

State Ownership and Systemic Risk: Evidence from the Indian Financial Sector

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- 1 Relevance
- 2 The empirical puzzle
- 3 Some observations
- 4 The policy message

Anglo vs Asian debate, Goodhart (2009)

That framework was found to be insufficient, and Anglo-Saxons may, at least for a time, be less arrogant about the superiority of their approach.

But they may succeed in patching up their framework by adopting generalised regulatory measures that apply counter-cyclical pressures on financial cycles in leverage and maturity mismatch. If they succeed in this approach, should Asian countries adopt similar mechanisms? And if they do, will this result in a closer match, a greater synthesis, between the two models?

The Anglo-Saxon model

Need for a new instrument: *The public sector, the State, has clearly become the guarantor of all systemic financial institutions, providing both liquidity and solvency insurance*

Essentially the Anglo-Saxon model has been short of one necessary instrument, the ability to adjust regulatory pressure so as to restrain such financial cycles

*The problem now is to design and to **introduce a new instrument(s)** that will provide such mitigation with the least cost to financial intermediation, and the **best influence on appropriate innovation and risk-taking.***

Asian vs Anglo-Saxon banking model

Asian better during bad times (B), *slightly* worse during normal times (G) ?

- the evidence on (G): How do PSB fare? mixed evidence
- the evidence on (B): PSB fare better: → crisis endorses the *complacent view*

This paper addresses (B) times.

→

Indian PSB fared better **not for an inherent quality, but for implicit contingent subsidy** from GOI

Fable of the bullock-cart vs Lamborghini

The policy question from a road-rules traffic police perspective:
the (PSB)
the (private-banks)



A remarkable development in the banking sector



Public sector banks: accounted for 79.8% of *incremental deposits* end-March 2009. 88.7% in end-March 2005.

from the *RBI Financial stability Report, March 2010*

MES \equiv marginal expected shortfall

- MES = average return of each firm in bad days for the market

- Easy to compute:

$$MES_{5\%}^i = \frac{1}{\#Baddays} \sum_{t \in Baddays} R_t^i$$

- MES and leverage predict well each firm's contribution to a crisis

from VaR to MES

VaR the most the bank loses with probability $1 - \alpha$

$$Pr(R < -VaR_\alpha) = \alpha$$

Expected Shortfall:

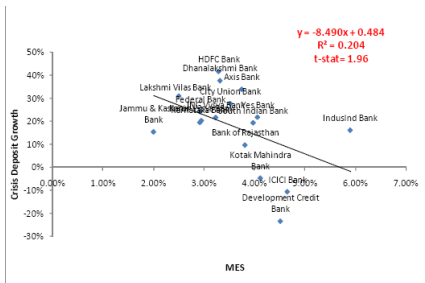
$$ES_\alpha = E[R \mid R \leq VaR]$$

Expected loss when the portfolio's loss exceeds its VaR limit.
Multiple banks (just like a portfolio):

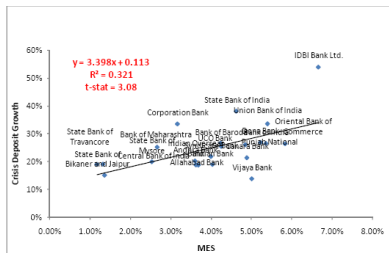
$$\begin{aligned} R &= \sum_i y_i r_i \\ ES_\alpha &= - \sum_i y_i E[r_i \mid R \leq VaR_\alpha] \\ \frac{\partial ES_\alpha}{\partial y_i} &= -E[r_i \mid R \leq VaR_\alpha] \equiv MES_\alpha^i \end{aligned}$$

The puzzle: (1) for deposits

Private banks deposit growth

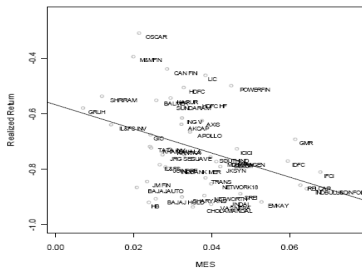


Public banks deposit growth

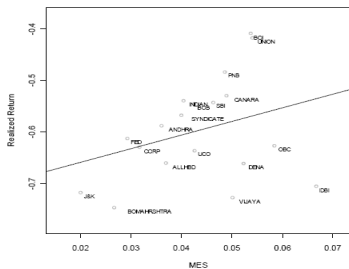


The puzzle: (2) for returns

Private banks realized returns



Public banks realized returns



Implicit government subsidy: a Colbert Bump?

