Did the Indian capital controls work as a tool of macroeconomic policy?

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The theory

- Capital account liberalization has benefits, but could expose a country to capital surges which may be associated with appreciation of the real exchange rate, loss of monetary policy independence and problems due to balance sheet mismatches when reversals happen.
- IMF has suggested that capital controls are a legitimate tool of policy and may be imposed when faced with a capital surge and all other tools such as exchange rate intervention and fiscal and monetary policy have failed.
- In theory, capital controls should be useful in
  1. preventing a capital surge
  2. preventing real exchange rate appreciation
  3. retaining monetary policy autonomy

The evidence

- The literature largely focusses on transitory capital controls when a country is faced with a surge.
- Evidence suggest that such controls are not useful in controlling the magnitude of capital flows during a surge.
- Controls have been found to impact the composition of capital flows, but only for a short time.
- They have not been able to prevent real exchange rate appreciation.
- There is no clear evidence that controls gave monetary policy autonomy.

Why study India?

- It has been assumed in the literature that controls are not effective because the evidence studied is for economies that liberalised, and did not have the administrative mechanisms for effectively handling controls.
- It has been suggested that capital controls may, therefore, be more effective in countries like India and China where (i) controls are permanent and (ii) the administrative machinery to implement these controls has not been dismantled.
- India has maintained permanent controls and maintained the laws, institutions and administrative machinery to implement capital controls during a surge.
- India tightened capital controls during a capital surge within the existing insitutional and legal system of controls.

Questions for this study

- Key question: Did the Indian experience of capital controls differ from that of countries that had dismantled the machinery for capital controls?
- What were the costs of maintaining this system of controls?
- During the capital surge were the tightening measures effective in
  1. preventing a capital surge?
  2. preventing real exchange rate appreciation?
  3. retaining monetary policy autonomy?
- Additional question: Did capital controls change the composition of capital inflows? What were the costs and benefits associated with this strategy?

Preview into our findings -1

In normal times

1. Maintaining the system of capital controls led India to have lower integration with the world compared to her peers.
2. Capital controls introduced a wedge between onshore and offshore market prices for Indian assets by restricting arbitrage.

Preview into our findings -2

- India faced a capital surge despite the tightening measures. This experience was similar to that of other countries that had no permanent controls. Also controls do not seem to have been effective in:
    1. preventing a capital surge.
    2. preventing a real exchange rate appreciation
    3. or in retaining monetary policy autonomy.
- In other words, the Indian experience for tightening of capital controls was similar to the experience of other countries which had liberalised controls and then tried to reverse them.
- The costs of imposing these controls included keeping the economy closed, microeconomic distortions and violation of rule of law.

Preview into our findings -3

On the composition of flows:

- Debt flows as a share of GDP fell as other flows were allowed, while debt flows were restricted.
- Restrictions on debt were not enough to prevent firms from taking on unhedged foreign currency exposure in periods when exchange rate volatility was low.

Part I

The policy framework

Financial sector regulation

- The controls are built into the domestic financial regulations.
- All foreign transactions are prohibited, unless explicitly permitted.
- The framework allows controls to be eased or tightened when desired.

India's approach to the capital account

- India never completely decontrolled the capital account.
- Certain kinds of capital / foreign investors / market mechanisms are considered good.
- Institutional investors good, individuals bad
- Equity good, debt bad
- OTC trading good, exchange traded bad
- Dollar denominated borrowing good, rupee denominated borrowing bad
- FDI in banking, insurance bad
- and so on.

Broad features of India's controls

Outward flows by individuals Quantitative limit on yearly outward investment

Outward flows by firms Limited by a multiple of firm's net worth.

Borrowing by firms Limited by maturity, rate of interest, end use and administrative permission.

Borrowing by banks The central bank controls the interest rate at which banks borrow abroad through "non resident deposits".

Broad features of India's controls - 2

Foreign banks RBI restricts the growth of foreign banks by permitting all foreign banks, put together, to open only 20 branches a year.

Debt investment by foreign portfolio investors The aggregate investment in government/corporate bonds by all foreign investors cannot exceed a given sum.

