Y V Reddy: Foreign exchange reserves – new realities and options

Address by Dr Y V Reddy, Governor of the Reserve Bank of India, at the 2006 Program of Seminars on the theme "The World in Asia, Asia in the World", Singapore, 18 September 2006.

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Distinguished Friends,

I am thankful to the organisers for inviting me to participate in the 2006 Program of Seminars on the Theme "The World in Asia, Asia in the World". The theme for this session has tantalising words: problems, plenty, challenges, opportunities, accumulation, large, foreign, windfall and reserves. It may be a little hard to match the sense of these words in an address by central bankers. So, I intend taking a slightly broader view of the subject and focus on the new realities and innovative ideas. I would argue that there are degrees of comfort at various levels of reserves at any given time and in a country-context and in general, higher the degree of comfort, more numerous are the options.

I. New realities of forex reserves and management

(i) Large increase: most rapid in Asia

In the aftermath of the Asian crises, it was widely perceived, supported by academic research and commentators, that large reserves were needed by emerging market economies (EMEs) to withstand any crisis and, to some extent, it was a reflection of the lack of confidence in the international financial architecture. As a result, the recent episode of reserve accumulation has been on a much higher scale and more prolonged than was seen during the early 1990s. For instance, as reported by the Bank for International Settlements (BIS), the EMEs, during 2000 and 2005, accumulated reserves at an annual rate of US $ 250 billion (or 3.5 per cent of their annual combined GDP), which was almost five times higher than the level seen in the early 1990s. The bulk of the reserve accumulation was concentrated in Asia with countries like China, Korea, India, Malaysia and Taiwan (China) witnessing large increases, while countries in Latin America and Central Europe had a fairly modest increase in reserves during this period. Lately, many oil-exporting countries have also seen a large increase in their reserves.

It may be useful to recognise that reserve accumulation, in some senses, reflects the savings-investment balances and is symptomatic of both domestic and global factors, including self-insurance, a concept difficult to define.

(ii) Reserves increases: mostly driven by capital account surplus

It is important to identify the sources of reserve accretion in this latest episode. There are some countries like Russia where the reserves are built out of current account surplus. In countries like China, Korea and Taiwan, the surplus, in both current and capital account, led to accumulation of reserves. On the other hand, there are countries like India, where the reserves accretion was driven more by capital account surplus and not due to current account surplus, broadly implying that capital inflow was more than what could be normally absorbed in the domestic economy. Net capital flows have remained much larger than the current account deficit in India as well as in most of Latin America and Central & Eastern Europe. In case the reserve accumulation is due to large capital flows, it may be useful to distinguish between debt and non-debt flows as also between foreign direct investment and generally less stable portfolio flows. In fact, the stock as well as flow in each category would be relevant for reserve management. While the marking-to- market of the assets and liabilities may be difficult, it might not be irrelevant.

Thus, while the traditional indicators of adequacy of reserves are based on trade, debt and monetary indicators, or even the ‘Guidotti Rule’ or ‘Liquidity at Risk’ Rule suggested by Alan Greenspan may help explain the adequacy of reserves, they need to be supplemented with, what may be described as, multiple indicators to assess the adequacy of reserves of any country at a given juncture.

(iii) Difficulties in computing quasi fiscal cost of reserves

A simple method of calculating net cost of carrying reserves to the central bank is the difference between the interest rate on domestic securities and the rate of return earned on the foreign exchange reserves adjusted for any exchange rate change. The magnitude of the cost, which is often difficult to estimate, varies with the extent of sterilisation and the yield differentials. These are termed "quasi-fiscal" costs in the literature since the costs to the central bank are passed on to the sovereign through a lower transfer of profits. In countries where local interest rates are well above international levels, such carrying costs could be positive, while if the reverse is true such carrying costs could be negative. A recent study by the BIS has shown that carrying costs are negative in a number of countries at current interest rates. The study states that in China, for instance, the one year interest rate in June 2006 was less than half the comparable US Treasury bond rate. Hence the central bank is earning a positive carry. However, it can be argued that given the inherent cyclical nature of interest rates, such negative carrying cost could reverse over a period of time. Moreover, one has to keep in mind that these hypothetical cost calculations do not capture capital gains or losses. Dani Rodrik of Harvard University has proposed a measure of social cost of reserves, from the national stand point, that is equal to the spread between the private sector's cost of short-term borrowing abroad and the yield that the central bank earns on its liquid foreign assets. He estimates this cost roughly equivalent to one per cent of GDP of the developing countries in 2004. Briefly stated, there are difficulties in calculating precisely quasi-fiscal costs or other costs on this account.

