Corporate choice for external commercial borrowings: The Indian evidence

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I. The key questions

- How the shifts in policy regime have impacted the access to external commercial borrowing (ECBs) ?

- How the key attributes of ECBs have changed ?

- What drives the corporate demand for overseas borrowing ?

Why do firms borrow overseas?

- Domestic investment demand – supplement domestic savings

- Credit constraint in domestic market – underdeveloped market

- Better financing opportunities, leverage for longer maturity (Karolyi, 1998; Chaplinksy and Ramchand, 2000; Doidge, Karolyi and Stulz, 2002 & others).

- Lower cost advantage in international markets (Saudagaran, 1988)

- Global scale of operations and exposure to receivables in FC; overseas borrowings provide a natural hedge

- Credibility and reputation

EME firms' access to international capital markets

- Deepening and integration of capital markets
- Rising appetite for asset diversification
- EME firms' desire to overcome credit constraint imposed by underdeveloped capital markets
- Dismantling of capital controls
- Greater trade linkage and higher exposure of firms to foreign currency transactions
- Greater choices of financing - diversification
- Competition in product markets and cost reduction

# III. The Indian Approach

1950s to 1980s

- 1950s to 1970s – concessional non-market based finance; bilateral and multilateral assistance

- 1980s - commercial borrowings preferred with drying up external assistance

- 1980s – FIs/PSUs increased their participation in international bond market

- 1980s – ECBs constituted 27% of capital flows

- Regulations – approval procedure, ceiling on cost, maturity and amount, and the end-use restrictions

1990s onwards

- 1990s - Progressive liberalization of capital controls
- A paradigm shift from official to private capital flows
- A shift in the growth trajectory
- Lower risk perception and improved credit ratings
- Resilient corporate performance
- Greater choices of financing
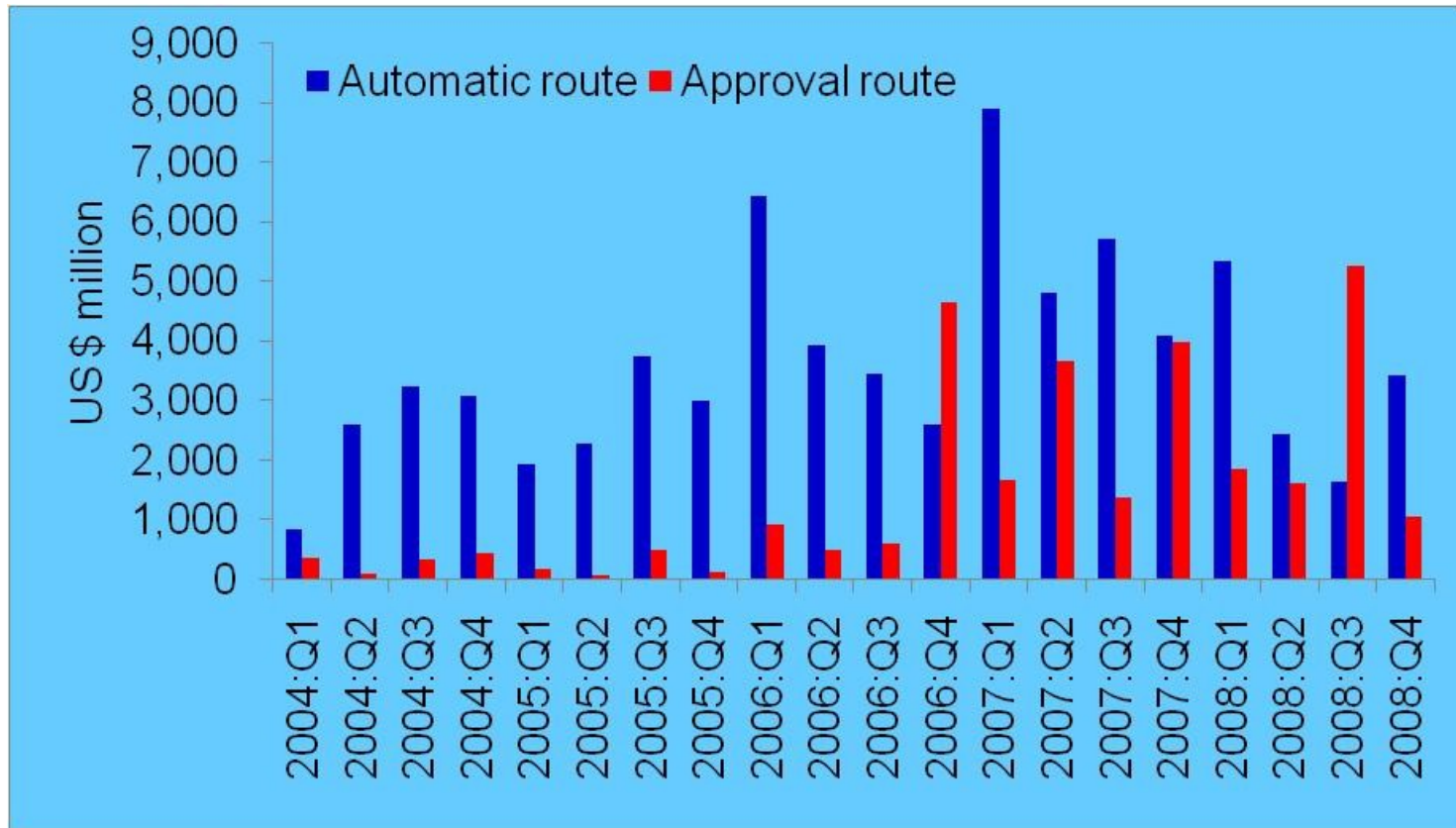- 1990s & 2000s – ECBs contributed 25-30% of net capital flows

