

How Does A Small Open Economy Faced With Unprecedented Capital Flows Conduct Monetary Policy?

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at the Reserve Bank of India.*

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It is a great honour and privilege for me to be invited by the Governor of the Reserve Bank of India to address this distinguished audience at the seat of this august institution this morning. Allow me to place on record my deep appreciation for the invitation extended to me by Governor Reddy. I had the immense pleasure of welcoming him to Mauritius in December last when he delivered a Memorial Lecture as part of the 40th Anniversary Celebrations of the Bank of Mauritius. India and Mauritius have enjoyed a very special relationship spanning over several centuries and cutting across vast swathes of human endeavour in the economic, social, cultural, linguistic and political fields. I cannot think of anything that symbolises this more eloquently than the plain simple fact that our currency - like its more famous cousin issued by your institution - also goes under the name of "Rupee". But then a central banker would say that, wouldn't he?.

The theme of my talk today is : "*How Does A Small Open Economy Faced With Unprecedented Capital Flows Conduct Monetary Policy ?*" I believe this subject, or at least some aspects of it, will be of interest to both the Bank of Mauritius and the Reserve Bank of India in the context of current economic developments in our two countries against the backdrop of the international economic environment confronting all of us.. The structure of my talk today will be as follows: In the first part, I begin with a thumb-nail sketch of the Mauritian economy to provide some context. In the second part of my presentation, I focus on some of the important financial and economic reforms that Mauritius is now embarked upon. The third part addresses some of the challenges emerging from globalization for a small country. Finally, I touch upon the monetary policy challenges stemming from unprecedented capital flows for a small open economy. This is a subject which is exercising my mind considerably, causing sleepless nights and swallowing in large gulps the reserves at my disposal as Governor of the Bank of Mauritius. You will discover that I have more questions than answers.

PART I: General Background On The Mauritian Economy.

As most of you are no doubt aware, Mauritius is a small island economy in the South-West Indian Ocean. It has been independent since 12 March 1968 and became a Republic in 1992. A couple of days ago, we celebrated our 40th Anniversary as an independent nation. In spite of several handicaps like limited natural resources, remoteness from major markets, a small domestic market and vulnerability to cyclones and man-made external shocks alike, Mauritius has achieved one of the highest per capita GDP in Africa. In 1968, Mauritius was, by all measures, a poor country with per capita income of less than US\$200. Prospects were so gloomy that Nobel-prize-winning economist James Meade, who headed an Economic Commission sent by the British colonial administration in the aftermath of one of the most devastating cyclones in the country's recorded history, recommended emigration as a key part of the solution to the island's problems. One of the first World Bank missions

to visit the country, led by Jean Baneth, opined "... this country exudes an air of hopelessness." Another Nobel prize-winner, V.S Naipaul, titled an analytical piece on Mauritius "The Overcrowded Barracoon.." And a French writer followed suit with a book entitled " Maurice – Quelle Independance ?"

It will take me too long to take you down the road we have travelled over the last four decades. I have been part of the journey, occasionally as an observer, but mostly as a doer, a mover or "agent provocateur." Suffice it to say that the prophets of doom and gloom have been proved utterly wrong, that the Malthusian nightmare has been exorcised, that Mauritius is now the poster boy of the IMF and the World Bank when it comes to successful economic development in Africa. By 2007, for a population of nearly 1.3 million, per capita GDP has increased to nearly US\$6,000. Real GDP has grown, on average, by about 5 per cent per annum over the last two decades. For 2008, real GDP growth is estimated at 6 per cent, up from 5.6 per cent in 2007. This has been one of the most remarkable policy-driven economic transformations in modern history.

The Bank of Mauritius has played a key role in this economic transformation. The modalities of conducting monetary policy in Mauritius have evolved from strong reliance on controls and directives to more market-based mechanisms. The 1970's were turbulent years for the conduct of monetary policy: external price shocks, together with expansionary domestic policies, led to an acceleration of inflation to an all-time record of 42 % in 1979. I played a key role in devising, marketing and implementing appropriate adjustment policies as part of IMF- and World-Bank-supported stabilization and structural adjustment programmes. Macroeconomic stability was regained in the early 1980's and maintained successfully thereafter. The monetary authorities pursued sound monetary and exchange rate policies, which contributed to foster an environment favourable to sustained growth.

