Motivations for capital controls and their effectiveness

Radhika Pandey Gurnain K. Pasricha Ila Patnaik Ajay Shah

March 12, 2014

Part I

The role of capital controls

The old consensus

- Capital controls give microeconomic distortions
- Capital controls give bureaucracy, corruption, lobbying
- Capital account liberalisation is an integral part of modernisation
- From the 1980s onwards, capital account liberalisation took place worldwide.
- In 2011, the 56 countries who have a fully open capital account (based on the Chinn-Ito measure) make up 59% of world GDP.

Reopening the debate

- Maybe a capital surge coupled with bad micro-prudential regulation works out badly.
- Maybe foreign investors are irrational and extreme capital flow reversals take place.
- Can capital controls be useful in macro-prudential policy?
- One step further: Can capital controls be useful for macroeconomic policy?
- Olivier Blanchard: use monetary policy, exchange rate intervention, macro-prudential tools and capital controls in conjunction to prevent large exchange rate changes that cause disruptions in the real economy and financial markets.
- IMF: Capital controls are back in the toolkit.

Back in the toolkit?

- In democracy, politicians and bureaucrats are never given arbitrary power.
- If capital controls are to be in the toolkit, we require:
  - The objective that will be pursued
  - A precise statement of the coercion that will be applied
  - Conditions under which it will be applied
  - Proof that the benefits outweigh the costs.
- For capital controls to graduate into the toolkit, a body of evidence is required on the four questions.
- But the 56 most-researched countries in the world have no capital controls.

What the rehabilitation of capital control actions (CCAs) requires

A research program that addresses four questions:

- What do policy makers actually do when they wield CCAs?
- Precise definitions and a shared vocabulary. Precisely what kind of capital control are we advocating?
- What CCAs are useful under what circumstances?
- Cost-benefit analysis.

Walls or gates?

- A great deal of evidence that once a country opens up, episodic use of controls is ineffective
- Once a country has sophisticated firms (both financial and non-financial), they will find a way to route around a given restriction.
- If capital controls are to be effective, what's needed is a comprehensive administrative system of controls.

This paper

The most interesting setting: India:

1. One of the two large countries in the world which has a comprehensive administrative system of capital controls.
2. Focus only on capital controls on debt, which might have a macroprudential objective.

Part II

Measurement of CCAs

The old literature

- It is hard to measure how open a country is.
- E.g. is China more open than India?
- Low frequency databases - e.g. Chinn-Ito.
- Poor measurement of openness has plagued the literature on capital controls.

A recent novel idea

- Instead of measuring the *level* of capital account openness, let's measure every capital control *action*.
- There is no doubt about the date of the legal instrument and it should be possible to classify it well.
- Can study causes and consequences.
- We won't know about the overall level of openness of a country, but we will be able to make precise statements about why the authorities act and what a difference this makes.

Three stages of measurement

Forbes, 2013: Use IMF AREAER coupled with some public sources. Example: For 2009-2011 finds 7 CCAs for India.

Pasricha, 2012: IMF AREAR plus central bank websites plus news sources. A much more detailed CCA database.

This paper: The logical conclusion: A new CCA database based on analysing every legal instrument issued by the authorities.

The setting

- India has a comprehensive administrative system of capital controls.
- Foreign borrowing is termed ‘External commercial borrowing’ (ECB).
- We study every legal instrument for CCAs on ECB.
- Analysed and classified by lawyers.
- Made a database about this for the 2004–2014 period.
- Discarded ambiguous actions.
- Led to a database with 68 easings and 7 tightenings.
- (Through all this Chinn-Ito measure for India was unchanged).

Part III

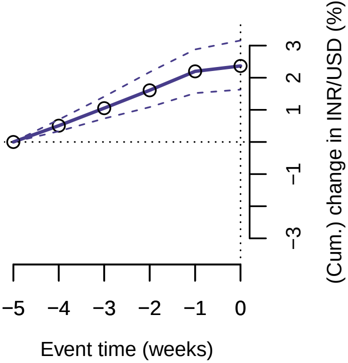
What determines the use of CCAs?