Now a Key component of external financing

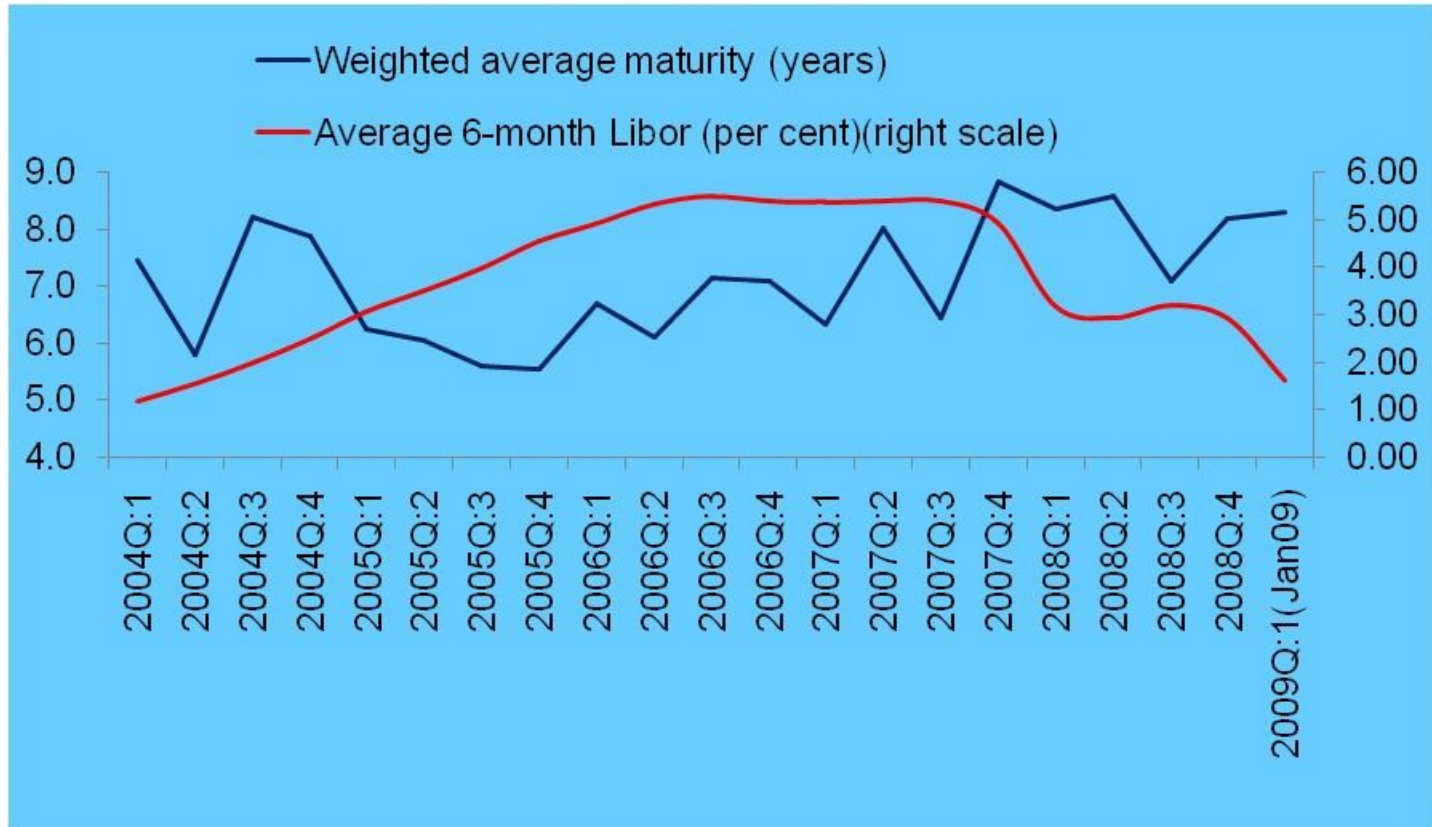• Second largest component of external debt after external assistance
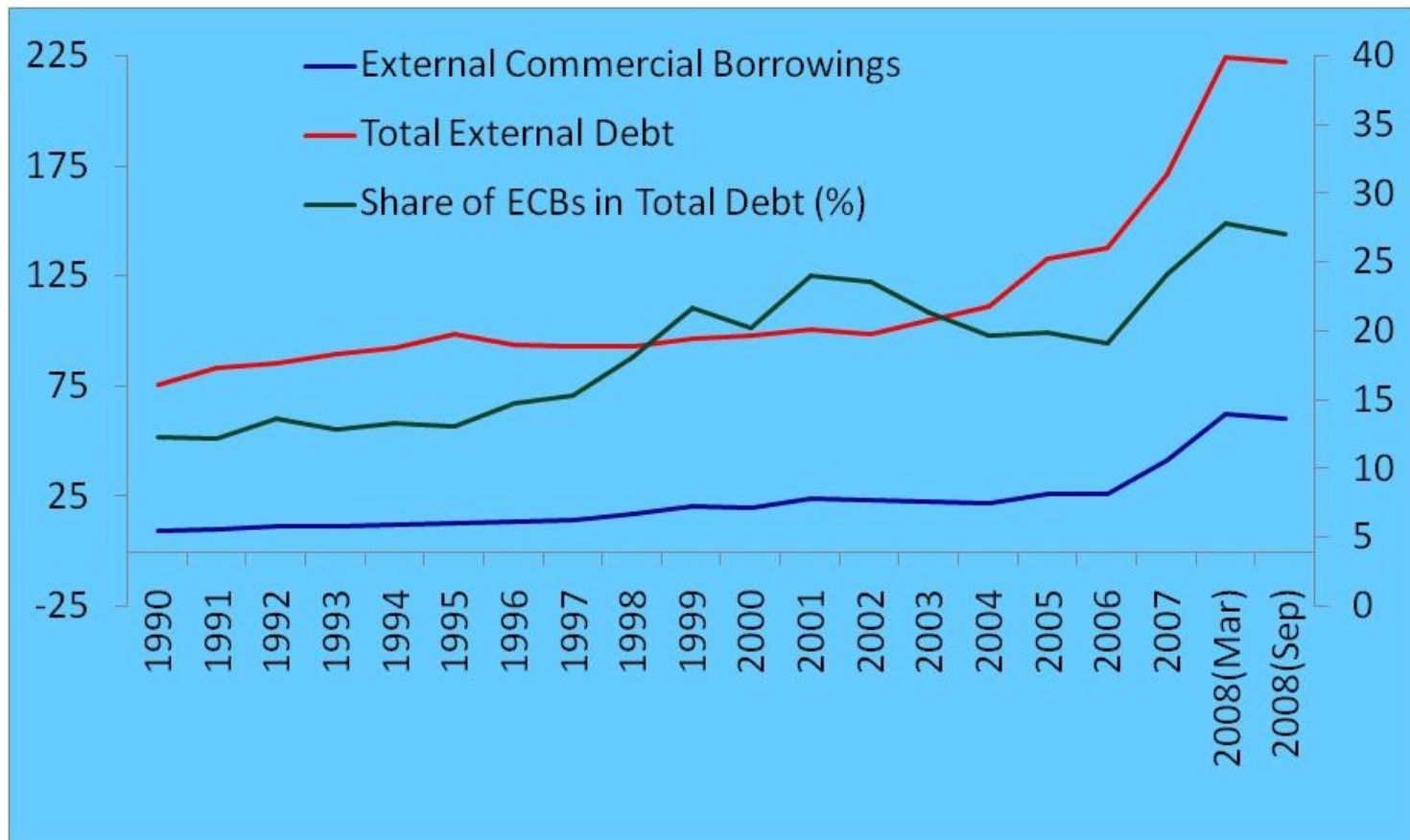
IV. Shifts in Policy Regime and their impact

Approval procedure and corporates' access to ECBs

Maturity Restrictions

- Restriction on the minimum average maturity - 3 years

- Balanced maturity structure
- Lengthening of maturity at the low interest rate cycle.

Sectoral/end-use restrictions

Domestic Investment	Import of capital goods, new projects, modernization/expansion - industrial sector including SMEs and infrastructure
Foreign Currency/Rupee Expenditure	US $ 500 million per borrower per financial year - automatic route.
Acquisition under the Disinvestment Process	First stage disinvestment process/second stage offer to the public - PSUs.
Overseas Investment	Joint Ventures (JV)/Wholly Owned Subsidiaries (WOS)
Services sector	Hotels, hospitals,software companies permitted ECBs up to US $ 100 million - automatic route (FC/Rupee expenditure)
Micro Finance	NGOs engaged in micro finance activities
NBFCs	Approval route: multilateral/regional FIs/Government owned development FIs - onlending to infrastructure sector

Utilisation pattern

		(Percentage distribution)
Components	**2004-05**	**2007-08**
Import of capital goods	26.6	41.1
Rupee Expenditure for local sourcing of capital goods	16.5	2.7
On-lending or sub-lending	12.2	2.3
New Projects	19.8	15.5
Modernisation/expansion of existing units	17.9	9.5
Overseas investment in JV/WOS	2.3	12.6
Leasing & hire purchase	-	8.1
Refinancing of old loans	-	4.0
Textile/Steel re-structuring package	0.9	-
Others	3.8	4.3
Total	100	100
Source: Compiled on the basis of the information sourced from www.rbi.org.in.		

- Large proportion for capital goods imports

Interest rate ceilings

Maximum speard over over 6-month LIBOR(basis points)		
Year	Normal Projects/3-5 year maturity	Long Term ECBs/more than 5 year maturity
2001	300-400	450
2004	200 (3-5 year)	350 (>5 years)
2006	200	350
2007	150	250
2008 (May)	200	350
Oct	300	500
2009 (Jan)	No ceiling (till June 2009)	No ceiling (till June 2009)
Note: Ceiling represents all in cost ceiling over 6 month LIBOR for the respective currencies.		

