Session On:

International Financial Linkages and the Real Economy

Discussion

by

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Conference:

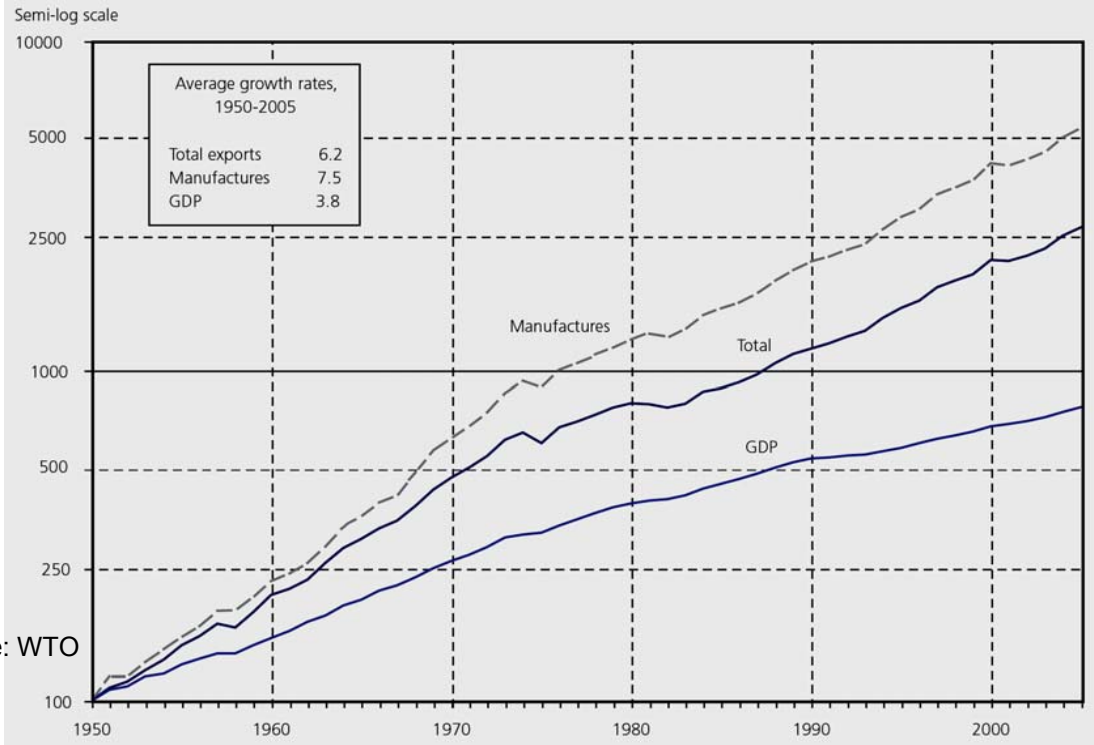
"2nd Symposium of the ECB-CFS Research Network on Capital markets and financial integration in Europe"

February 13-14, 2008

Hosted by the European Central Bank

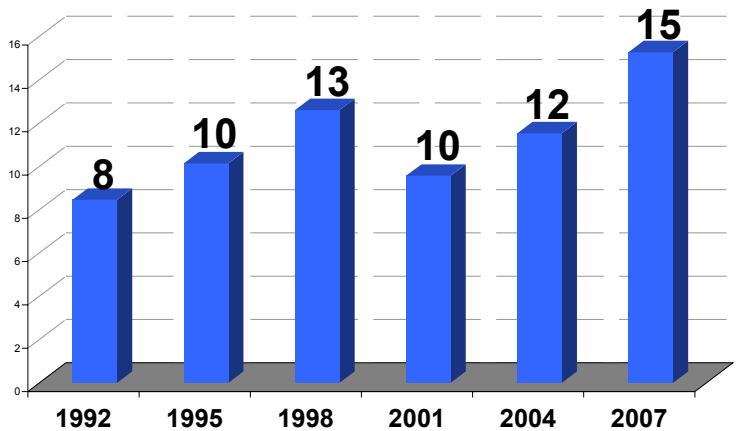
Financial Globalization Has Arrived

- World trade has grown **25-fold** since 1950, about **three times faster** the world output growth.



