The Measurement of Foreign Reserves: Three Caribbean Examples

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1. Introduction

Foreign exchange reserves are financial instruments at the disposal of monetary authorities for the primary purpose of financing international payments imbalances. Foreign assets in most countries are decomposed into two broad components: those of monetary authorities and those of commercial banks. The former usually comprise holdings of monetary gold, claims on non-residents, special drawing rights (SDR), reserve position in the Fund and the use of Fund Credit. Whether or not a foreign asset should be included in a country's foreign reserves is dictated by two internationally accepted criteria: 'effective control' and 'availability'. The monetary authorities should not only have 'effective control' over the asset but it should also 'be available' to meet a balance of payments (BOP) need.

This paper seeks to document and discuss the various approaches to the measurement of foreign reserves in Barbados, Jamaica and Trinidad and Tobago. It also examines trends in the identified reserve measures, assesses how they conform to BOP accounting procedures and discusses their suitability or otherwise for measuring reserve adequacy in the three countries.

2. Concepts and Measurements

The Central Banks of Barbados, Jamaica and Trinidad and Tobago have used slightly different approaches to identify reserve assets over time. Nevertheless, the underlying concept of what constitute foreign reserves has not differed markedly. Published documents of international reserves of the three countries broadly identify the following:

i. The net international reserves (NIR) position of the Central Bank, representing gross foreign reserves less outstanding short-term liabilities of the bank and any credit advanced by the International Monetary Fund (IMF);

ii. The net official reserves (NOR) position which represents the Central Bank's NIR position, the central government's foreign reserves and those of public agencies controlled by the monetary authorities.

iii The net foreign position (NFP) of the country as a whole, representing the net official reserves position plus the net foreign position of the commercial banking system.

In Barbados, the Central Bank continued to include the balances due from the Caricom Multilateral Clearing Facility (CMCF), which became bankrupt in 1983, among its published assets, even though the bankruptcy rendered about 75% of the Bank's foreign assets illiquid. However, for its own internal monitoring purposes, it netted out both its short-term foreign liabilities and the CMCF balances and called the remainder **available reserves**. This series was solely for internal use and was not published.

Trinidad and Tobago has operated under a regime of freely floating exchange rate since 1993. Unlike Barbados, its definition of external assets excluded all loans made to its Caribbean neighbours who are members of the Caribbean Economic Community (CARICOM), on the grounds that such loans were unavailable to the country for BOP purposes. Also, with that country's change from fixed to floating exchange rate regime in 1993, changes in the net foreign position of the commercial banks were no longer reckoned as suitable for financing payment imbalances but as part of net capital movements. Jamaica has also operated under a regime of floating exchange rate since 1991, but unlike Trinidad and Tobago (and Barbados), its definition of net foreign position of the country excludes the Central Bank's medium-term liabilities.

Estimates of the NIR, NOR and NFP were made for the period 1981 to 1999. They were positive for Barbados and Trinidad and Tobago. For Jamaica, however, all the three measures were consistently negative from 1981 until 1993.

3. Conformity of the Identified Reserve Measures to BOP Accounting Procedures

As measures of foreign exchange reserves, the NIR and NOR concepts in Jamaica and Trinidad and Tobago appear to conform to the two internationally accepted criteria of effective control by the monetary authorities and availability for balance of payments purposes. In Barbados, however, since the reported series of all three aggregates include the largely unavailable CMCF balances, they violate the availability criteria.

The NFP aggregates for Jamaica and Trinidad and Tobago adequately conform to the two criteria up to the periods when they moved from fixed to floating exchange rate regimes. With the change in exchange rate regimes, the net foreign position of commercial banks was no longer suitable for balance of payments purposes.

It should be stressed, though, that to the extent that the NFP series in Jamaica exclude the country's central bank's medium-term liabilities (which by definition should be available for financing any balance of payments imbalances), it provides a rather poor measure of any imbalances from that country's international transactions.

4. Adequacy of the Reserve Measures for BOP Purposes

A country's demand for foreign reserves for balance of payments purposes is determined by a number of factors, including more importantly, the degree of openness of its economy and the variability in the size of its payments imbalances.

Import reserve cover ratios (IRRs) were calculated for the three countries, using the NOR, NFP and GOR (gross official reserves) measures. The IRRs represent the number of months worth of imports that could be paid for from a given stock of reserves.

The GOR measure, which represents the amount of reserves available for transactions at each point in time, is included to emphasise the point that the gross concept of reserves is the more relevant measure when it comes to assessing adequacy of reserves for transaction purposes, since both the NOR and NFP measures could be negative for a prolonged period, as data from Jamaica attest to.

For the period 1981-1999, Trinidad and Tobago had the highest import cover ratios, averaging 5.6 months under GOR measure, compared with 3.2 months for Barbados. Although the import cover ratios for Barbados were generally lower than those for Trinidad and Tobago, they were relatively more stable, with a standard derivation of 0.73 (with GOR) compared with 5.57 for Trinidad and Tobago.

The Jamaican data underscores the importance of using the gross concept of reserves rather than the net concept when measuring reserve adequacy. The average import cover ratio was a negative 2.7 months under the NOR measure but was a positive 2.0 months under the gross concept. Unlike Trinidad and Tobago, Jamaica maintained a higher level of import cover ratio during the period of floating exchange rate (2.54 months) than under the period of fixed exchange rate (1.53 months). That may be due more to the exigencies of the period rather than the result of a deliberate policy. Jamaica experienced extreme balance of payments problems in the period immediately preceding the shift to a floating exchange regime in 1991.