Interest rate corridor
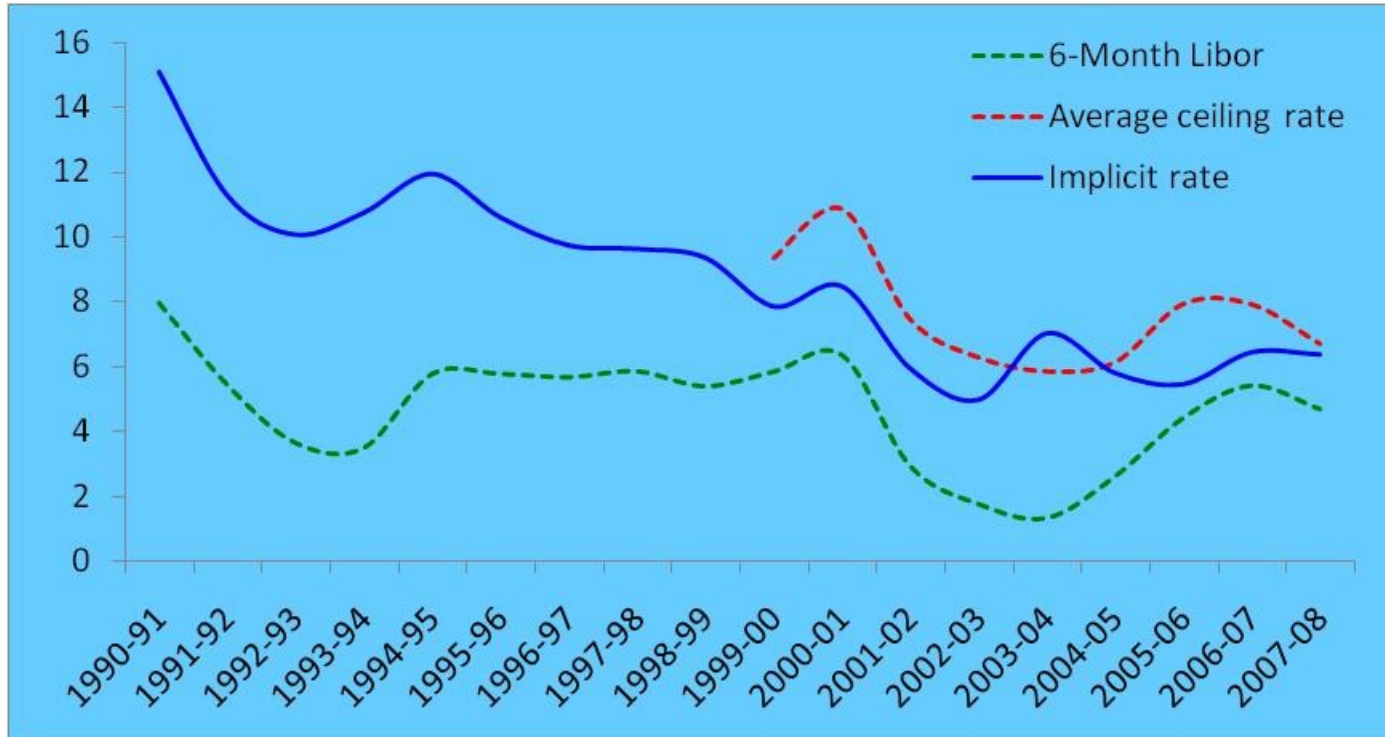
- Before the interest rate ceiling, large spread
- and after that – relatively narrow spread

Do small corporates access overseas markets?

Quarter	(No. of Loans)				
	≤ US$ 20 mn	>US$20-50 mn	>US$ 50-100 mn	>US$ 100 mn	Total
2004:Q3	166	6	14	5	191
2004:Q4	119	9	4	10	142
2005:Q1	141	10	3	5	159
2005:Q2	111	11	8	5	135
2005:Q3	110	9	16	9	144
2005:Q4	115	14	17	5	151
2006:Q1	122	13	14	22	171
2006:Q2	158	28	11	10	207
2006:Q3	173	23	11	8	215
2006:Q4	188	16	4	15	223
2007:Q1	205	30	12	29	276
2007:Q2	141	31	9	14	195
2007:Q3	113	15	12	19	159
2007:Q4	73	26	10	17	126
2008:Q1	91	25	5	20	141
2008:Q2	48	22	5	13	88
2008:Q3	105	26	3	16	150
2008:Q4	144	26	11	7	188
2009:Q1(Jan)	29	4	2	4	39

- 75% of the total no. of loans are of small size (≤ US$ 20 million)

Concentration of ECB loans

No. of loans under different loan size categories, Jan 2005 to Jan 2008
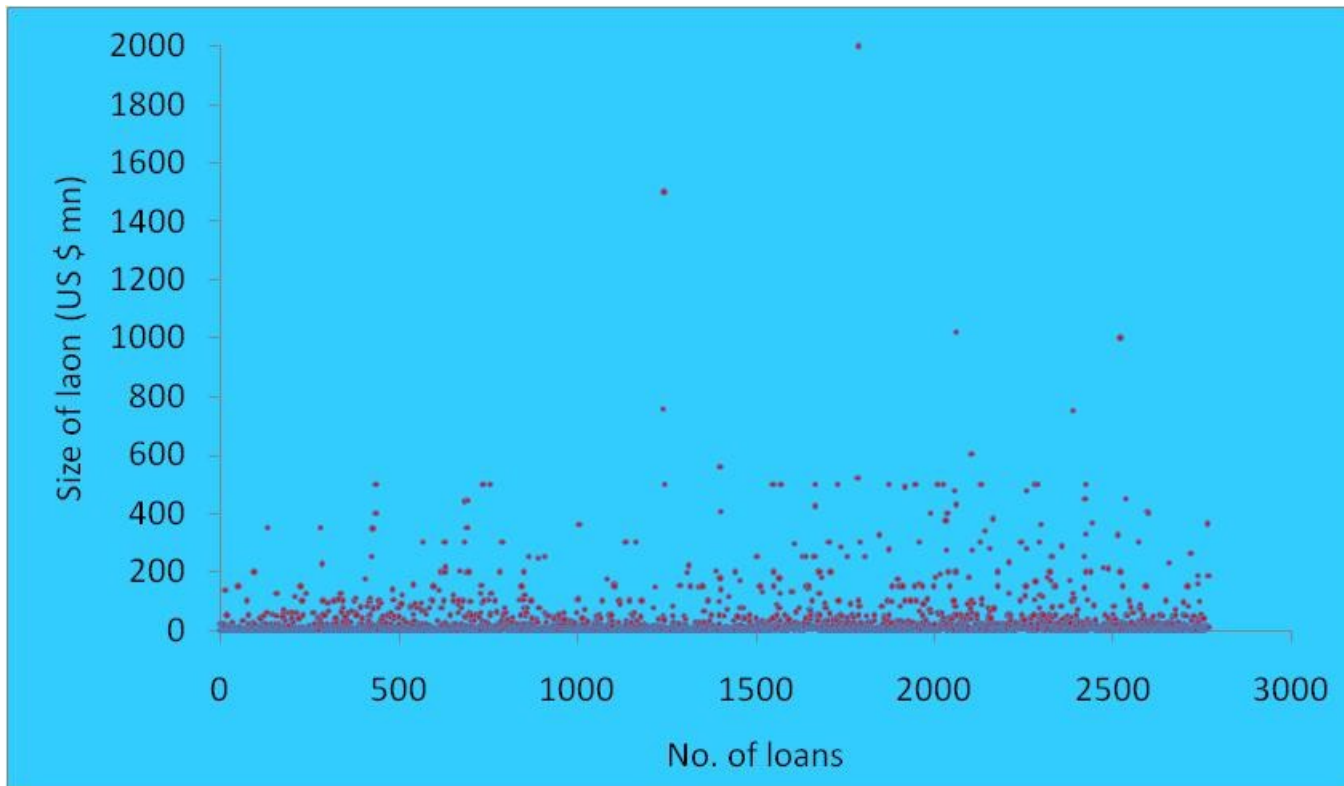
Distribution of ECB loans by amount

|	≤ US$ 20 mn	>US$20-50 mn	>US$ 50-100 mn	>US$ 100 mn	Total
(Percentage distribution of the value of Loans)					
2004:Q2	24.3	6.3	31.8	37.6	100.0
2004:Q3	12.7	12.0	14.0	61.3	100.0
2005:Q1	33.5	17.0	5.7	43.8	100.0
2005:Q2	18.4	19.0	27.5	35.1	100.0
2005:Q3	18.8	9.2	35.8	36.2	100.0
2005:Q4	16.2	21.8	39.9	22.1	100.0
2006:Q1	10.1	5.6	14.3	69.9	100.0
2006:Q2	18.3	25.2	16.9	39.5	100.0
2006:Q3	20.6	19.0	18.7	41.7	100.0
2006:Q4	15.5	9.1	4.9	70.5	100.0
2007:Q1	13.8	14.4	11.4	60.5	100.0
2007:Q2	9.5	12.5	9.9	68.1	100.0
2007:Q3	8.8	7.2	12.8	71.1	100.0
2007:Q4	5.4	14.2	11.2	69.2	100.0
2007:Q1	33.9	17.9	1.4	46.8	100.0
2007:Q2	4.2	16.8	8.3	70.7	100.0
2007:Q3	13.5	11.8	2.5	72.2	100.0
2007:Q4	35.9	12.2	19.2	32.7	100.0
2008:Q1	33.9	17.9	1.4	46.8	100.0
2008:Q2	4.2	16.8	8.3	70.7	100.0
2008:Q3	13.5	11.8	2.5	72.2	100.0
2008:Q4	35.9	12.2	19.2	32.7	100.0
2009:Q1(Jan)	13.2	9.2	11.1	66.5	100.0

