



How Countries Manage Reserve Assets

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A Review by Kerry-Ann Alleyne*

Introduction

The book, *How Countries Manage Reserve Assets*, explores a number of important concerns resulting from the diverse facets of reserve management, and provides differing perspectives from a variety of authors involved in the reserve management process.

The text discussed many aspects of reserve management, in particular the increased focus on the efficient use of reserve assets and in this regard the diversification of investment into different asset classes with various risks. The emphasis was then placed on managing these risks effectively in order to maximise returns, while minimising losses to investments. Increased transparency is also an important concern for all groups of countries. This means that there should be a consistent accounting framework and central banks should adhere to international accounting standards, as well as provide adequate information on reserve management policies. Other important issues examined in this book were the importance of using external managers, the implications of the euro for reserve managers and the impact of currency composition of reserves.

The information provided by the articles reviewed in the book was generally consistent with the IMF guidelines for reserve management, which focused on accountability and transparency and risk management. The text, however, did not fully address certain topics, such as, all of the reasons for holding reserves, and the question of whether the government or the central bank has ownership of reserves.

The Need for Reserves

Abstracting from the years of crisis, the demand for reserves has grown over the last 25 years. David Williams, in chapter 2, argued that the supply of reserves is demand determined, that is countries hold what they perceive is needed. A rise in the demand for reserves may therefore

be indicative of increasing international transactions and the variability of external payments. Demand may also include the reserves needed for precautionary purposes, for example, to absorb unexpected shocks and capital flows.

Williams also talked about the relationship between exchange rate arrangements and the level of reserves. According to the writer, there was little evidence to support a significant relationship between these two variables and he justified this by showing that the upward trend in reserves was for all countries regardless of their exchange rate arrangement. The author also noted that there has been a shift in the measurement of reserve adequacy from current account to capital account indicators, in particular debt. More recently, attention has also been placed on the impact of the short-term debt position on the country's need for reserves. Hence, reserve adequacy is expressed in terms of these measures as opposed to the traditional imports to reserves ratio.

The author however failed to mention a few other reasons for holding reserves such as, a formal backing for domestic currency and a source of funds for government expenditure. These reasons, in addition to others, were discussed further in the Bank of England's handbook on *Foreign Exchange Reserve Management* written by John Nugée.

Reserve Management: Country Experiences

India

The balance of payments crisis in 1991 started a shift away from the traditional approaches of reserve management in India. According to Y. V. Reddy, these policies are now built on factors such as, short-term debt obligations and maintaining financial and trade flows. The objective of reserve management at the Reserve Bank of India (RBI) is to ensure the safety, liquidity and optimisation of reserves and this is done through continuous review of reserve management strategies in consultation with the government. Reddy said that when investing reserves

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attention is paid to the currency composition, duration of investment and instruments. Equally important is that all investments are in high quality assets, and that some of these are easily converted at short notice. In the opinion of the author, the RBI also focused on adequate disclosure regarding reserve management policies and other relevant information.

Canada

The increase in holdings of international reserves, for Canada, has been accompanied by increased transparency and complexity in the management of reserves. Canada's reserves are held in the Exchange Fund Account (EFA), which is managed by the Bank of Canada and the Department of Finance. An asset-liability matching framework is used in the management of the EFA. In chapter 6, Jacobo De Leün noted that the objective of liability management is to achieve the lowest possible funding subject to considerations such as ensuring access to capital markets and the diversification of funding sources. Under asset management the EFA consists of two tiers, the liquidity and the investment tiers. The objective of asset management is to minimise the cost of carry whilst still maintaining adequate liquidity and safety of capital. De Leün examined the evolution of Canada's reserves, and the changes in reserve management accompanying the developments in the financial markets, new approaches to foreign exchange intervention and federal government policies. The author pointed out that Canada was one of the first countries to meet the IMF and G-10 format for presentation of reserves.

Other Developing Countries

Of particular interest to the region is chapter 7, which examined reserve management in developing countries, and how it differs from the practices in more developed countries. The objectives of reserve management in developing countries include ensuring economic stability, security and adequate confidence national currencies, meeting financial obligations, and building institutional capacity. Michael

Naameh found that in about one third to one half of the developing countries, GDP volatility and high external debt were the key factors that determined reserve levels. In contrast, the level of reserves in the more advanced developing economies was shaped by exchange rate considerations. In the same chapter, the author also examined a few other interesting topics that related to reserve management and developing countries, and these are examined in greater detail below.