While assessing the fiscal cost of holding reserves, it would be worthwhile to set off the benefits that the country may have in holding reserves. In any country risk analysis by the rating agencies and other institutions, the level of reserves generally has high weights. Moreover, it is essential to keep in view some hidden benefits which could accrue to a country holding reserves, which may, *inter alia*, include: maintaining confidence in monetary and exchange rate policies; enhancing the capacity to intervene in foreign exchange markets; limiting external vulnerability so as to absorb shocks during times of crisis; providing confidence to the markets that external obligations can always be met; and reducing volatility in foreign exchange markets. It is true that beyond a point, when the credit rating reaches appropriate investment grade, addition to reserves may not lead to further improvement in the credit rating. It is necessary to recognise that, as in the case of costs, there are difficulties in computing the benefits too.

(iv) Changing composition of reserves

The available data on the composition of official reserves indicate that progress towards diversification of reserves has been cautious, which is not surprising given the very definition of reserves in terms of "external assets that are readily available……." as defined by the IMF. An important objective of holding the reserves is to be prepared for contingencies, but the range of instruments available to satisfy this need is limited. Nevertheless, the management of reserves has been changing and there has been a quest for higher returns within these traditional objectives. To quote Mr. Philip D. Wooldridge of the BIS, in his latest article on "The Changing Composition of Official Reserves" in the September 2006 issue of the BIS Quarterly Review:

> "Continuing a trend that began in the 1970s, when reserves were first reallocated from US Treasury bills to bank deposits, reserve managers have been gradually shifting into higher-yielding, higher-risk instruments. They seem most comfortable managing market risk but are beginning to take on more credit and liquidity risk too. The currency composition of their portfolios, while volatile, has not changed as much as the instrument composition."

It is essential to recognise that reserve managers are already shifting into higher-yielding instruments with a higher risk-return equation, presumably as a result of progressively rising level of reserves. Consequently, the financial returns on the free reserves at the margin could be far higher than the average return. In my view, the marginal return appears to be a more relevant concept in the context of alternative forms of investment of reserves.

(v) Quasi reserves

With the positive shock emanating from large capital flows resulting in significant reserves accumulation in many EMEs, a new development in reserve management is to hold a part of the reserves which could be used by the public sector in a country in a manner different from the strictly defined pattern of holding of the external assets by the monetary authorities. Such foreign exchange

reserves could be termed as quasi reserves. In terms of its holding, such quasi reserves could be easily retrievable when the situation demands. In Singapore, the Monetary Authority of Singapore (MAS) and the Government of Singapore Investment Corporation (GIC) basically manage foreign exchange reserves. GIC is the Government's principal investment agent, handling the bulk of the nation's investments while the MAS holds reserves to maintain the stability of the Singapore dollar. Similarly, Temasek Holdings invests in Singapore as well as manages diversified global portfolio with the aim of creating and maximising sustainable value for the shareholders and providing resources to finance pension and other benefits.

On the pattern of the Singapore's GIC, South Korea has recently established the Korean Investment Corporation (KIC). Another interesting example is China, where foreign exchange reserves have been utilised to strengthen the banking system without foreign securities being sold. China has transferred funds from its international reserves, held with the Peoples' Bank of China (PBC) to a new company, Central Huijin Investment Company (CHIC), set up in 2003 and jointly managed by the government, PBC and the State Administration of Foreign Exchange. In the PBC's balance sheet, the said amount of reserves was replaced by claims on the CHIC. The CHIC used the assets to purchase shares in banks which were to be recapitalised.

(vi) Stabilisation funds

Investment funds are sometimes created by the public sector out of "windfall revenue" accruing to a country due to rise in export price of, say, oil or other commodities. Such reserves arise due to positive external shocks which can cause a surge in government revenues and, at times, could be challenging as some Governments may have to deal with an appreciating exchange rate, undermining export competitiveness with symptoms of "dutch disease". Many countries such as Chile, Kuwait, Norway, Russia and United Arab Emirates (UAE) have institutionalised the investment of the surplus arising from the positive shocks of commodity and oil prices by creating sophisticated investment agencies or commodity/oil stabilisation funds to manage reserves – since there is a broader range of investment opportunities for their savings today than in the 1970s or 1980s. The management of such corpus may, in some cases, be entrusted to the central bank but with an appropriate mandate.

Usually, these stabilisation funds are established with one or more of the following objectives: insulate the budget and the economy from excess volatility in revenues; help monetary authorities to sterilise unwanted liquidity; build up savings for future generations; or use the money for economic and social development. In regard to oil funds, the transparency and disclosures standards appear to be lower than those for the official reserves but with some accountability.

An interesting question in this regard is the extent to which the windfall revenues can be equated with the large capital flows. While there could be a deceleration in the windfall revenues, the reserve accumulation due to large capital flows should reckon with the possibility of potential reversals and outflows in respect of the capital account.

