

RULE BASED INTERVENTION TO CURB RUPEE VOLATILITY

Part I THE BACKGROUND

Part I Section A Introduction

A major development in 2007 has been the strength of various currencies, especially emerging market currencies, against the US dollar. The rupee rose 12.3% against the dollar as of end November 2007 over a year ago. The bulk of this rise came during March and April. Although the overall rupee rise against the U.S. dollar over the year was just slightly higher than for the Euro, the magnitude of this rise understates the rupee's underlying strength. This is because only sustained intervention to support the dollar prevented a larger rise. The rupee rise has adversely affected huge segments of exports and fuelled an ongoing, heated debate on both export sector and broader macroeconomic policy.

There have been two primary reasons for these developments. As part of the liberalization process in India, the capital account has been gradually and greatly liberalized since 1994. Simultaneously easy monetary policy in the United States and other developed countries (in particular, the U.S. federal funds rate of 1% between June 2003 - June 2004 induced huge capital flows to emerging markets. The booming Indian economy and soaring equity market in turn amplified the capital inflows.

This paper analyzes these developments, drawing upon evidence and analysis from wide ranging sources. It suggests a set of interconnected policy measures to reduce rupee volatility, while maintaining a basically flexible exchange rate. The paper is organized as follows. Part I reviews developments and policy disputes over the summer. Part II tabulates and evaluates the views expressed by prominent economists and analysts this year, pertaining to the rupee and capital account. Part III first adumbrates a macroeconomic framework upon which policy recommendations should be based, and then puts forth a set of inter-related rupee policy recommendations. Part IV critiques the conventional view that growth in emerging economies is crucially dependent on external borrowing needed to increase total savings.

PART I Section B Reviewing the Midsummer Mayhem

Within different categories of the capital account, the specific policy action that led to the uncontrollable surge in inflows was the liberalization of the norms and the limit on External Commercial Borrowings. In fact, in fiscal year 2006-2007, about two thirds of the \$ 21.5 bn. rise

in forex reserves came from External Commercial Borrowings. Indeed, there was a drop in portfolio investment of \$ 5.4 billion during this period as foreign institutional investors, a major player in the Indian equity markets, cashed in their profits. (Table 1 below).

TABLE 1: India's Balance of Payments Main Items

(US \$billion)	2005/06	2006/07	Change
Current Account (net)	-9.2	-9.6	-0.4
Capital Account (net):	24.2	46.2	+22.0
of which:			
Foreign Direct Investment	4.7	8.4	+3.7
Portfolio Investment	12.5	7.1	-5.4
External Commercial Borrowing	2.71	16.1	+13.4
Short-term Trade Credit	1.7	3.3	+1.6
External Assistance	1.7	1.8	+0.1
NRI Deposits	2.8	3.9	+1.1
Addition to Reserves	15.1	36.6	+21.5

Source: RBI's Macroeconomic and Monetary Developments, First Quarter, 2007/8, July 2007

In recent years, the Reserve Bank of India (RBI) has been intervening when the rupee was rising too sharply. To be more precise, it bought U.S. dollars when the rupee's real effective exchange rate (henceforth abbreviated as REER) tended to rise above target i.e. outside a 5% band based on the 1993-1994 index (equals 100) of the REER. Further, the RBI would sterilize the excess liquidity generated by this forex intervention, as China and other Asian countries with pegged or semi pegged exchange rates have been doing. In February 2007 itself, forex reserves went up by \$12 bn. (a huge 1% of annual GDP) mostly due to an inflow of long-term debt issues, known as External Commercial Borrowings.

This policy of managing inflows fell apart early this summer since the RBI had exhausted its ability to sterilize, as evident in domestic money market developments. The crucial call money rate fell below the reverse repo rate (the policy floor rate) and was even zero for several days.¹ Despite all the euphoria about the Indian economy's high growth rate, the above mentioned development indicates the fragility of the underlying financial and macroeconomic policies.