Capacity Development

The first topic discussed was capacity development; Naameh pointed out that an increase in the number of central banks, particularly in transition countries created a greater demand for technical assistance. Demand was initially met by the central banks of industrial countries together with the IMF and the Bank for International Settlements; regional training institutions have since been established to meet the demand. The focus of these assistance programmes was to build the organisational structure needed to support higher levels of activity in foreign exchange, bond and derivatives markets. As a result of the increased focus on capacity building, some central banks were able to restructure and sharpen skills.

Policy Implementation

The currency intervention and portfolio management aspects of policy implementation were also reviewed.

With the advent of inter-bank foreign exchange markets in most developing countries, significant progress has been made in the area of currency intervention. The country's exchange rate regime, the frequency of central bank intervention and the intensity of foreign bank participation have all influenced the operations of these markets. In a fully developed market when the demand for foreign currency rises, the central bank may be forced to intervene at the risk of depleting its reserves.

With respect to portfolio management, the concern is with optimisation in both the level and composition of

reserves. The use of portfolio optimisation techniques, experiences and the risk profile when deciding the level of and composition of reserves was proposed.

In the author's opinion, the active management of reserves should focus mainly on the minimum level of reserves needed. This is dependent on the primary objective of reserve management. He also suggested that a number of advantages could be obtained from splitting the reserves into different sub-portfolio each with their own objectives, benchmarks and guidelines. These advantages include improvements in risk control, transparency and efficiency.

In concluding he recommended that the inflow of foreign direct investment (FDI) should be used, rather than the level of reserves, as an indicator of policy success in developing countries. According to him, based on this measure of evaluation of success developing countries have done very well. However, the level of FDI inflows is a function of exchange rate, and what may be appropriately classified as FDI in a floating exchange rate regime could be classified as loan capital under a fixed exchange rate.

One of the abovementioned advantages of portfolio management was improvements in risk control. A discussion on the process of risk management follows.

Risk Management

Like other financial institutions central banks are exposed to financial risks. However, unlike other institutions the issues relating to these risks are not the same because of their different objectives. The first step in risk management involves the identification of the type of risk. The four types of risk described in chapter 9 written by Ib Hansen, Christian Olgaard and Peter Kaer Jensen were:

- Interest Rate (Market) Risk – risk of losses associated with fluctuations in the interest rate.
- Exchange Rate Risk – risk of losses due to fluctuations in exchange rates.
- Liquidity Risk – the risk that arises from the difficulty of selling assets.

- Credit Risk – risk associated with the possibility of default on obligations.

Quantifying these risks involves the evaluation of the likelihood of occurrence and the consequences of each type of risk identified. Over the last ten years there has been considerable development in the methods of quantifying risk.

The approaches noted were:

- Value at risk estimates, which provide information about the general risk of losses, and;
- Stress scenarios, which provide information on losses in extreme circumstances.

Neither method can be considered better, because the approach used is dependent on the information required.

How Countries Manage Risk

The book also addressed how different countries manage risk. The Reserve Bank of Australia, as a result of the nature and efficiency of its operations, has low credit risk exposure and has not experienced any losses due to counterparty defaults. However, it is interesting to note that the bank has limited control over the management of the exchange rate and interest rate risks. On the other hand, the Hong Kong Monetary Authority has a Risk Management and Compliance Division, whose responsibility is to monitor the risk associated with the investing process. In contrast, the Central Reserve Bank of Peru uses hedging to minimise the interest rate risk. Liquidity risk is also controlled by distributing assets over investments of varying liquidity and credit risk is minimised by using highly rated investments in non-private entities.

Risk plays a significant role in the investment of reserve assets. Usually, the risk tolerance of the central bank will dictate the portion of reserves to be invested in non-government securities. As the increase in transparency continues, central banks will be under pressure to demonstrate efficient use of the reserve assets.

Roberts L. Grava presented extensive data analysis regarding the rate of return on various asset classes to support

increased investment in non-government securities. He found that irrespective of weighting, short and medium term government securities were always expected to underperform agencies and investment grade corporates, and suggested that single asset returns and diversified portfolio simulations yielded similar results.

