Chapter IV

FOREIGN EXCHANGE MARKET INTERVENTION IN NEPAL

4.1 Introduction

Foreign exchange market intervention is mainly concerned with maintaining the stability of the exchange rate regime followed by a country. It is considered as one of the most important instruments for sound foreign exchange management, particularly in developing countries. In Nepal, foreign exchange market intervention is conducted with the objective of injecting/mopping up liquidity in the domestic foreign exchange market, avoiding unwanted fluctuations in the exchange rate of convertible foreign currencies, preventing broken exchange rates among currencies and defending the existing pegged exchange rate with the INR. Nepal's Central Bank regularly intervenes in the local foreign exchange market on a daily basis, provided there is a request from BFIs for a minimum amount of NPR 2.0 million. The process of foreign exchange market intervention was first introduced in FY 1991/92 on a need basis of the market participants. USD serves as the medium for intervention.

In the Nepalese context, NRB has instituted two mechanisms of Intervention with respect to its involvement in the domestic foreign exchange market. The first is a regular purchase/sale of foreign currency from/to commercial banks, national-level development banks and remittance companies. This is a regular and scheduled window where the aforesaid institutions can buy/sell their foreign currencies as per their long or short position. This regular purchase/sale from/to BFIs is executed at the request of market participants and the transaction rate (popularly known as intervention rate) is determined as per the pre-specified method.

There is a body called Foreign Exchange Dealers' Association of Nepal [FEDAN] consisting of representatives from all commercial banks and national level development banks which deal in foreign exchange. The FEDAN works as a bridge between the commercial /development banks and the NRB. When the BFIs need USD, NRB supplies it as a part of its foreign exchange management responsibility at the market determined exchange rate displayed on the Reuters screen at 12:00 noon on the same day plus four paisa. Similarly, while mopping up excess USD of the BFIs at their request, the NRB deducts three paisa from the displayed rate on the Reuters screen. Remittance companies can also participate in foreign exchange market intervention process through their organisation, i.e., Nepal Remittances Association [NRA].

According to the second category of intervention as specified in section 12 of the 'Foreign Exchange Buy, Sell and Intervention Guidelines 2010', NRB can intervene in the foreign exchange market any time when there is a sharp fluctuation in the exchange rate of NPR with respect to other foreign currencies. According to section 12 of the Guidelines, intervention in the Nepalese foreign exchange market solely depends on NRB's discretion. However, this type of intervention, which is real intervention according to international practices, has never been practised in Nepal till date.

4.2 Legal Framework for Intervention

As per Nepal Rastra Bank Act 2002, the NRB formulates necessary monetary and foreign exchange policies in order to maintain the price and BOP for sustainable development of the economy, and manages it (section 4.1.a), promotes stability required in the banking and financial sector (section 4.1.c) and contributes to the development of a secure, healthy and efficient system of payments. To meet these objectives, the mandatory functions of NRB (among others) are, to formulate foreign exchange policies and to implement or cause to implement them (section 5.1.c) and to determine the system of foreign exchange rate (section 5.1.d), besides managing and operating foreign exchange reserves (section 5.1.e). Further, the NRB has power to implement or cause to implement any other necessary function which the Bank has to carry out in order to achieve its objectives (section 5.1.j). While exercising the powers conferred by this Act or any other prevailing law, the Bank shall have power to carry out other functions and take actions, which are incidental thereto (Section 5.2). No one shall violate powers conferred on the Bank under this Act. Section 62 of the Act bestows full authority on NRB to formulate and implement the foreign exchange policy of Nepal. Section 65 (1) of the Act allows the Bank to buy/sell foreign exchange, gold and precious metals. The provisions of the NRB Act, 2002 have empowered the Bank to formulate and implement the foreign exchange rules/bye-laws and issue instructions which, consequently, provide a legal framework for intervention in the local foreign exchange market.

NRB is intervening in the foreign exchange market under the guidelines articulated as 'Foreign Exchange Buy, Sell and Intervention Guidelines 2010'.[14] The Guidelines, which provide policy and operational framework for intervention in Nepal, describe two types of interventions; (i) regularly buy and sell foreign exchange at the request of market participants and, (ii) discretionary intervention. The discretionary intervention is executed only when the Central Bank observes misalignment in the exchange rate and feels the necessity for correcting it. The procedure and the rate of intervention are finalized by the Governor, as per the recommendation of FEMD which is different from the

[14] The Foreign Exchange Buy, Sell and Market Intervention Guidelines 2010 was approved by the NRB Board of Directors on July 15, 2010 and its first amendment was made on October 10, 2013.

regular buy and sale procedure.[15] However, this type of intervention never took place after the introduction of the Guidelines.

