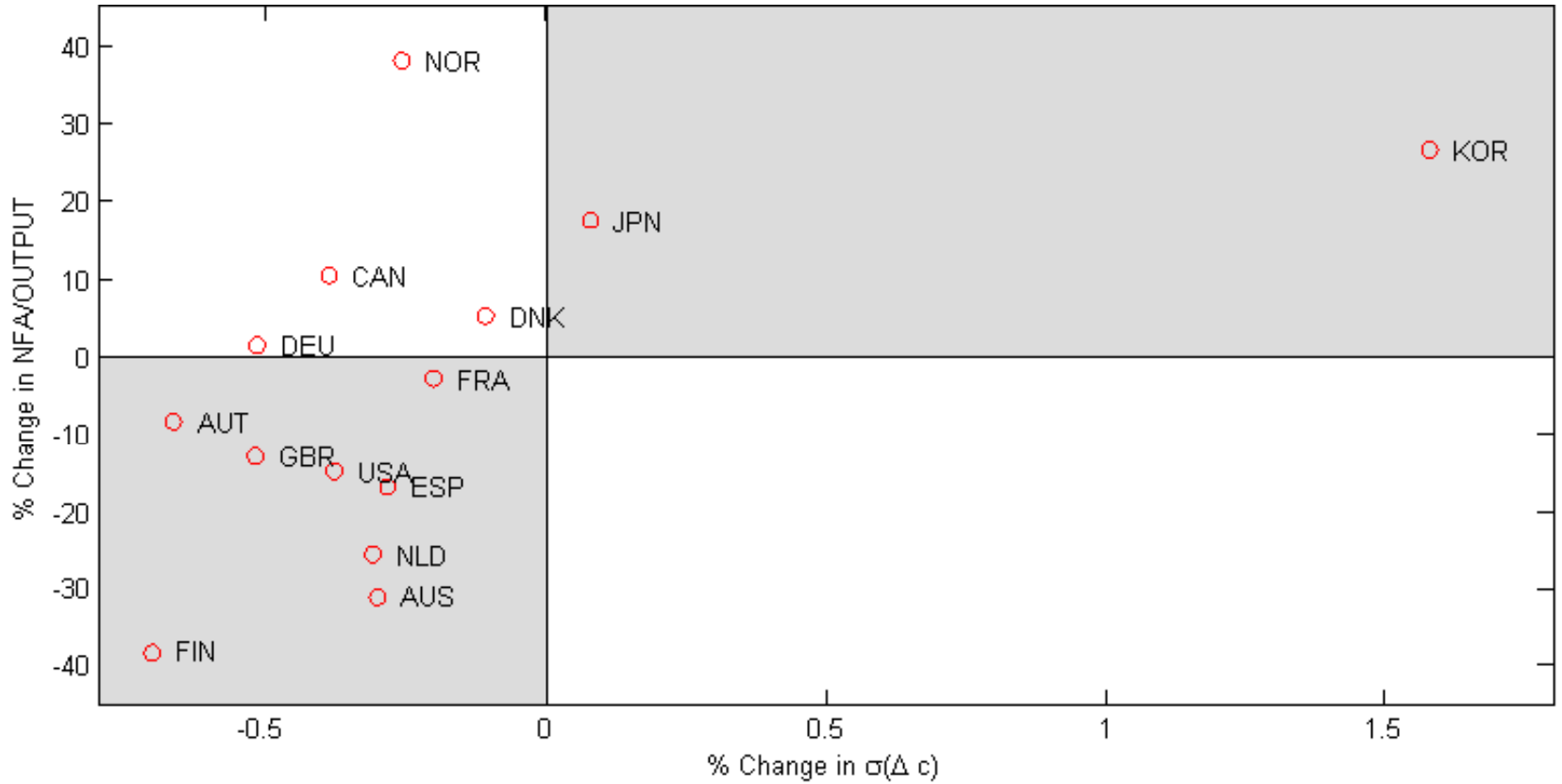
- International debt vs FX volatility?
- International debt vs consumption growth volatility?
- International correlation of stock market returns and FX volatility?

$\rightarrow$ Provide richer set of restrictions for international finance models.