- ≤ US$ 20 million account for about 18% of ECBs raised,
- >US$100 million account for 60%.
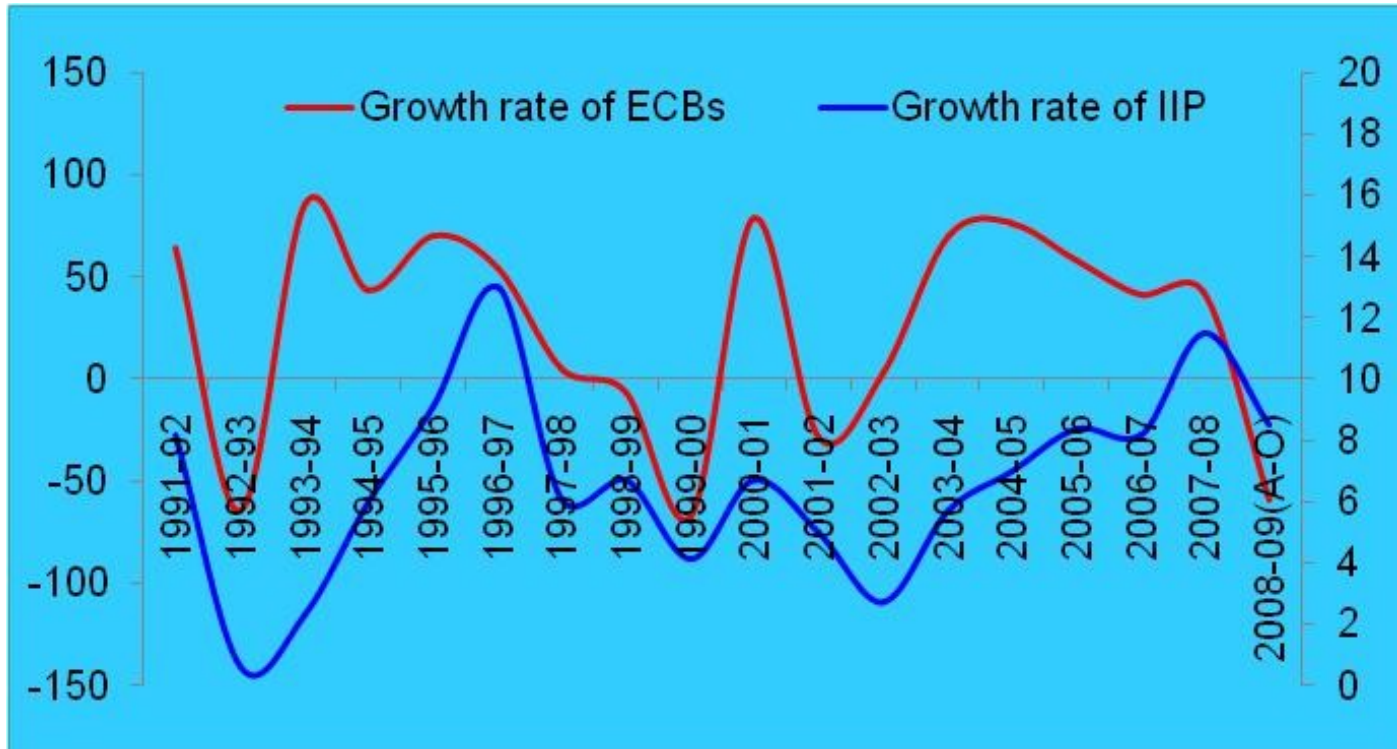
ECBs and Capital goods imports
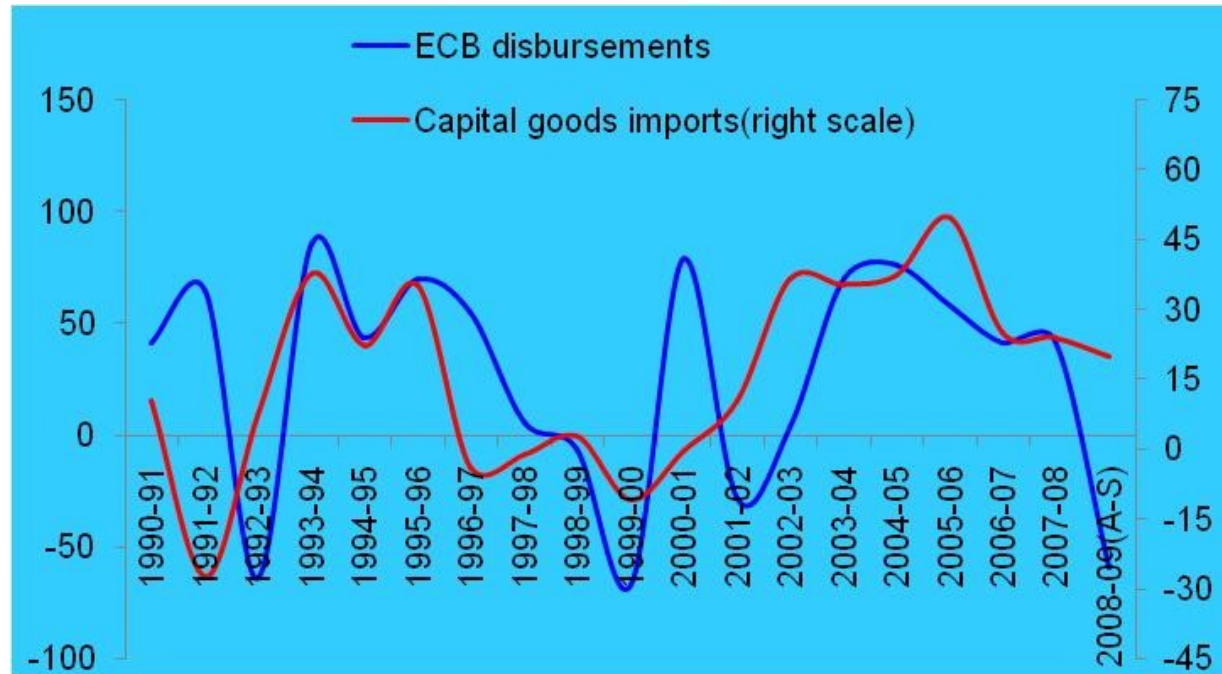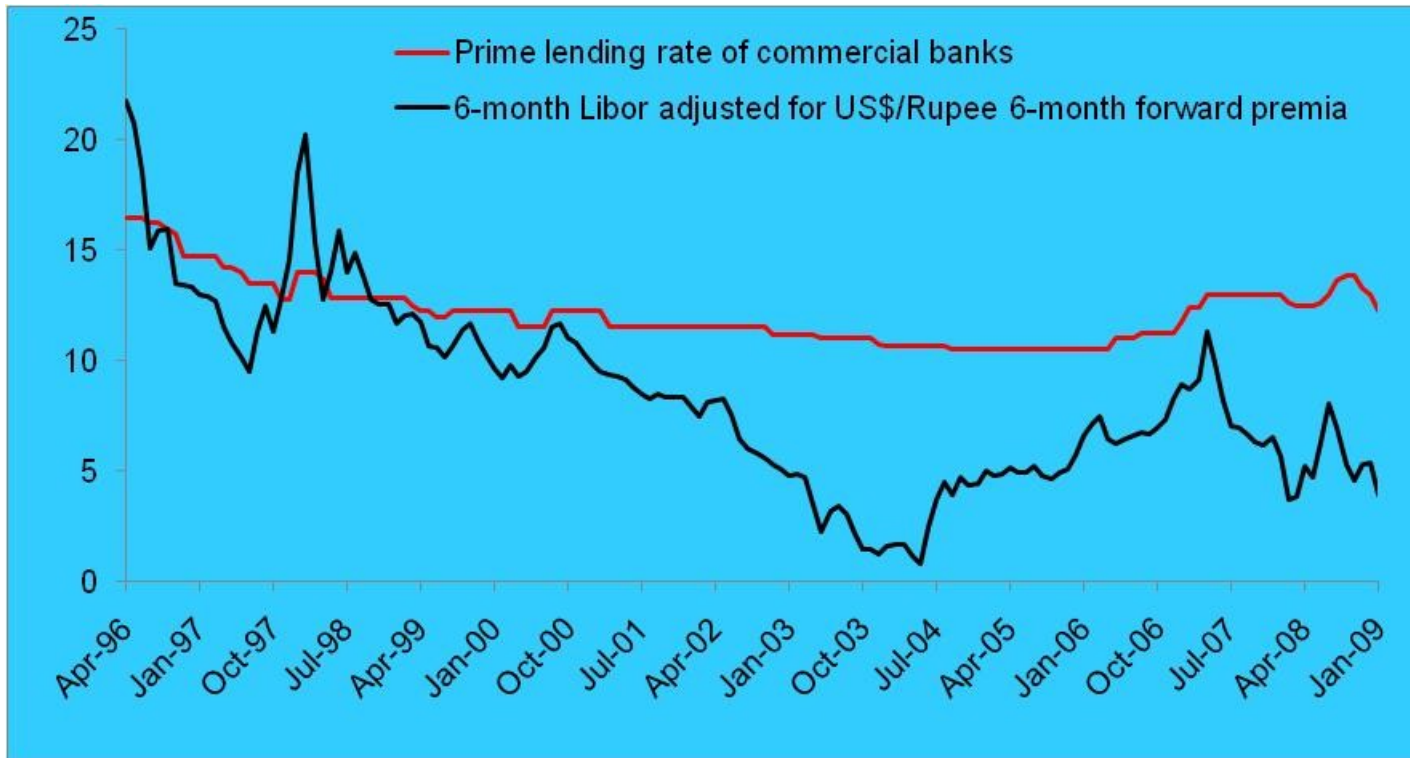

