Assessing the Role of Foreign Exchange Reserves in Capital Formation: The Indian Context

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Abstract

Foreign exchange reserves (hereafter referred to as forex) in a strict sense are only the foreign currency deposits and bonds held by central banks and monetary authorities. However, the term in popular usage commonly includes foreign exchange and gold, SDRs and IMR reserve positions. In the last decade in India, the forex has increased almost 3.5 times from 4,901.29 billion rupees in 2004 to 18,283.80 billion rupees in 2014. India is a developing economy which requires a large amount of capital to be committed towards infrastructure expansion. Therefore, it would be fruitful to analyse in the Indian context if the increasing volumes of forex could possibly provide an additional source of funds for capital formation or domestic investment. Against this backdrop, this paper aims to analyse the link between the surging volumes of foreign exchange reserves and capital formation for Indian economy. Based on a comparison of the growth rates of average forex and capital formation over decades this paper finds it analytically rewarding to utilise surplus forex for investment purpose in case of Indian economy.

Introduction

Savings are vital to investment, just as investments are vital to economic growth. The simple Harrod-Domar model, assuming a closed economy implies that the level of domestic investment is limited by the level of domestic savings. Resultantly, the level of economic growth too, is constrained by domestic savings [1]. However, in the present day world almost all economies across globe are open economies. By definition, an open economy is integrated with other economies of the world either through trade in goods and services and/or flows of capital. These flows of capital among economies have a very crucial implication i.e. the level of investment (and hence, level of economic growth) is no longer constrained by the level of domestic savings. This is to say that now domestic investment can be done using foreign savings (typically entering an economy in the form of capital inflows) in addition to domestic savings.

In national income accounting, generally the foreign savings are reflected in current account. However, the capital account of Balance-of-Payments (BoP) can also contribute towards investment but this aspect remains less investigated. The capital account balance of BoP comprises of flows like external commercial borrowings, foreign direct investment and forms of external assistance. All capital account proceeds in foreign currency are converted in domestic currency, and the foreign exchange so received is partially or fully utilised to cover the deficit in the current account. Eventually, any remaining surplus shows up as addition to an economy’s foreign exchange reserves [2].

In the light of the above, we find that an economy could potentially use surplus forex for investment purpose. This issue gains significance in Indian context because the volume of forex has increased manifold over time. During the last decade in India, the forex has increased almost 3.5 times from 4,901.29 billion rupees in 2004 to 18,283.80 billion rupees in 2014. More strikingly, in just one year from 2013 to 2014 India added a massive 2400 billion rupees as forex (RBI Statistics). Therefore, in India these increasing volumes of forex can readily provide an additional source of capital for domestic investment.

Foreign Exchange Reserves: An Overview

Before embarking on any analysis it is crucial to understand the composition of foreign exchange reserves. Forex in a strict sense are only the foreign currency deposits and bonds held by central banks and monetary authorities.
However, the term in popular usage commonly includes foreign exchange and gold, SDRs and IMR reserve positions. Foreign exchange reserves are the total of a country’s gold holdings and convertible foreign currencies held in its banks, plus Special Drawing Rights (SDR) and exchange reserve balances with the International Monetary Fund (IMF). Holding the currencies of other countries as assets allow governments to keep their currencies stable and reduce the effect of economic shocks [3].

In the past, during the Bretton Woods system—an international monetary system formed after the Second World War – foreign exchange reserves were used by countries through their central banks to maintain the external value of their currencies at fixed rate. Subsequently, with the collapse of this system, the focus changed. Reserves are now generally maintained by countries for meeting their international payment obligations—both short and long terms, including sovereign and commercial debts, financing of imports, for intervention in the foreign currency markets during periods of volatility, besides helping to boost the confidence of the market in the ability of a country to meet its external obligations and to absorb any unforeseen external shocks, contingencies or unexpected capital movements. Reserves are also built up by countries to promote the use of their currencies as global currencies in the long run [4].

**Foreign Exchange Reserves and Capital Formation: Indian Scenario**

The volumes of foreign exchange reserves in India are presented below in Figure 1. The data on foreign exchange reserves has been obtained from Reserve Bank of India (RBI). In case of India, a clear distinction can be made in the volumes of forex before (1951-1990) and after liberalisation (1992-2014).