- Indian Bank Nationalization Act: guarantees *all obligations* of PSB in the event of a failure
- Deposit Insurance: all commercial Banks (including foreign ones) are insured by the (DICGC)
- Each *depositor* insured upto a max of *Rs.1,00,000*

It insures all deposits savings, fixed, current, etc, **except**

(i) Deposits of foreign Governments; (ii) Deposits of Central/State Governments; (iii) Inter-bank deposits

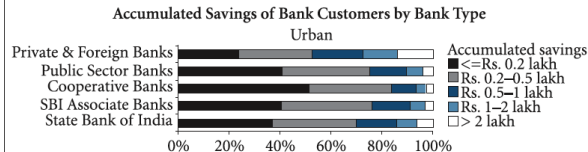
Am not sure about MF deposits

Deposit insurance, ok for now

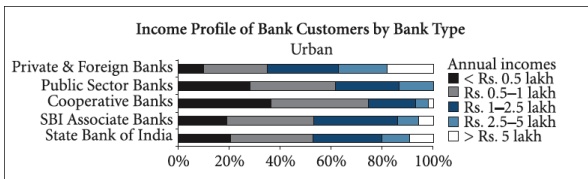
*... , the global financial crisis did not pose any major threat to the banking system in India at any point of time. As such, the need for any special measures pertaining to deposit insurance did not arise. However, **there was also some demand here to increase the deposit insurance cover.** If one looks even at broad data, it becomes quite clear that this demand had no persuasive force. Under the existing insurance cover, **number-wise almost 90 per cent of the deposit accounts are fully covered. Amount-wise, over 60 per cent of total insurable deposits are covered.***

*We determined, therefore, that the cost-benefit calculus was not in favour of enhancing the deposit cover. **Subbarao 2010***

Some stuff worth looking into



Deposits by size differ across banks



More informed investors/depositors may switch, and they are also high net worth individuals.

the maturity structure of deposits

Table IV.19: Bank Group-wise Maturity Profile of Select Liabilities /Assets
(As at end-March)

(Per cent to Total)

Assets/Liabilities	Public Sector Banks		Old Private Sector Banks		New Private Sector Banks		Foreign Banks	
	2008	2009	2008	2009	2008	2009	2008	2009
1	2	3	4	5	6	7	8	9
I. Deposits								
a) Up to 1 year	44.1	45.7	50.9	48.3	57.1	53.1	64.7	63.8
b) Over 1 year and up to 3 years	26.5	27.3	35.5	38.4	34.3	35.6	33.3	23.1
c) Over 3 years and up to 5 years	10.3	8.4	7.7	8.4	2.5	3.7	0.4	9.6
d) Over 5 years	19.1	18.7	6.0	4.9	6.0	7.6	1.6	3.5

What is Viral trying to tell policy makers?

- Don't stop banking sector liberalization, in particular, entry of new private players
- Or, at least, do not rely on developments during the crisis to support *a particular* agenda for the banking sector
- Rather, stimulate more analysis along the lines of this paper (or Gupta et al. 2010 also in this conference)

elicit a more informed/rigorous debate on banking sector

On ownership and stability: mixed predictions

From **Thorsten Beck in Voxeu (2010)**

- Govt. ownership
 - increase stability: reduce risk-taking as high returns might not be the primary concern
 - increase fragility: weaker banking skills and governance structures, unstable business models, misaligned incentives in government-owned banks, resulting in lower efficiency and lower profitability
- Privately-owned banks: shareholder concentration matters. might reduce agency problems between managers and owners (better monitoring and discipline, lead to more risk taking).
- Besides bank-specific factors, the risk-taking and stability of banks of all ownership types depends very much **on the financial safety net** and macroeconomic conditions

Consolidation and/or privatization of banking sector

Insights from 2 European countries during 1994-2004 [(G) times]

Country	Banking Groups	No. of Banks		Asset Share	
		1990	2004	1990	2004
Italy	Public banks	93	-	59.6	-
	Private commercial banks	106	243	20.5	79.3
	Cooperative and mutual banks	823	475	18.5	14.9
	Branches of foreign banks	37	66	1.6	5.80
	Total	1064	784	100	100.00
Germany	Public banks	784	489	34.79	33.30
	Private commercial banks	305	168	27.45	31.99
	Cooperative and mutual banks	3416	1338	14.84	10.42
	Specialized institutions	73	68	21.54	23.00
	Branches of foreign banks	60	84	1.35	1.23
	Total	4638	2147	100	100.00

Source: Bundesbank and Banca d'Italia, Monthly reports.