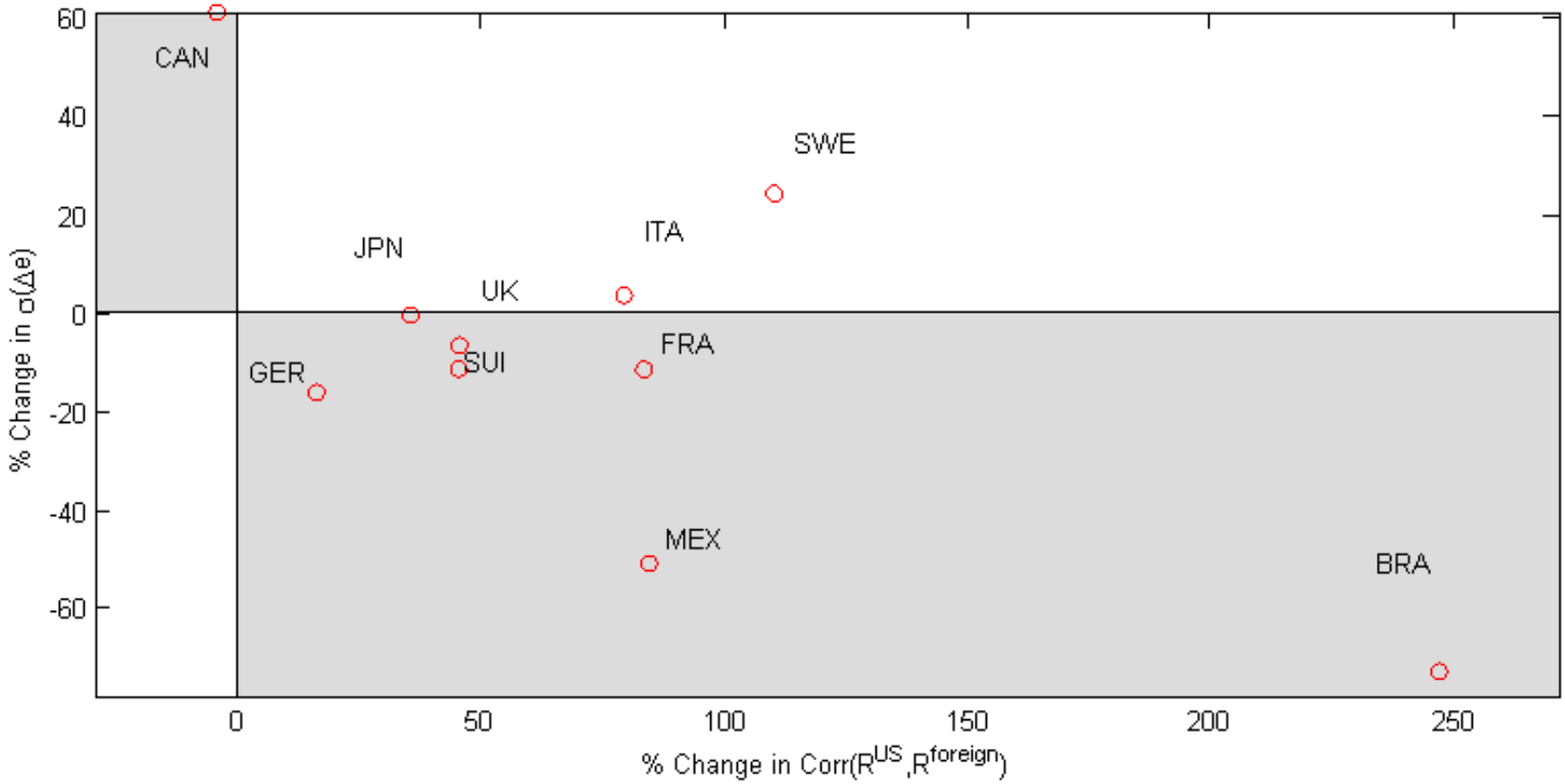
# International Debt and FX Volatility



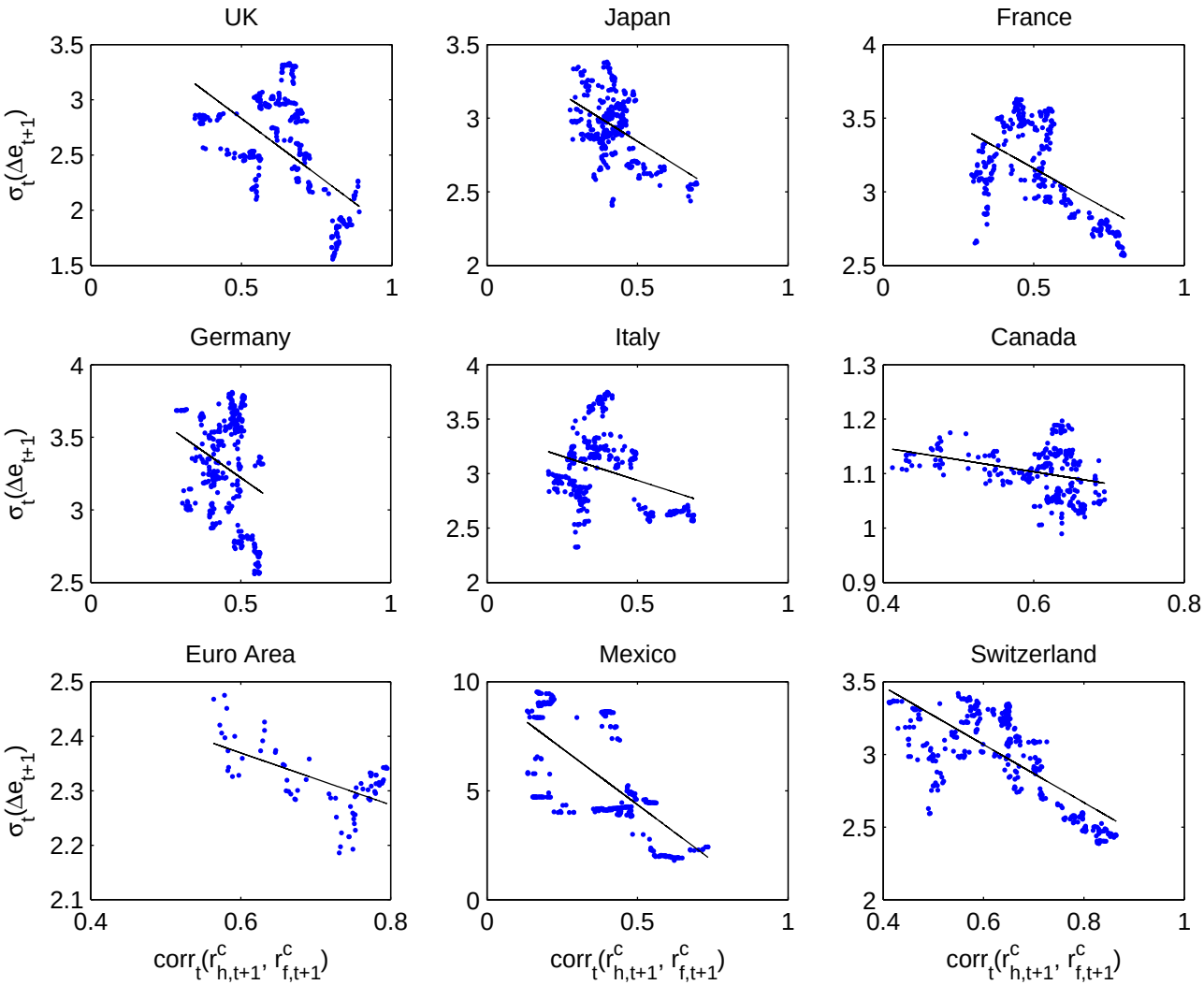
# International Debt and Consumption Growth Volatility



# Correlation of Stock Returns and FX Volatility



# Correlation of Stock Returns and FX Volatility: high frequency



# Other trends: bottom line

- This technology could be used to bridge part of the gap between the joint dynamics of international prices and quantities.
- Better assessment of link between time-varying second moments and current accounts, net exports, ...
- Useful for international finance modeling, practitioners, and policy makers.

