EUROPEAN CENTRAL BANK

Discussion of "Real Effects of Financial Integration" by Jean Imbs

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The usual disclaimers apply.

Overview

- Very good paper on an important issue: quantity puzzle
- discussion focuses on
  - original contribution and fit of the paper into the literature
  - what are the critical issues
  - what are the open questions - some suggestions

Contribution of the paper

– Quantity puzzle (Backus, Kehoe and Kydland 1994): int'l financial integration (IFI)

  - should raise risk-sharing / consumption correlation ρ^C across countries
  - should lower output correlation ρ^Y across countries

– puzzle is that empirically $\rho^Y > \rho^C$, even for financially integrated countries

– contribution of the paper:

  - IFI $\longrightarrow$ $\rho^C \uparrow$
  - IFI $\longrightarrow$ $\rho^Y \uparrow$ **and $\Delta \rho^Y > \Delta \rho^C$**

  i.e. quantity puzzle is due to unexplained / unexpected effect of IFI on ρ^Y

Contribution of the paper

– Empirical findings robust to:
  - controlling for trade and specialisation effects of IFI
  - instrumenting for IFI and trade-specialisation variables to account for endogeneity
  - different IFI definitions (*de jure* flow, *de facto* stock)
  - different types of countries (rich versus poor, currency union, core versus periphery)

– open question - reformulation of the puzzle:
  - *why does IFI raise ρ^Y more than ρ^C ?*

Discussion

- Does IFI *really* raise ρ^Y so much?
- Open question - what may account for the remaining puzzle:
  - role of FDI
  - role of financial crises related to financial liberalisation

Does IFI *really* raise ρ^Y so much?

- Two central issues:
  - How much can we learn from a purely cross-sectional analysis?
  - How accurate are the control variables? -- Controlling for trade and country groups

Does IFI *really* raise ρ^Y by so much?

– cross-sectional analysis:

$$\rho_{ij}^{Y} = \alpha_0 + \alpha_1 \Phi_{ij} + \alpha_2 T_{ij} + \alpha_3 S_{ij} + \alpha_4 X_{ij} + \varepsilon_{ij}$$

$$\rho_{ij}^{C} = \eta_0 + \eta_1 \Phi_{ij} + \eta_2 \rho_{ij}^{Y} + \varepsilon_{ij}$$

ρ^Y and ρ^C measured over whole sample period & openness measure is *average* over whole period

Does IFI *really* raise ρ^Y by so much?

1. Many of the 43 countries liberalised during sample period; hence ρ^Y and ρ^C mixture of open and closed periods

– some countries went from open to close (at least temporarily)

→ question: do differences in ρ^Y and ρ^C in cross-section really reflect differences in IFI?

Or: how strong is the endogeneity of IFI due to ρ^Y - possibly large, following OCA theory

→ assumes that instruments work well - (La Porta et al. 1998) - can this be shown better ?

Does IFI *really* raise ρ^Y by so much?

2. Cross-section *alone* may be problematic because of likely presence of strong country fixed effects - not captured by controls
   – in particular: most "open" countries in the sample are European
   – More direct question would be: does IFI lead to higher ρ^Y for *the same countries*?

→ adding *time-series component* (i.e. panel) to empirical model could be crucial

Does IFI *really* raise ρ^Y by so much?

3. Puzzling result of α_1 being higher between periphery & core countries

– *Country sample*:
  - why are so many "rich" and European countries in the periphery group?
  - e.g. Swe, Fin in periphery, Den in core; no Ger

– *Controlling for trade*:
  - only bilateral trade
  - no multilateral trade, esp. third-market competition
  - in particular for EMEs third-market competition likely to be main factor for interdependence (fin. crisis lit.)

→ bilateral trade "too weak" a control ?

What may explain the effect of IFI on ρ^Y?

What are potential explanations? - What is “real integration”?

- trade and specialisation - controlled for in the paper
- business cycle synchronisation due to “interdependence” or …
- synchronisation due to common shocks - as e.g. reflected in systemic financial crises
- the role of FDI

Openness, financial crises and ρ^Y

Literature on financial openness and growth:

- no robust evidence for positive effect (Rodrik 1998)
- role of asym. information/incomplete markets (Stiglitz 1998), political economy factors (Bhagwati 1998)
- "locking in" of domestic reforms provide first order gains (Gourinchas & Jeanne 2002)
- openness has positive effect on growth *if controlling* for clusters of financial crises (Eichengreen & Leblang 2003)
- intertemporal trade-off : theory (McKinnon & Pill 1997) and empirical evidence (Fratzscher & Bussiere 2004)

→ H_0: *openness synchronises output by inducing a boom-bust cycle and by making crises more severe*

Openness, financial crises and ρ^Y

Unweighted correlations of annual real GDP growth rates, 1960-2002

	closed	open	open & no crisis[1]	open & crisis[1]
All 45 countries	0.135	0.223	0.144	0.382
emerging markets	0.100	0.304	0.218	0.435
industrialised countries	0.320	0.356	0.314	0.456

Notes: [1] correlation during "crisis" is correlation in year of financial crisis plus the two subsequent years.