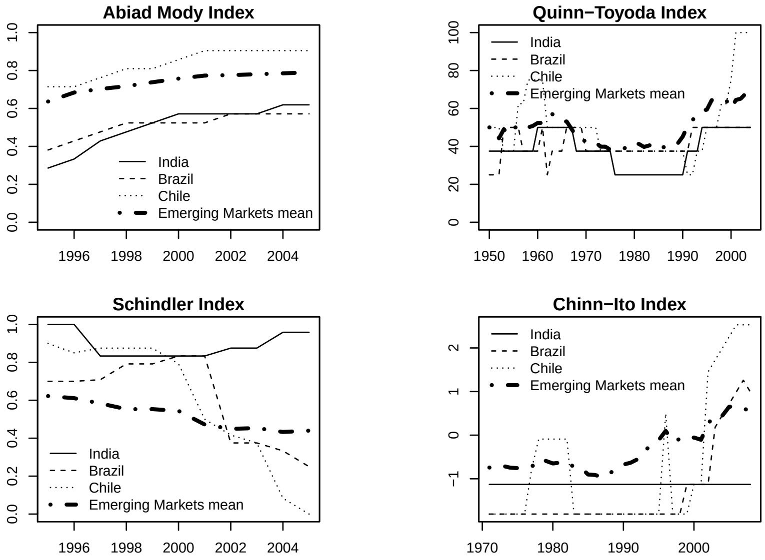
Equity investments by foreign portfolio investors Only "foreign institutional investors" are permitted to invest in the country.

FDI Foreign ownership in certain sectors (e.g. telecom, insurance, banking) is capped at various levels.

Part II

Did the high level of capital controls keep India's integration with the world economy low?

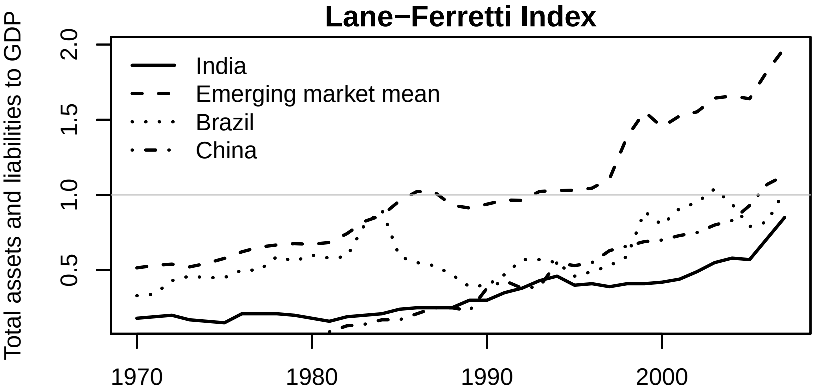
Comparing *de jure* capital account openness



De jure openness

- Various measures of capital controls show that India remains more closed than its peers
- Other emerging market economies have removed controls faster than India

Comparing *de facto* capital account openness 1



Wedge between onshore and offshore markets

- Controls introduced a wedge between domestic and foreign markets
  1. Shah and Patnaik (2007) find persistent deviations from the covered parity condition
  2. Hutchison, Pasricha and Singh (2011) provide empirical evidence of absence of arbitrage in financial markets.
  3. Stigler, Shah and Patnaik (2010) find persistent premiums on American Depository Receipts of Indian firms indicating effective market segmentation.
- *Price based measures* suggest market segmentation and presence of price wedges.
- More *de jure* controls than her peers resulted in lower *de facto* integration than her peers.

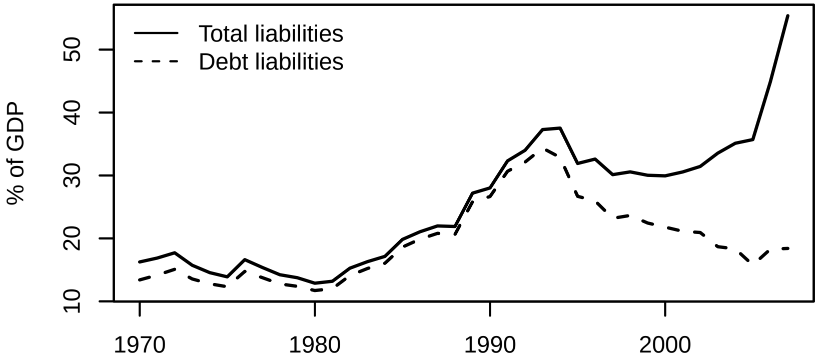
Part III

Did capital controls change the composition of capital flows?

The policy framework

- India chose a policy framework to increase foreign private capital flows, and the share of non-debt flows to India.
- Foreign investment flows were eased much more than debt flows., especially foreign portfolio investment flows.
- The new framework allowing private foreign capital flows included price, quantity and administrative restrictions on debt flows.

External liabilities as % of GDP



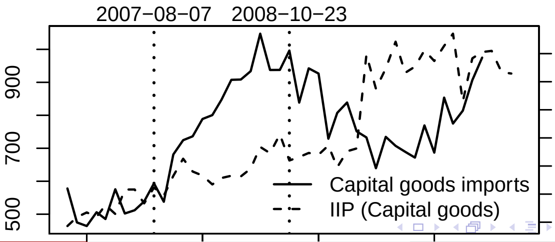
Composition of flows

- The main aim of restricting debt flows is to reduce the potential contractionary effects of balance sheet mismatches in case of a currency depreciation.
- The desired results of a lower share of foreign debt flows was achieved. This evidence supports the evidence in the literature that capital controls can alter the composition of capital flows.
- The following capital controls on foreign debt were used to achieve this: Individual quantitative ceilings on debt by each firm, case by case permission, caps on borrowing rates, ceilings on the amount borrowed, end use for which borrowed, and major industry of borrower and a cap on the overall foreign debt of all Indian firms.
- Patnaik and Shah (2010) show that while the restrictions on debt remained the same, Indian firms acquired unhedged currency exposure in periods when currency volatility was low.
- Restrictions on debt flows may not be enough to prevent balance sheet mismatches.