The productivity gains

De Vincenzo et al. (2009) decompose TFP change as:

$$\Delta TFP = \text{Tech. change} + \text{Efficiency change} + \text{Scale economies}$$

Country/Bank Type	Divisia ²⁾	$TFPC = TC + EFC + SC$				$(SE \times \dot{Y})$		N
Germany Total	0.027	0.012	0.004	0.001	0.008	0.139	0.055	21620
Saving banks	0.028	0.013	0.004	0.002	0.007	0.135	0.053	4843
Private banks	0.017	0.008	-0.007	0.001	0.015	0.184	0.072	575
Cooperatives	0.027	0.012	0.004	0.001	0.008	0.138	0.054	16202
Italy Total	0.074	0.032	0.023	-0.003	0.012	0.129	0.098	4604
Formerly State owned¹⁾	0.069	0.022	0.020	-0.002	0.003	0.201	0.019	58
Formerly Saving banks¹⁾	0.071	0.027	0.020	-0.007	0.014	0.177	0.073	548
Private banks	0.049	0.027	0.026	-0.011	0.012	0.141	0.085	349
Cooperatives	0.062	0.022	0.021	-0.012	0.013	0.149	0.091	554
Mutual banks	0.079	0.036	0.024	0.0001	0.012	0.114	0.107	3095

Notes: $TFPC$ = Total Factor Productivity Change, TC = Technical Change, EFC = Efficiency Change, SC = Change in Scale Economies, SE = Scale Elasticities, \dot{Y} = Output Change. ¹⁾ Privatized during the sample period. ²⁾ For comparability reasons we consider here the negative of the Divisia Index. We tested the statistical significance of the differences in the values of $TFPC$ and its components using a t-test for unpaired samples. Differences between Italy and Germany are significant at the 1% level, while differences

Italy and Germany

Public control over banks played different role in TFP change in IT and DE.

- Italy: state owned banks less efficient. Maximize social objectives but more prone to political interference. Liberalization helped to eradicate it.
- Germany: savings banks greater independence. May explain relatively good performance in the period.

However a big but..., in (B) times

- During the recent crisis German Landesbank (state owned savings banks) were hit the most.
- Not an issue of lending (no subprime loans) but of bad investment
- Lack of risk management skills
- Corporate governance failures
- Similar conclusions could be drawn for the Spanish experience with the Cajas involvement in real-estate loans

Lesson: inferences drawn from (G) and (B) times can be quite different

GOI backing as unfair competition? more from EU

- German savings banks compete with commercial banks for retail and commercial customers
- Commercial banks alleged that the government guarantees resulted in a competitive advantage for savings banks.
- the European Union filed a lawsuit against the government guarantees at the European Court of Justice in 2000
- Announcement in 2001 that all guarantees would be removed in phased out fashion
- **Gropp et al** (2010) estimate the extent to which the expectation of their complete removal affected bank behavior

Evolving view from the regulator: “a word-score”



from RBI Financial Stability Review (2010): *This was largely attributable to the higher interest rates offered by public sector banks for wholesale and large-ticket deposits and **possibly due** to customers’ perception that in troubled times, the public sector banks act as safe havens.*

On Oct. 23, 2008

Bank credit to the commercial sector increased by 23.2 per cent (y-o-y) as on September 26, 2008 as compared with 21.2 per cent a year ago. Non-food credit by scheduled commercial banks (SCBs) expanded by 24.8 per cent, y-o-y, as on September 26, 2008, higher than 22.9 per cent a year ago.

(Macroeconomic and Monetary Developments - Mid-Term Review 2008-09)

No mention of the private-public-foreign trichotomy

On Jan. 26, 2009

*The expansion in credit during 2008-09 so far **was mainly on account of public sector banks**, while credit growth decelerated in respect of private and foreign banks*

The private-public-foreign trichotomy pops out

Annual Report 2008-09

Table 2.24: Credit Flow from Scheduled Commercial Banks

(Amount in Rupees crore)

Item	Outstanding as on March 27, 2009	Variation (year-on-year)			
		As on March 28, 2008		As on March 27, 2009	
		Amount	Per cent	Amount	Per cent
1	2	3	4	5	6
1. Public Sector Banks	20,18,711	3,07,310	22.5	3,48,562	20.9
2. Foreign Banks	1,69,335	36,116	28.5	6,467	4.0
3. Private Banks	5,23,492	78,301	19.9	52,013	11.0
4. All Scheduled Commercial Banks*	27,75,549	4,30,724	22.3	4,13,636	17.5

* : Includes Regional Rural Banks.