The possibilities

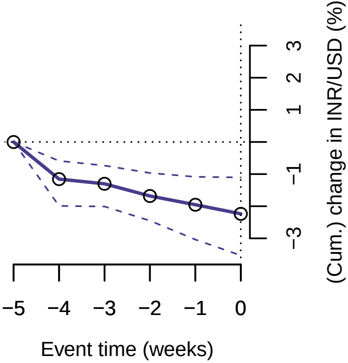
- Exchange rate objectives.
  1. INR/USD returns.
  2. Frankel-Wei residual.
  3. REER.
  4. EMP.
- Macroprudential objectives.
  1. Private bank credit.
  2. Stock prices.
  3. Capital flow surge.

INR/USD returns

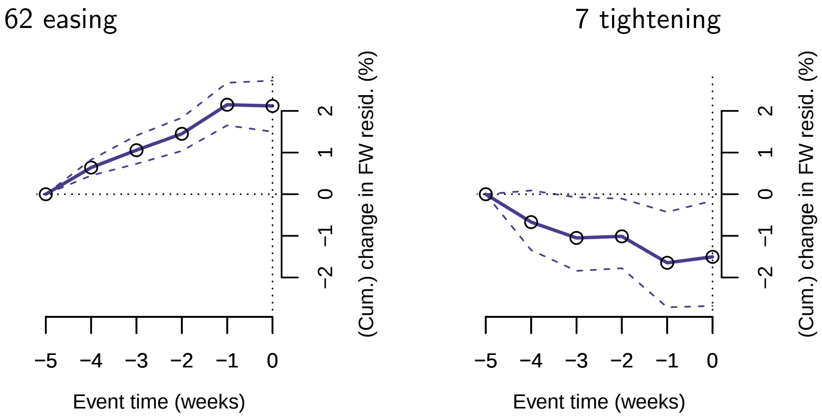
68 easing



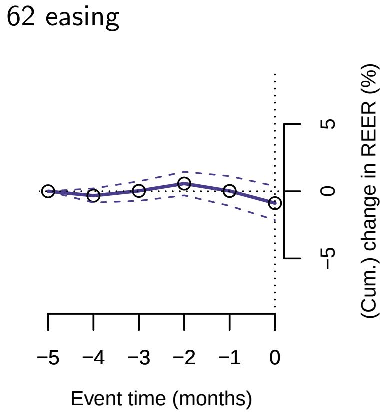
7 tightening



Frankel-Wei residual

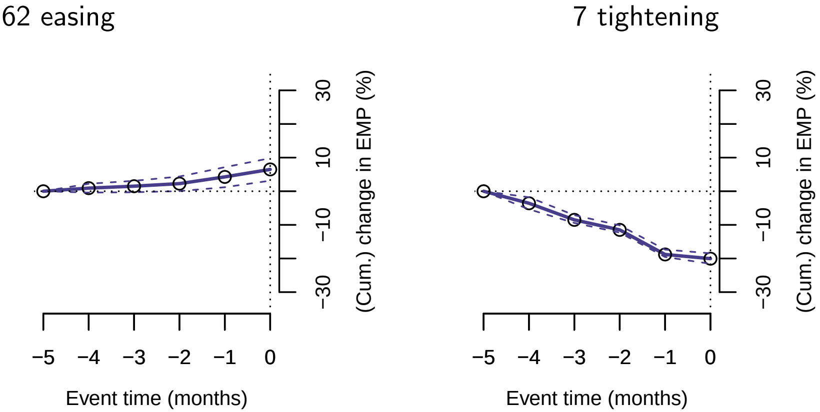


REER

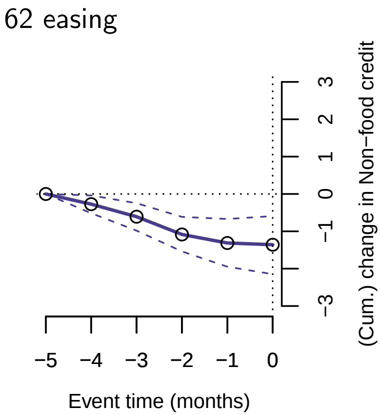


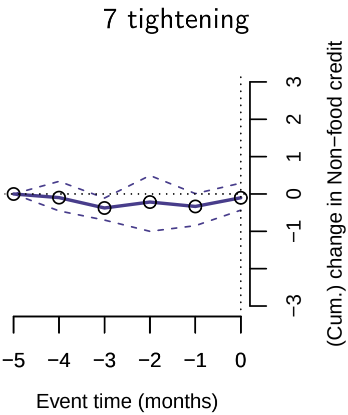
62 easing
7 tightening
(Cum.) change in REER (%)
5
0
−5
−5 −4 −3 −2 −1 0
Event time (months)