Distortions due to controls on debt

Controls on foreign borrowing

- August 2007: Control against foreign currency borrowing allowed such transactions only for import of capital goods
- October 2008: This control was relaxed.
- We see high growth of capital goods imports and a fall in the growth of domestic production during that period.
- Domestic firms may have substituted away from domestic capital goods (measured by the domestic capital goods production index - IIP) in order to obtain cheap credit.



Part IV

Did the tightening of capital controls during the surge work as a tool for macroeconomic policy?

Differentiating long-term and short-lived controls

- India faced a surge during the 2000s and tightened capital controls.
- Many of these controls were temporary in nature.
- So were the tightening measures effective, unlike in countries which had witnessed higher *de jure* and *de facto* integration with global financial markets?
- Was India's experience different from that of other countries who had dismantled controls and merely imposed temporary controls during periods of surges?

Controls as a policy tool

- In the context of the 'trilemma' tradeoffs, Ostry et al. (2010) argue that capital controls can be used as the measure of last resort
- Indian policy response to the surge was a textbook example of having used this full tool kit.
  1. Sterilized intervention
  2. Fiscal tightening: Fiscal deficit reduced from 6.2% of GDP in 2001 to 3.9% in 2005.
  3. Only when the surge continued despite the above measures, India imposed capital controls.

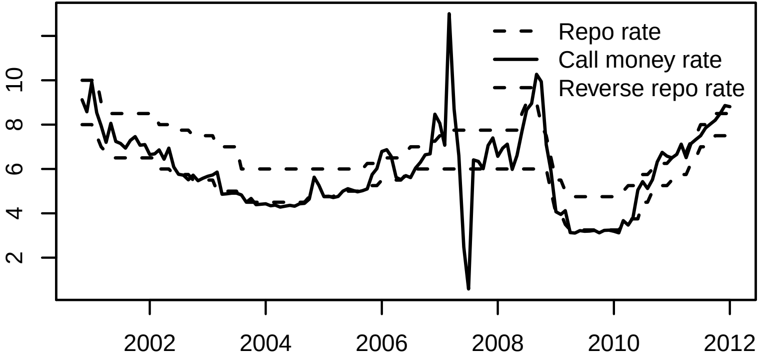
Controls attempting inflow restrictions

31^{st} Jan, 2007	The ceiling on interest rates on foreign (non-resident Indian) deposits reduced
24^{th} Apr, 2007	Interest rates on foreign (non-resident India) deposits reduced
21^{th} May, 2007	Cap on interest rate on firm foreign borrowing lowered. Foreign borrowing by real estate companies disallowed.
07^{th} Aug, 2007	Foreign borrowing of more than USD 20 million had to be spent abroad.

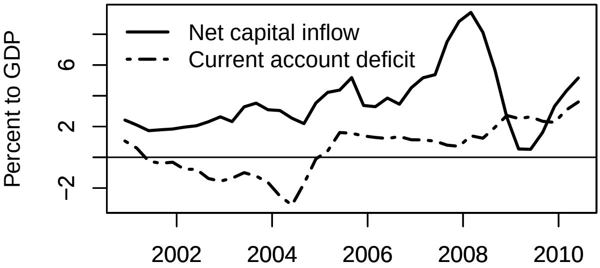
Controls on outflows relaxed

04^{th} Dec, 2006	Prepayment of foreign loans allowed up to \$ 300 million over and above existing limit of \$ 200 million
30^{th} Apr, 2007	Limit of prepayment of foreign loans enhanced from \$ 300 million to \$ 400 million
30^{th} Apr, 2007	Registered Indian Venture Capital Funds were allowed to invest in equity & linked instruments of offshore Venture Capital undertakings
31^{st} May, 2007	Mutual funds allowed to invest overseas
14^{th} Jun, 2007	The limit for overseas investment by Indian companies was raised to 300% from 200% of net worth
14^{th} Jun, 2007	Portfolio investment limits of listed Indian companies in listed foreign companies raised
26^{th} Sep, 2007	Portfolio investment limits of listed Indian companies in listed foreign companies raised further
26^{th} Sep, 2007	Limit on Indian firms permission to invest in overseas JV/WOS raised to 400% of their net worth
26^{th} Sep, 2007	The aggregate ceiling for overseas investment by Mutual Funds enhanced
30^{th} Oct, 2007	The aggregate ceiling for overseas investment by mutual funds raised further