Part I Section C Firefighting Measures To Prevent a Rupee Rise

The immediate response to the uncontrollable surge in inflows from February onwards, leading to the collapse of the call money rate corridor in the critical money market operations, was to abandon intervening and let the rupee sharply rise. Relevant facts and figures are documented in Vivek Moorthy (Far Eastern Economic Review, June 2007). The RBI also hiked the Cash Reserve Ratio and the policy rates between April – June 2007. Despite the RBI's regaining of

control over the call money corridor, reserves kept rising at a much higher rupee range of around Rs 39-40/\$ since the summer, compared to Rs. 43-44/\$ range in March (see Table 2 below).

TABLE 2: The Collapse of the Rupee Peg

Fiscal Year End (March 31)	Rs./\$	Net Forex Assets Rs bn.	Net RBI Credit to Govt. Rs bn.	Reserves \$ bn.	REER Index*
2005	43.76	6128	-180	141.51	101.35
2006	44.61	6730	81	151.62	106.67
2007	43.59	8662	-28	199.18	104.91
May 4 07	40.90	8327	159	204.00	110.33
Sep 21 07	39.87	9395	16	235.89	N. A.

* REER stands for Real Effective Exchange Rate Index, base 1993-94 = 100 (A rise implies stronger Rs.) REER is based on a trade-weighted basket of currencies and adjust for inflation.

Faced with the continuing and dangerous deluge of capital inflows, the RBI, in consultation with the Finance Ministry undertook the following measures: (a) It reimposed the limits on External Commercial Borrowings borrowing on August 07, 2007. (b) It further hiked the Cash Reserve Ratio and (c) It continued forex intervention. These moves had the desired salutary effect on the rupee, as analysts have noted. Nevertheless, with funds pouring into equity markets, and continuing forex intervention, reserves have risen from about \$ 200 bn. in end March to about \$ 273 bn. as of end November, a level of about 25% of annual GDP. Pressure on the rupee to rise continues to be strong and sustained, as of early December 2007.

The above three moves have been in accordance with recommendations of The Economic Advisory Council (EAC) to the Prime Minister, headed by Dr. Rangarajan, the distinguished former RBI Governor. In its July 2007 report, the EAC recommended a combination of the following measures (i) Allowing some appreciation (ii) Restriction on some inflows (iii) Forex Intervention when appropriate and (iv) Sterilization of inflows to curb domestic money and credit expansion via hikes in the Cash Reserve Ratio and related measures. While in favour of restricting debt inflows, the EAC Report took a firm position that equity inflows should not be restricted, as that would send the wrong signal to investors about India being an "attractive destination".

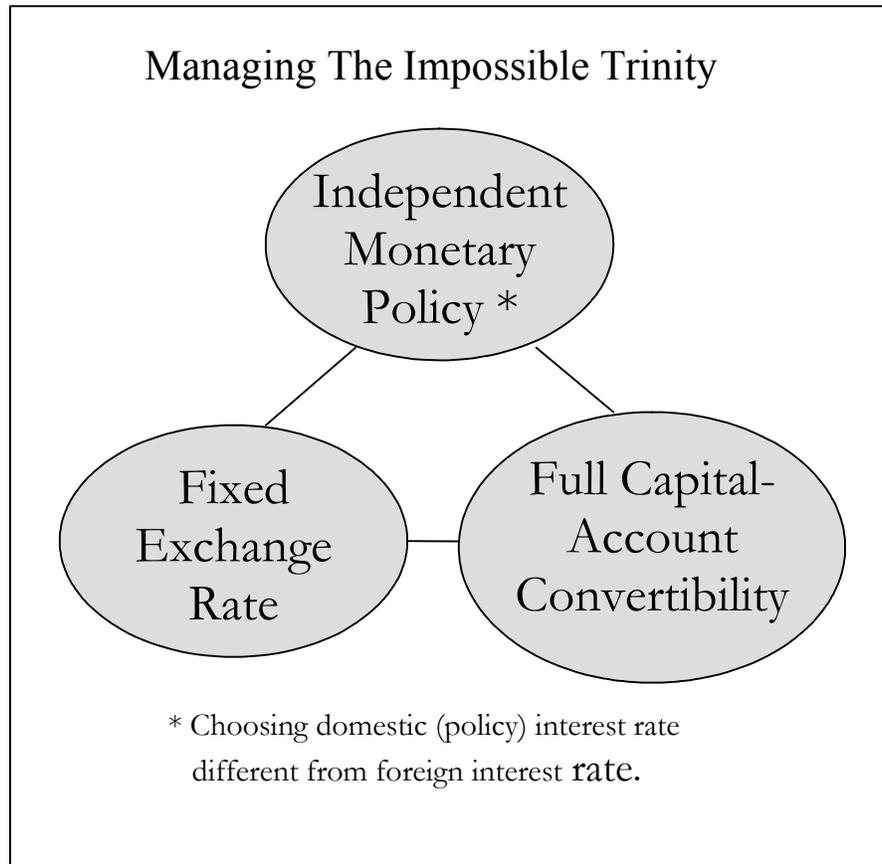
Part I Section D: OFFICIAL STANCES ON CAPITAL FLOWS