- High degree of co-movement

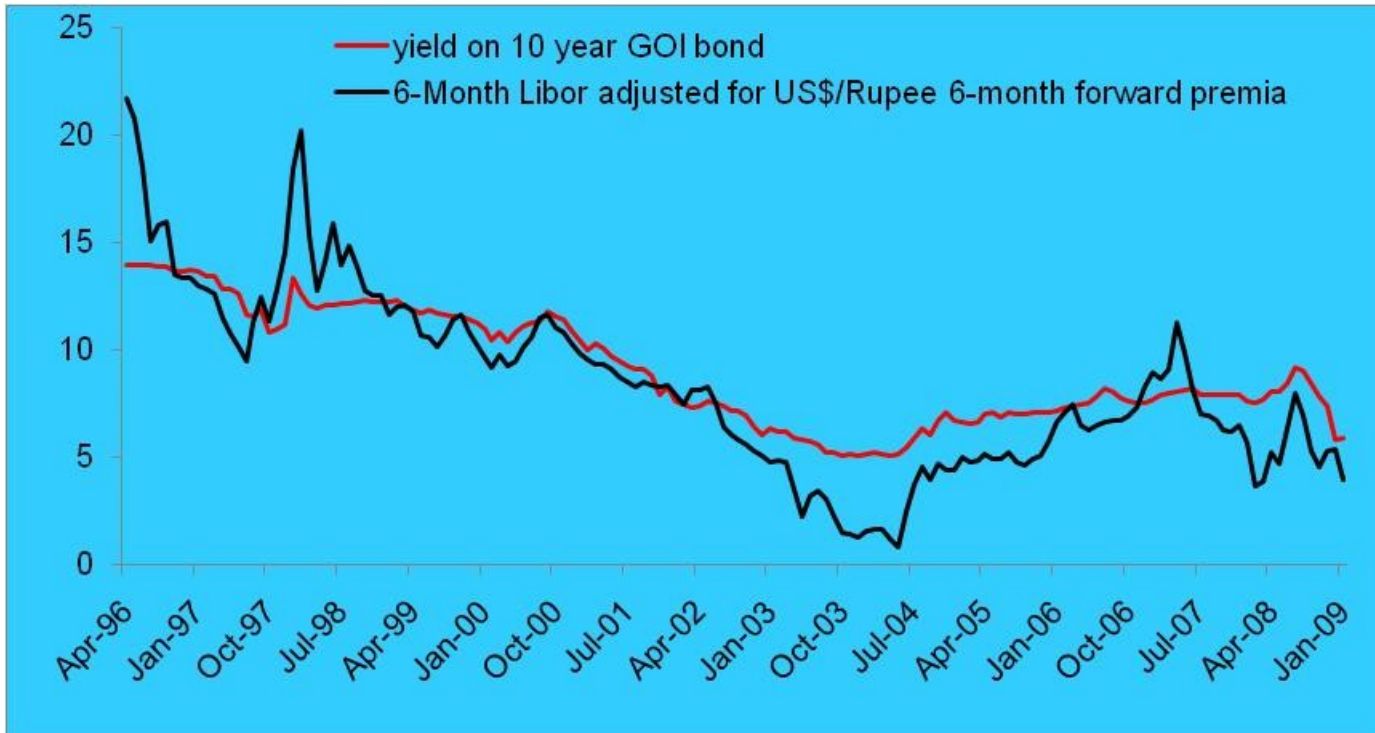# Capital goods imports: Lead indicator of real activity?