4.3 Objectives of Intervention

Utilising the reserves to intervene in the foreign exchange market is one of the objectives of accumulating foreign exchange reserves. Reserves accumulation and supplying adequate levels of foreign exchange as per the need of the local market comprise the regular functions with respect to intervention in developing countries. In the usual Nepalese practice, the Central Bank intervenes mainly to mop up the excess supply of USD in the local foreign exchange market, which results mainly from the remittances by Nepalese workers abroad. By the intervention process, the Central Bank also ensures an adequate level of foreign currency in the domestic market to meet the commercial and financial demands of the private sector. NRB's interventions are spot, scheduled, based on request from the market participants, and non-sterilized. The objectives of the intervention, as stated in the Nepal Rastra Bank Foreign Exchange Buy, Sell and Intervention Guidelines 2010, section 2, paragraph 3 are as follows:

(i) Assist in implementing the policy issues as envisaged in the monetary policy of the NRB

(ii) Contribute to maintaining the funds and liquidity in the banking sector

(iii) Manage the level of foreign exchange in the domestic foreign exchange market by the way of buying/selling foreign exchange from/to commercial banks as per the need of the market

(iv) Stabilise the exchange rate.

[15] Nepal Rastra Bank Foreign Exchange Buy, Sell and Intervention Guidelines 2010 (including first amendment), Section 2, Paragraph 12.

4.4 Foreign Exchange Market Intervention Procedure

Intervention in Nepal takes place as and when the market participants request the Central Bank through predetermined proper channels. The execution of either a purchase or sale intervention for a particular day is decided by the liquidity position in the local foreign exchange market. A logical analysis is made at the FEMD from the disclosure sheets received for this purpose from various commercial and national-level development banks. Since the intervention process is one-way, the BFIs which are in long position offset it by selling to the Central Bank. Similarly, when the BFIs are in short position mainly due to issuances of Letters of Credit [LC] and face difficulty in meeting their requirement from the local market, they request the Central Bank for intervention via FEDAN. NRB encourages BFIs to settle their requirements through the interbank market before approaching NRB's intervention window.

FEDAN acts as a mediator between the Central Bank and all commercial/ national-level development banks. The BFIs which are in long or short position approach the FEDAN a few minutes before 11:00 in the morning. The net amount obtained from matching the total demand and supply determines the type of request to be sent to NRB. If the total requirement is USD 2.0 million or more, FEDAN requests individual BFIs to furnish their request directly to NRB's intervention platform, i.e., FX ALL.[16]

4.4.1 Preconditions

Intervention in Nepal is executed at the request of BFIs from Monday to Friday, if there is no public holiday in Nepal and also in India. Purchase and sale interventions are mutually exclusive for a particular day, i.e., buy and sale intervention would not be conducted simultaneously. As mentioned before, the

[16] Nepal Rastra Bank (2014), Foreign Exchange Buy, Sell and Intervention Guidelines 2010 (including first amendment), Section 2, Paragraph 6.

intervention currency is the USD. All the participating BFIs are required to disclose their latest foreign exchange positions to the NRB before the intervention procedure begins. For the execution of each intervention episode, the minimum volume requirement is USD 2.0 million. FEDAN arranges the net requirement below USD 2.0 million through the interbank market. Commercial banks need to sell or buy at least 75 percent of the amount quoted by them.

The intervention transactions are generally settled on '*T+1*' basis, i.e., next working day is considered as the 'value date'.[17] On the value date, BFIs deposit the sold USD amount in NRB's specific account abroad and NRB deposits the corresponding NPR in the accounts of the concerned BFIs maintained with Banking Office of the NRB. SWIFT transfers are made by the BFIs to transfer fund in NRB's account. In case of default in depositing the foreign currency on the specified value date in the NRB's concerned account, the BFIs need to pay a penalty of a flat USD 100 plus interest at the FED funds rate for the number of days of delay.

4.4.2 Counterparties

The commercial banks and national-level development banks are major counterparties for intervention. They can participate in both buy and sell interventions. Further, the Remittance Companies, in coordination with NRA, can sell their USD to NRB in multiples of one million USD. However, the remittance companies are not allowed to participate in sale interventions executed by the NRB.