Before liberalisation for almost 4 decades the volumes of forex remained very meagre. The average forex in India remained below 10 billion rupees till 1970s. In fact, the average fell from 7.32 billion rupees in 1951-1960 to 4.17 billion rupees in 1961-1970. However, in the following decade the average forex jumped more than 6 times to 26.24 billion rupees.

![Figure 1. Average Foreign Exchange Reserves (Rupees Billions)](image)

Source: Reserve Bank of India Statistics

However, post liberalisation, the forex has massively increased in volume. This becomes evident by looking at average values of forex pre-1991 and post-1991. The average forex jumped from only 64.52 billion rupees 1981-1990 to a huge 795.35 billion rupees in 1991-2000. Even in the following decade, forex volumes in India increased and reached a colossal 7,258.06 billion rupees. Interestingly this upward trend continues in the present decade as well with the average forex touching 15,709.86 billion rupees in just four years (2011-2014).

The Indian economy remains upbeat regarding the flow of the forex volumes and its continued momentum in 2015. Within the capital account, however, there may be a reallocation with FII money getting substituted by Foreign Direct Investment (FDI) [5].

As mentioned in the previous section, the huge volumes of foreign exchange reserves in India can be potentially be used for investment purposes. To capture investment we use the following indicator -Gross Fixed Capital Formation (hereafter referred to as GFCF).
The data on capital formation has been taken from RBI Statistics and is presented in the Figure 2. The average GFCF has increased almost 5 times since 1950s from only 489 billion rupees in 1951-1960 to 19,396.05 billion rupees in 2011-2014. It is noteworthy that foreign reserves play an important role in capital formation in Indian context.

Joshi [2] in his paper conducts an empirical analysis using the capital account balance of the BoP as a yardstick to measure the contribution of capital flows to domestic capital formation. He finds that there is a significant causation effect of capital account flows on aggregate capital formation in India. Also, the impact on account of capital account balance on capital formation is relatively large at 1.761 per cent which is almost as good as the impact made by the private or public sector savings rate.

We present below in Table 1 the growth rates of average capital formation and forex in India. It can be seen that the growth rate of capital formation has declined in 2011-2014 (85.53) after reaching its peak in 2001-2010 (139.91). This decline in capital formation the present decade can be uplifted using the vast forex available to Indian economy.

**Table 1: Growth rates of average gross fixed capital formation and foreign exchange reserves in India**

<table>
<thead>
<tr>
<th>Year</th>
<th>Growth Rate of Average GFCF (Rupees Billions)</th>
<th>Growth Rate of Average Foreign Exchange Reserves (Rupees Billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951-1960</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>1961-1970</td>
<td>93.00</td>
<td>-43.10</td>
</tr>
<tr>
<td>1971-1980</td>
<td>44.44</td>
<td>529.73</td>
</tr>
<tr>
<td>1981-1990</td>
<td>70.55</td>
<td>145.86</td>
</tr>
<tr>
<td>1991-2000</td>
<td>87.42</td>
<td>1132.81</td>
</tr>
<tr>
<td>2001-2010</td>
<td>139.91</td>
<td>812.56</td>
</tr>
<tr>
<td>2011-2014</td>
<td>85.53</td>
<td>116.45</td>
</tr>
</tbody>
</table>

Source: Authors’ Calculations using RBI Statistics

**Conclusion**

Savings play a very crucial role in providing capital for investments in an economy. And, higher the investment levels in an economy, higher will be the rate of economic growth. In today’s integrated world there are flows of capital among economies implying that domestic investment can be done using foreign savings in addition to domestic savings. Post liberalisation (i.e. 1991) there has been massive accumulation of foreign exchange reserves reaching 18,283.80 billion rupees in 2014, with the upward trend continuing in 2015. India is a developing economy which requires a large amount of capital to be committed towards infrastructure expansion. Therefore, it would be fruitful to utilise the surplus forex, in addition to domestic savings, for enhancing capital formation in India.

**References**