Source: WTO

- Yet, financial globalization became prevalent only since the late 1980s, with home bias in asset allocation declining

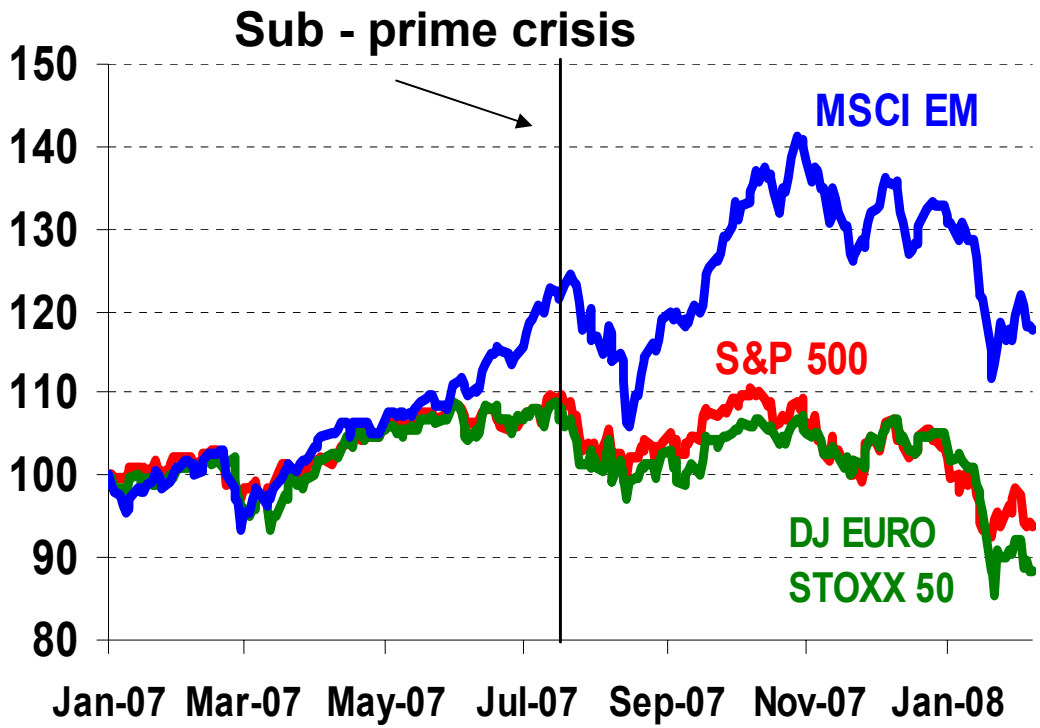


Source: BIS, authors calculations

Globalization & Decoupling

An interesting question today:

- Is the presence of financial globalization causing the US slowdown to affect the global economies and global stock markets more strongly than the time before globalization?
- Some may argue that the sub-prime crisis and the US housing bubble would not have occurred in the first place, if it were not for the cheap money flowing into the US from abroad !!



Source: Bloomberg, author's calculations

- One item is clear: Today's prevalent vocabulary of "decoupling" or "re-coupling" was not present 15 years ago.

Session Papers

All three session papers are empirical. Each paper examines a different aspect of financial globalization:

- What are the determinants of financial integration? (Lane & Milesi-Ferretti)
- What are the effects of financial integration on TFP and capital accumulation? (Bonfiglioni)
- How does the institutional environment affect banks' decisions to expand into a foreign country? (Claessens & Van Horen)