4.4.3 Determination of the Intervention Rate

[17] The transactions are settled on the next working day from the date of the intervention.

Determination of the intervention rate is a crucial aspect of the intervention process. In Nepal, the intervention rate is determined on the basis of a pre-determined criterion. The market determined INR/USD spot mid-rate displayed in the Reuters/Bloomberg online screen at 12:00 noon (i.e., 12:15 Nepalese time) provides the basis for the determination of the intervention rate.[18] The displayed rate is converted into NPR by multiplying it with the pegged rate and is termed the NPR/USD mid-rate. The intervention rate is then determined by deducting 3 paisa from the NPR/USD mid-rate in the case of purchases and adding 4 paisa in case of sales. This intervention rate is applicable in the particular round of intervention for which it has been approved by the Governor. When the intervention rate and the value date are finalized, they are immediately (not beyond 1:00 PM the same day) communicated to participating BFIs via FX ALL.

4.4.4 Deal Confirmation

When the intervention rate and value date are shown on the FX ALL screen, the participating BFIs should confirm their amount within 10 minutes via FX ALL. Confirmation deal ticket is automatically generated when the deal is executed via FX ALL, therefore, no further confirmation is required.

4.4.5 Encourage Interbank Transactions

Intervention policies have been developed in such a way that the interbank transactions are automatically encouraged. The provision of adjusting the INR/USD spot mid-rate displayed on the Reuters screen by adding 4 paisa in sale interventions and deducting 3 paisa in purchase interventions are primarily intended to promote interbank transactions. These adjustments are intended to encourage trading in the interbank market vis-à-vis the intervention window of

[18] Nepali time is ahead by 15 minutes than Indian time.

the NRB. Nonetheless, the Central Bank is supposed to act as the lender of the last resort.

4.4.6 Sale Interventions Not for Trading with NRB

The purchase and sale interventions are treated separately to meet the policy objectives. The sale interventions are considered solely to address the genuine needs of the commercial banks. The commercial banks are not allowed to purchase USD with intention of selling in a subsequent round of intervention to NRB itself. Attempting such trade is considered a violation of the NRB's prudential norms as per the provision made under section 3, paragraph 17, of the Intervention Guidelines.

4.5 Sensitivity of the Intervention Strategies and Policies

Under the present arrangement, it is the market forces which determine the exchange rates of NPR with the convertible currencies. But the Central Bank's role in determining exchange rate vis-à-vis INR is crucial in the pegged exchange rate regime. The market-determined exchange rates with INR which prevailed before 1960 fluctuated widely and hence were not regarded as ideal or best suited to the socio-economic conditions prevailing in the economy.

Given the free and unlimited convertibility of the INR in the country, the magnitude of the broken cross rate has to be watched closely (NRB, 2014a). Besides this, NRB always needs to maintain a proper balance between the domestic interest rate structure, liquidity conditions and external sector transactions. In the process, NRB has adopted a policy through its Intervention Guidelines under which intervention in the local foreign exchange market is undertaken as and when required (NRB, 1996, p. 115).

The policy decisions regarding intervention are mainly guided by the requirements of liquidity management and exchange rate stability in the domestic foreign exchange market. NRB is aware of the risk that the NPR/USD intervention rate falling below the rate implied by the peg could divert some of the foreign remittances for conversion to INR in India before reconverting into NPR in Nepal. The result of this would be an increase in INR holding and stagnation in the level of convertible foreign currency holdings by NRB. This policy issue has been considered seriously by the Nepalese authorities in the recent years, which has encouraged remittance inflows in the country through the formal channels.

4.6 Frequency and Volume of the Intervention Transactions

In Nepal, the process of intervention was initiated in FY 1991/92, together with the adoption of partial convertibility of the NPR. Since the commencement, the frequency of intervention is large and is expected to continue till the existence of the pegged exchange rate regime in the country. When the intervention process was introduced, it used to be in effect on a need basis. Later on, the intervention frequency was increased to twice a week. Similarly, effective from September 2009, the frequency was increased to three times a week on alternate days, i.e., Monday, Wednesday and Friday. Finally, effective from October 2013, the intervention process has been conducted every working day.