The Bank has, since its establishment in 1967, given prominence to the objectives of diversifying the economy and fostering growth and employment through supportive actions. Freshly liberated from the tight corset of the Currency Board system - and here, let me add for those of you who do not know it, the Currency Board of Mauritius is the very first one of its kind on record, just as Mauritius is also the first known customer for the noted banknote printing company Thomas De La Rue - it was natural for the Bank of Mauritius to strike out in new directions. An expansionary policy was followed by keeping interest rates low and providing concessional credit to what were called "priority sectors". Concessional credit was provided to industrial enterprises, which were being supported to promote growth, diversification and employment. Export Processing Zone companies and manufacturing companies were the targeted beneficiaries, along with the sugar sector which then constituted the backbone of the economy.

As part of our colonial heritage, the Mauritian rupee was pegged to the Pound Sterling until 1976, when we gave up the link in the face of continued depreciation of the British currency. We then achieved a world first by pegging our rupee to the IMF's Special Drawing Right, which turned out to be an unmitigated disaster. In 1983, after a period of political and economic turmoil, accompanied - if not caused - by currency devaluation, we moved from a fixed to a managed exchange rate regime. Over the next few years, exchange rate policy was aimed at protecting

competitiveness, and the real effective exchange rate steadily depreciated until 1987. As the net international reserves situation improved and became more comfortable, policy aimed more at achieving a stable real effective exchange rate. Exchange controls which were the bread and butter of the Bank of Mauritius at its creation were gradually liberalized. In September 1993, Mauritius accepted the obligations of Article VIII of the Articles of Agreement of the IMF and all current account transactions were liberalized. Within a year we fully liberalized the capital account. An interbank foreign exchange market was established with a greater role assigned to market forces in the determination of the exchange value of the Mauritian rupee.

The long and the short of it is that Mauritius, which at independence was a monocrop economy depending entirely on sugar, has over the intervening years diversified successfully by adding such new pillars of economic activity as export manufacturing (mainly textiles), tourism and financial services. Information and Communication Technology and the seafood hub are two emerging sectors of the economy with very promising prospects for the future.

PART II: Financial and Economic Reforms.

Today, Mauritius can boast of having a sound and dynamic financial system. The banking industry is highly profitable, underpinned as it is by a sound regulatory framework and a supportive monetary policy geared to macroeconomic stability. The entry of new banks, and the expansion of the local and regional branch network of existing banks, has combined to instil a new dynamism in the industry. We are in the final stages of rolling out Islamic banking and financial services which, we believe, represent a new window of global business opportunity for Mauritius. Since April 2007, a new era of monetary policy-making has also dawned at the Central Bank with the establishment of an independent Monetary Policy Committee, which also comprises members from outside the country.

Let me add some comments on how, in the wake of the continued development and increasing sophistication of the banking industry, the Bank of Mauritius has relentlessly pursued its efforts to strengthen its supervisory arm. The regulatory framework was reinforced with the promulgation of the Banking Act 2004 and the Bank of Mauritius Act 2004. From a regulatory perspective, the change in the licensing regime stemming from the Banking Act 2004 has also contributed to the new dynamism which characterises the banking sector. This legislation provided for the integration of domestic and offshore banking business and eliminated the previous distinction between Category 1 “domestic” and Category 2 “offshore” banks. Offshore banks had been generally perceived as being less regulated and more prone to money-laundering and other illegal activities. The new legislation served to dissipate such misapprehensions regarding the regulation of offshore banks and has enhanced the image of our financial sector.

Under the single banking licence approach, banks are free to undertake the whole range of banking business. According to the “Guideline on Segmental Reporting under a Single Banking Licence Regime,” issued by the Central Bank and which became effective in July 2005, banking business in the country is divided into two categories, Segment A and Segment B. Segment B activities encompass banking business conducted essentially with non-residents and Global-Business-Licence-

holders. Segment B is thus essentially directed to the provision of international financial services generating “foreign source income,” which is taxed under a special preferential regime. All other banking business is classified under Segment A. This favourable tax treatment of foreign source income has acted as a catalyst in the expansion of the regional and international banking business of banks. The unification of the banking licence has subjected banks to increased competition in both Segments of their activity. The challenge for banks which are now operating under the same single regime, is to be innovative in order to be able to tap specific and niche markets, both locally and overseas.

