

Empirical Studies on Trade Finance in the context of global financial crisis

ESCAP/WTO Fifth ARTNeT Capacity Building Workshop
for Trade Research

Wei Liu, ESCAP

26 June, 2009

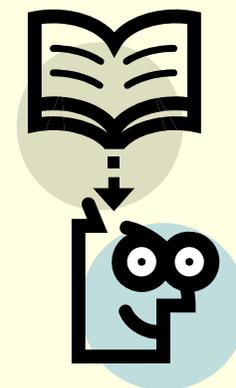
liuw@un.org

Outlines

- Literature review
- Data
- Future research

Literature

- Ronci (2004), IMF
- Thomas (2009), IMF
- Duval and Liu (2009), ESCAP



Trade Finance & Trade Flows

– Evidence from 10 crisis

Marcio Ronci

Dec 2004

IMF

Objectives

- To assess the effect of constrained trade finance on trade flows in countries undergoing financial crisis.

Estimate import and export volume equations

- Key findings:
 - Constrained trade finance is a factor in explaining both export and import in the short run.
 - Impact was very small on the trade during crisis though.

Data in Ronci (2004)

- Trade finance = the first difference of the log of the outstanding (external) short-term credit.
- Source: Global Development Finance (GDF) – World Bank.

<http://publications.worldbank.org/GDF/>

- Limitations: exclude intra-firm trade by Multinational corporations; also exclude trade finance by domestic bank.

Data in Ronci (2004) (cont.)

- Dummy var for domestic banking crisis
- This dummy can be a 'proxy' for the ability of domestic banks to finance trade.
- Panel data: 10 countries over 10 years annual data.
- Including: Indonesia, Malaysia, Philippines, Republic of Korea, Thailand and Turkey.
- Unit root tests results are mixed.
- Treating all variables as non-stationary.

Model

- $\text{Log Export} = C1 + a1\log XW + a2\log \text{REL PX} + a3\text{FIN} + A4\text{dummy} + e1$
- $\text{Log Import} = C2 + b1\log Y + b2\log \text{REL PM} + b3\text{FIN} + b4\text{dummy} + e2$
- RELPX and RELPM are the export and import relative price indexes.
- FIN external trade finance
- Y domestic demand
- XW world trade volume index

Econometric methods

- Panel Generalized least squares (GLS)
- Instrumental variables (IV)
- Panel Generalized method of moment (GMM)
- Including fixed effects assumption
- Wald tests to determine a more parsimonious model specification.

Empirical results

| | Export volumes | Import volumes |
|---|----------------|----------------|
| The change in external short-term credit in USD | 0.039** | 0.0798*** |
| Dummy var for domestic banking crisis | -0.055*** | -0.11*** |

Results in words

- A fall of 10 percent in trade finance, explain a decline of 0.39 percent in export and 0.8 percent in import.
- Since trade credits fell by about 50 percent in Brazil and Korea, these coefficient imply a fall of about 2 percent in export volumes and 5 percent in import volumes on account of the drying up of trade finance.

Thomas (2009), IMF

- Including a larger set of countries for a longer time period to assess whether the linkages between external trade finance and trade volumes remains robust in less distressed times and for a wider sample.
- 36 middle-income countries and 2 low-income countries (India and Pakistan)
- Total net financial flows to emerging markets as a proxy for the availability of external finance.

Main results from Thomas (2009)

| | Export volumes | Import volumes |
|--|----------------|----------------|
| Emerging Mkt private capital flows (in percent of GDP) | 1.27*** | 0.95*** |
| Banking crisis dummy | -0.039* | -0.021* |

Recent regression analysis



Estimating gravity model with trade finance var in the model

$$\text{Export}_{\text{reporter/partner}} = \text{GDP}_{\text{reporter}} + \text{GDP}_{\text{partner}} + \text{Distance}_{\text{reporter/partner}} + \text{contiguous}_{\text{dummy}} + \text{common language}_{\text{dummy}} + \text{Official Trade Credit}_{\text{reporter}} + \text{Official Trade Credit}_{\text{partner}} + \text{error}$$

All in log value, except dummy variables.