On Apr. 20, 2009

*Bank credit flow from scheduled commercial banks moderated to 17.3 per cent (y-o-y) at end-March 2009 as compared with 22.3 per cent a year ago. The deceleration in credit expansion was observed across the banking system, but **it was sharper for the private and foreign banks** (Macroeconomic and Monetary Developments in 2008-09)*

On July 27, 2009

*Within the commercial banks the expansion in credit **declined sharply for private banks** while foreign banks registered a negative growth (Table 30).*

(Macroeconomic and Monetary Developments - First Quarter Review 2009-10)

On Oct.26 2009

*Though the moderation in credit growth was witnessed across the banking sector, credit growth decelerated sharply for **private banks while foreign banks** registered a decline (Table 4.3). (Macroeconomic and Monetary Developments : Second Quarter Review 2009-10)*

On Jan. 28 2010

*While there has been deceleration in credit growth of the banking sector as a whole, **credit flow from foreign banks registered a decline** (Table 4.3). The expansion of credit from the public sector banks, which had held up till the first quarter of 2009-10, witnessed deceleration in the following two quarters.*

(Macroeconomic and Monetary Developments : Third Quarter Review 2009-10)

On Apr. 17 2010

*Due to the revival in credit demand for the banking system as a whole, the credit extended by private banks at end-March 2010 showed some improvement over last year. **The loan portfolio of foreign banks, however, contracted** (Table IV.4). (Macroeconomic and Monetary Developments in 2009-10)*

On July 26 2010

The revival in credit demand was reflected in the lending figures for all bank groups, with foreign banks and private sector banks in particular, showing significant improvement in their y-o-y credit growth compared to last year (Table IV.7). Credit growth from the public sector banks continued to be the highest and also most stable. (Macroeconomic and Monetary Developments in 2010-11)

Report on Currency and Finance, July 2010

*To analyse the direct impact of the slowdown on credit deceleration and other banking indicators, banks were classified into four different credit growth classes (Table 5.17). The **banks which recorded negative deposit growth and a resource squeeze during 2008-09 witnessed a significant fall in their credit growth. Indeed, these banks had higher non-performing loans as well. Interestingly, these banks had a significantly lower proportion of time deposits in their deposit portfolio. The financial crisis, thus, seems to have had a greater adverse impact on banks that had fewer core deposits. During the time of distress, the stable deposit buffer played an important role in withstanding the liquidity squeeze.** (from Annual Report on Currency and Finance 2008-09)*

October 22, 2009

from (Report on Trend and Progress of Banking in India, 2008-09) *While the balance sheets of public sector banks maintained their growth momentum, the private sector banks and foreign banks registered a deceleration in growth rate. Furthermore, **the old private sector banks**, which had been registering a significantly lower growth rate than their newer counterparts in the recent past, **managed a better performance this year***

*The public sector banks' share in aggregate assets, deposits, advances and investments increased as at end-March 2009 vis-a-vis last year, while the shares of private sector banks registered a decline. This was mainly on account of the **strong balance sheet growth registered in case of public sector banks**, against the backdrop of deceleration in growth rate of other bank groups*

“Public ownership proved out to be a source of strength”

*While the former (Anglo Saxon) model came under pressure during the recent crisis, the latter (Asian) model having substantial presence of public sector stood the Indian financial system in good stead. This was evident from the fact that the **NPA's ratio for foreign and new private sector banks increased significantly during 2008-09 as an after-effect of the crisis, the NPA ratio declined for public sector banks during this period** and was the lowest among all bank groups. Contrary to the belief that public ownership weakens the allocative efficiency, the **analytical exercises by the Reserve Bank indicate that allocative, technical and cost efficiency** of the public sector banks has been much higher than the private and foreign banks in India in the recent years.*

The asymmetry revisited: lending rates

Table 5.1: Movements in Monetary Policy Instruments and BPLRs

(Basis Points)

Phase		Monetary Tightening Phase	Monetary Easing Phase
		(Mar 2004 – Sep 2008)	(Sep 2008 – Nov 2009)
CRR		450	(-)400 ¹
Repo Rate		300	(-)425
Reverse Repo Rate		150	(-)275
Benchmark Prime lending rates	Public Sector Banks	325 - 350	(-)125 – (-)275
	Private Banks	225 - 375	(-)100 – (-)125
	Foreign Banks	100 - (-)150	(+)50 – 0

Source: RBI, Report of the Working Group on Benchmark Prime Lending Rate, October 2009.