To give you a better picture of the monetary challenges confronting a small open economy like Mauritius, I believe it would be useful if I dwell a little on the new framework for the conduct of monetary policy that was introduced by the Bank in December 2006, that is just a few weeks before I joined. Under this new framework, the Bank established a “corridor” that would effectively provide a ceiling and a floor for overnight interbank interest rates. Effective 18 December 2006, when this framework was introduced, the Repo Rate was set at 8.50 per cent. In order to manage the overnight interbank interest rate in an effective manner, the Bank stated that it would supply, or absorb, liquidity against collateral at its discretion and in whatever volume was required to hold the overnight interbank interest rates close to the Repo Rate. The Bank initially established a “corridor” that was symmetrical around the Repo Rate. Thus, the Bank was expected to lend money to banks at the ceiling of the “corridor” which was set at 50 basis points above the Repo Rate. In a similar manner, the Bank was expected to absorb excess funds at the floor of the “corridor” which was set at 50 basis points below the Repo Rate. The ceiling and the floor of the “corridor” were expected to move in the same direction, and with the same magnitude, as the changes in the Repo Rate. Currently, the Repo Rate stands at 9.00 per cent.

The experience so far with the new monetary policy framework has been a mixed one. While banks’ deposit and lending interest rates have generally moved in tandem with changes in the key Repo Rate, market interest rates at the short-end of the yield curve have tended to move away from the key Repo Rate. This has been particularly evident since last November. This phenomenon has been caused by the excess liquidity on the interbank money market and partly by the sizeable reduction in the primary issues of bills mainly by the Government relative to maturing bills. The Central Bank’s absence in the reverse repurchase market reflected our concern not to mop up any “hot money” or money just transiting through Segment B activities – which I detailed earlier. We have attempted to address systemic excess liquidity by introducing a Special Deposit Facility whereby banks were invited to place special deposits with the Central Bank for a period of 14 days at a rate of 125 basis points below the key Repo Rate.

The “disconnect” between the key Repo Rate and short-term market interest rates remains a source of concern to us. The Bank is contemplating a widening of the corridor as the ± 50 basis points might be too narrow for a small open economy like ours which is vulnerable to shocks and subject to volatility in international capital markets. We are also currently debating internally whether the corridor should be “symmetric” or “asymmetric.” Moreover, there are issues relating to “discretionary” as opposed to “automatic” conduct of repurchase operations by the Bank which need to be addressed. These technical issues have been taken up with the recent IMF

Article IV Mission that visited Mauritius during the last two weeks. Obviously, we are looking for a solution that fits more comfortably with the Mauritian situation, characterized as it is by a highly-concentrated banking structure.

Let me also make a point about our legal mandate. In terms of the Bank of Mauritius Act 2004, the primary object of the Bank is to maintain price stability and to promote orderly and balanced economic development. In this respect, real sector issues are duly weighed up in our monetary policy decision-making process. As part of our other objectives, we must also ensure the stability and soundness of the financial system in Mauritius.

The process of fiscal adjustment in Mauritius has been set in a medium-term framework. Corrective measures to address fiscal imbalances and restore fiscal discipline have been initiated. The budget deficit, as a percentage of GDP at market prices, declined from 5.3 per cent in Financial Year 2005-06 to an estimated 4.3 per cent in FY 2006-07. For the current financial year, it is estimated at 3.8 per cent. I should perhaps also mention here that there is a separation of debt management from monetary management. Government Securities are issued only for purposes of financing the Government's borrowing requirement whereas Bank of Mauritius Bills are issued for purposes of monetary management. The policy of issuing central bank bills to mop up any excess liquidity thrown up by incoming foreign exchange flows has a direct relevance to the main theme of this talk.