Exchange market pressure



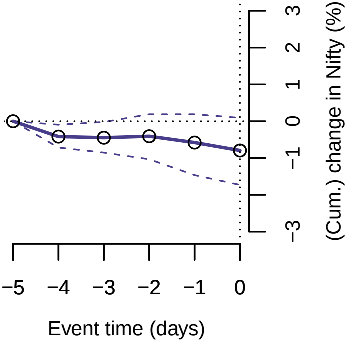
Private bank credit



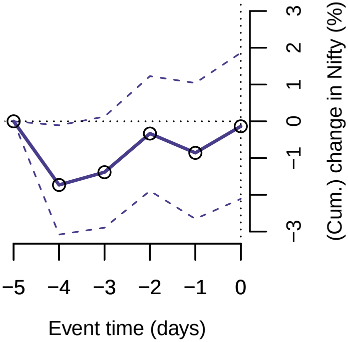


Stock prices

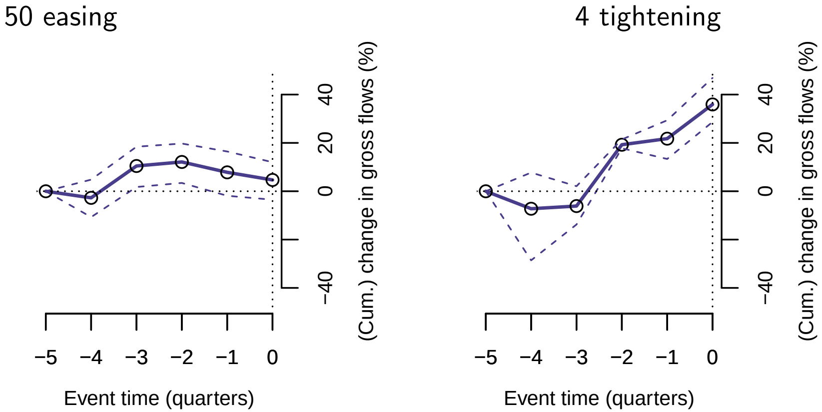
62 easing



7 tightening



Capital flow surge



Part IV

Consequences

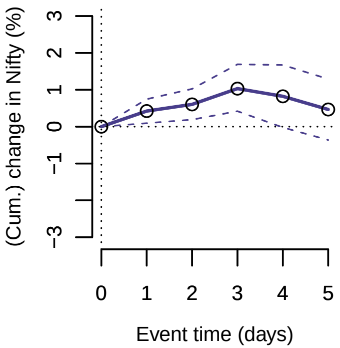
Possibilities

- A CCA on a particular kind of capital flow will impact on that narrow measure, but the market will find other labels through which that capital will find its way into the country. Prediction: Tightening ECB will impact on ECB but not on overall capital flows.
- Signalling: When a country retreats from economic liberalisation, this adversely affects foreign equity capital flows and adversely affects stock prices (and vice versa).
- Impact upon exchange rates: Maybe CCAs do achieve exchange rate objectives.
- Impact upon macroprudential objectives: Maybe CCAs do deliver on curbing private bank credit growth, stock prices and capital flow surges.

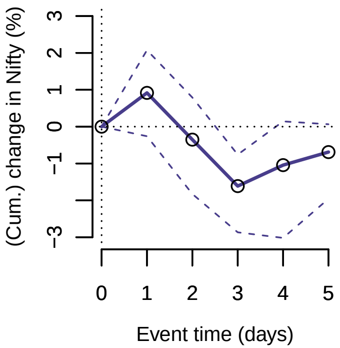
We will first do correlations and then do causal effects.