II. Innovative ideas

It is useful to explore some of the innovative ideas that have been put forward in the recent period for using reserves.

First, in March 2006, Prof. Lawrence Summers while delivering the L. K. Jha Memorial Lecture in Mumbai, argued that the level of reserves in many countries far exceeded the traditional measures of reserve levels required to guard against a foreign exchange crisis. While expressing concern about the risk composition of the assets in which these reserves are invested, Prof. Summers suggested that it was time for the International Monetary Fund (IMF) and the World Bank to think about how they could contribute to deployment of the reserves held by some of the major emerging markets. Prof. Summers suggested creation of an international facility by these two multilateral institutions, under which the countries could invest their excess reserves without taking domestic political responsibility for the process of investment decision and ultimate outcome. In turn, the modest fee charged by these two institutions could support the concessional and grant aspects of global development.

The proposal provides an option to a country holding reserves to place a part of them with the IMF/World Bank entities to operate, *de facto*, as external asset managers. The option could be exercised, presuming that it would be permissible, but not obligatory, to make placement of a part of the reserves if the envisaged entity could assure that it had the expertise to function as such an

external asset manager and to provide a higher risk-weighted return than the domestic reserve managers. Further, since the external asset managers for reserve management in the market are usually guided by the parameters fixed by the official reserve management authorities, which may vary from country to country, the proposed entity may also have to have several windows to cater to the varied mixes of safety, liquidity and return preferred by various client countries. Thus, the critical issue would be the professional expertise of the proposed entity in terms of assuring an acceptable risk-reward equation.

Second, there was a proposal in 2005 by Eswar Prasad and Raghuram Rajan of the IMF for a controlled approach to capital account liberalisation for economies experiencing large capital inflows. The proposal essentially involves securitising a portion of capital inflows through closed-ended mutual funds that issue shares in the domestic currency, use the proceeds to purchase foreign exchange from the central bank and then invest the foreign exchange so acquired, abroad. It is argued that such an arrangement would eliminate the fiscal costs of sterilising these inflows, provide the domestic investors opportunities for international portfolio diversification and stimulate the development of domestic financial markets; more importantly, it would allow central banks to control both, the timing and the quantity of capital outflows. It is advocated that this proposal could be a part of a broader toolkit of measures to liberalise the capital account cautiously when external circumstances are favourable.

The merit of this proposal is in combining three elements – capital account management, financial sector development and use of foreign exchange reserves. This proposal, for setting up more than closed-ended private-sector foreign- asset funds, to be licensed by the central bank, appears relevant under certain circumstances, mainly when there is a likelihood of a significant investor interest for such fund. This, however, does not seem realisable, if there is a negative carry that such funds could entail. Further, it is not certain whether a private intermediary licensed by a central bank specifically for this purpose would entirely obviate the moral hazard, even in the absence of any explicit or implicit guarantee with regard to performance.

In India, domestic mutual funds are permitted to invest in foreign securities, apart from ADR/GDR of Indian companies, up to an aggregate limit of USD two billion. In addition, a limited number of qualified mutual funds are also permitted to invest cumulatively up to USD one billion in overseas exchange traded funds (ETF). More generally, the pace and sequencing of several measures of liberalisation of capital account take into account the degree of comfort as one of the relevant factors.

Third, an idea which received some attention in March 2002 during the gathering on ‘Finance for Development’ in Monterrey, Mexico, is that instead of holding the reserves in the US dollars, a new form of global money, akin to IMF's Special Drawing Rights, namely, ‘global greenbacks’ could be issued, which countries could hold in their reserves. The corpus would be created by countries setting aside a part of reserves every year as an insurance against contingencies. The amount of money held by these countries in ‘global greenbacks’ could be given to developing countries for financing their development programmes as well as global public goods like environmental projects, health initiatives, humanitarian assistance, and so on. For countries that receive less than the amount that they need to put into reserves, the new ‘global money’ would go into reserves freeing dollars that these countries would otherwise set aside. Countries that receive more than they must put into reserves, could exchange the new money for conventional currencies. Eventually, all the new money will find its way into reserves, which in effect represent a commitment by the countries to help each other in times of trouble.

It has been argued that the global greenbacks proposal envisages flow of funds to poor countries according to their need while contributing to global economic growth, stability and equity. Opponents of this move have argued that some countries will become “greenback addicts”, and when the handouts end, the economic withdrawal symptoms will be severe.