Faced as it is today with the triple shocks stemming from the erosion of trade preferences in the sugar and textile sectors and the surge in oil prices on the international market, Mauritius has no choice but to embark on bold structural reforms. This is precisely what we are doing. Efforts at fiscal consolidation with a view to maintaining medium-term fiscal sustainability, the achievement of a stable macroeconomic environment and the maintenance of social consensus are some of the key ingredients for ensuring the success of these economic reforms. The achievement of higher job-creating growth remains a central policy challenge for Mauritius now and in the years ahead. To make any significant dent in the unemployment rate, standing at around 8.8 per cent, Mauritius needs to move to a higher growth path of at least 7 to 8 per cent per annum. In developing new growth poles, we must take care to consolidate the existing pillars of the economy, a consideration not without implications for the conduct of monetary policy.

The erosion of trade preferences for its main exports, coupled with the challenges stemming from globalization, make it imperative for Mauritius to raise productivity and become globally competitive. As the country shifts progressively toward a service-dominated and knowledge-based economy, labour-market flexibility has become vital. The central wage-setting framework that characterized the labour market since before independence allowed for little wage moderation, did not favour wage differentiation across sectors and enterprises, and focused more on job preservation than on job creation. The recent establishment of the National Pay Council, which aims at broadening practices in wage agreements to reflect better sector- and firm-specific conditions, represents a breakthrough in labour market reform. It will enable us to link wage growth to productivity gains. This, together with the implementation of the proposed changes in labour regulations, will give the much needed flexibility in the labour market.

As regards the external accounts, the deficit on the current account represented 8.1 per cent of GDP in FY 2006-07, compared to 5.2 per cent in FY 2005-06. This deterioration reflected mostly the worsening merchandise account deficit which was itself due largely to the purchase of two aircraft. It was however offset to some extent by the combined surpluses on the services, income and current transfers accounts. If we exclude the purchase of aircraft, the current account deficit for FY 2006-07 represented 5.0 per cent of GDP, or a slight improvement on the preceding year. For the current fiscal year, the current account deficit, including the purchase of aircraft, is estimated at 4.8 per cent.

Policy must now reckon with some evolving fundamentals emanating from the external sector, particularly in the capital and financial account of the balance of payments. The fundamentals of the balance of payments are no longer determined by the trade balance alone. The overall balance of payments posted a surplus of Rs 6.6 billion in FY 2006-07 and a surplus of Rs 13.5 billion in calendar year 2007, as against a deficit of Rs 4.6 billion in calendar year 2006. Gross total tourist earnings amounted to Rs 40.7 billion in calendar year 2007, up from Rs 31.9 billion in 2006. Foreign Direct Investment (FDI) is estimated to have reached an unprecedented peak of Rs 11 billion in 2007, up from Rs 7.2 billion in 2006.

FDI is growing rapidly in response to reform efforts, and there are good prospects for attracting still more significant FDI flows to Mauritius in the medium term on account of the numerous mega projects in both the public and private sectors. These relate mainly to the tourism Integrated Resort Scheme projects, a Chinese integrated industrial project, and some real estate development projects. Coping with these unprecedented capital inflows remains a major challenge for the conduct of monetary policy for the Bank of Mauritius. Today, the Bank of Mauritius finds itself confronted with the important challenge of reducing the rate of inflation, which stood at 9.0 percent at the end of February 2008, and preserving the competitiveness of the export-oriented sectors, given the tendency for the capital inflows to generate pressures for exchange rate appreciation of the rupee.

There is a tendency in some quarters to think of exchange rate adjustment as an easy solution to the type of problems that we are currently facing. Unfortunately, currency appreciation or depreciation cannot be a panacea for our economic ills. We should not forget that both appreciation or depreciation of a currency are at best a mixed blessing. While appreciation may help us to contain inflation, it may also lead to a loss of international competitiveness. Similarly, a depreciation of the currency, while being beneficial to the export-oriented sectors, would also have potential inflationary consequences for the rest of the population and for the wider economy. In terms of macroeconomic policies, there is a policy trade-off between the extent of exchange rate adjustment and the inflation rate. The way forward for a small open economy like Mauritius is for it to aim to become more competitive through the achievement of real productivity gains. Long-term competitiveness depends not on exchange rate changes but on productivity growth. Short-term exchange rate accommodation can only serve to postpone the need to address the real issues relating to productivity improvement and good management.