Monetary policy



Magnitude of capital inflows



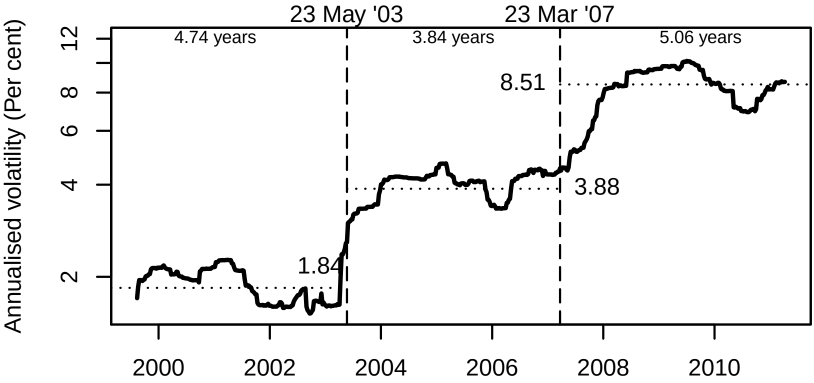
India was the third largest recipient of flows in the world after US and Spain.

2001 - 2008 RBI defines this period as “one marked with sustained surges in capital inflows”

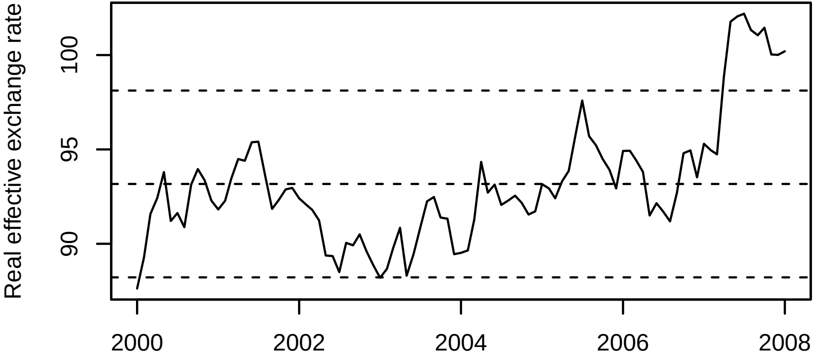
1999 - 2008 Pradhan et al. (2011)

2006 - 2008 Forbes and Warnock (2011)

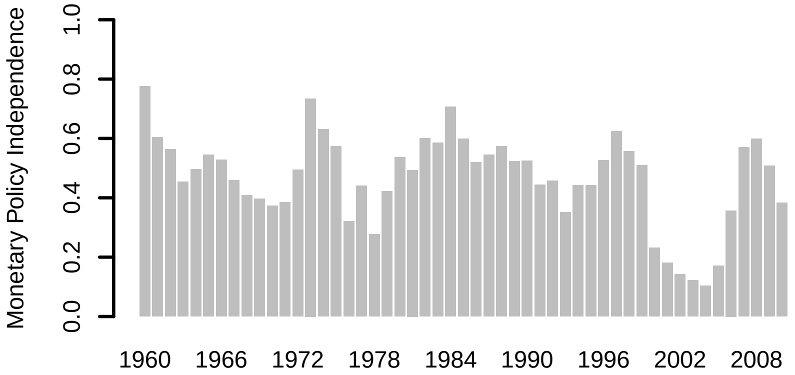
Exchange rate policy



Real effective exchange rate



Monetary policy autonomy



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Mitigating asset price booms	$\times$
Mitigating credit boom	$\times$

Part V

Costs of the regulatory and administrative machinery for capital controls

Many controls were not part of the rule book

- A government committee on foreign investment found that many controls imposed during the surge violated basic principles of rule of law
- Some of them are
    1. Venture capital: The text of law did not provide for administrative controls that required registration and restrict such investment into nine obscure sectors
    2. SEBI registration: Refusal to register investment managers as FIIs if they were owned substantially by Non Resident Indians. Text of law did not provide for this restriction.
    3. Restriction on offshore derivatives: Despite being outside the jurisdiction of the Indian authorities, rules restricted registered FIIs from such transactions in the overseas market.

Part VI

Conclusion

In normal times

- Capital controls kept India relatively closed. This had a cost.
- They introduced a price wedge between domestic and foreign markets. This caused microeconomic distortions.
- Controls on debt altered the composition of inflows. This came at the cost of a huge regulatory burden.

But when the capital surge came...

- India witnessed a large capital surge, despite all these measures.
- The real exchange rate appreciated during the capital surge.
- Monetary policy autonomy was lost during the capital surge.
- Credit growth and asset prices rose.

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