# Determinants of FX volatility

- Gonzalo suggests that:

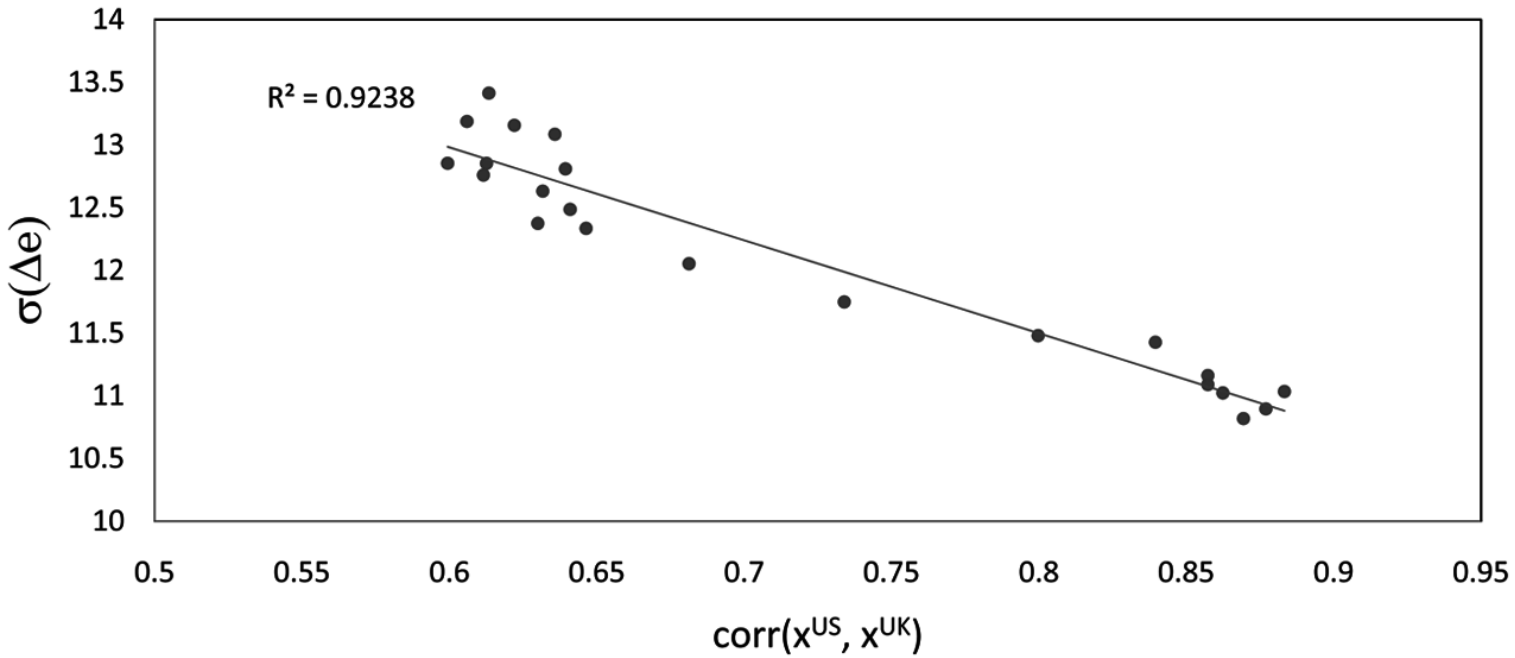
  > *the variation in FX volatilities may largely come from systematic risk factors, and that the idiosyncratic component shows only a mild response to country-specific fundamentals.*

- Go for it!

- Literature is trying to provide conclusive evidence on the dynamics of common international risk factors
  $\rightarrow$ Colacito and Croce (JPE, 2011)
  $\rightarrow$ Lustig, Roussanov, and Verdelhan (RFS, 2011)
  $\rightarrow$ Stathopoulos (2010)
  $\rightarrow$ ...

# Long-run correlations and FX volatility

Can a better measure of long-run correlation help us to better understand FX volatility?



# Determinants of FX volatility: bottom line

- Can long-run correlations predict FX volatility?
- Why focus only on forecasting power of country-specific macro variables?
- What about bilateral trade variables?
- How does this look in the cross-section of countries?
- What macro variables are responsible for the dynamics of international correlations?

# Concluding remarks

- A very interesting paper!
- Suggestions:
  1. benefits?
  2. other trends?
  3. what variables are responsible for FX fluctuations?