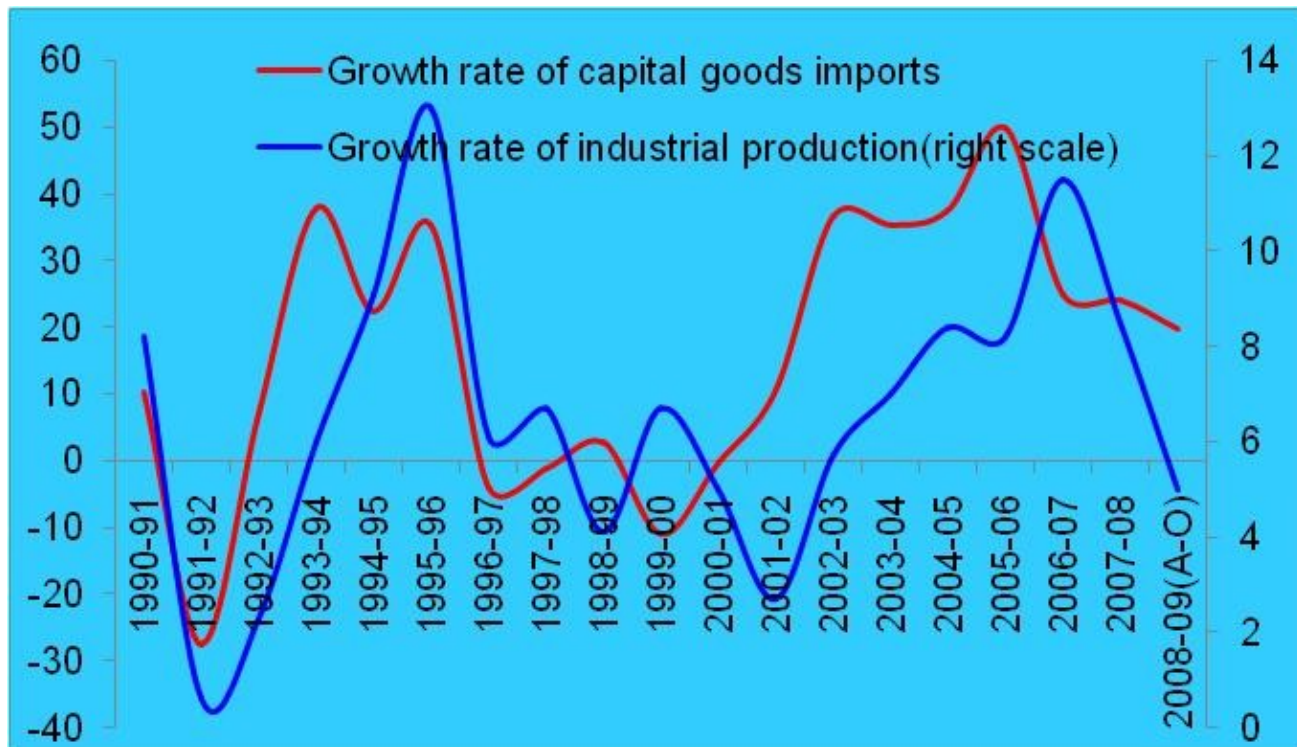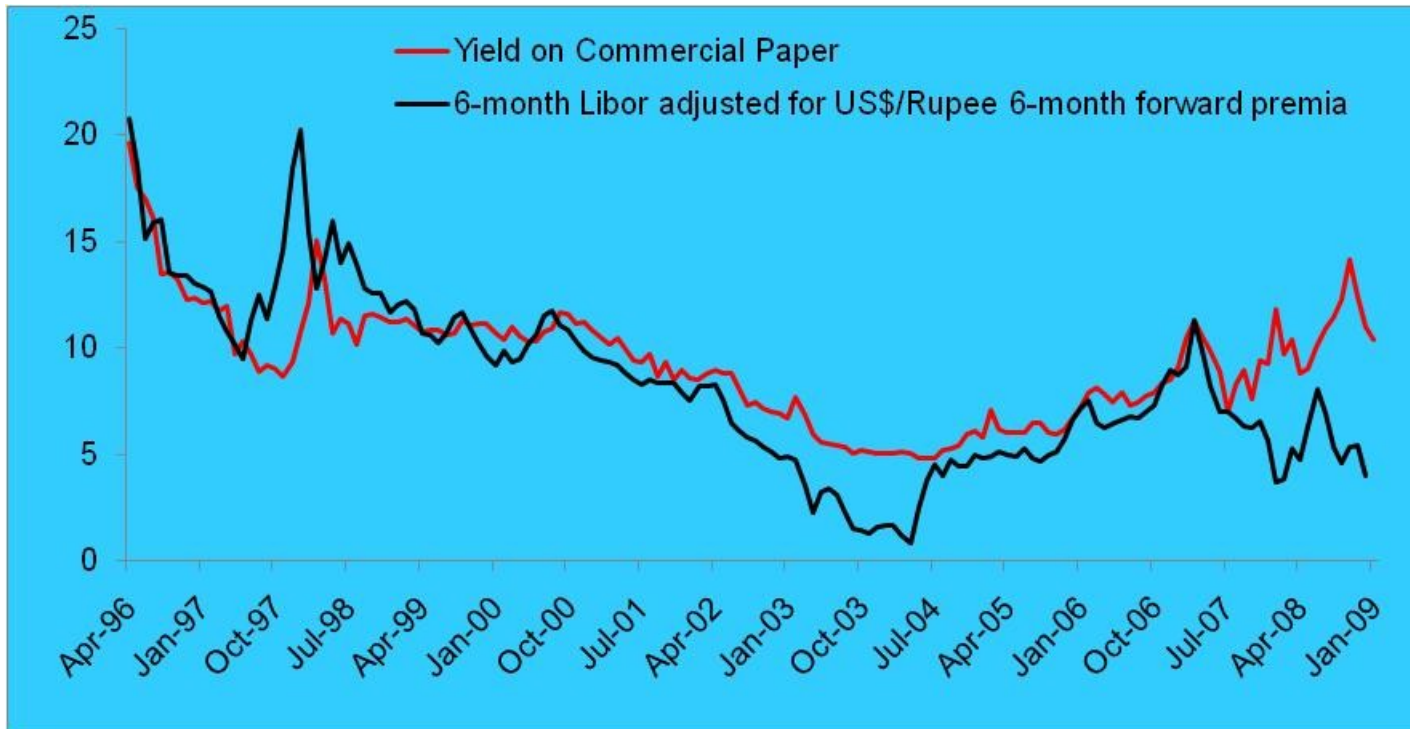
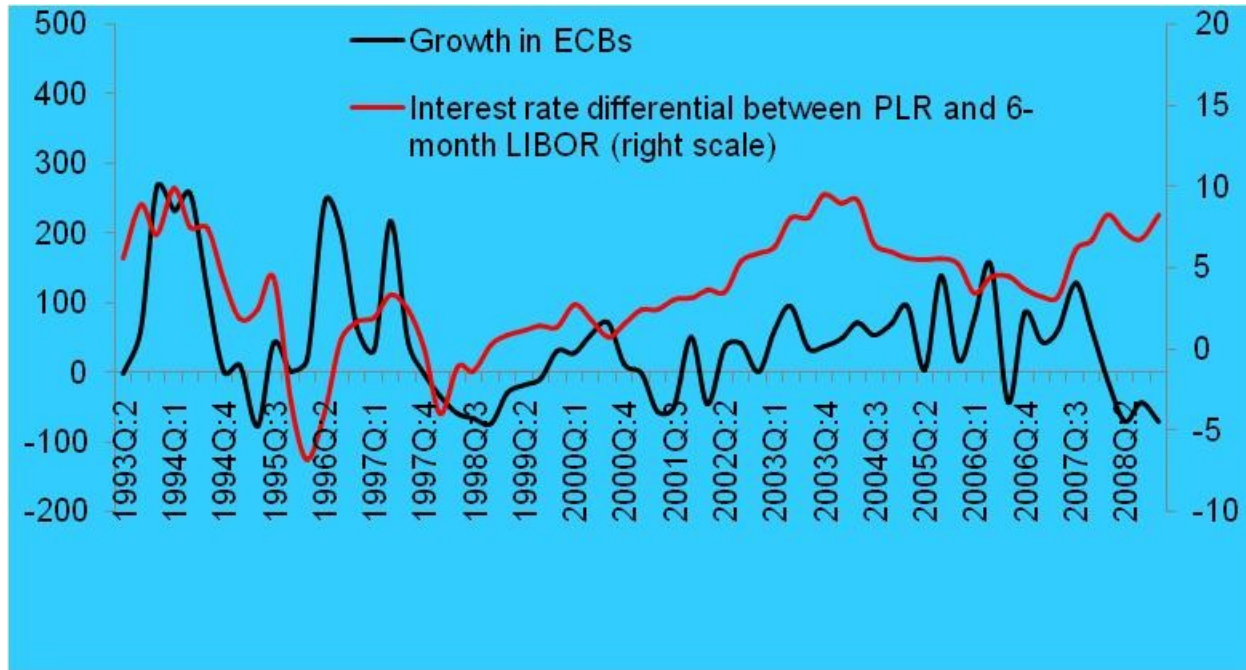# ECBs and the real activity

