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Policy Brief

Should India Use Foreign Exchange Reserves for Financing Infrastructure?

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The unprecedented rise in Foreign Exchange Reserves (FER) in some of the Asian countries raises a concern about their optimal size and appropriate utilization. In India too, in recent months, different ways to utilize FER, in particular, to finance infrastructure, have been debated. The Government of India intends to use a part of its FER for infrastructure financing and has announced a scheme — yet to be implemented — in its annual Budget in February 2005. There is no evidence that any other country has used FER to finance infrastructure. The amount of FER in India is modest when compared to some of the other countries in the region, and it can be argued that the proposed plan may lead to more economic difficulties than anticipated benefits.

Trends

India followed a restrictive external sector policy until 1991, mainly designed to conserve limited FER for essential imports (petroleum goods and food grains), restrict capital mobility, and discourage entry of multinationals. The external sector strategy since 1991, though gradualistic in approach, has shifted from import substitution to export promotion, with sufficiency of FER as an important element. As a result of measures initiated to liberalize capital inflows, India's FER (mainly foreign currency assets) have increased from US$6 billion at end-March 1991 to US$140 billion at end-March 2005 (Graph 1). The acceleration in the trend first emerged in 1993, as recorded by the rise in foreign currency assets, when India adopted the market-based system of exchange rates and then in 2001, when the current account recorded a surplus after a persistent deficit since 1978 (Graph 1). In March 2005, FER exceeded 15 months of imports, in contrast to two weeks in June 1991. The substantial growth in FER has led to a sharp decline in the ratio of short-term debt to reserves from 147 percent in 1991 to 5 percent in 2005. India ranks fifth in the world in holdings of FER in 2004 (Graph 2).

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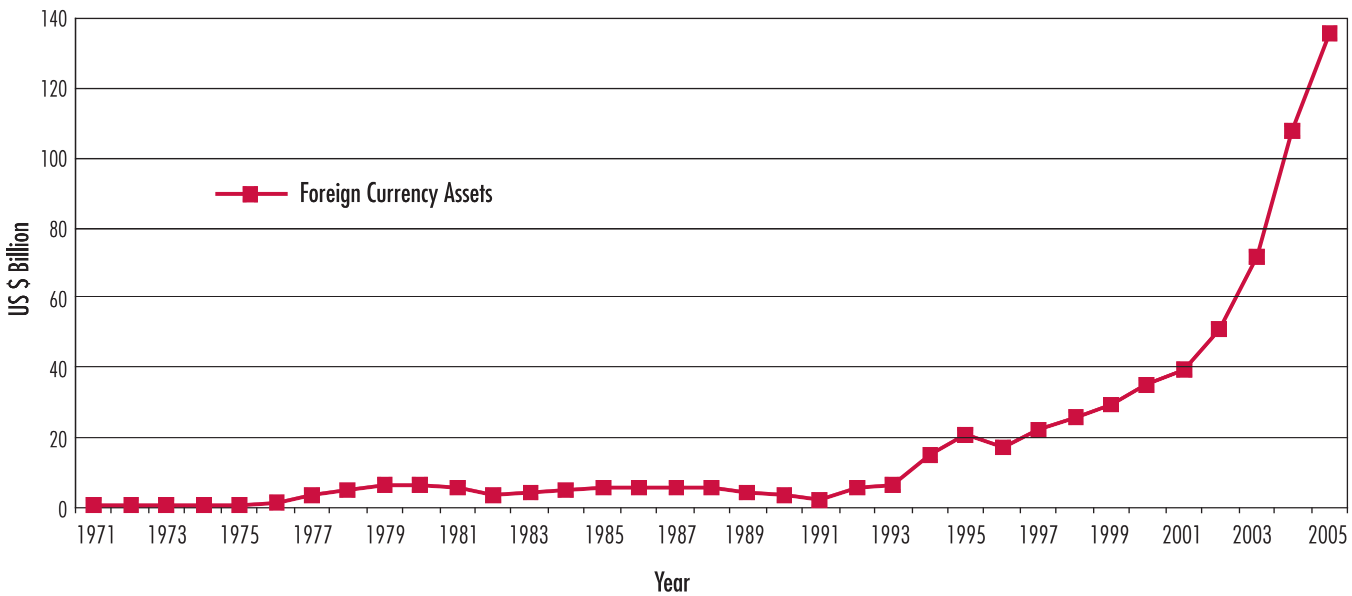
Objectives of Foreign Exchange Reserves Management

The main objectives in managing a stock of reserves for any developing country, including India, are preserving their long-term value in terms of purchasing power over goods and services, and minimizing risk and volatility in returns. After the East Asian crises of 1997, India has followed a policy to build higher levels of FER that take into account not only anticipated current account deficits but also liquidity at risk arising from unanticipated capital movements. Accordingly, the primary objectives of maintaining FER in India are safety and liquidity; maximizing returns is considered secondary. In India, reserves are held for precautionary and transaction motives to provide confidence to the markets, both domestic and external, that foreign obligations can always be met.