Source: Based on Fratzscher & Bussiere (2004) "Financial openness and growth: Short-run gain, long-run pain?"

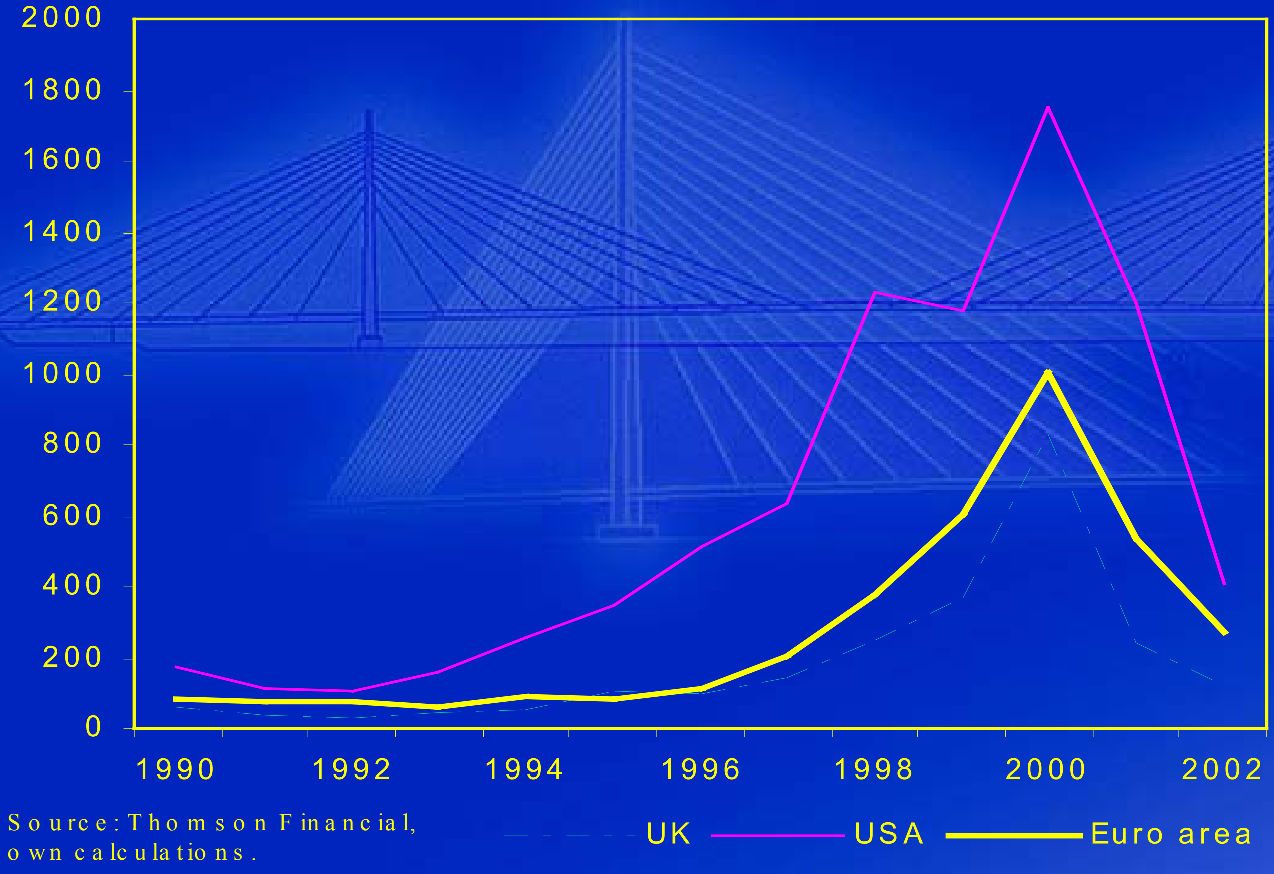
- ρ^Y higher among open economies, esp. EMEs
- <u>but:</u> this is mainly explained by much larger ρ^Y during crisis periods, again mainly for EMEs