As of early 2007, official stances on policy can be characterized as follows:

The Reserve Bank of India, henceforth RBI, was in favour of, and was pursuing, a Real Effective Exchange Rate (REER) target or at least a 'Not too Strong Rupee' policy. It was using forex

intervention, and recommending curbs on capital inflows, to help prevent the rupee rise. By contrast, the Finance Ministry was for full Capital Account Convertibility (abbreviated here as CAPAC). The opposing stances of the two on more capital inflows crystallized on two specific matters. First, on raising the External Commercial Borrowing limit, discussed above. Second, the RBI's was against allowing investment through Participatory Notes, an instrument devised and used to get around restrictions on categories of overseas investors buying Indian equities. The RBI recorded its dissent from a Finance Committee recommendation on this matter.

The well-known impossible trinity diagram (below/next page) shows that a country can choose only two out of the three choices below. Given the primacy of the goal of independent monetary policy, full CAPAC then requires accepting a fully flexible exchange rate. The Finance Ministry staff and economists were in favour of this, and were accordingly for promoting full currency futures markets to enable hedging of currency risk under full CAPAC. They were also for developing the domestic bond and derivatives markets and enhancing what they called the Bond-Currency-Derivative nexus. This goal of developing this nexus fitted in smoothly with the goal, or rather dream and vision, to make Mumbai an International Financial Center. The Finance Ministry released a report on this subject, called the Mumbai International Financial Center Report, towards end April 2007. For Mumbai to achieve this status, effectively requires the rupee to be fully convertible under current global financial competitive conditions.



However, when the rupee rose sharply, leading to exporter woes, the Finance Ministry backed down on its full CAPAC goal and allowed some curbs on inflows, and provided some export sops. The Mumbai as International Financial Center Report got accordingly shelved. However, recent statements such as the Junior Finance Minister saying 'no more curbs on inflows' (Business Standard, Nov 21st), indicate that confusion on policy continues. The Finance Ministry is vacillating between pushing for more inflows and supporting the rupee, while the RBI is intervening heavily to support the rupee without a clear conviction that monetary policy should target the REER, and without a clear macroeconomic framework or rules for a 'managed float'. Policy makers are firefighting with flipflopping, and dangerously fumbling along.

PART II PINNING DOWN POLICY POSITIONS

Policy recommendations cannot be analyzed in isolation. Any specific recommendation has to be part of a package deal of inter-connected policies on the exchange rate, capital account, and very crucial although neglected, domestic macroeconomic policy goals. In order to evaluate prevailing policy package recommendations, it is necessary to delineate and discuss what is meant by desirable and feasible policies, commonly used terms in analysis.

A desirable policy is easy to define e.g. ceteris paribus, any point of the trinity is desirable.

A feasible policy pertains to both economical and political feasibility.

Economical feasibility is mainly a matter of logic, based on arbitrage and/or long run economic constraints. However, the criterion also entails some judgement, depending on the situation.

Political feasibility is a matter of judgement e.g. freeing retail petrol prices in India is desirable, and economically feasible whatever the other policies. However it may not be politically feasible.

In the Table below, I use the term consistency instead of (economic) feasibility to evaluate the views expressed by various economists in recent months, in the paper Business Standard.

