Economic Crises and The Twin Balance Sheet Problem in India

Module 6
Contemporary Themes in India’s Economic Development and the Economic Survey

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Overview

• Financionomic (Financial-Economic) Crises and Indian Experience

• Effects of the Twin Balance Sheet Crisis.

• Successful and Unsuccessful Central Banking Experiences.
Crisis, Crises, Crises: A Rough Time-Line

Early 1980's

1991

1994-95

1997-98

1999

2007

2008

2009-10

2013-14

2016

Latin American Debt Crisis

BOP Crisis

Tequila Crisis

Argentina Mexico

Asian Financial Crisis + Russia

Brazil

East Europe

Global Financial Crisis

Greece, Ireland, Spain, Iceland

Taper Tantrum

Brazil, India, Indonesia, South Africa, Turkey

Tremors in China
Financionomic (Financial-Economic) Crises and Indian Experience
Debt Crises Not Uncommon (Reinhart & Rogoff, 2009)

Sovereign External Debt: 1800-2006
Percent of Countries in Default or Restructuring

Year

Percent of countries

0 10 20 30 40 50 60
What is a Financionomic Crisis?

• Broadly defined as phenomena associated with *substantial loss in value of assets* with *a sharp negative impact on growth*. These assets can be:

1. Currency (*exchange rate*)
   
   [Example: Thailand during Asian Financial Crisis late 1990s]

2. Equity
   
   [Example: Argentina ‘Tequila Crisis’, 1994-95, AFC].

3. Real Estate
   
   [Example: Japan late 1980s, USA post-Global Financial Crisis 2008-09].
Economic Crises Manifestations

Thailand during Asian Financial Crisis

Argentina during ‘Tequila’ Crisis

Japan during the Balance Sheet Crisis

Costs of Economic Crises

1. Loss of income
2. High inflation
3. Unemployment
4. Banking Problems
5. Contagion
Source: Reuters and the Wall Street Journal
<table>
<thead>
<tr>
<th>Crisis type</th>
<th>Originating countries</th>
<th>Origin of problem</th>
<th>Manifestation</th>
<th>Trigger</th>
<th>Exchange rate regime</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt</td>
<td>EMEs (Latin America 1982; India 1991); Small AE (Greece)</td>
<td>Govt. borrowing</td>
<td>Current account deficit</td>
<td>Speculative attack &amp; exchange rate collapse</td>
<td>Fixed rate</td>
<td>Greece was part of euro, so trigger was sharp rise in interest rates</td>
</tr>
<tr>
<td>Sudden Stop</td>
<td>EMEs (East Asia 1997-9; Eastern Europe, 2008; Fragile Five 2013); Small AE (Spain 2010)</td>
<td>Corporate borrowing</td>
<td>Asset price bubbles; High corporate leverage</td>
<td>‘Sudden stop’ of capital flows &amp; exchange rate collapse</td>
<td>Fixed rate</td>
<td>Fragile Five had flexible exchange rates. Spain was part of euro.</td>
</tr>
<tr>
<td>Balance Sheet</td>
<td>Systemically important</td>
<td>Corporate borrowing</td>
<td>Asset price bubbles; High corporate leverage</td>
<td>Asset price collapse</td>
<td>Flexible exchange rate</td>
<td>Yen appreciated after crisis</td>
</tr>
<tr>
<td>Banking Crisis</td>
<td>Systemically important (GFC US 2008)</td>
<td>Bank and consumer borrowing</td>
<td>Asset price bubble in housing</td>
<td>Correction in asset prices</td>
<td>Flexible exchange rate</td>
<td>US$ appreciated</td>
</tr>
<tr>
<td>The NEXT</td>
<td>Systemically important</td>
<td>Corporate borrowing</td>
<td>Rising debt, asset price bubbles</td>
<td>‘Sudden stop’ with potential for sharp exchange rate decline</td>
<td>Managed float</td>
<td>Crisis country's currency could depreciate substantially.</td>
</tr>
</tbody>
</table>
Historically Periods of High International Capital Mobility Have Led to Banking Crises (R&R 2009)
A **tranche** is a French word meaning "a portion of something."
<table>
<thead>
<tr>
<th></th>
<th>Currency/ Sudden Stop</th>
<th>Debt/ Banking Crisis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Affected</strong></td>
<td>1991</td>
<td>2011 onwards</td>
</tr>
<tr>
<td></td>
<td>(fiscal profligacy by Centre)</td>
<td>(Balance sheet crisis but no recession and no decisive solution yet).</td>
</tr>
<tr>
<td><strong>Less Affected</strong></td>
<td>1998</td>
<td>2002</td>
</tr>
<tr>
<td></td>
<td>(avoided fate of ‘Asian Tigers’)</td>
<td>(high NPAs and fiscal profligacy by states but no crisis)</td>
</tr>
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<td></td>
<td>2013</td>
<td></td>
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<td></td>
<td>(almost a ‘Sudden Stop’)</td>
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No Sovereign default ever
The Twin Balance Sheet Problem in India: Banks and Corporates Stressed