Roberto de Beaufort, Francisco Palomino and Sandra Benitez found that corporate debt has better risk/return characteristics, in spite of the additional systematic and non-systematic risk that they are exposed to. They also provided data analysis to show the benefits of diversification of reserve assets. The authors concluded by saying that the data analysis showed that corporates delivered better risk/return considerations than treasuries over different time periods, and the additional risk particular to corporates can be managed.

The authors of both chapters queried why losses from fluctuations in interest rate are more acceptable to central banks than losses arising from corporate debt.

Other Issues Affecting Reserve Management

The text also looked at a number of concerns for reserve managers and the management of reserve assets. These included accounting for reserves, the use of external managers, factors affecting the currency composition of reserves and the implications of the advent of the euro.

Accounting for Reserves

The issues of accounting standards and corporate governance have emerged due to recent corporate accounting scandals. Consequently, Joshua Kurtzig, Christopher Hemus and Ian Goodwin in chapter 15, suggest that central banks should ensure that they meet and adhere to changing accounting standards. Reserve management practices also need to be on level with the accounting standards in areas such as governance and risk management. On account of the increased transparency of reserve management, the accounting framework identified should provide accurate, relevant, reliable and consistent

information about the financial activity of the central bank to all users of this information.

The Use of External Managers

The need to hire an external manager came about because risk/return considerations are of greater importance as a result of changing central bank goals and increased transparency. The Bank of Estonia, the Swiss National Bank and the Hong Kong Monetary Authority are some of the banks that use external managers. The reasons for hiring external managers include: benefiting from the expertise of the external manager, obtaining access to and coverage of additional markets and the provision of benchmarks for internal assessment. The use of external managers is also advantageous, because investments can be made in additional asset classes, which would have been too expensive to manage internally. It is interesting to note that the external managers, like their internal counterparts, are subjected to investment benchmarks, guidelines and stringent controls when managing external portfolios.

Currency Composition of Reserves

The advent of the euro, choice of exchange rate regime, multilateralisation and regionalisation of trade and capital account restrictions are issues that affect the currency composition of reserves. Barry Eichengreen and Donald J. Mathieson in chapter 4 investigated the recent trends in the currency composition of reserves in developing countries, as these countries are more likely to be affected by changes in the international financial environment. The authors found that the currency composition of reserves was stable overtime and the choice of reserve asset by developing countries is influenced by links with the reserve currency country, such as the presence of pegged exchange rates, the level of trade and the amount of debt servicing required.

The UK and the Euro

The arrival of the euro and the issues of if and when the UK would adopt the euro have provided reserve

managers with a number of concerns. Geoffrey Dicks, Kit Juckes and Paul Stanworth, in chapter 14, addressed the consequences of the UK joining the EMU for the euro, euro-denominated assets and sterling denominated assets. They postulated that entry by the UK would make the eurozone the largest single currency zone, which would result in the euro becoming an alternative to the dollar as a means of exchange and as currency for investment. Sterling holdings would be redenominated into euro assets at the chosen entry rate thereby increasing the percentage in euro assets, while sterling assets in the eurozone will be no longer foreign exchange reserves. The authors concluded by saying that entry into the EMU by the UK would have positive effects for both the euro and the eurozone bonds, but will negatively impact on the pound and UK denominated assets.

Conclusion

Foreign exchange reserves are increasing rapidly for all groups of countries and this is expected to continue into the future. Recent events such as the collapse of Enron, the Argentine default and the terrorist attacks on the US all have impacted on the level of reserves and reserve management policies. The resulting increase in reserves has

been accompanied by greater transparency and consequently greater pressure and demands have been placed on reserve managers. These include improving the return on assets and accounting for reserves. The text, *How Countries Manage Reserve Assets*, used the experience of individual and groups of countries to discuss current issues relating to reserve management in addition to topics such as reserve adequacy, the demand for reserves and diversification of reserve assets.

Reserve Management at the Central Bank of Barbados

The objective of the Central Bank of Barbados' investment policy is to optimise the return on its foreign investments within a risk adverse framework. These investments are mainly US dollar denominated fixed income, highly credit rated securities, thereby minimising exchange rate, interest rate and credit risks. Liquidity risk is also minimised by the use of a staggered basis for maturing assets. In addition, the Bank has recently started employing the use of external managers and approximately 5% of total reserve assets are managed externally.