The Drivers of Financial Globalization

by

Philip R. Lane and Gian Maria Milesi-Ferretti

January 2008

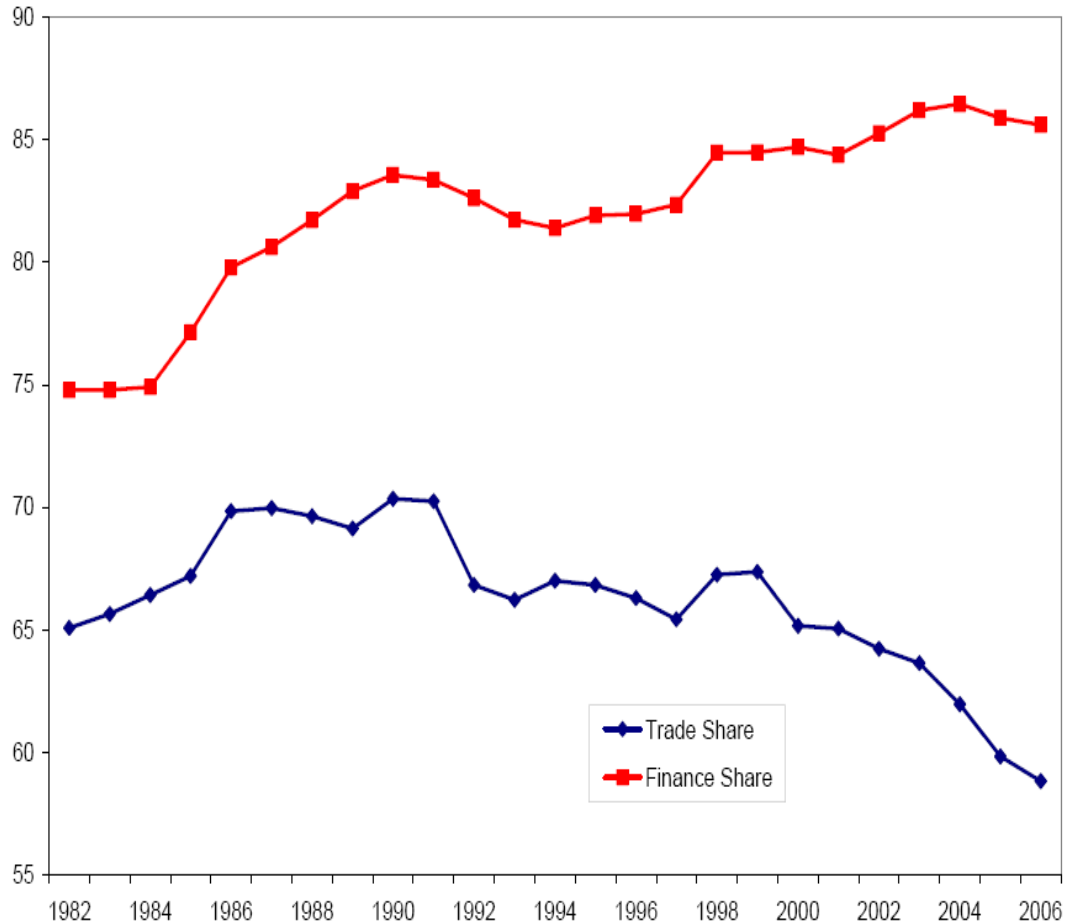
LANE-MILESI-FERRETTI: Description

A short paper designed to motivate the discussion on the drivers of financial globalization.

Key motivating point:

An observed asymmetry over the last 15 years:

The share of advanced countries in trade is declining, but their share in cross-border financial positions is rising.



Description, cont.

The authors run a cross-country regression with 67 observations and 2006 data, using the following equation:

$$F_i = \alpha + \beta*TRADE_i + \gamma*FINDEV_i + \rho*GDPPC_i + \delta*POP_i + \sigma*CAPOPEN_i + \varphi*EUR_i + \eta*FINCTR_i + \varepsilon$$

where

F	≡	foreign assets (or liabilities) as a share of GDP
TRADE	≡	trade-GDP ratio
FINDEV	≡	sum of stock market capitalization and bank deposits as a share of GDP
GDPPC	≡	GDP per capita
POP	≡	population size
CAPOPEN	≡	Capital Account Openness (de jure)
EUR	≡	dummy for EU15 +Iceland, Norway, Switzerland
FINCTR	≡	dummy for international financial centers (Belgium, the Netherlands, Switzerland, and the United Kingdom)