Mauritius has a managed floating exchange rate regime with no pre-announced path for the exchange rate. As a matter of policy, the Bank has allowed the free play of market forces to determine the exchange rate. Intervention by the Bank of Mauritius in the domestic interbank foreign exchange market aims at smoothing out volatility in the rupee exchange rate and improving the functioning of the market. It is not aimed at offsetting market forces or at targeting any specific exchange rate as the Bank does not have any exchange rate target. The policy approach used by the Bank of Mauritius in the face of incoming capital inflows has also been validated by the recent Article IV Mission of the IMF. The conduct of monetary policy has to be freed from sectoral considerations. It is not the role of the Central Bank to support a particular sector at the expense of other sectors. Policy should aim at promoting the general interest of the country and that is what we have been trying to do.

PART III: Challenges Emerging From Globalization.

After these remarks relating to the specific context of Mauritius, what can we say about the implications of globalization for the conduct of monetary policy in this kind of situation?

But, more generally, some of us are beginning to wonder whether globalization should lead to a reassessment of central banks' primary objective of price stability. Especially now, in the light of the recent actions by the US Federal Reserve which seems to be more concerned about staving off recession and kick-starting the economy. Should we revisit the entire framework of economic and monetary analyses in central banks? How do we react to a range of variables that have now assumed greater importance in global markets?

Has globalization altered the way monetary policy influences inflation and output? In other words, has it affected the transmission mechanism of monetary policy? Not that we knew much about this in the first place, as some people would have you believe!

Should monetary policy react directly to exchange rate movements or should it only focus on inflation and real GDP?

It is often asserted that the more we integrate global markets, the more we have to sit back and let markets work. Can central bankers in small open economies faced with unprecedented capital flows afford to do just that? How interventionist should a central bank be under such circumstances?

How resilient are our monetary policy frameworks?

Do we need more sophisticated economic and monetary models to address the monetary policy challenges stemming from globalization?

With globalization, small open economies receiving unprecedented capital flows face the daunting task of managing these external flows in order to ensure macroeconomic and financial stability. Monetary management has to contend with the vicissitudes of capital flows and the increased volatility in exchange rates. While the distinction between short-term and long-term capital flows may be conceptually clear,

from an operational viewpoint, there are severe problems in distinguishing between the two. At any given time, some of the inflows could be of an enduring nature whereas others could be temporary and, hence, reversible. In the face of such uncertainty in determining the temporary or permanent nature of inflows, is it justified to blame your central banker if, out of prudence, he assumes that the flows are temporary until their permanent nature can be established?

There are some underlying similarities in the challenges faced by India and Mauritius in the face of capital inflows. There is also, however, a very significant difference in that India does not have full convertibility of the capital and financial account of the balance of payments. This difference translates into some additional leeway for the Reserve Bank of India in managing capital flows. Mauritius with its open capital and financial account, since the abolition of all capital controls in July 1994, does not have some of the tools which RBI has at its disposal. Introducing capital controls under any guise is certainly not an option for us.

PART IV: Challenges For Monetary Policy.

What, then, are the challenges faced by a small open economy in the conduct of monetary policy when confronted by unprecedented capital flows? As I said in my opening remarks, this is a question which has been troubling me ever since I took the helm of the Bank of Mauritius one year ago.

As most of you are no doubt aware, in economics, simultaneously targeting an exchange rate and maintaining an independent monetary policy, with an open capital account, is considered an **impossible trinity**. This famous trilemma follows from the Mundell-Fleming model, which states that countries cannot simultaneously fix their exchange rate, have an open capital account, and pursue an independent monetary policy. Only two of these three objectives are mutually consistent. Even with a fully floating exchange rate, it has become more difficult for a small open economy facing unprecedented capital flows to run an independent monetary policy. And, boy, don't I know it!

Governor Reddy, in his recent address last week, in Paris at the International Symposium of the Banque de France on "Globalization, Inflation and Monetary Policy", underlined the simultaneous challenges, from several angles, to the conduct of monetary policy arising from recent financial market turbulence, the growing importance of global factors relating to abrupt and large policy shifts in monetary policy measures of the major economies, and the unprecedented inflationary pressures due to food and energy prices. I fully endorse Governor's Reddy's view that these developments certainly warrant significant and innovative ways of cooperation among central bankers.