Fourth, in the aftermath of the Asian financial crisis, two related developments took place. In the year 2000, ASEAN+3 countries mutually agreed to form a network of bilateral swap agreements to provide mutual protection from financial emergencies, popularly known as the Chiang Mai Initiative (CMI). The success of such an initiative is reflected in the recent proposal of the Asian Finance Ministers to double the size of the Asian Central Bank Swaps under the CMI.

The Asian Bond Fund Initiative was also launched in 2003 reflecting the efforts to develop a regional bond market for catering to the medium- and long-term financing needs of the Asian economies. The Asian Bond Fund provided an arrangement for pooling of a portion of foreign exchange reserves of a few East Asia and Pacific countries and the Fund’s portfolio is invested in the liquid US dollar denominated bonds issued by the major Asian economies. The second ABF, launched in June 2005,

aims to promote local currency bond markets, by establishing a Pan-Asian Bond Index Fund (PAIF) and eight single-market funds (SMFs).

III. Degree of comfort

The concept of adequacy of reserves is popular but it is also possible, from a practitioner's perspective, to view reserves in terms of degree of comfort they provide at various levels. Such a perspective is more dynamic and contextual. Certainly, at a very low level of reserves, which we in India had in the early 1990s, the degree of comfort was very low, and with rising level of reserves, the comfort also increases. The level of comfort and discomfort could be linked to the problem of plenty and the problem of paucity – with a continuum representing different levels of comfort at various levels of reserves. For a country, it could happen that initially the degree of comfort with the level of reserves may be too low for sometime but with rising level of reserves, the country might reach a 'comfort zone', and as the reserves level keeps on rising to reach a still higher level, then at some point, a portion of the reserves would cease to be strictly ‘foreign exchange reserves’ and could be characterised as a corpus of funds available for deployment in a higher risk-return portfolio.

Several factors, apart from the exchange rate regime, influence the comfort level in regard to reserves. Illustratively, they would include vulnerability to the real sector shocks, strength of the fiscal and financial sectors, current account balance, the changing composition of capital flows, a medium-term view of growth prospects encompassing business cycles, etc. In a sense, official reserves have to reflect the balancing and comforting factors relative to external assets and liabilities in the context of a rational balance sheet approach.

IV. Options linked to comfort

Let me now link the availability of options with the degree of comfort.

First, it may be useful, for practical purposes, to view the adequacy of reserves in terms of degree of comfort they offer at a given time.

Second, while considering the level of reserves and comfort derived there from, it will be necessary to take into account the investment and the stabilisation funds, if applicable. Further, transferability from official reserves to such funds and *vice versa*, and the extent of liquidity required, also need to be considered in assessing the comfort level.

Third, relative emphasis on safety, liquidity and return keeps changing with the degree of comfort at a given level of reserves.

Fourth, it must be noted that from a national balance sheet point of view, official reserves have to reflect the potential market infirmities in the private sector. So, if there are high returns derived from high risks assumed due to larger risk appetite of the external asset managers, then deploying official reserves too in the high-risk assets would exacerbate the risks. Official reserves may be needed as a cushion when markets get suddenly risk averse and hence, safety and liquidity should normally have higher orders of priority in the management of reserves.

Fifth, it is possible for a central bank to have tranches – each tranche reflecting a different combination of safety, liquidity and return. Each tranche can be managed by the central bank or an external asset manager, or both, in parallel, to benchmark their relative performance.

Finally, and above all, the criticality of the accountability in the use of reserves must be recognised. It is useful to note that the reserve management policies normally involve joint responsibility of the Government and the central bank – irrespective of in whose balance sheet they appear.

V. Concluding observations

I would like to recall here what I had said in this regard In 2003, at the Annual Fund-Bank Meetings in Dubai:

> "The reserve accumulation could also be seen in the context of the availability of abundant international liquidity following the easing of the monetary policy in industrial countries. The resultant excess liquidity flowed into the emerging

> markets. In the event of hardening of interest rates in industrialised countries, this liquidity may as quickly dry up; in that situation, emerging markets should have sufficient cushion to withstand such reverse flows of capital."

Now, with the global rise in the interest rates, there is always a lurking fear in the EMEs, that the level of capital flows may not be maintained. Thus, the comfort level of reserves should not be viewed with respect to the current situation alone but should also reckon the assessment of the emerging risks. Moreover, at this moment, the global economy has not been tested on the eventuality of a not-so-orderly correction of the current global imbalances. In that eventuality, as the experts caution, disruption in financial markets in the form of large cross-currency volatility and sharp rise in interest rates are not unlikely in the global economy.

To sum up, several factors impinge on the comfort level of reserves and the relative weights assigned to safety, liquidity and return. When, how and through whom should the search for higher returns be pursued, depending upon the level of comfort, is a matter of convenience and context, and options, as appropriate, should always be kept open.

Thank you.