TABLE 3: DIFFERENT RECOMMENDED POLICY PACKAGES

<u>PERSON/SOURCES</u>	<u>Recommended Policies</u>	<u>Consistency</u>
Shankar Acharya Aug 9th	Some curbs on Inflows and sterilization to achieve REER target or weak rupee. Nothing definite about inflation target	Moderate (in short run)
A.V. Rajwade Surjit Bhalla Rajwade Apr 30, Bhalla May 12th Oct 17 th	Strongly for freer inflows in 2000/2006 Committees. Also calling for heavy sterilization a la China so that weak rupee Peg or REER target can promote exports. No inflation target, Bhalla denies inflation.	Zero-violating the impossible trinity
Ajay Shah Apr 4 th Oct 17 th	Full convertibility and pure float with forwards, swaps and options for exporters and importers to hedge forex risk and CPI Inflation targeting as RBI's only activity	Full
Vivek Moorthy Far East. Econ. Rev. June 2007, May 14 th , Sept 27 th	Strict CPI Inflation targeting main goal of RBI. Moderate inflow curbs, a basically flexible rate with forex intervention to reduce volatility via a random walk band based on last period average.	Rather high (my opinion!)

*Default reference with only the date is to a Business Standard article.

The policy package of full CAPAC with a pure float, coupled with well developed currency derivative markets to hedge exchange rate risk and an inflation target for the RBI, as recommended by Ajay Shah, is completely consistent. It is the policy followed by countries such as Canada and New Zealand, where forex intervention is minimal, and the exchange rate is very market determined. By contrast, Rajwade and Bhalla, who advocated liberalizing capital inflows as Members of national committees on CAPAC, and continue to do so, are also recommending a REER target. Their stance is logically inconsistent, violating the impossible trinity.

PART III Recommended Policies to Reduce Rupee Volatility

Part III Section A The Underlying Framework

Any policy recommendations must be based on a clear underlying macroeconomic framework. Unfortunately, both the policy actions, and recommendations of many economists and analysts in India in recent months, have not been grounded in a clear framework. By contrast, the recommendations outlined below stem from a conceptual macroeconomic framework based on the natural rate hypothesis. The natural rate hypothesis states that in the long run, the central bank cannot control the growth rate, real interest rate, or in an open economy, the real exchange rate. These variables are governed by real sector fundamentals – the microeconomic forces pertaining to technology, intellectual property rights, productivity, labor supply, the cost of doing business, land available for business and housing, consumer preferences, etcetera. However, in the short run, expansionary monetary or fiscal policy can raise output above potential, and an artificially weak real exchange rate can similarly boost net exports.

All that the central bank can control in the long run, as outlined by Milton Friedman when explaining the natural rate hypothesis (“The Role of Monetary Policy” December 1967), is some nominal variable. Further, in the long run the impossible trinity reduces to a fundamental dilemma: capital account controls cannot be used to avoid between choosing a price level/inflation rate or the nominal exchange rate as a final goal. (Vivek Moorthy, “The Fundamental Dilemma” Business Line, Oct 26th 2007)

Based on this fundamental dilemma, the view taken here is that for a large economy like India, it is far better to have an independent monetary policy and control over the inflation rate than the nominal exchange rate as the final goal. The same holds for China, but not necessarily for a small economy like Hong Kong which may be better off with an exchange rate peg (at present the US dollar, now perhaps the Chinese yuan.) While the exchange rate is a very important price, unless a country is small and is overwhelmingly export oriented, for the macroeconomic welfare of the average person in the economy, a flexible exchange rate with an inflation target is far better than a nominal exchange rate peg, since the latter leads to complete loss of monetary autonomy and lack of control over the economy and the price level.

Part III Section B: Concrete Recommendations and Rationale

Summary of Recommendations

- 1) **The RBI should announce and maintain a band (plus or minus x%) based on last period's average spot rate.** (The longer the period, the larger the band, e.g 5% annual or 1.25% quarterly)
- 2) Moderately stiff capital controls on debt and equity should be imposed to manage the above.
- 3) A large scale currency futures market should not be introduced.
- 4) Tobin type taxes (as in Chile, Thailand) to reduce high frequency trading should be imposed.