Why Is India Accumulating Foreign Exchange Reserves?

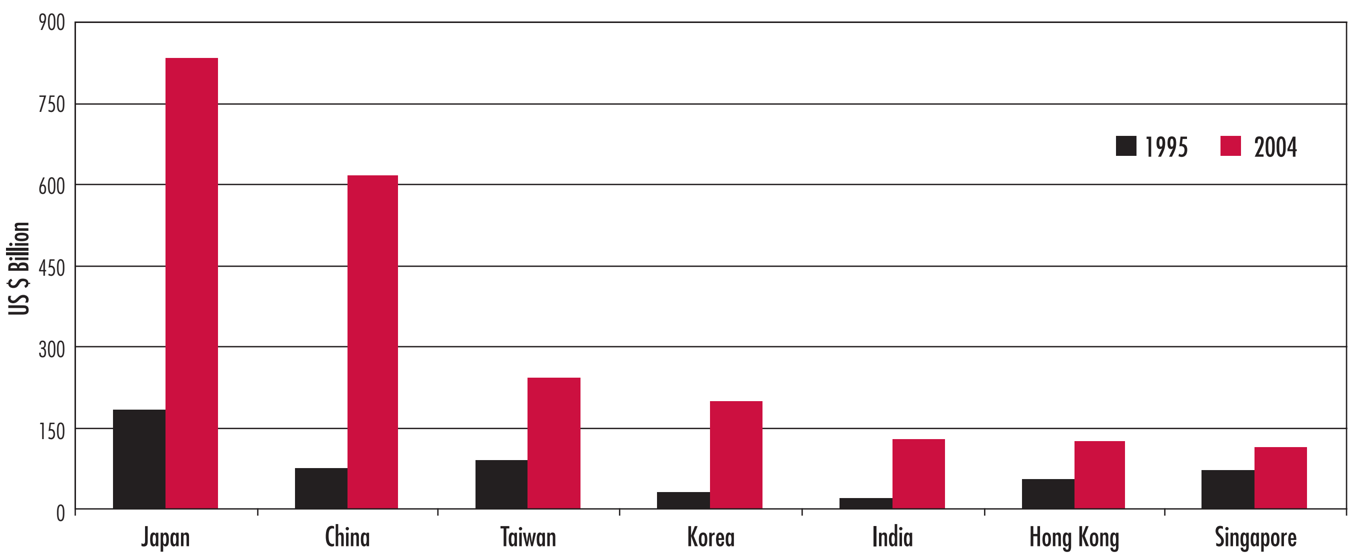
There are multiple reasons why India has accumulated large reserves. India was virtually a closed economy until 1991 and has gradually been opening its economic

Graph 1: Foreign Currency Assets



Source: Reserve Bank of India.

Graph 2: Foreign Exchange Reserves – Trend in Selected Countries



Sources: International Finance Statistics, IMF, and MOEA, Taiwan.

frontiers since then. The current account was opened in August 1994, and the capital account is cautiously, though gradually, being liberalized. In any emerging economy, the desirable size of reserves can be explained mainly by four factors: the size of the economy, its vulnerability to the current and capital accounts, exchange rate flexibility, and opportunity cost. In recent years, some additional factors have emerged for developing economies like India. First, with increasing financial integration in global markets, movement of capital is swift and FER are considered as a first defense in a crisis — a self-insurance — reflecting a lack of confidence in the current international financial architecture. To illustrate, the Government of India had to ship 47 tonnes of gold to the Bank of England in June 1991, amidst national humiliation, to secure a loan of about US$415 million before funds could be arranged from the International Monetary Fund to ride out the financial crisis. Second, the reserve accumulation in India could be a reflection of abundant international liquidity in the global economy resulting from easing of monetary policy in developed countries, especially the United States. Therefore, this could be a short-term phenomenon, which might reverse swiftly with a rise in interest rates in the developed countries.