*% of debt owed by companies with Interest Coverage Ratio <1 based on sample of 3700 listed companies (Credit Suisse).
India’s Twin Balance Sheet Problem

• Why ‘Twin’?
  – Private credit boom financed by public sector banks.
  – Thus, impaired PSB balance sheets post-GFC derives from and mirrors damaged corporate balance sheets
  – Twins- corporates and banks (mostly public sector).
What Happened in India?
Boom in Gross Capital Formation (Per cent of GDP)
What Happened in India?: Boom Financed by Credit Creation and Capital Flows
Sharp Currency Declines Worsened Balance Sheets of Companies with Foreign Borrowing
In February 2016 as PSB financial results came in investors fled PSB shares..
NPA ratio in India higher than other EMEs

<table>
<thead>
<tr>
<th>Country</th>
<th>NPA Ratio</th>
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<tbody>
<tr>
<td>Brazil</td>
<td>3.8</td>
</tr>
<tr>
<td>Russia</td>
<td>9.2</td>
</tr>
<tr>
<td>South Africa</td>
<td>3.2</td>
</tr>
<tr>
<td>Korea (2000)</td>
<td>8.9</td>
</tr>
<tr>
<td>India</td>
<td>9.0</td>
</tr>
</tbody>
</table>

[Bar chart showing NPA ratios for various countries]
### Estimated Non-Performing Loans

<table>
<thead>
<tr>
<th></th>
<th>India 1998-99</th>
<th>China 2002</th>
<th>India 2016@</th>
<th>China 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total amount in $ billion</strong></td>
<td>14.0</td>
<td>209.1</td>
<td>191.1</td>
<td>1300</td>
</tr>
<tr>
<td><strong>Percent of total loans</strong></td>
<td>14.7</td>
<td>23.4</td>
<td>16.6^</td>
<td>15.5</td>
</tr>
<tr>
<td><strong>Percent of GDP</strong></td>
<td>3.0</td>
<td>14.4</td>
<td>9.4</td>
<td>12.0</td>
</tr>
</tbody>
</table>

**Memo Item**

| Total Bank Credit to GDP | 20.5 | 108# | 53.4* | 137.5** |

*Source: IMF, Credit Suisse estimates, RBI.*

@: As per latest data available till September 2016. ^: Total stressed loans which includes NPAs, restructured loans and unrecognised stress loans; *Using outstanding credit to industry data from RBI as on March 2016; #: People’s Bank of China as reported in “Money & Credit: China Social Financing”, Yardeni Research, Inc., November 2016. **PRC 2016 Article IV consultations, IMF.
Why hasn’t growth suffered in India?

Unique structure of financial system: Public Sector dominated.

- Increase investment and supply capacity
- No sharp adjustments
- ‘Give time to time’ strategy (that worked in early 2000s)
- Allow companies time to turnaround (high growth improving cash flows) by postponing principal payments
- ‘Evergreening’
India: Real GDP growth
Why hasn’t growth suffered in India?

Boom (2004-05 to 2007-08) led to investment in infrastructure that eased long-standing supply constraints and helped growth.
Strategy so far:
‘Giving Time to Time’ and Evergreening

About 6.5% of loans outstanding of stressed Companies were restructured by 2014-15

With little improvements in cash flow stressed Co.s* have borrowed significantly to continue operations

Source: Credit Suisse database. * Top 10 stressed Groups. Includes bank debt, bonds, ECBs, and other debt.
“What if we don’t change at all ... and something magical just happens?”