Overall, a moderately flexible exchange rate is best suited for India.² The only viable long run alternative – a nominal exchange rate peg, implying complete surrender of monetary autonomy, would be disastrous. A real effective exchange rate (REER) target, as the RBI has been practicing, and as advocated by Bhalla, Rajwade and others (cf. Table 3) does adjust for inflation differences, but cannot be sustained in the long run. As emerging economies become stronger, it is generally the case that their currencies will tend to rise in real terms.

The problem with a full float is the huge swings in the nominal and real exchange rate that repeatedly occur under full capital account convertibility (CAPAC). This is true for developed countries as well. As the European Central Bank President Jean Claude Trichet recently stated, the rise of the Euro against the dollar in recent weeks has been “brutal”. The Euro’s rise has been threatening the future of the company EADS and the Airbus, a great European product resulting from years of innovation and effort.

The impact of such sharp swings in capital flows are even greater in poor (although increasingly richer) economies such as India. A small amount of portfolio flows, between USA and Eurozone, such as \$ 10 bn. most often will barely dent the Euro/US dollar exchange rate. However, the same amount flowing into India is a large amount, about 1% of annual Indian GDP. It can thus have a huge impact upon the rupee/US dollar exchange rate with a massive impact upon exports and imports.

As noted economists Calvo and Reinhart (American Economic Review, 2000) have stated, there is a widespread “fear of floating”. Countries that profess to follow a flexible exchange rate often intervene to mitigate huge swings in the real exchange rate. The desirability of intervention to reduce exchange rate volatility is, in my opinion, hard to question.

Part III Section C Rules Versus Discretion in Forex Intervention

Central bank intervention under flexible exchange rate regimes at present is based both on discretion, as in the case of the European Central Bank and the Bank of Japan, or on rules, as in the case of managed floats such as a REER target in India. The RBI was pursuing a REER target without explicitly announcing it as such up to 2003. But the capital inflows have been so immense of late that it has abandoned any specific target. The RBI merely steps in to prevent a rupee rise, whenever it feels it is warranted.

It is generally accepted by economists that policies based solely on discretion are dangerous because they allow individuals to have too much power. The temptation to stimulate or manipulate the economy for short-term economic, and thus political gain, is very high. There should be some rules that constrain the policy makers with respect to final goals, while allowing independence in the tactical measures used to achieve these goals.

This discussion on rules versus discretion, and also on secrecy versus transparency, needs to be extended to the forex market, where for developed countries intervention is generally by discretion, and is often not transparent. While many economists would accept that forex intervention should be solely to reduce exchange rate volatility and nothing else, achieving this is easier said than done. One way to operationalize this goal is to implement what I have called (Far Eastern Economic Review, June 2007) a random walk band. The RBI should take as the reference value last period's exchange rate – ideally, some carefully chosen average.³ With moderately stiff controls as recommended in policies # 2 through # 4 (moderate controls on inflows, restrictions on currency futures and related derivatives, and Tobin type taxes to discourage short- term trading) the above goal should be manageable.

Required or Accompanying Domestic Policies:

An inflation target should be main goal of RBI – a 3 year average of CPI should be kept under 3%. The 'unstable middle' and 'falling peg' critique about intermediate exchange rate regimes is valid when the central bank is not independent and inflation is high, and/or a band is chosen very different from prevailing market conditions (e.g the entry by Britain into the European Exchange Rate Mechanism at a central rate of 2.95 DM/sterling in 1990, which collapsed on Black Wednesday in September 1992).⁴ However, if the central bank keeps inflation low, the objections of a free market purist to an exchange rate peg are on much weaker grounds.

Part III Section D The Return to Targeting the Federal Funds Rate in USA

In order to justify the policy of an exchange rate target band recommended above, it is useful to take a cue from the conduct of monetary policy in the USA over the post war period. During the 1950s and 1960s the federal funds rate was the instrument or operating target of policy. Monetary policy fell apart during the 1970s stagflation in the USA and many European countries also. . It was a constant refrain of Milton Friedman that the Federal Reserve should not target interest rates or peg them, since a central bank cannot control interest rates. According to him, these should be fully market determined. Instead the central bank should follow a money growth rule.