Period: 1996-2003

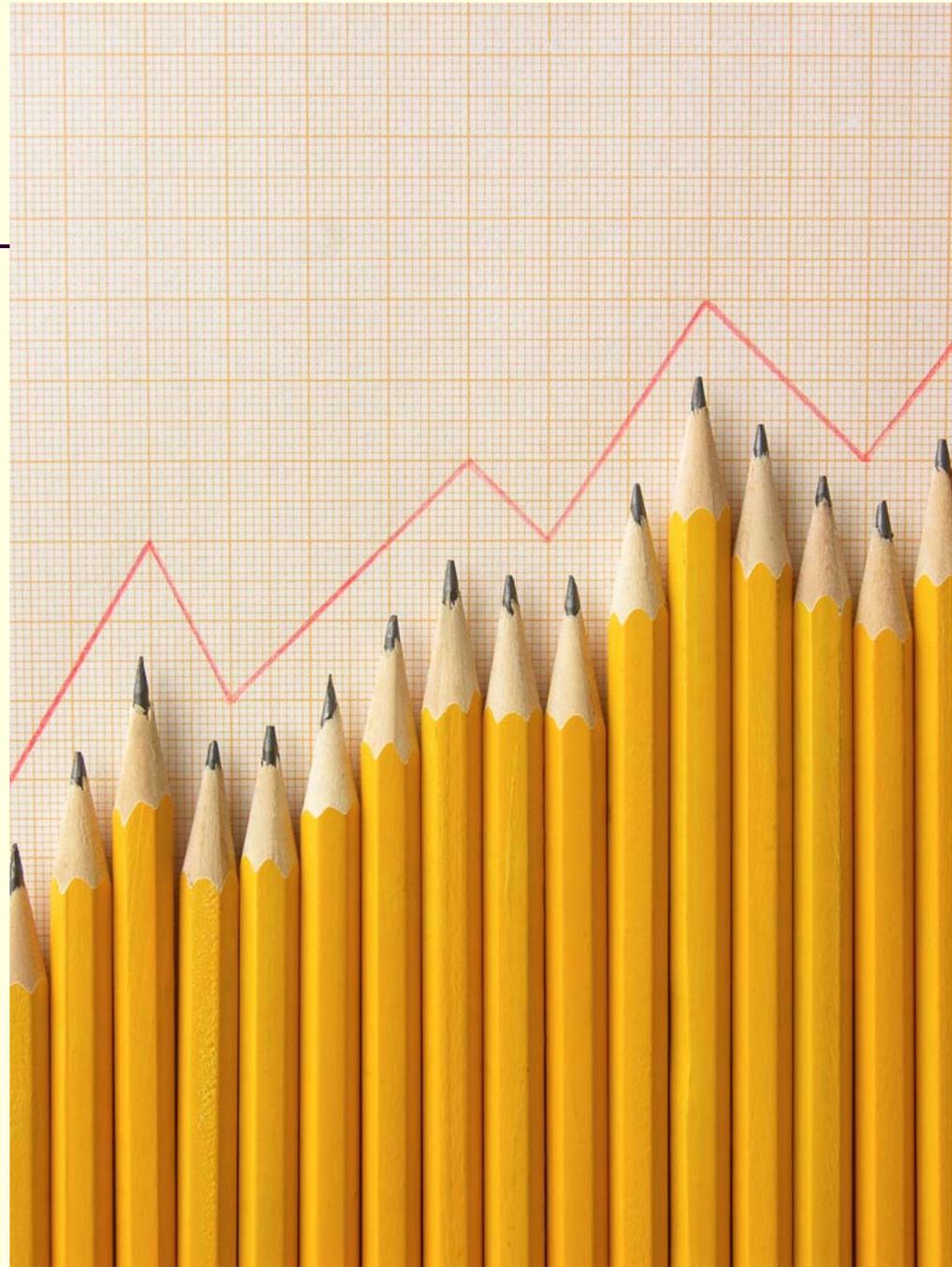
Preliminarily results

| | Log Export volumes | Log Export volumes |
|--------------------------------------|--------------------|--------------------|
| Log Official Trade Credit (reporter) | 0.36*** | 0.39*** |
| Log Official Trade Credit (partner) | | 0.20*** |

Preliminarily results

- A 10 per cent decline in the amount of trade finance may lead to a drop of up to 3.6 per cent of total merchandise trade in developing Asia, a staggering US\$129 billion.
- Financial conditions play a significant role in stimulating trade volumes among emerging market economies
- Compare with those of Ronci and Thomas, Ronci < ESCAP < Thomas.

Data



Trade Finance Data (1)

- **Insured export credit exposures**
- An export credit that carries a guarantee, issued by an export credit agency, protecting the creditor against political, commercial, or transfer risks in the debtor country that may prevent the remittance of debt-service payments.
- Source: Joint OECD-BIS-IMF-WB Statistics on External Debt
<http://www.jedh.org/>
- Availability: Mar 2005 – Sep 2008, quarterly

Trade Finance Data (2)

- **Official trade credits, nonbanks, short term**
- Short-term non-bank trade-related credits comprise official and officially guaranteed or insured suppliers' credits. These are credits extended by exporters to importers abroad that have a remaining maturity of one year.
- Source: Joint OECD-BIS-IMF-WB Statistics on External Debt
<http://www.jedh.org/>
- Availability: Jun 1996 – Dec 2003, biannual

Trade Finance Data (3)

- **Global Trade Finance**
- In ARTNeT Alert, the change of the volumes of global trade finance (including and excluding aircraft and shipping) between 4Q 2008 and 4Q 2007 are cited.
- Source: Dealogic press release, Jan 2009
<http://www.dealogic.com/>

Trade Finance Data (4)

- **Country Risk Classification**

- The Country Risk Classification Method measures the country credit risk, i.e. the likelihood that a country will service its external debt.

