Financial Integration and Deepening: Are Poor Countries Lagging?

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I. Financial Depth
Measures of Financial Depth

- Cross-country measures of financial depth tend to be crude
- Intermediation taking place relative to level of economic activity
- Liquid liabilities as a share of GDP
- Domestic Credit from banking sector
- Domestic Credit to private sector
Positive correlation between financial depth and income

![Graph showing the positive correlation between liquid liabilities (% GDP) and GDP per capita (1970-1999)]
Liquid Liabilities
(% of GDP)

High Income OECD Countries: GNI per capita > $10,066
Middle Income Countries: GNI per capita between $825 and $10,065
Low Income Countries: GNI per capita < $825
Domestic Credit Provided by Banking Sector
(% of GDP)

- High Income OECD Countries: GNI per capita > $10,066
- Middle Income Countries: GNI per capita between $825 and $10,065
- Low Income Countries: GNI per capita < $825

The diagram shows the domestic credit provided by the banking sector for different income categories across different decades (60s, 70s, 80s, 90s, and current). The data indicates a significant increase in domestic credit, especially in the 90s and current period, compared to the decades of the 60s and 70s.
Domestic Credit to Private Sector

(% of GDP)

- High Income OECD Countries: GNI per capita > $10,066
- Middle Income Countries: GNI per capita between $825 and $10,065
- Low Income Countries: GNI per capita < $825
Stylized Facts

- Wealthy countries have more financial depth
- Financial depth in wealthy countries has been increasing over time
- Poor country performance has been mixed, but by and large poor countries have been falling behind
Why should we care?

- Number of theoretical reasons why financial depth may enhance economic performance
  - Reduced information costs
  - Mitigate risk exposure
  - Pools savings to capitalize on potential economies of scale
- Countries with more financial depth appear to exhibit superior economic performance
Positive correlation between financial development and subsequent growth
Positive relationship between financial development and growth

- Serious causality issues, but results seem robust
- Impact appears to be on “total factor productivity,” rather than factor accumulation

\[ y = Af(K, L, T, ...) \]

- Bodes well for “sustainable” growth improvements through development of financial sector [Young (1992)]
II. Financial Integration
Concepts of financial integration

- *de facto* financial integration
  - Actual intensity of links to international capital markets

- *de jure* financial integration
  - Degree to which policies encourage enhanced links to foreign capital markets
  - Usually associated with severity of restrictions on capital movements into and out of country
Discrepancies between two concepts

- **Latin America**
  - Countries often closed according to *de jure* measures
  - Often have relatively large volumes of international capital flows (*de facto*)

- **Africa**
  - Number of countries have relatively open capital account policies
  - Still receive relatively small international capital flows
Measures of *de facto* financial integration

- Gross foreign assets and liabilities relative to GDP
  - Typically CPIS data set
- Correlation between consumption and output
  - Should be negatively related to international financial integration
High income countries are more integrated by *de facto* measure

Total Foreign Assets & Liabilities
(% of GDP in 2003)

- **High Income OECD Countries**: GNI per capita > $10,066
- **Middle Income Countries**: GNI per capita between $825 and $10,065
- **Low Income Countries**: GNI per capita < $825
Measures of *de jure* financial integration

- Combinations of:
  - Intensity of official restrictions on capital flows
  - Prevalence of use of multiple exchange rates
  - Requirements of surrender of export proceeds

- Chinn-Ito (2007)
High income countries also more integrated by *de jure* measure.
Why should we care?

- Channels for financial integration to affect economic performance
  - Increased investment from decrease in capital costs
  - Technology transfer from developed countries
  - Development of domestic financial sector
  - Increased risk management and more specialization in production
  - Improved macroeconomic policies

- However, unlike financial depth, impact of financial integration is much more mixed
Little correlation between *de jure* capital account openness and subsequent growth
Parametric studies also find weak relationship