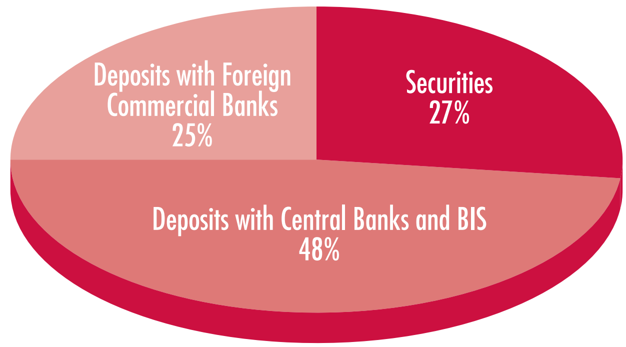
What Are the Sources of Rising Foreign Exchange Reserves?

The main sources of rising FER in India are inflows of foreign investment (more portfolio than direct) and banking capital, including deposits by non-resident Indians. In 2004-05, of the total investment of US$12 billion, foreign direct investment amounted to about US$5 billion. In the current account, a major contribution has been made by computer services and software exports, mainly banking, financial, and insurance, which increased from less than US$1 billion in 1995-96 to US$17 billion in 2004-05. In addition, inward remittances from workers abroad, mainly from Western Europe and the United States, more than doubled from US$8 billion to US$21 billion over a similar period.

How Are the Foreign Exchange Reserves Managed in India?

The Reserve Bank of India (RBI), in consultation with the Government of India, currently manages FER. As the objectives of reserve management are liquidity and safety, attention is paid to the currency composition and duration of investment, so that a significant proportion can be converted into cash at short notice. The essential framework for investment is conservative and is provided by the RBI Act, 1934, which requires that investments be made in foreign government securities (with maturity not exceeding 10 years), and that deposits be placed with other central banks, international commercial banks, and the Bank for International Settlement following a multi-currency and multi-market approach (Graph 3).

Graph 3: Deployment of Foreign Currency Assets – March 2005



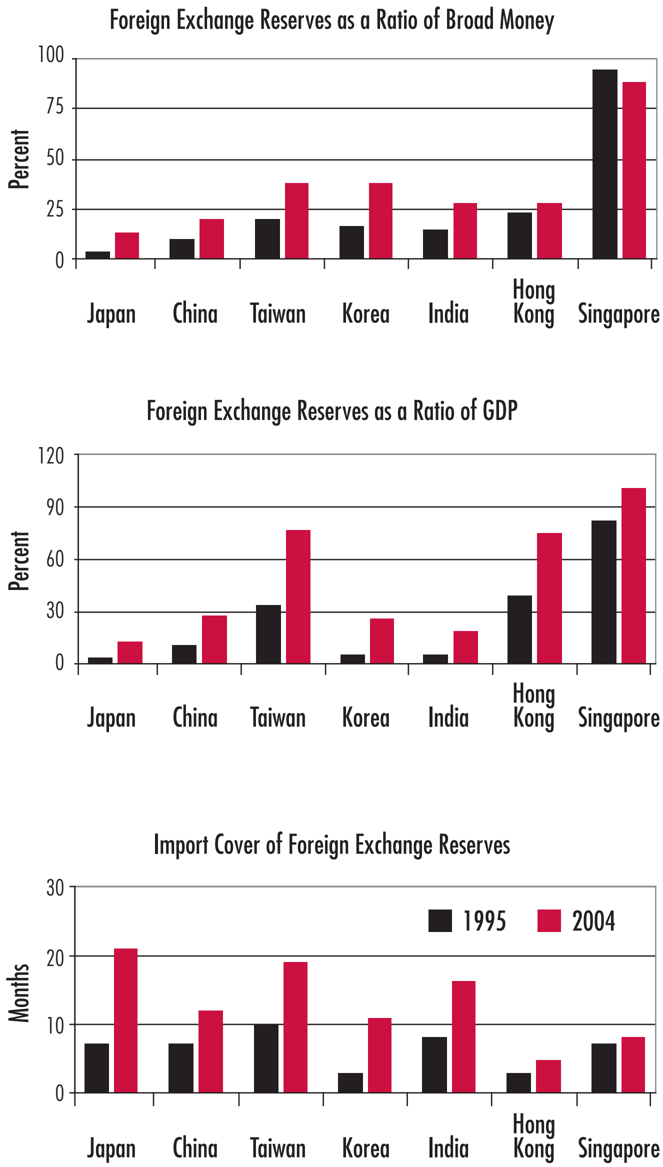
Source: Reserve Bank of India.