Picture from CartoonStock, Andrew Toos.
Effects of the Twin Balance Sheet Crisis
Health of Public Sector Banks in the Red (Return on Assets)

Return on Assets is obtained by dividing net profits by average total assets. The dotted red line indicates the international norm.

International Norm
Investment is Contracting
(Real growth in Gross Fixed Capital formation)
Credit to Industry lowest in over 20 years
(Real growth in Credit to Industry)
Real Credit Growth to MSMEs and Corporates: Suffering
Monetary Policy Transmission 1A: Interest Rate and Borrowing Channel, Transmission of Recent Rate Cuts Impeded by Rising NPAs
How does India fit in the Balance Sheet Crisis Model?

• Similarities with other cases (Japan)
  • High NPAs
  • Decisive resolution time-consuming.
  • Weak (private) investment.

• But unique due to
  • Relatively robust growth.
  • Moderately high inflation.

• **Key:** In Japan and India fixing of balance sheets has taken time unlike in US (after GFC) and Thailand (after AFC). So for the latter recovery have been quicker.
Timeline of RBI/Government Actions

- **June 2014:** 5:25 Flexible Refinancing
  - Mar-14

- **August 2014:** Change in ARC Fee Structure
  - Aug-14

- **June 2015:** SDR Scheme
  - Jun-15

- **June 16:** Scheme for Sustainable Structuring of Stressed Assets
  - Jun-16

- **October 2015:** AQR Scheme
  - Oct-15

- **May 2017:** Banking Regulation (Amendment) Ordinance 2017
  - May-17
Core Problems

• **It's not just about banks, it's a lot about companies.** Public discussion has focused on bank capital which is the easiest part. More problematic is to resolve the bad debts in the first place.

• **It is an economic problem, not a morality play.** Several of the problems have been caused by *unexpected* changes in the economic environment: timetables, exchange rates, and growth rate assumptions.

• **The stressed debt is heavily concentrated in large companies.** Concentration is an opportunity, because TBS could be overcome by solving a relatively small number of cases. But large cases are also more difficult to resolve.

• **Many of these companies are unviable at current levels of debt requiring debt write-downs in many cases.** Cash flows in the large stressed companies have been deteriorating over the past few years. The only alternative would be to convert debt to equity, take over the companies, and then sell them at a loss.
Core Problems

• **Banks are finding it difficult to resolve these cases, despite a proliferation of schemes to help them.** They face severe coordination problems, since large debtors have many creditors. If PSU banks grant large debt reductions, this could attract the attention of the investigative agencies. But taking over large companies will be politically difficult, as well.

• **Delay is costly.** Since banks can’t resolve the big cases, they have simply refinanced the debtors. But this is costly for the government, because it means the bad debts keep rising, increasing the ultimate recapitalization bill for the government. Delay is also costly for the economy.

• **Progress may require a Public Sector Asset Rehabilitation Agency (PARA).** Private ARCs haven’t proved more successful than banks. But international experience shows that a professionally run central agency with government backing – while not without its own problems -- can overcome these difficulties.
Stressed Companies in Difficult Situation
Example: Power

Given large cost over-runs, break even tariff is well above current merchant rates*:

* Tariffs are in Rs./KwH and on shown in RHS. Costs are in Rs. Million.
The 4 Rs for Progress

• Recognition
• Resolution
• Recapitalization
• Reform
## Successful and Unsuccessful Central Banking Experiences

<table>
<thead>
<tr>
<th>Location</th>
<th>Run-up (to high inflation and/or crisis)</th>
<th>Clean-up (after inflation and/or crisis)</th>
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<tbody>
<tr>
<td><strong>International</strong></td>
<td><strong>Success</strong></td>
<td><strong>Less Success</strong></td>
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<td></td>
<td>Alan Greenspan: Identified rapid growth in late 1990s as a positive productivity shock and not as overheating. Did not raise interest rates</td>
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<td>Jean-Claude Trichet: Tightening in 2009 that aggravated economic downturn in Eurozone</td>
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<td></td>
<td>D. Subbarao: Inadequate action to head off inflation in the mid-2000s</td>
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**India**
Recommended Readings*


2. Economic Survey 2016-17, Chapter 4.


*: The video clips used in this presentation from the movie ”The Big Short” have been taken from YouTube.