It is true that pegging the nominal federal funds rate in the face of rising inflation in the USA proved to be unsustainable in the 1970s. As the expected real rate of interest declined, the economy overheated. In long run, equilibrium, the nominal rate equals the real interest rate plus expected inflation, and the central bank cannot control the real interest rate in the long run. However it does not follow that the central bank should use a monetary aggregate as the instrument or operating target of policy, and let interest rates be fully market determined.

When inflation is under control, the policy of pegging the short term interest rate in the USA and the Eurozone and elsewhere has proved to be quite successful. Conversely when the Federal funds rate was fully market determined and Non Borrowed Reserves was used as the instrument (October 1979-August 1982) by the Federal Reserve, it proved to be a disaster. Both short and long rates of interest gyrated too wildly for money market to function smoothly and for business to be conducted efficiently. The central banks of USA and Canada, which had gradually switched to money growth targeting in the 1970s, pragmatically abandoned it in the early 1980s.

In the mid 1980s U.S. policy reverted in steps to interest rate pegging. The Federal Reserve switched from targeting Non Borrowed Reserves to Borrowed Reserves for a few years, and by 1987 had effectively reverted to the 1950s policy of targeting the funds rate. However, the target was not announced. The subsequent issue that came up was whether the federal funds rate target should be disclosed or kept secret, leaving it to traders to guess the target rate from the Fed's open market operations. Those against transparency argued that declaring the funds target would make it hard to achieve the target and perhaps destabilize the economy. However, when the Fed started declaring its funds target from February 1994, there was no problem in meeting the target easily. Announcing the funds target did not destabilize the financial markets, and in fact the transparency contributed to smoother monetary policy.

In short, the lesson from the domestic money markets is that transparent forex intervention based on rule may work if the underlying domestic macro fundamentals are sound. In particular, inflation should be under control. The target rate(s) should be left to respond to market forces gradually, as in the random walk band proposal.

PART IV Will Reducing Capital Inflows Reduce Growth?

Part IV Section A – The Benefits of Capital Inflows

The main reason why many economists have been strongly in favour of capital account liberalization for emerging markets is that capital inflows are generally assumed to be necessary for higher growth. The benefits of capital inflow are seen as two fold:

Quality effect – Exposure to modern, perhaps better practices (of Foreign Institutional Investors, pension funds, mutual funds etc). While such exposure is undoubtedly beneficial, India has had enough capital inflows over the last ten years to obtain this benefit. Our mutual funds are well managed. At present, restricting the quantum of inflows will not reduce the benefits from the 'quality' effect which have pretty much been saturated.

Quantity Effect – The main argument for capital inflows is that we need external borrowing to bridge the domestic savings - investment gap. From the fundamental macroeconomic identity:

Savings – Investment = Exports minus Imports = External Borrowing (ignoring transfers)

It is argued that we have huge investment needs in excess of saving, and so external borrowing is needed to fill the gap. The Official Committees on Infrastructure Finance (from the Rakesh Mohan Committee onwards to the Deepak Parekh Committee), based on such an approach, have calculated external borrowing needs, based on projecting infrastructure investment.

To counter this argument brings us to what I call the Solownomics versus Sotonomics view of growth. Based on the Solow growth model, Solownomics looks at inputs of labour, capital and the residual of technical progress as the determinants of growth. By contrast, the term Sotonomics (which I have informally coined, in class notes) broadly describes the approach and arguments made by Hernando de Soto. In *The Other Path* (1986) de Soto calculated the number of days to start a business, enforce a contract, register a property, resolve an insolvency etc. He stressed the cost of doing business as the main impediment to growth.

In his subsequent book *The Mystery of Capital* (2000) de Soto argued that poor countries are not short of capital. Rather, their capital is tied up in land that lacks clear title and cannot be used as collateral to get a loan. Improving the legal system is the key to generate the finance that is a vital input for growth. Inputs of capital and labour will then be endogenously forthcoming. While opening up an economy is conducive to efficiency and growth, the Washington Consensus strategy of Liberalization, Privatization and Globalization (LPG) pays only limited dividends when it come to broad based, sustainable growth for the economy. The limitations of the Washington consensus are discussed in my review of *The Mystery of Capital* ("The Wealth in the Title, Business Line, February 19th 2002). Focussing on the domestic economy and developing 'legal infrastructure' for the informal sector is critical.