The conservative strategy adopted in the management of FER has implications for the rate of return on investment. The direct financial return on holdings of foreign currency assets is low, given the low interest rates prevailing in the international markets. However, the low returns on foreign investment have to be compared with the costs involved in reviving international confidence once eroded, and with the benefits of retaining confidence of the domestic and international markets, including that of the credit rating agencies.

Are Foreign Exchange Reserves Adequate?

Traditionally, the adequacy of reserves is determined by months of import cover (stock of reserves to volume of imports), with three or four months regarded as adequate. This measure implicitly assumes a time frame to successfully overcome a short-term shock in external payments. But in the case of South East Asian countries, the crises of 1997 lasted for a lengthy period and import cover of a few months was inadequate to absorb the shock. In addition to the experience of 1997, many changes in international financial markets since then have led to new measures of adequate reserves. The most prominent of these is the Guidotti rule, which, though modified over the years, continues to stress that liquid reserves be maintained sufficient to meet external obligations for about a year without any external assistance. A cross-country comparison of some major adequacy indicators is presented in Graph 4. In terms of the adequacy ratios, except for import cover, India's reserves are modest when compared with those of other countries.

**Graph 4:
Adequacy Ratios of Foreign Exchange Reserves**



Note: The data on FER excludes gold and is at the end of the year.

Source: International Finance Statistics, IMF, and CBC, Taiwan.

Use of Foreign Exchange Reserves – International Experience

International experience in the deployment of FER is scant, but the experience of Singapore, spanning nearly a quarter of a century, is most interesting. In Singapore, the Monetary Authority of Singapore (MAS) and the Government of Singapore Investment Corporation (GIC) basically manage FER. GIC, incorporated in May 1981 as a private company and wholly owned by the government, manages more than US$100 billion of FER owned by the government and the MAS as of 2005. GIC, with investments in more than 30 countries, is among the largest fund management companies in the world and has overseas offices in key financial centers including New York, London, Tokyo and Hong Kong. The GIC Group comprises four main areas — public markets, real estate, special investments and corporate services — and a diversified portfolio of equities, bonds, real estate and money market instruments. GIC's portfolio returns in US dollars exceeded 5 percent annually during 1981 – 2001. On the pattern of GIC, given its performance, South Korea has established the Korean Investment Corporation (KIC) in June 2005, with a capital of US $20 billion. Another interesting case is China, where FER have been utilized to strengthen the financial institutions. China has transferred funds from its international reserves, held with the People's Bank of China (PBC), to a new company, Central Huijin Investment Company (CHIC), set up in December 2003 and jointly managed by the government and PBC. CHIC has used the reserves to recapitalize three large banks so far, by injecting equity amounting to US$57.5 billion.

What Should Concern India in Managing Foreign Exchange Reserves?

There is considerable consensus that improvements in India's infrastructure would have a strong impact on GDP growth, but also that a prudent policy to finance it would be necessary. At present, significant fiscal problems have been noted in the infrastructure sector-persistent underperformance of revenue effort with unsustainable tariff structures and nontransparent subsidy schemes. In terms of financial aspects, many organizations providing infrastructure services lack creditworthiness, with opaque financial and accounting systems and limited treasury management systems. The prevailing labor laws are restrictive, dispute resolution is slow, and transparency and public disclosure are lacking in the absence of focused rules, orders, and regulations. Therefore, there are concerns and issues that need to be considered before utilizing FER to finance infrastructure.

Consequently, the most important question for India is: How sustainable are current account surpluses and capital inflows over the longer term? First, in a developing country, the current account is generally expected to be in deficit, but India recorded a surplus during 2001-04, mainly due to high exports of software and IT-related services. The surplus on the current account could not be expected to last long, and in 2004-05, with the revival of growth in domestic industry and higher oil prices in international markets, the current account recorded a deficit of US$6.4 billion, or 1 percent of GDP. Second, India was a financially repressed economy for many decades until 1991, which generally implies that residents might have held a part of their wealth in international markets. In recent years, with continued emphasis on liberalization in the reform process, there is a strong possibility that such off-shore capital might be returning to India as a part of a one-time portfolio realignment. This reverse flow, however, cannot be assumed to last. Finally, a significant component of reserves could be sensitive to economic and political developments in India, especially deposits of non-resident Indians and foreign portfolio investments that constitute more than half of annual inflows.

