PHOENIX MIRACLES
The Anatomy of Post-Collapse Recoveries

Guillermo Calvo
December 6, 2005

Collapse and Recovery in Argentina
(s.a. GDP, II. 1998=100)
## Systemic Capital Market Turmoil and Output Collapses 1980-2004

<table>
<thead>
<tr>
<th>Country</th>
<th>Peak Year</th>
<th>Trough Year</th>
<th>Recovery Year</th>
<th>Output Decline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nigeria</td>
<td>1980</td>
<td>1984</td>
<td>1989</td>
<td>-21.9%</td>
</tr>
<tr>
<td>Uruguay</td>
<td>1981</td>
<td>1984</td>
<td>1991</td>
<td>-20.9%</td>
</tr>
<tr>
<td>Argentina</td>
<td>1990</td>
<td>2002</td>
<td>2004</td>
<td>-18.4%</td>
</tr>
<tr>
<td>Chile</td>
<td>1981</td>
<td>1983</td>
<td>1986</td>
<td>-13.7%</td>
</tr>
<tr>
<td>Peru</td>
<td>1981</td>
<td>1983</td>
<td>1986</td>
<td>-12.3%</td>
</tr>
<tr>
<td>Thailand</td>
<td>1996</td>
<td>1998</td>
<td>2002</td>
<td>-11.7%</td>
</tr>
<tr>
<td>Argentina</td>
<td>1980</td>
<td>1982</td>
<td>1984</td>
<td>-10.4%</td>
</tr>
<tr>
<td>Malaysia</td>
<td>1997</td>
<td>1998</td>
<td>2000</td>
<td>-7.4%</td>
</tr>
<tr>
<td>Brazil</td>
<td>1980</td>
<td>1983</td>
<td>1985</td>
<td>-7.1%</td>
</tr>
<tr>
<td>South Korea</td>
<td>1997</td>
<td>1998</td>
<td>1999</td>
<td>-6.9%</td>
</tr>
<tr>
<td>Morocco</td>
<td>1994</td>
<td>1995</td>
<td>1996</td>
<td>-6.6%</td>
</tr>
<tr>
<td>Côte d’Ivoire</td>
<td>1982</td>
<td>1984</td>
<td>1986</td>
<td>-6.5%</td>
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<tr>
<td>Ecuador</td>
<td>1998</td>
<td>1999</td>
<td>2001</td>
<td>-6.3%</td>
</tr>
<tr>
<td>Mexico</td>
<td>1994</td>
<td>1996</td>
<td>1997</td>
<td>-6.2%</td>
</tr>
<tr>
<td>South Africa</td>
<td>1981</td>
<td>1983</td>
<td>1984</td>
<td>-6.1%</td>
</tr>
<tr>
<td>Turkey</td>
<td>1993</td>
<td>1994</td>
<td>1995</td>
<td>-5.5%</td>
</tr>
<tr>
<td>Russia</td>
<td>1997</td>
<td>1998</td>
<td>1999</td>
<td>-5.3%</td>
</tr>
<tr>
<td>Mexico</td>
<td>1981</td>
<td>1983</td>
<td>1985</td>
<td>-4.8%</td>
</tr>
<tr>
<td>Turkey</td>
<td>1998</td>
<td>1999</td>
<td>2000</td>
<td>-4.7%</td>
</tr>
</tbody>
</table>

- **Mean**: -9.9%
- **Max** (Nigeria 80): -21.9%
- **Min** (Turkey 98): -4.7%

**Sample Size**: 22
Anatomy of Post-Collapse Recoveries

- Post-collapse recoveries are steep (V-shaped)
The Behavior of Output
(Average SCMT Episode, annual GDP)
Anatomy of Post-Collapse Recoveries

- Post-collapse recoveries are steep (V-shaped)
- The conditions under which the recovery materializes are extremely precarious:
  - no meaningful recovery in external financing
Current Account & Output
(Average SCMT Episode, CA in % of GDP)