LANE-MILESI-FERRETTI: Main Results

	FA	FL
TRADE	0.20 [0.11]*	0.13 [0.08]
FINDEV	0.33 [0.08]***	0.15 [0.06]**
GDP per capita	0.23 [0.05]***	0.16 [0.04]***
Population	-0.07 [0.04]*	-0.13 [0.03]***
CAPOPEN	-0.05 [0.04]	-0.04 [0.03]
Europe	0.76 [0.15]***	0.53 [0.11]***
Financial Center	0.62 [0.22]***	0.61 [0.17]***

- *Although a positive link exists between trade and external financial exposure, it is insignificant*
- *Domestic financial & economic development are strong factors.*
- GDP per capita is stronger for external assets than for external liabilities.
- Capital account openness is insignificant when controlling for other factors.

LANE-MILESI-FERRETTI: Comments

- A useful synopsis of the factors behind financial integration
- Yet, the regression does not address the key motivating point of the divergent shares:
  - It would be more relevant to conduct a time series analysis and search for breaks regarding the relationship between trade and financial integration.
- A number of indices and variables could be added in the analysis, like institutional parameters, banking and currency crises, alternative indicators for *de jure* capital account openness, etc.
- Robust standard errors could be reported.

Financial Integration, Productivity and Capital Accumulation

by

Alessandra Bonfiglioni

December 2007

BONFIGLIONI: Description

- The previous paper dealt with the determinants of capital account liberalization with *de facto* financial openness as the dependent variable.
- This paper examines a reverse effect: The benefits to growth from Capital Account Liberalization (CAL).
- The innovation of the paper is the ***separation of the effects on TFP and on capital accumulation***

The literature on the growth effects of financial openness is ambiguous

- Empirically, results are mixed as the effects on growth are not robust (Kraay, 1998; Rodrik, 1998; Edison *et al*, 2002). Financial globalization is not a necessary nor a sufficient condition for growth. However, a positive effect does show up for long term data.
- The underlying theory suggests that *if* benefits of financial integration are large for developing countries, it must be through channels that are not in the textbook model (Gourinchas & Jeanne, 2006).
- Kose *et. al.,* 2006 survey the beneficial indirect effects of financial openness : Better macro policies, better institutions, increased TFP, etc.

BONFIGLIONI: Data

Sample data: 1975-1999 for 70 countries.

Dependent: TFP, Capital accumulation

Independent:

CAL: (IMF): (*de jure* financial integration*:* **0, 1** discrete variable)

CAL: (Quinn): (*de jure* financial integration: **0 – 100** continuous variable)

IFIGPD ≡ gross external position (A+L) as a ratio of GDP

(*de facto* financial Integration)

CC ≡ **0, 1.** Currency crises (Glick & Hutchison, 2000; Bordo et. al., 2000)

BC ≡ **0, 1, 2.** Banking crises (Caprio & Klingebiel, 2003)

Other controls

Comments

- IFIGDP includes (among others) both FDI and debt. However, they have distinctive characteristics and should be disentangled (ie. the empirical literature has shown that debt flows generate the greatest risks from financial openness. See Eichengreen *et al.*, 2006; Berg, 2004).
- The sample stops in 1999, leaving out an important era (eg. the creation of the Eurozone).
- Question marks on the constructions of CAL - Table A, e.g. does not record the 1994 liberalization that occurred in Greece.

BONFIGLIONI: Empirical Methodology

- Three empirical methodologies: Annual, 25-year change, 5-year intervals
- Author does not explain which methodology is the preferred one.