Purchases from BFIs account for the major portion of the intervention transactions while sale to BFIs is comparatively very low. Table 4.1 and the accompanying Figures 4.1 and 4.2 provide the frequency and volume of intervention transactions that took place over the years from FY 1991/92 to FY 2014/15:

Table 4.1

Frequency and Volume of Intervention

Volume in Million USD

Fiscal Year	Purchase		Sale		Net Purchase Volume
	Frequency	Volume	Frequency	Volume	
1991/92	1	8.7	0	0.0	8.7
1992/93	8	110.5	0	0.0	110.5
1993/94	5	69.6	4	22.1	47.5
1994/95	0	0.0	10	163.6	-163.6
1995/96	7	41.8	8	164.8	-123.0
1996/97	7	44.7	5	35.1	9.6
1997/98	8	65.6	6	59.6	6.0
1998/99	15	161.0	0	0.0	161.0
1999/00	7	70.3	4	28.2	42.1
2000/01	5	94.8	15	162.1	-67.3
2001/02	9	107.5	7	102.4	5.1
2002/03	24	323.1	2	7.8	315.3
2003/04	30	408.7	3	27.6	381.1
2004/05	41	527.0	4	50.1	476.9
2005/06	64	769.9	2	9.2	760.7
2006/07	77	923.0	1	7.2	915.8
2007/08	90	1,589.2	3	17.7	1,571.5
2008/09	100	1,919.0	3	21.5	1,897.6
2009/10	134	1,606.7	1	6.0	1,600.7
2010/11	134	2,419.9	2	9.5	2,410.4
2011/12	135	3,186.1	0	0.0	3,186.1
2012/13	130	3,235.3	2	11.3	3,224.0
2013/14	192	3,546.7	4	25.9	3,520.9
2014/15	208	4,043.8	4	11.4	4,032.5
Total	**1,431**	**25,272.6**	**90**	**942.9**	**24,329.7**

Source: NRB, Economic Reports (various Issues) and FEMD

From FY 1991/92 to the end of FY 2014/15, NRB executed 1,521 rounds of interventions, out of which 1,431 (94.1 percent) were purchases from BFIs and the rest, i.e., 90 (5.9 percent), were sales to the BFIs. The total volume under intervention till the end of FY 2014/15 amounted to USD 26,215.5 million, out of which the purchase interventions accounted for USD 25,272.6 million (96.4 percent) and the sale interventions accounted for USD 942.9 million (3.6 percent). There was no purchase intervention in FY 1994/95 while there was no sale intervention in four fiscal years (1991/92, 1992/93, 1998/99 and 2011/12). The largest amount of purchase intervention took place in FY 2014/15 (USD 4,043.8 million) followed by FY 2013/14 (USD 3546.7 million). During the period of last five years, the purchase intervention amounted to USD 16,431.8 million which represented 65.0 percent of the total purchase intervention during the entire period of 24 years. The large increase in the purchase intervention in recent years has been on account of the substantial rise in the inflow of remittance in the banking system. In contrast, the largest amount of sale intervention took place in FY 1995/96 (USD 164.8 million) followed by FY 1994/95 (USD 163.6 million). In the last five years, the sale intervention totaled USD 58.1 million which as a percent of total amount of sale intervention during the period of 24 years was just 6.2 percent, reflecting modest sale interventions during this period.