Interventions by the Central Bank to purchase large amounts of foreign exchange from the market have an expansionary impact on the domestic money supply and pose challenges for the conduct of monetary policy. Just to illustrate the point I am trying to make, only yesterday we at the Bank of Mauritius had to intervene to purchase Rs 1.8 billion of foreign currency in dollars and Euros from the domestic forex market to prevent this market from seizing up altogether as major players reached their foreign currency exposure limits. This was a new record,

improving on the previous record for a single transaction of Rs 1.6 billion which we conducted just before Christmas 2007 when we purchased Euros 40.5 million from the market. I suspect the present record will not stand for long either. To appreciate the relative enormity of these transactions, remember that the Bank's capital base is currently Rs 1 billion and our general reserves stand at Rs 23.5 billion.

To sterilize the excess liquidity stemming from these capital inflows, the Central Bank has to issue Government or Central Bank securities. In the case of Mauritius, where we now have a separation of debt management from monetary management, this entails the issue of a huge amount of Bank of Mauritius Bills for monetary policy purposes, with a potentially adverse impact on the Central Bank's balance sheet and its profit and loss account. It is instructive to recall here that in the recent past, more precisely in FY 2003-04, the Bank of Mauritius incurred a loss accruing largely from its monetary operations at a time when its returns on its foreign exchange reserves were also at a very low point, with rates on the US dollar hovering around 1 per cent.

With the current apprehension of an imminent recession in the United States and the aggressive easing of interest rates by the US Federal Reserve, conducting such levels of monetary operations to sterilise the projected volume of capital inflows would, in all likelihood, move the Central Bank into negative territory. Such an outcome becomes a near certainty given the significant interest rate differential that exists between the yields on Central Bank securities, currently around 8.0 per cent, and placements in US dollars which stand at around 3.0 per cent .

Globalization has indeed complicated the task of monetary management .With globalized capital markets, a small open economy, faced with such unprecedented capital flows, must grapple with a potentially very serious challenge of keeping inflation under control, if it is to prevent exchange rate appreciation from undermining external competitiveness. There are clearly costs for the Central Bank in running monetary policy that have to be explicitly recognized. I believe that the instruments and operating procedures of monetary policy have also to be constantly refined to meet the challenges that arise from unprecedented capital inflows.

Moreover, central banks are required to strengthen their balance sheets in order to manage the shocks impacting on the economy. A central bank's capital and reserves have to be strong enough to be able to sustain repeated intervention in the money market. Given the uncertainty surrounding the nature of capital inflows, it would also be prudent for the central bank in small open economies to build up reserves as a cushion against a possible change in investor sentiment, leading to a sudden stop syndrome and the even more dreaded reversal of capital flows. In these circumstances, should the Governor sound the alarm bell and seek help from the Minister of Finance? To offset the strong impulse on aggregate demand from the large capital flows, isn't a hefty dose of fiscal consolidation just what the doctor ordered? Or will the Governor be accused of being a spoilsport in such good and buoyant times?.

To sum up then, I would say that central bankers are indeed living in very interesting times. It is taken for granted that they are a smart bunch. But being smart is no longer enough. We must also be lucky. I have tried to demonstrate that, at the

present juncture, the conduct of monetary policy is nothing short of a gargantuan task for the lilliputian economy that Mauritius is.

To meet some of the emerging and unprecedented challenges of the financial sector, the Bank of Mauritius, which as I said earlier celebrated its 40th anniversary last year, is pursuing with renewed vigour and determination the exciting journey of modernization. We have enlisted the support of the Reserve Bank of India in the area of bank supervision, thus renewing with a tradition going back to the early years of our existence when RBI officers helped to establish the Bank of Mauritius. We are now engaged in a major restructuring of our internal organisation with the help of resource persons from Bank Negara Malaysia. The structure is now flatter, with the creation of Divisions within the Bank that are responsible for particular focused areas of activity. The Bank has adopted an open and transparent staffing strategy, with the promotion of fifty-five existing staff and recruitment of twenty-three additional staff from outside the Bank. To appreciate how fundamental is this transformation, just remember that our total staff strength adds up to only 250 persons. We are enhancing our skills and knowledge base to add value to the organisation and contribute directly towards the attainment of our organisational goals.