1) Annual: Panel difference in differences, 1975 – 1999, 70 countries

log (K) in Tables 1a, 2a, 3a

log (TFP) in Tables 1b, 2b, 3b

- The estimated equation is:

$$P_{it} = \beta_0 + \beta'_1 X_{it-1} + \gamma\, IFL_{it-1} + \eta_i + v_t + u_{it} \qquad (2)$$

X ≡ *BC, CC, other controls*

IFL ≡ *CAL, IFIGDP, CAL∗IFIGDP*

Author claims the lag in independent variables controls for endogeneity, a big question-mark.

She also does something along the lines of Lane-Milesi-Ferretti in Table B: What affects CAL? Answer: Financial Development, plus the type of region. GDP is <u>not</u> included as an independent variable.

BONFIGLIONI: Comments on Eq. (2)

Main Result:

CAL and IFIGDP have significant negative effect on *log (K)* and significant positive effect on *log (TFP).* The latter is larger. Openness to trade is also insignificant.

Econometric remarks:

- Log levels are going to be non-stationary, either because of stochastic trends (unit roots) or deterministic economic growth. Suggestion: Include a linear trend component with an explicit coefficient or an AR(1) in the error term.
- Do a dynamic panel in the annual sample. It is unclear why this is done only in the smoothed data of the 5-year averages.
- Include the R-squared statistics

BONFIGLIONI: Additional Empirical Approaches

2) Cross - sectional analysis (25-year avg growth rates)

Tables 4, 5 (max of 69 observations)

$$dp_{i(t-25,t)} = \beta_0 + \lambda p_{it-25} + \beta'_1 X_{i(t-25,t)} + \gamma IFL_{i(t-25,t)} + u_{it} \qquad (3)$$

Result: Financial integration increases productivity, mainly in the developed world and has no effect on capital accumulation.

3) Dynamic panel analysis, GMM system (5-year averages)

Table 6, 7

$$dp_{it} = \beta_0 + \theta\, dp_{it-5} + \beta'_1 X_{it} + \gamma\, dIFL_{it} + d\varepsilon_{it} \qquad (4)$$

$$p_{it} = \beta_0 + \theta\, p_{it-5} + \beta'_1 X_{i(t-5,t)} + \gamma\, IFL_{i(t-5,t)} + \eta_i + v_i + u_{it} \qquad (5)$$

Overall findings:

- a positive effect on TFP, no effect on capital accumulation
- Likelihood of banking and currency crises does not increase with financial integration.
- Coefficient for openness to trade is insignificant.

BONFIGLIONI: Recommendations for Future Research

1. Threshold conditions matter in the effects of financial globalization (Kose, Prasad, Rogoff and Wei, 2006).
   - ✓ Critical thresholds: Domestic financial market development, institutional quality, Governance, Macroeconomic policies, trade integration
   - ✓ Above thresholds: GDP and TFP ↑ , Risks of crises ↓
   - ✓ Below thresholds: GDP and TFP ? , Risks of crises ↑

2. Issues of volatility could also be examined.

3. As a test of robustness, the authors could utilize alternative indicators to asses the role of financial growth (the level of market capitalization, the magnitude of corporate bond issues etc).

Location Decisions of Foreign Banks and Institutional Competitive Advantage

by

Stijn Claessens and Neeltje Van Horen

February 2008

CLAESSENS-VAN-HOREN: Paper's novelty

- According to the existing literature, banks prefer to expand to countries with similar institutional environment. Galindo et al. (2003) showed that differences in institutional environments is an important determinant of foreign bank entry.
- Novelty of the paper:

  Introduction of a competitiveness factor affecting the decision of a bank to enter into a foreign market:

  > *The institutional similarity of the source to the host country **relative** to the average institutional similarity of all competitor banks.*

CLAESSENS-VAN-HOREN: Data & Variables

- Period 1995 – 2006, 138 countries, 8,838 host-source country pairs
- A bank is assumed to be foreign owned, if above 50% of its shares are foreign owned
- The foreign country with the highest percentage of shares is considered the source country
- Direct ownership is used rather than indirect
- Dependent Variable: Measure of Foreign Bank Entry
  - 1996-2006 change in the number of foreign banks from source country j present in host country i (gross foreign bank entry – exits are not taken into account)
- Independent Variable:

$$InstCompAdv_{ijt} = \frac{(\| InstSource_{jt} - InstHost_{it} \|)}{\sum_{j=1}^{k} \| InstSource_{jt} - InstHost_{it} \| / N}$$