Figure 4.1
Volume of Purchase and Sale Interventions

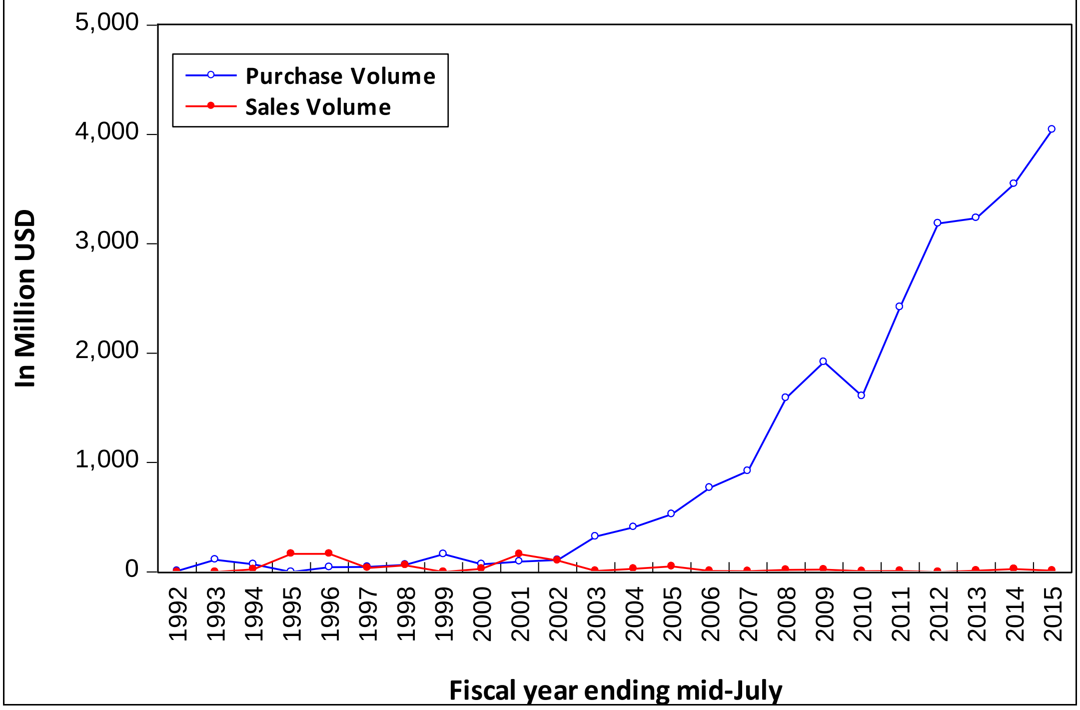
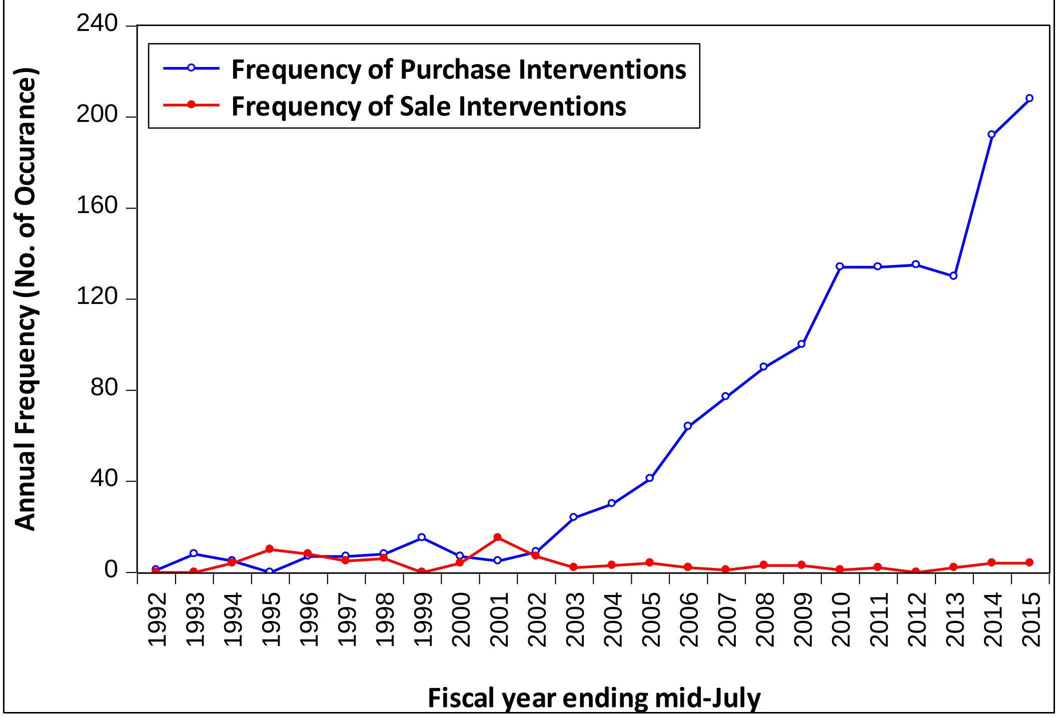


Figure 4.2
Frequency of Purchase and Sale Interventions



According to Figures 4.1 and 4.2, both volume and frequency of purchase interventions have risen sharply after FY 2001/02. However, in the case of sale interventions, the graphical lines, both in terms of frequency and volume, are found moving along the baseline in a fairly stable pattern, indicating their modest frequency and volume.