Another related concern is the quantity and quality of inflows. India, in seeking to accumulate reserves as well as to globalize, has been encouraging foreign participation by liberalizing investment regulations in various economic activities, including banking and insurance. As a result, India has been able to attract more foreign portfolio investment (outstanding amount at US$44 billion as on as at end March – 2004) than foreign direct investment (outstanding amount at US$39 billion as on as at end – March 31, 2004). As foreign portfolio investment is considered less stable than foreign direct investment, with increasing level of FER, it may become necessary to adopt a cautious approach toward capital inflows, especially inflows from tax havens, to ensure financial sector stability.

Third, if the primary objective for accumulating FER is the precautionary motive with liquidity as the key feature of investment, then it may be inappropriate to use reserves for financing infrastructure. Infrastructure projects in India characteristically yield low returns on account of low user charges, inefficient technology, and archaic labor laws. In fact, many infrastructure projects operating in India yield negative returns. For example, the performance of the electricity boards continues to be dismal despite power sector reforms initiated since 1991. The State Electricity Boards have continued to record negative rates of return ranging between 13 to 38 percent during 1991 to 2005, and the difficulties in raising user charges on electricity have continued to deter private participation in power sector projects despite concerted efforts. In most of the states, transmission and distribution losses, mainly because of low quality equipment and theft, range between 30 to 50 percent and in some cases reach 62 percent.

Fourth, some important concerns relate to the political economy aspect of a federal structure. The provincial governments also may seek such extra-budgetary resources for urgent public work projects under their administration. In that eventuality, prudent management of the overall government finances, both federal and provincial, could then become difficult, as was the recent experience of some countries in Latin America, especially Argentina. Even in India, with the onset of reforms in 1991 and tightening of the budget constraints, state government guarantees sharply rose from 4 percent of GDP in 1996 to 8 percent in 2001, when urgent measures were initiated to stem the rise. Also, in a multi-party coalition democracy, a soft-budget scheme, though imaginative, is susceptible to exploitation. In India, the scheme of ad hoc Treasury bills initiated innocuously in 1955 and repeatedly abused until 1997 is an interesting illustration. Further, the confidence of the markets could be adversely affected if FER-financed projects are delayed or abandoned for economic or political reasons.

Finally, ad hoc use of FER to finance infrastructure, as proposed in the Union Budget, could hinder the operations of the monetary policy and result in higher public debt. As stressed in the literature, financial engineering that ignores fiscal fundamentals cannot lead to healthy economic growth. The use of FER for infrastructure would expand the money supply (foreign currency assets would be sold for Indian rupees) normally requiring sterilization by the Reserve Bank of India to stabilize the price level. Sterilization is expensive, as the government rupee bonds issued to mop up excess funds have to be serviced at the prevailing market interest rates. The supply of the "mop-up" bonds increases domestic debt — the issuance of which could be used to finance infrastructure in the first place. The sequential cycle of using FER, sterilization, and issuance of bonds makes domestic monetary management more difficult.

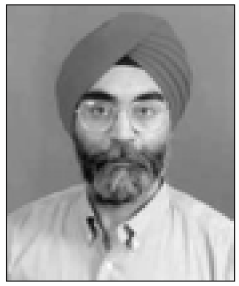
Recommendations and Conclusions

The rising levels of FER have succeeded in infusing necessary confidence, both to the markets and policy makers. However, neither the capital inflow to India nor the size of FER is disproportionately large when compared to some other countries in the region. The main sources of accretion to FER are exports of IT-related services and foreign portfolio investment-not foreign direct investment (which is more stable), as in the cases of China and Singapore. Therefore, India, which is accumulating FER for precautionary and safety motives, especially after the embarrassing experience of June 1991, should avoid utilizing reserves to finance infrastructure. Infrastructure projects in India yield low or negative returns due to difficulties — political and economic — especially in adjusting the tariff structure, introducing labor reforms, and upgrading technology. The use of FER to finance infrastructure may lead to more economic difficulties, including problems in monetary management. However, if India continues to accumulate reserves and seeks to enhance the returns on FER in the future, it may consider establishing a separate investment institution on the pattern of the GIC.

References

Singh, C. (2005), "Should India Use Foreign Exchange Reserves for Financing Infrastructure?" SCID Working Paper No. 256, Stanford University, http://scid/pdf/SCID256.pdf

About the Author



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The views expressed in this Policy Brief are Dr. Singh's alone and do not represent those of the RBI.

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