Interest rate arbitrage

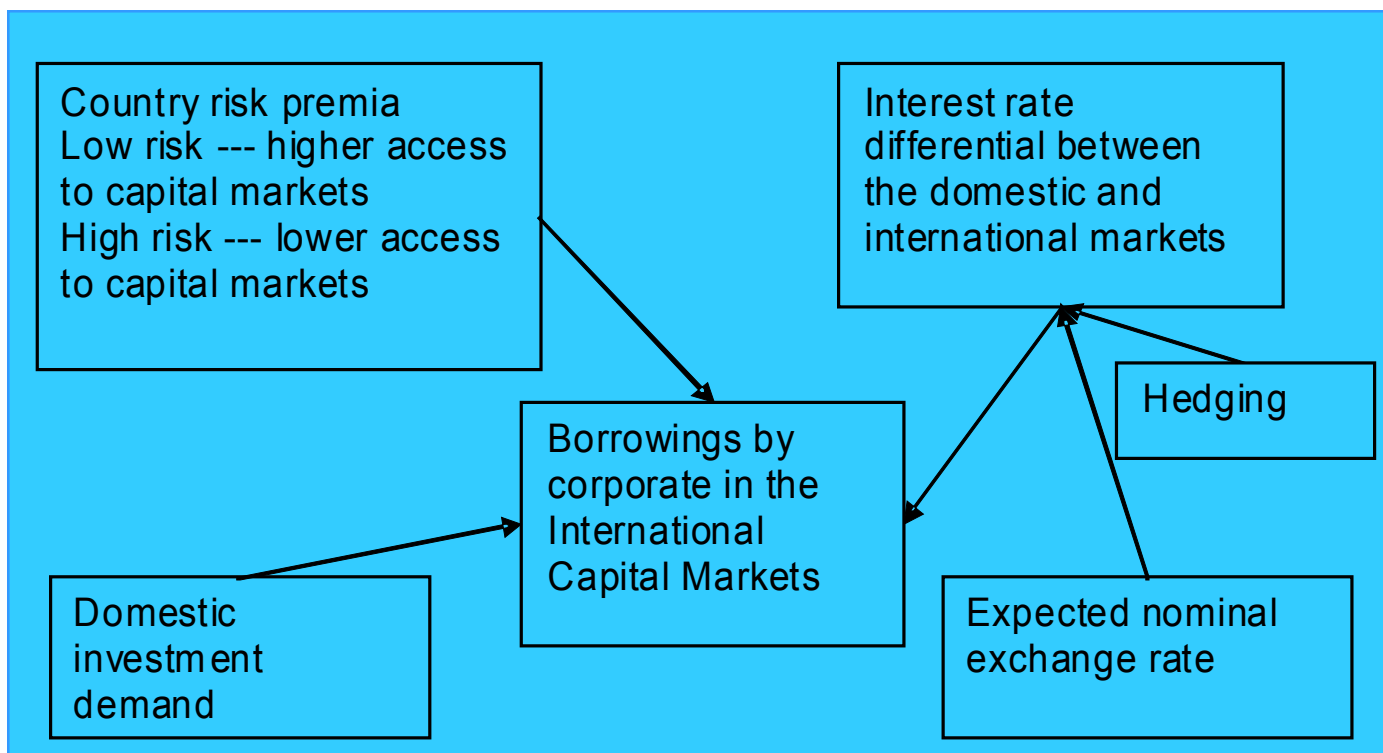# Interest rate arbitrage

Interest rate arbitrage

ECBs and Interest rate differentials

- Current episode – Arbitrage versus access to capital markets?
- Rapid slowdown in domestic investment demand

The empirical framework

Country risk premia
Low risk --- higher access
to capital markets
High risk --- lower access
to capital markets

Interest rate
differential between
the domestic and
international markets

Hedging

Borrowings by
corporate in the
International
Capital Markets

Domestic
investment
demand

Expected nominal
exchange rate

The Model
Vector error correction and cointegration model

$$\Delta y_t = \theta_1 \Delta x_{t-1} + \ldots + \theta_p \Delta x_{t-p} + \propto \beta y_{t-1} + \varepsilon_t$$

Where $y_t = B_t,\ r^d_t,\ L_t$ and y_t

B = corporate borrowings in the international capital markets,

r^d = the interest rate differential between the domestic and the international interest rates,

L = liquidity condition faced by the firms in the domestic market,

y = underlying investment demand faced by corporate sector

$\propto,\ \beta$ and θ are the vectors of adjustment, the long-run coefficients and the short-run responses, respectively.

The Data

- Data constraints : Forward premia – after 1994

  ECBs data after 1990

- We use quarterly data for the sample period: 1990:Q1 to 2008:Q4.

- The following variables have been used in the model:

- ECBs in US dollar terms

- Index of industrial production (IIP) with 1993-94 base.

- Stock of M3 – broad money supply

- Average prime lending rates of commercial banks

- 6-month Libor on USD

- Rupee-US dollar exchange rate

The Data

- Forward premia and exchange rate changes – negative co-movement
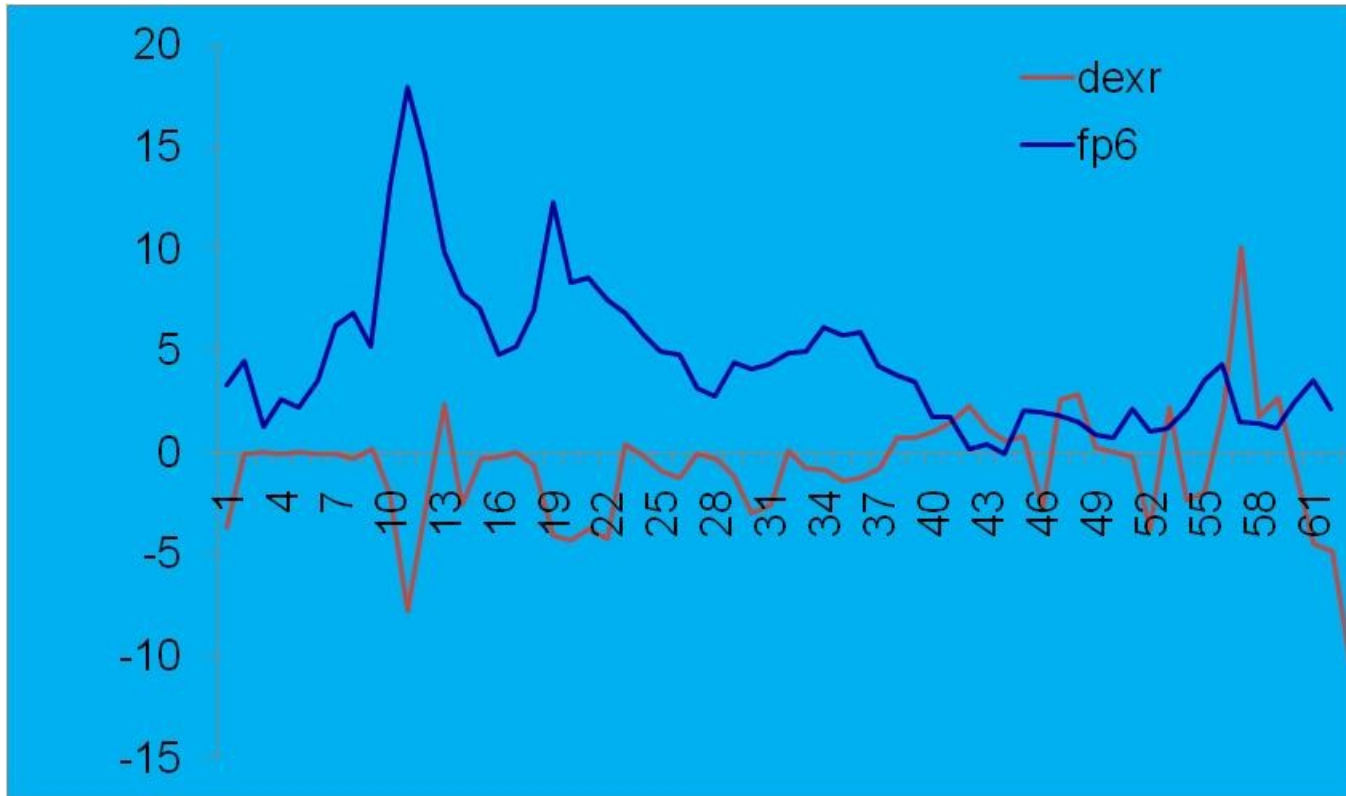
The empirical results

Unrestricted Cointegration Rank Test – Trace and Maximum Eigen value

Null hypothesis: No. of CE	Trace	5% Critical Value	Maximum Eigen Value	5% Critical Value
r<0	50.16*	47.86	29.31*	27.58
r≤1	22.85	29.80	13.33	21.13
r≤2	9.52	15.49	9.23	14.26
r≤3	0.29	3.84	0.29	3.84
* denotes rejection of the hypothesis at the 0.05 level				

The empirical results

Long-run Cointegration Path of ECBs	
Variables	Coefficients
Log ECB$_{t-1}$ (Normalised)	1.00
log y	13.55
	[8.25]
Log M3 $_{t-1}$	-4.75
	[-7.15]
rdiff $_{t-1}$	0.104
	[4.09]
Intercept	3.93
Note: t-statistics in [ ].	

The empirical results

Error Correction	
Variables	Coefficient of EC term
Δ(LogECB)	-0.60
	[-2.95]
Δ(rdiff)	0.47
	[0.60]
Δ(Log y)	0.01
	[1.11]
Δ(LogM3)	0.01
	[1.46]

Note: Figures in brackets are 't' statistics.