4.7 Intervention Volume as Percent of GDP

Intervention is one of the major sources of net foreign assets [NFA] which contributes to increasing the broad money (M2) and credit expansion in the economy. As a percent of GDP, the amounts of intervention from FY 1991/92 to FY 2014/15 are presented in Table 4.2 and Figure 4.3:

Table 4.2

Intervention Volume as Percent of GDP

GDP and Intervention Amount in million USD

Fiscal Year Ending mid-july	GDP in Producers Prices	Intervention (net) Volume	Intervention (Net) Volume as Percent of GDP *
1991/92	3,509.1	8.7	0.2
1992/93	3,499.8	110.5	3.2
1993/94	4,057.7	47.5	1.2
1994/95	4,344.4	-163.6	-3.8
1995/96	4,425.1	-123.0	-2.8
1996/97	4,943.0	9.6	0.2
1997/98	4,450.4	6.0	0.1
1998/99	5,018.9	161.0	3.2
1999/00	5,390.5	42.1	0.8
2000/01	5,914.5	-67.3	-1.1
2001/02	5,890.3	5.1	0.1
2002/03	6,585.0	315.3	4.8
2003/04	7,239.7	381.1	5.3
2004/05	8,378.3	476.9	5.7
2005/06	8,827.0	760.7	8.6
2006/07	11,223.2	915.8	8.2
2007/08	11,907.5	1,571.5	13.2
2008/09	12,701.0	1,897.6	14.9
2009/10	16,023.3	1,600.7	10.0
2010/11	19,266.4	2,410.4	12.5
2011/12	17,238.6	3,186.1	18.5
2012/13	17,842.2	3,224.0	18.1
2013/14	20,485.3	3,520.9	17.2
2014/15	20,965.7	4,032.5	19.2
Total/Average	**230,127.0**	**24,329.8**	**10.6**

Note: Year-end NPR/USD buying rates have been applied to convert the NPR amount to USD.
* Negative ratio indicates the excess of sales intervention compared to that of purchase intervention in that particular year.

Source: Economic Survey, 2016, MOF, GON; FEMD, NRB

The average intervention volume to GDP ratio from FY 1991/92 to FY 2014/15 is 10.6 percent. This ratio was sometimes negative and very low till FY 2001/02; however, it averaged at 17.1 percent during the recent five years.

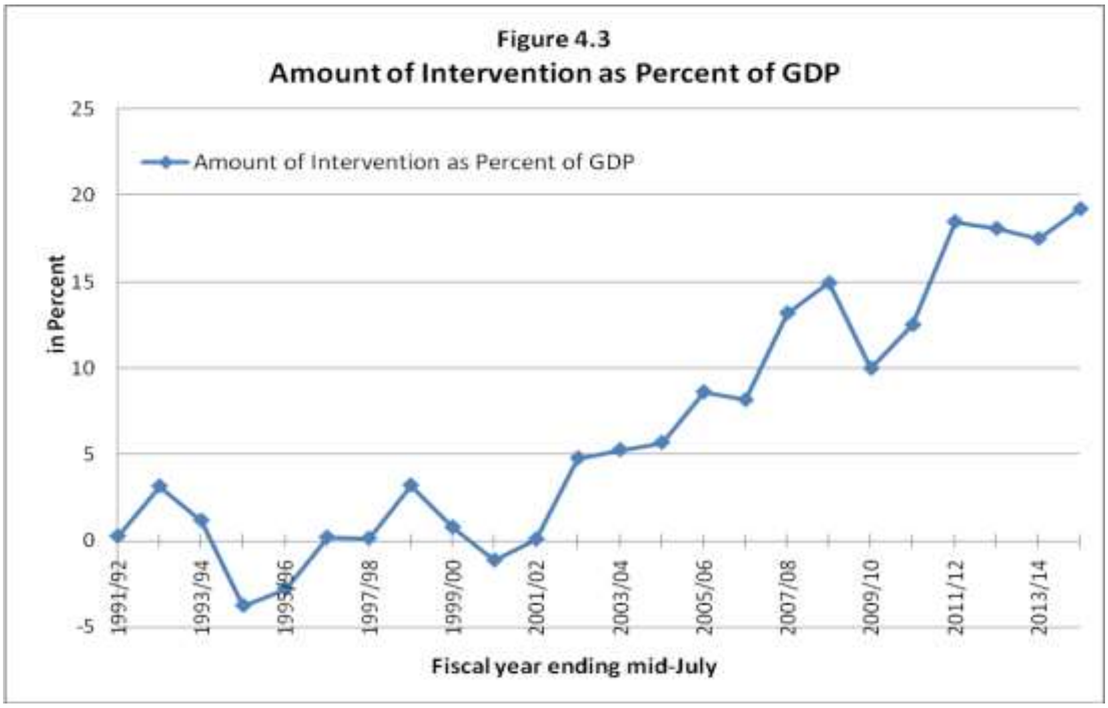


Figure 4.3
Amount of Intervention as Percent of GDP

From the above figure, the intervention volume to GDP ratio has been fluctuating and averaged almost zero percent till FY 2001/02. The ratio started to pick up continuously since FY 2002/03 and reached the highest level of 19.2 percent in FY 2014/15.