<table>
<thead>
<tr>
<th>Study</th>
<th># of Countries</th>
<th>Years</th>
<th>Effect on growth</th>
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<tr>
<td>Alesina, et al (94)</td>
<td>20</td>
<td>50-89</td>
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<td>Grilli and Milesi-Ferretti (95)</td>
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<td>Quinn (97)</td>
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<td>75-89</td>
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<td>Kraay (98)</td>
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<td>Rodrik (98)</td>
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<td>Chanda (00)</td>
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<td>76-95</td>
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<tr>
<td>Arteta (01)</td>
<td>51-59</td>
<td>73-92</td>
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<tr>
<td>Bekaert, et al (01)</td>
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<td>81-97</td>
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<td>Edwards (01)</td>
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<td>O’donnell (01)</td>
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<tr>
<td>Edison, et al (02)</td>
<td>57</td>
<td>80-00</td>
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Reasons for weak relationship

- Integration may foster increased capital accumulation, but not total factor productivity growth
  - TFP growth is bulk of cross-country growth differences
- Integration may increase exposure to financial crises
- Researchers may have failed to find relationship due to endogeneity issues
Integration and macroeconomic volatility

- Increased integration allows risk to be shifted to world markets
- Can “separate” output and consumption risk
- Because consumption risk (which we care about) is not as closely connected to output risk, we can choose a riskier (but perhaps more valuable) output bundle
  - Predicts increased specialization and perhaps increased output volatility ...
  - ... but should also see reduced consumption volatility

<table>
<thead>
<tr>
<th></th>
<th>More financially integrated</th>
<th>Less financially integrated</th>
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</thead>
<tbody>
<tr>
<td>Output (Y)</td>
<td>3.84</td>
<td>4.67</td>
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<tr>
<td>Income (Q)</td>
<td>5.44</td>
<td>7.25</td>
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<td>Pvt. Consumption (C)</td>
<td>5.18</td>
<td>6.61</td>
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<td>C+G</td>
<td>4.34</td>
<td>6.40</td>
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<tr>
<td>(C+G)/Q</td>
<td>0.81</td>
<td>0.80</td>
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Evidence from geography

- *de jure* integration likely to be endogenous
  - Countries may respond to financial crises by imposing capital restrictions [e.g. Malaysia (1997)]
- Finds strong positive relationship between financial remoteness and macroeconomic volatility
Figure 1: Volatility and Remoteness

Key Variables, 1994-2004
III. Bond Finance
Increased attention to bond finance subsequent to 1997 Asian crisis

- Perceived that bond finance could provide a “substitute” form of intermediation during crises
  - Greenspan: “Spare tire” comment
- This finding is largely discredited
  - Evidence suggests that bank and bond finance are complements, rather than substitutes [Eichengreen, et al (2004)]
  - Ex.: Banks provide bond underwriting services
Arguments for encouraging local currency bond finance

- Developing countries, particularly in Asia, considered to be “over-banked”
- Borrowing in local currency could mitigate borrower exposure to currency risk
- “Original sin” precludes borrowing in local currency for investors in countries lacking thick local currency bond markets
Bond market shares suggest Asia behind Latin America

- As early as 1995 (before crisis) World Bank study encouraged Asian bond development
- 2003 – Asian bond Fund launched by EMEAP
  - Members committed to investing US 41 billion in Asian sovereign bonds
  - Larger private bond purchases planned, but not finalized
  - Idea is to increase depth of domestic bond markets
Large share of Latin American volume is public debt

Domestic Bond Markets as a Share of GDP
Determinants of bond market depth

- Examined characteristics associated with increased bond market volume
  - Country size (scale effects)
  - GDP per capita (wealth)
  - Exports/GDP (openness)
  - Cost of contract enforcement (decreasing)
After controlling for country characteristics, Asia is ahead!
Questions for EMEs

- Merits of local currency bond finance are difficult to quantify
- Costs of encouraging development of these markets are real
  - Usually could float debt offshore more cheaply
- Unclear that intervention is motivated
  - Economies of scale suggest that some smaller economies incapable of developing
- Are government bonds substitutes or complements for private issues?
Conclusion

- Robust evidence of a positive relationship between financial deepening and growth
- Much weaker evidence that international financial integration enhances economic performance
  - Some evidence that integration positively correlated with growth among countries pursuing good policies
- Little evidence supporting intervention encouraging local currency bond markets
  - Bond markets should develop along with, not at expense of, development of domestic banking sector