→ *much of increase in ρ^Y likely explained by crisis episodes*

'he role of FDI

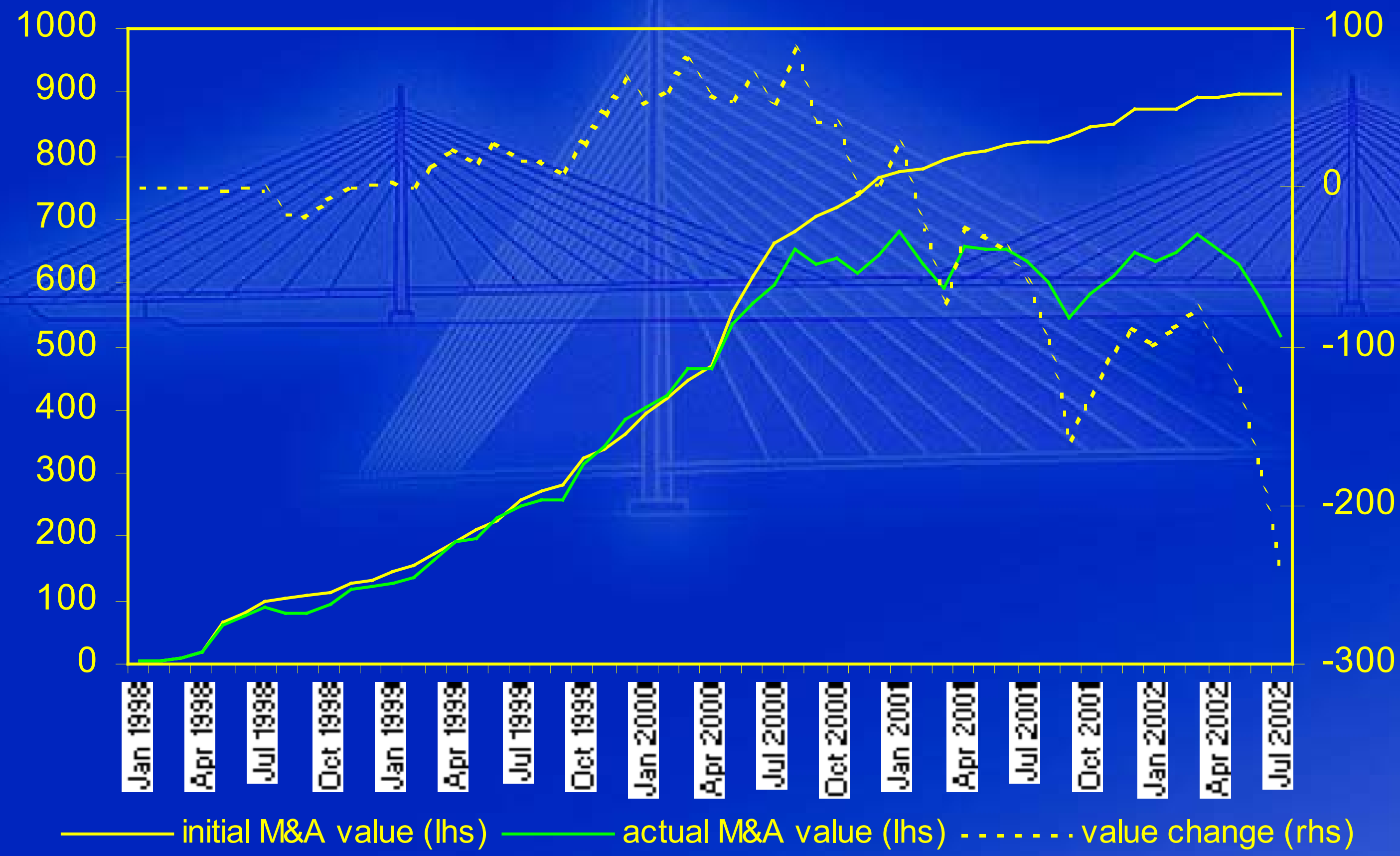
- Use of IMF's CPIS data (equity, short-term & long-term debt securities) only partly convincing
- FDI could be missing link:
  - FDI increases strongly with financial liberalisation
  - FDI induces closer interdependence between two economies through:
    - direct spillovers through earnings and profits
    - other internal spillovers through technology, transfers etc.
    - value of foreign subsidiary can have effect on financing conditions and investment of parent company
    - some illustration for euro area - US M&A transactions ...

The role of FDI: M&A transactions (EUR b.)



Source: Thomson Financial, own calculations.

The role of FDI: EA firms' valuation changes



ummary

– Very good and original paper
– 2 critical issues:
  - quality of instruments & controls
  - time series dimension may make finding (even) more compelling
– outlook
  - business cycle synchronisation versus crisis-driven correlations
  - role of FDI