4.8 Inflow of Remittance and USD Purchase under Intervention

Remittances are the major sources of foreign exchange in Nepal. Unlike other capital inflows, remittances do not entail the creation of external debt with a variety of future repayment obligations. Unlike foreign assistance, they do not come encumbered with political and economic conditions with which the recipient country must comply.

The foreign exchange which enters the country in the form of remittance is first exchanged by the market participants, mainly by the remittance companies, BFIs and by the money changers. It ultimately reaches the vault of the Central Bank by the way of purchase interventions. "There is also the tendency of Nepalese migrant workers to take advantage of favourable exchange rate by sending back more remittance at the depreciated nominal exchange rates" which also influences accordingly on the amount of USD purchase of the Central Bank through intervention (Pant & Budha, 2016). The foreign exchange receipts from remittances are the backbone for financing the widening trade deficit of the country in recent years. The net amounts of USD receipts from interventions and the remittances from FY 1991/92 to FY 2014/15 have been presented in Table 4.3 and the related Figure 4.4 and Figure 4.5 below:

Table 4.3
USD Receipts from Intervention and Remittance Income

Amount in USD Million

Fiscal Year	USD Receipts from Intervention (net)		Remittance		USD Receipts from Intervention (net) as Percent of Remittance
	Amount	Growth Rate Percent	Amount	Growth Rate Percent	
1991/92	8.7	--	9.9	--	87.5
1992/93	110.5	1,170.1	11.2	12.8	985.0
1993/94	47.5	-57.0	4.5	-59.5	1,046.1
1994/95	-163.6	-444.4	57.6	1,168.8	-284.0
1995/96	-123.0	-24.8	47.3	-17.9	-260.1
1996/97	9.6	-107.8	51.8	9.5	18.5
1997/98	6.0	-38.0	60.4	16.7	9.8
1998/99	161.0	2,605.9	95.7	58.4	168.3
1999/00	42.1	-73.9	85.7	-10.5	49.1
2000/01	-67.3	-259.9	131.2	53.2	-51.3
2001/02	5.1	-107.5	190.5	45.2	2.7
2002/03	315.3	6,142.6	556.9	192.3	56.6
2003/04	381.1	20.9	763.8	37.2	49.9
2004/05	476.9	25.1	878.2	15.0	54.3
2005/06	760.7	59.5	1,251.7	42.5	60.8
2006/07	915.8	20.4	1,656.4	32.3	55.3
2007/08	1,571.5	71.6	2,035.4	22.9	77.2
2008/09	1,897.6	20.8	2,488.3	22.3	76.3
2009/10	1,600.7	-15.6	2,874.8	15.5	55.7
2010/11	2,410.4	50.6	3,184.1	10.8	75.7
2011/12	3,186.1	32.2	3,762.6	18.2	84.7
2012/13	3,224.0	1.2	4,151.0	10.3	77.7
2013/14	3,520.9	9.2	5,112.6	23.2	68.9
2014/15	4,032.5	14.5	5,339.7	4.4	75.5
Total	**24,329.8**		**34,801.5**		**69.9**

Source: NRB, Quarterly Economic Bulletin, Volume 50, mid-Jul 2016 and FEMD

Table 4.3 shows that there is heavy fluctuations in the remittances income from FY 1991/92 to FY 1999/00 followed by similar fluctuations in USD receipts from intervention in the same period. On the other hand, from FY 2001/02 to FY

2014/15, both the variables are in continuously increasing trend. It can be concluded that these two variables have positive relationships.