Signalling value: Impact on stock prices

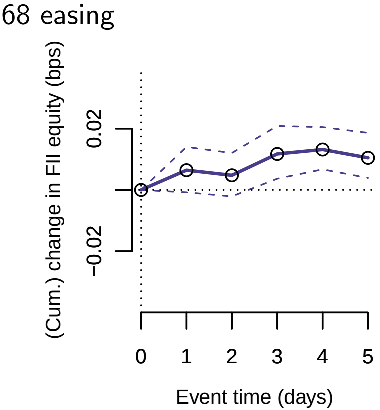
68 easing

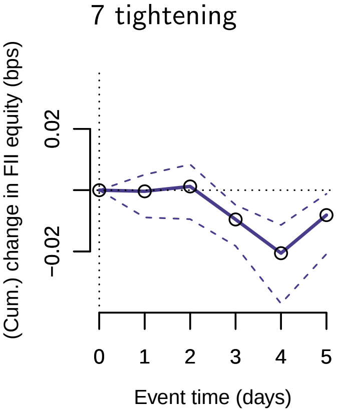


7 tightening



Signalling value: Impact on foreign capital flows into the equity market

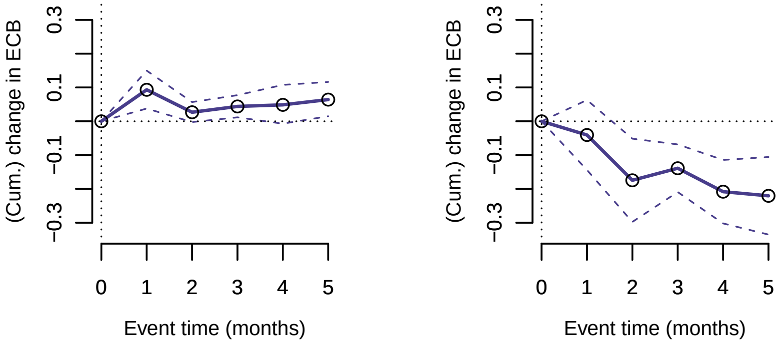




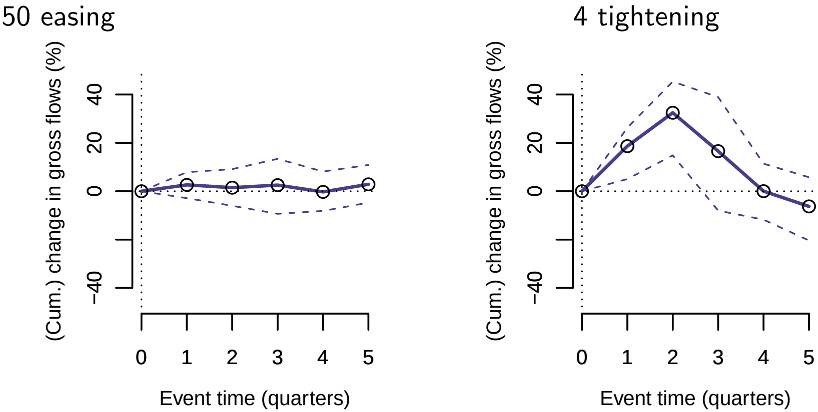
Impact on ECB flows

62 easing

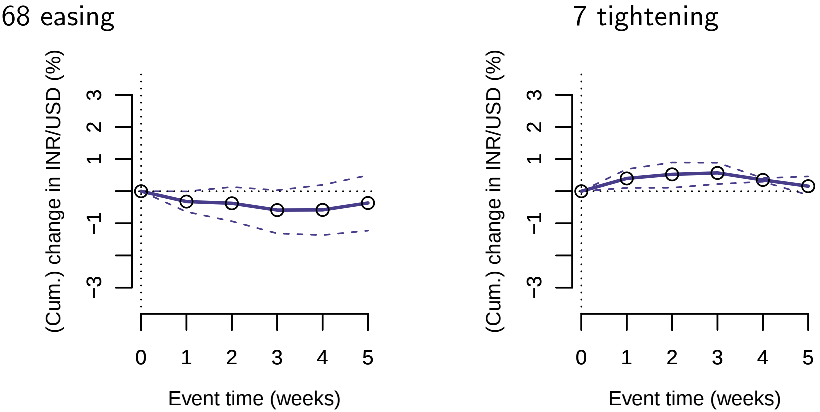
7 tightening