CLAESSENS-VAN-HOREN: Results

	(1)		(2)		(3)	
dInstCompAdv	-0.012	***				
	[0.000]					
dInstHost	0.009	*	0.007		0.011	**
	[0.063]		[0.135]		[0.020]	
dInstDif			-0.010	***	-0.011	***
			[0.002]		[0.000]	
dInstAvgDif					0.024	**
					[0.033]	
dEntryres	-0.005	**	-0.005	**	-0.006	**
	[0.038]		[0.048]		[0.026]	
dTrade	0.002	***	0.002	***	0.002	***
	[0.000]		[0.000]		[0.000]	
dGDPsource	-0.022	***	-0.022	***	-0.022	***
	[0.000]		[0.000]		[0.000]	
dGDPcapsource	0.000		0.000		-0.001	
	[0.978]		[0.990]		[0.946]	
Wald chi2	105.38		99.06		110.82	
No. Obs.	8,838		8,838		8,838	

Difference in differences model

CLAESSENS-VAN-HOREN: Comments

- **Model (1) is a restricted version of Model (3): Should test the restriction**
- **Some robustness tests on the appropriate index of institutional quality could be performed. Paper's Index is a simple average of six indicators: (1) voice and accountability, (2) political instability and violence, (3) government effectiveness, (4) regulatory quality, (5) rule of law and (6) control of corruption.**
- **Other variables that can be used to measure institutional quality:**
  - ✓ **Institutional Profiles (IP) database (www.cepii.fr),**
  - ✓ **the Arthur S. Banks Cross National Time-Series Data Archive**
  - ✓ **WDI indicators: the share of children aged 10-14 in the labor force, mortality rates etc.**
  - ✓ **Fraser Institute**
  - ✓ **Human Development Index**
- **Other possible indicators for competitive advantage:**
  - ✓ **the difference in innovation and creativity (number of patents)**
  - ✓ **the difference in productivity**
  - ✓ **technology intensity (R&D expenditures)**

CLAESSENS-VAN-HOREN: More Comments

- 51% foreign ownership doesn't necessarily mean foreign control. *Who exercises effective control of the bank? A*n alternative definition could be: **The nationality of the largest shareholder.**
- A robustness test: Take the net foreign presence, i.e., entries minus exits instead of entries only as the dependent variable, and see what happens.
- The authors could use a number of variables to control for domestic location factors:
  - ✓ market size (credit expansion, market capitalization)
  - ✓ consumer confidence indicators
  - ✓ wages and productivity (unit labor costs)
  - ✓ technological and human related aspects such as R&D
  - ✓ expenditures or people with secondary and tertiary education etc.
- Why include both GDP and GDP per capita?

CLAESSENS-VAN-HOREN: More comments for future research

- Banks have a source and a target area, which immediately calls for a EDA (exploratory data analysis) approach to the data set.
  - Clustering of banks based on source and target areas would be particularly interesting and (if done well on a map) would be visually stimulating. The authors can use any clustering method to extract “who goes where.”
  - Based on these clusters, they can rank the banks: where do larger banks go and where do smaller banks go? Do large banks lead and smaller follow? Or smaller banks lead in certain areas?
  - These, and similar questions based on profitability and efficiency indicators can be answered in a meaningful way by such EDA methods.

Concluding Remarks

What have we learned from the session papers?

- At the macro level, trade doesn't seem to matter for financial integration, TFP or capital accumulation.
- Both *de jure* and *de facto* liberalization have a positive effect on TFP, but not so much on capital accumulation.
- A bank's entry into a foreign country depends, *ceteris paribus,* on whether the institutional environment of the potential host country is closer to the institutional environment of the source country than of the other competitor countries. Also, at the micro-level, bank foreign expansion is related positively to trade.