From a Sotonomics perspective, infrastructure is constrained not by funds, but by doable projects. The availability of land for commercial purposes is a critical constraint to growth. Policies to streamline the land acquisition process (e.g majority voting - if 80% or more inhabitants of land to be acquired, typically farmers, agree to sell out, then others have to), and similar measures will make land commercially available. Then domestic savers will be willing to finance infrastructure without Special Purpose Vehicles. Domestic legalization of the informal sector is the key to equitable, sustained growth, not globalization per se, from this perspective.

About savings and infrastructure, I had argued in 1999 along Sotonomics lines as follows:

"...The primary reason why Capital Account Convertibility (for inflows) is seen as desirable in an Indian, or more generally emerging market context, is that foreign capital inflows are thought to be vital to raising sustainable GDP growth...The above view can be questioned at every stage of its reasoning....India has a high private saving rate. there is no dearth of private saving, much of which gets channeled into the unproductive asset of gold....If domestic investors are unwilling to put their savings in infrastructure and similar projects without specific concessions, it may well reflect an accurate perception on their part that the risk adjusted returns are not adequate. Without a well developed legal system and well-functioning property rights, merely attracting foreign capital will not ensure more infrastructure. Without the ability to enforce payment for, say electricity, there is no effective demand. The term 'Transmission and Distribution (T&D) losses in electricity has often been jokingly referred to as Theft & Dacoity Losses. ("Capital-Account Convertibility: How Should we Proceed? Vivek Moorthy, in *Management Perspectives*, IIM Bangalore 25th Year Volume, Macmillan Press, 1999

The progress of the Bangalore-Mysore Infrastructure Corridor (BMIC), a multi-lane highway under construction is case in point. Due to numerous court cases (above one hundred) filed against the Government by farmers pertaining to acquisition of land, actual road construction has been stopped on several occasions. This infrastructure corridor makes for an excellent 'case study' about the hurdles to land acquisition versus financing constraint as determinants of infrastructure output and amount of road area built.

To summarize, moderate curbs on capital inflows will not necessarily adversely affect growth, while the benefits to the real economy of allowing a basically flexible but more stable rupee, using intervention to keep it within a band, are immense.

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EndNotes

¹ The European Central Bank, the US Federal Reserve and other developed country central banks have a target policy rate, and sufficient control over the money market to keep the effective overnight rate within a few basis points of the target rate. Unlike them the RBI has been operating with a target corridor, reflecting a lower degree of control over the money market, and it attempts to keep the overnight call money rate within this corridor. During April 2007, the reverse repo rate was 6% and the repo rate was 7.75%.

² The recommendations above build upon my articles in May, June and September 2007 cited in the Table in previous section. These recommendations are broadly in line with those of the Economic Advisory Council's July Report, discussed earlier. However, there are major specific and important differences.

³ In my article (June 2007), I had recommended a 5% band for the REER. In retrospect, it is simpler to implement a band for the nominal rate, avoiding the difficulties that arise when constructing an REER index. The inflation differential between USA and India is small enough to ignore the need for inflation correction. One issue that needs to be carefully addressed in implementing a bilateral exchange rate random walk band (say Rupee/\$) is how to deal with variations in the cross (say Euro/\$) rates.

⁴ The general perception of the financial markets, and the Bundesbank, was that the 2.95 DM/Sterling rate at which Britain entered the ERM in 1990 was not viable for British manufacturing. To quote from the Financial Times "At every cocktail party, sterling was attacked before the schnapps!"

List of Abbreviations or Acronyms (used here or elsewhere)

CAPAC Capital-Account Convertibility. Note – CAC in the term in official discussion in India. I prefer to use the term CAPAC to distinguish it from CURAC, which I use to denote Current Account Convertibility.

ECB – External Commercial Borrowing in India (not to be confused with the European Central Bank).

Forex (or FX) – Foreign exchange.

REER – Real Effective Exchange Rate.

RBI – Reserve Bank of India.