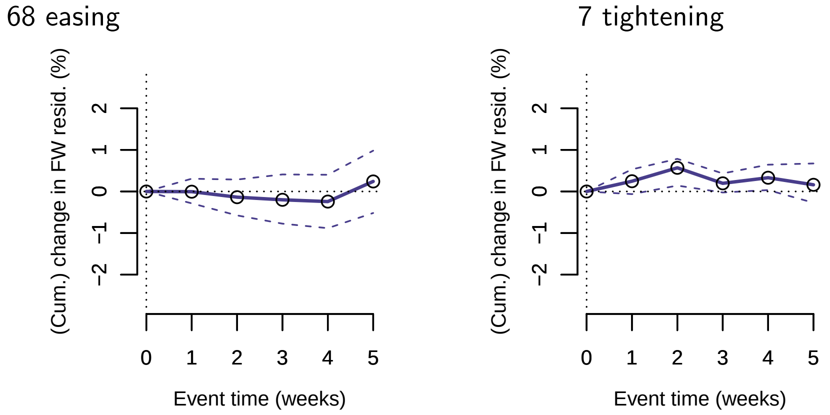
Impact on overall capital flows



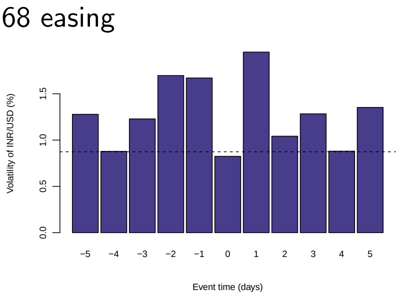
Impact on INR/USD returns

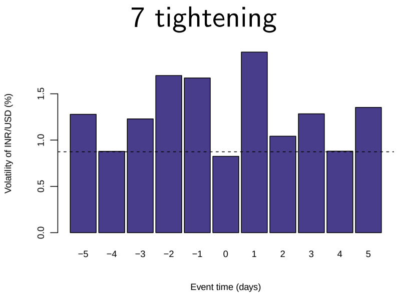


Impact on Frankel-Wei residual



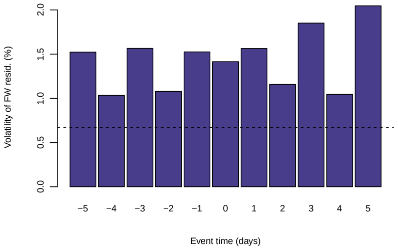
Was it currency volatility that was the driver?



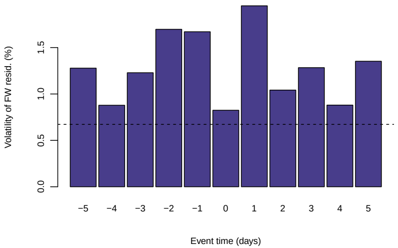


Was it volatility of the Frankel-Wei residual that was the driver?