- Source: OECD

http://www.oecd.org/document/49/0,2340,en_2649_34171_1901105_1_1_1_1,00.html

- Availability: Classified in Jan 2009

Trade Finance Data (5)

- **Depth of Credit Information Index**
- The depth of credit information index measures rules affecting the scope, accessibility and quality of credit information available through either public or private credit registries.
- Source: World Bank
<http://www.doingbusiness.org/>

Trade Finance Data (6)

- Collecting data at the grassroots level:
country data
 - Thailand – ExIM Bank
 - State Bank of Pakistan
 - And more?
 - ESCAP Trade Finance Questionnaire
 - IMF Trade Finance Questionnaire

Trade Finance Study - List of Questions/Issues of Interest (ESCAP)

- **What are the main sources of import/export finance in Pakistan? If possible, can you provide information on the value and proportion of each source of trade finance:**
 - 1) **Domestic public institutions (e.g. Pakistan EXIM Bank and other specialized institutions);**
 - 2) **Commercial Banks operating in Pakistan;**
 - 3) **Foreign official trade finance (e.g. official export credits, officially guaranteed or insured suppliers' credits, which are credits extended by exporters to importers);**
 - 4) **Foreign non-official trade finance (e.g. foreign companies);**
 - 5) **Others (to be elaborated on)**

List of Questions/Issues of Interest (ESCAP)

- How has the importance of the various trade finance providers changed over time, in particular since the beginning of the current economic crisis?
- What is the average cost of trade finance? What are major components of the cost of trade finance? How much did it increase since the beginning of crisis?
- Etc.

IMF Survey 2009

■ Where Value of Transactions has Declined, is this due to . . . ?

| | |
|---|-----|
| A fall in the demand for trade activities | 73% |
| Less credit availability at your own institution | 57% |
| Less credit availability at your counterparty banks | 57% |
| A fall in the price of transactions | 43% |
| A shift towards cash-in-advance transactions | 14% |
| A shift toward open account | 14% |
| Economic crisis; increased risk at the global level | 14% |
| Other | 11% |

IMF Survey 2009

■ Has Pricing of Trade Finance Increased Because of . . . ?

| | |
|--|-----|
| Own institution's increased cost of funds | 71% |
| Increased capital requirements | 58% |
| Increased risk of trade finance products relative to other working capital lending to same non-financial corporate borrowers | 39% |

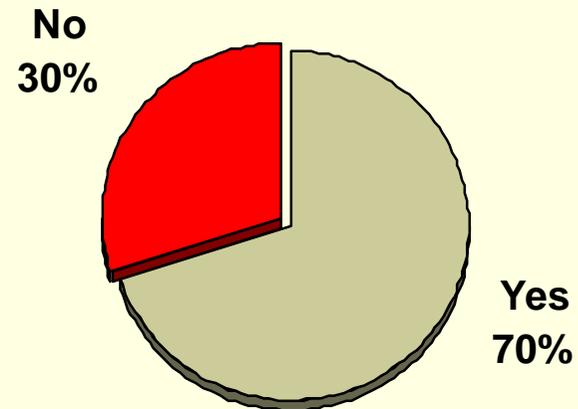
IMF Survey 2009

■ How Has the Implementation of Basel II Impacted Your Ability to Provide Trade Finance?

| | |
|--|------------|
| No impact | 40% |
| Negative impact <i>Reduces ability to undertake new business; greater restrictions and more costly</i> | 33% |
| Positive impact <i>Includes more selective trade finance offerings; risk rating more individual</i> | 27% |

IMF Survey 2009

**Have Trade-related
Guidelines Changed
Since October 2008**



IMF Survey 2009

■ How Guidelines Have Changed

| | |
|--|-----|
| More cautious with certain countries | 83% |
| More cautious with certain sectors | 77% |
| Requested shorter tenors | 67% |
| Requested more collateral | 47% |
| Requested more Export Credit Insurance | 37% |

IMF Survey 2009

- **What Official Sectors Should Do with Respect to Trade Credit Financing**
- Most respondents offer suggestions which center around greater government involvement in providing credit, support, and policies specific to the trade finance industry.

Future research

- Which models of export credit insurance and guarantee organizations are most appropriate for developing countries of the region?
- How are SMEs financing their imports and exports and what are their needs and priorities in this area?
- How important is trade finance for South-South trade development?
- What is trade finance gap in your country?

Summary

1. Understand basic trade models for empirical analysis;
2. Understand data issues and tools for data collections;
3. Analyze trade finance issues and assess whether the linkages between external trade finance and trade volumes.



Further readings

- The global financial crisis: A wake-up call for trade finance capacity building in emerging Asia, Vox column, June 19, 2009.
- <http://www.voxeu.org/index.php?q=node/3667>
- Or
- Trade finance in times of crisis and beyond
- <http://www.unescap.org/tid/artnet/pub/alert3.pdf>

- Questions?