Collapse  Recovery

GDP

Current Account

GDP

-6,0
-5,0
-4,0
-3,0
-2,0
-1,0
0,0
1,0
2,0
3,0

-6,0
-5,0
-4,0
-3,0
-2,0
-1,0
0,0
1,0
2,0
3,0

100 102 104 106 108 110

100 102 104 106 108 110

Current Account (%GDP)

GDP

t-2  t-1  Trough (t=0)  t+1  t+2
Anatomy of Post-Collapse Recoveries

- Post-collapse recoveries are steep (V-shaped)
- The conditions under which the recovery materializes are extremely precarious:
  - no meaningful recovery in external financing
  - no meaningful recovery of domestic bank credit
Bank Credit & Output

(Average SCMT Episode, Bank credit deflated by CPI)
Anatomy of Post-Collapse Recoveries

- Post-collapse recoveries are steep (V-shaped)
- The conditions under which the recovery materializes are extremely precarious:
  - no meaningful recovery in external financing
  - no meaningful recovery of domestic bank credit
  - no meaningful recovery of investment
Investment & Output
(Average SCMT Episode, annual Investment)

Collapse

Recovery

GDP

Investment
Anatomy of Post-Collapse Recoveries

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  - no meaningful recovery of domestic bank credit
  - no meaningful recovery of investment

- Post-collapse recoveries in EMs display striking parallels with the US Great Depression...
EM Collapses & the US Great Depression: Similarities

- Bank Credit -

Collapses in EM Economies

US Great Depression

Collapses & the US Great Depression: Similarities

- Bank Credit -
EM Collapses & the US Great Depression: Similarities

- Investment -

Collapses in EM Economies

US Great Depression

Collapses & the US Great Depression: Similarities
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- Post-collapse recoveries in EMs display striking parallels with the US Great Depression...
- ...but also substantial differences, which are revealing when examining the causes of output collapse
EM Collapses & the US Great Depression: Differences

- CPI Inflation -

**US Great Depression**

- **Collapse**
- **Recovery**

**Collapses in EM Economies**

- **Collapse**
- **Recovery**

*Median*
EM Collapses & the US Great Depression: Differences
- Real Wages -
(deflated by WPI)

US Great Depression
Collapses in EM Economies

1929 1930 1931 1932 1933 1934 1935 1936

1929 1930 1931 1932 1933 1934 1935 1936

1929 1930 1931 1932 1933 1934 1935 1936
EM Collapses & the US Great Depression: Differences

- Nominal Exchange Rate -

US Great Depression
(Gold, USD/Ounce)

Collapse  | Recovery
--|--
XR (USD/Gold Ounce)

Collapses in EM Economies

Collapse  | Recovery
--|--
XR*  | GDP

*Median
EM Collapses & the US Great Depression: Differences
- Real Exchange Rate -

US Great Depression

Collapses in EM Economies

GDP (vis à vis British Pound)

RER (vis à vis USA)

*Median
GREAT DEPRESSION: The Keynesian View

- The increase in real (product) wages and real currency appreciation during the collapse phase, lead some observers to conclude that wage stickiness, coupled with price deflation, were a major determinant of the Great Deflation.

- However, EM collapses, in which none of that happens, shed serious doubts on the Keynesian conjecture.
The ‘Debt Deflation’ View

- I. Fisher also believed that price deflation was a major factor, but the reason was different:
  - Fisher conjectured that the shock was in the financial sector, and was provoked by a sharp increase in the real value of outstanding debt resulting from the fall in prices - thus, Debt Deflation.

- This conjecture is not refuted by EM experience, because an equivalent major factor there is Liability Dollarization, which kicks in as a result of currency devaluation.
Studying the 80/90s and comparison with 30s suggest that Financial Factors play a central role in generating major systemic collapses, and in rationalizing Phoenix Miracles - 

*independently of nominal stickiness or the exchange rate regime.*
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