Impulse responses of ECBs to different shocks
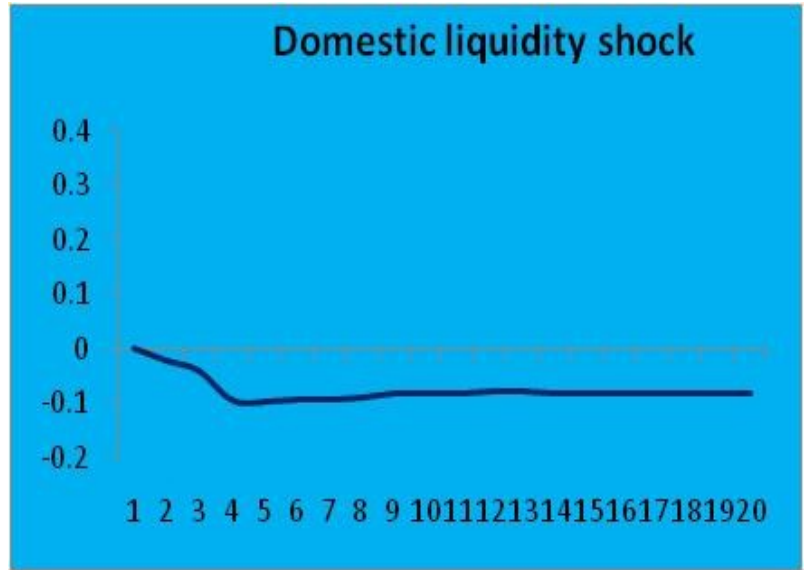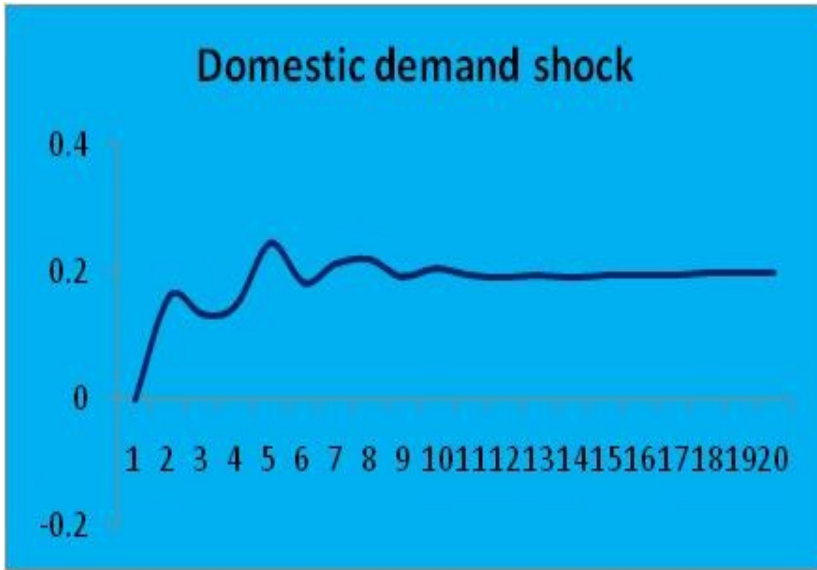
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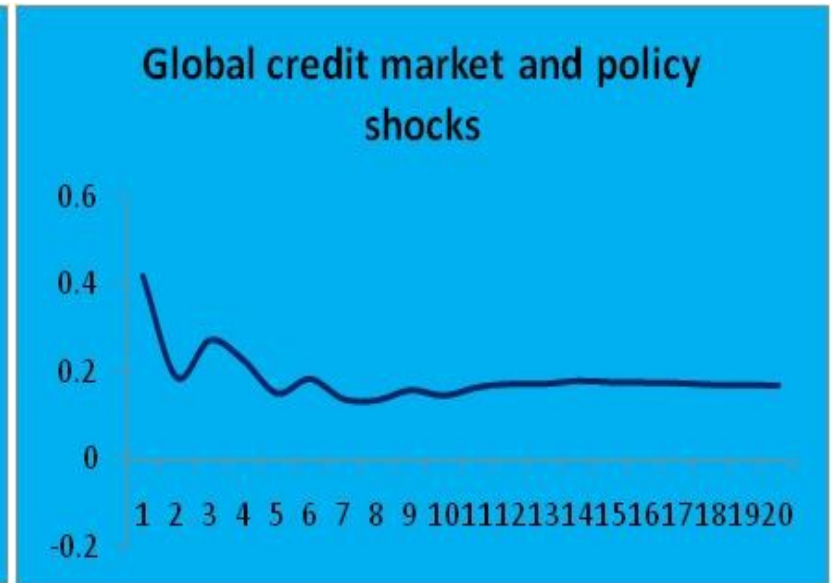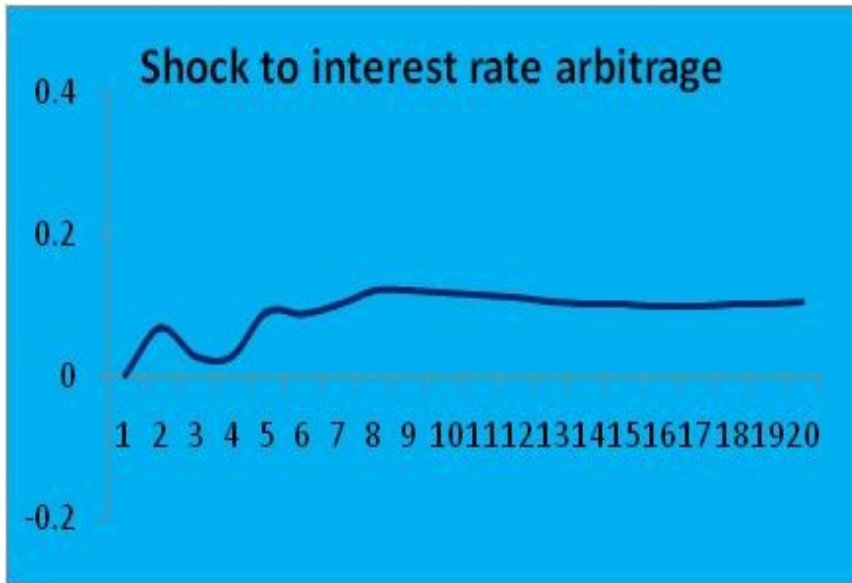
The empirical results

Variance Decomposition of ECBs				
Quarter	LogECB	Log y	LogM3	rdiff
1	100.0	0.0	0.0	0.0
4	80.3	15.7	2.6	1.5
8	55.3	32.9	5.8	6.0
12	47.9	36.7	6.3	9.1
16	45.2	38.4	6.6	9.8
20	43.1	39.7	6.9	10.2

The empirical results

Simulated path of ECBs under various combinations of money growth and output

Period	Growth of IIP	Growth of broad money	Growth of ECBs
Scenario I. High output growth and tight monetary policy			
1	10.0	13.5	18.4
2	10.4	13.5	19.7
3	10.8	13.5	21.1
4	11.6	13.5	23.8
5	12.0	13.5	25.1
Scenario II. High output growth and expansionary monetary policy			
1	10.0	21.0	9.5
2	10.4	21.0	10.8
3	10.8	21.0	12.2
4	11.6	21.0	14.9
5	12.0	21.0	16.2
Scenario III. Lower Output growth and stable money supply			
1	6.4	17.0	2.0
2	6.8	17.0	3.4
3	6.8	17.0	3.4
4	7.2	17.0	4.7
5	7.6	17.0	6.1

Conclusions

- A large number of companies accessing international capital markets for small size loans.

- Evidence of a balanced maturity structure; moderation in the interest rate cycle affects maturity favourably.

- After the prescription of interest rate ceiling, the borrowing cost moved in a narrower corridor.

- ECBs and import of capital goods display a close positive relationship; the demand for ECBs is driven by the underlying real activity.

Conclusions

- The VECM estimates suggest that Indian corporates' long-run demand for ECBs is predominantly determined by the domestic activity.

- Followed by interest rate differentials (arbitrage) and the credit conditions (liquidity).

- The real variable dominates the price variable in driving the demand for overseas borrowings.

Thank you!