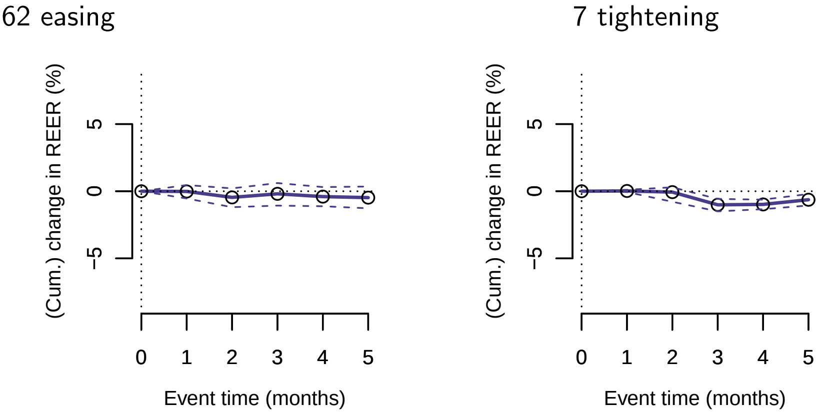
62 easing



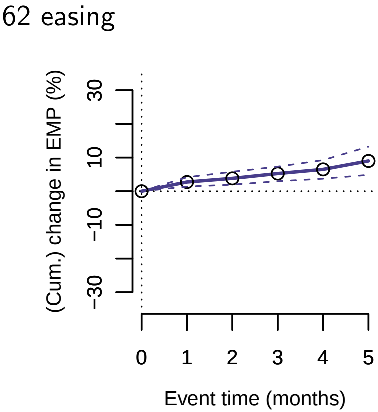
7 tightening

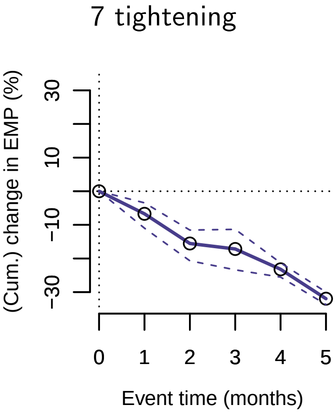


Impact on REER

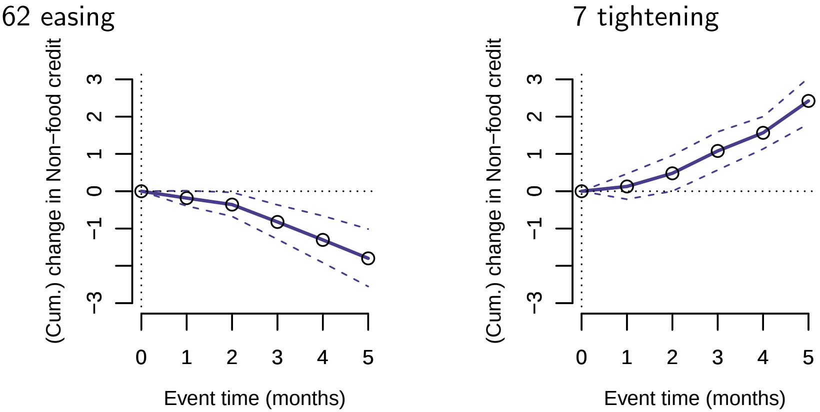


Impact on Exchange market pressure





Impact on Private bank credit



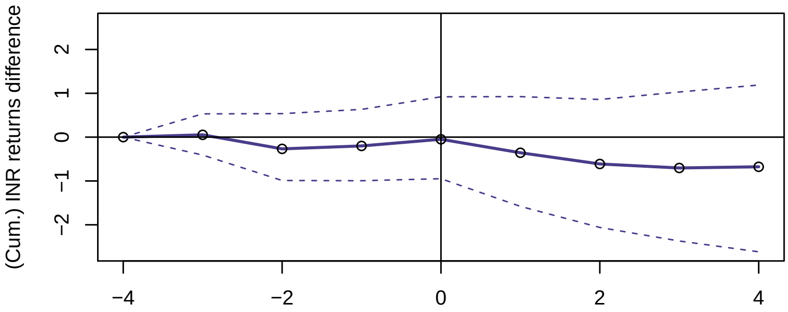
Part V

Causal analysis

The puzzle of causal effects

- We observe the outcome after the treatment
- We don't observe the counterfactual.
- Key insight: RBI responds to a certain macro-economic situation.
- Can we identify moments in time which are similar to those in which the RBI used CCAs?
- Propensity score matching: Estimate a logit that predicts an easing CCA, and identify moments in time which are the control.

Example: The impact on the INR/USD exchange rate



Other causal impacts

Net FII inflow

	OLS	Robust
1	0.06 (0.112)	0.07 (0.116)
2	0.06 (0.133)	0.07 (0.141)
3	0.09 (0.147)	0.1 (0.158)
4	0.09 (0.156)	0.11 (0.168)

Nifty

	OLS	Robust
1	-0.3 (1.863)	-0.32 (1.948)
2	-0.93 (1.989)	-1.29 (2.002)
3	-1.27 (1.967)	-1.51 (2.008)
4	-1.17 (2.023)	-1.26 (2.108)

Credit growth

	OLS	Robust
1	-0.43 (0.495)	-0.12 (0.75)
2	-0.35 (0.485)	-0.21 (0.477)
3	-0.27 (0.507)	-0.04 (0.658)
4	-0.47 (0.498)	-0.43 (0.536)

FW residual

	OLS	Robust
1	-0.42 (0.6)	-0.44 (0.62)
2	-0.87 (0.673)	-0.82 (0.7)
3	-0.68 (0.804)	-0.68 (0.84)
4	-0.7 (0.861)	-0.52 (0.897)

Square of INR-USD returns

	OLS	Robust
1	0.27 (1.149)	0.32 (1.169)
2	0.4 (1.26)	0.47 (1.313)
3	0.57 (1.497)	0.56 (1.54)
4	0.93 (1.606)	0.73 (1.543)

Part VI

Conclusion

- The Indian authorities use CCAs to pursue exchange rate objectives.
- Reversals of economic liberalisation are seen as a problem by the equity market and by foreign investors in equities.
- CCAs have no impact.

Thank you.