Figure 4.4
USD Receipts from Intervention and Remittance Income

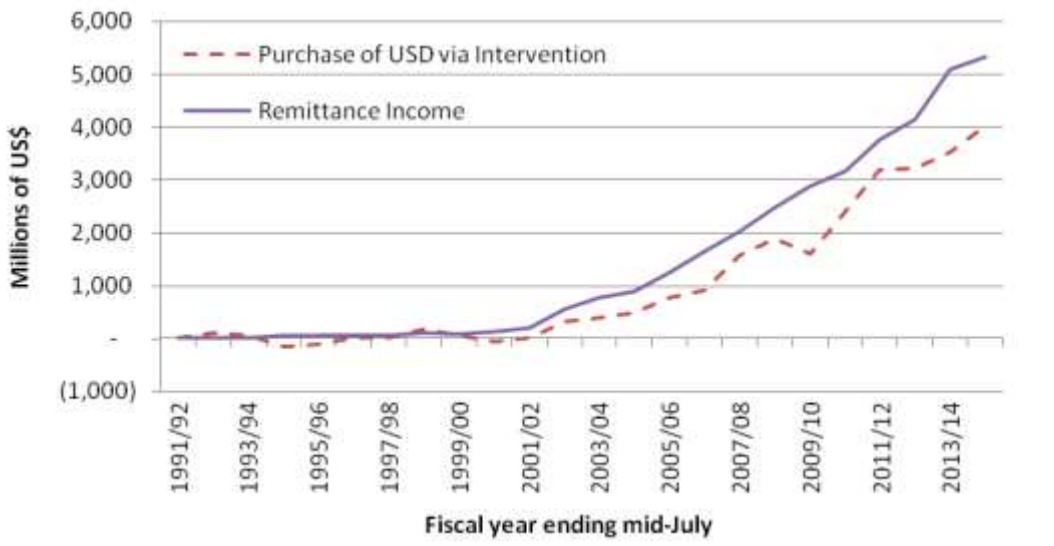


Figure 4.5
Net Amount of Intervention as Percent of Remittance income

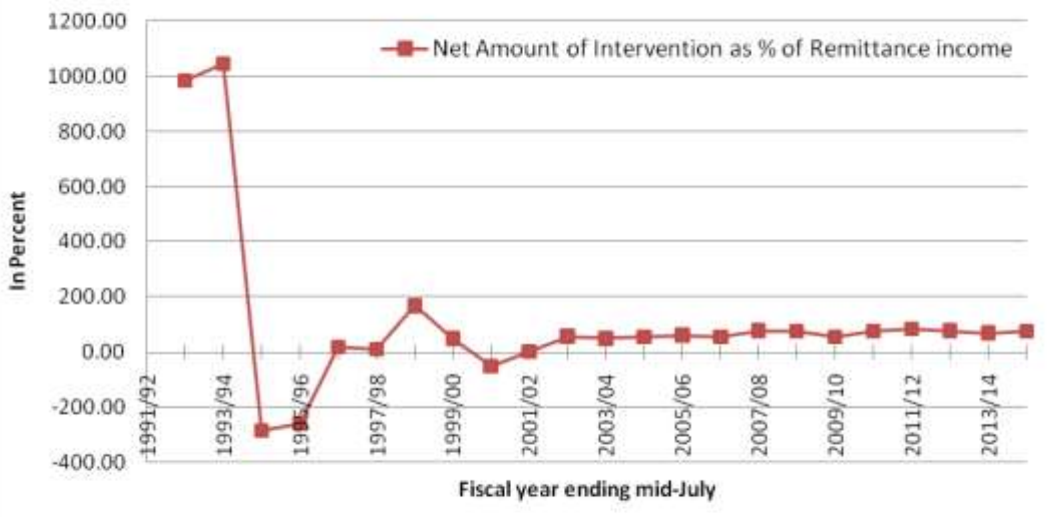


Figure 4.4 also establishes that the growth of remittances is continuously on the uptrend, almost linearly since FY 2001/02. Purchase of USD through interventions, though at a slightly lower level, has mirrored the growth trend of

remittance income. Figure 4.5 shows that the amount of net intervention as a percent of remittance income has almost been at a constant level since FY 2002/03.

4.9 Broad Money and Foreign Exchange Market Intervention

Broad money, expressed as M2, is influenced by the level of foreign exchange market intervention in the economy. Since NRB's intervention is non-sterilized, the intervention directly affects the money supply. Thus, intervention volume to broad money ratio has averaged 16.5 percent for the 24 years from FY 1991/92 to FY 2014/15, with 21.7 percent in FY 2014/15. The growing share of intervention to broad money indicates that NFA are becoming the major determinant of money supply in Nepal.

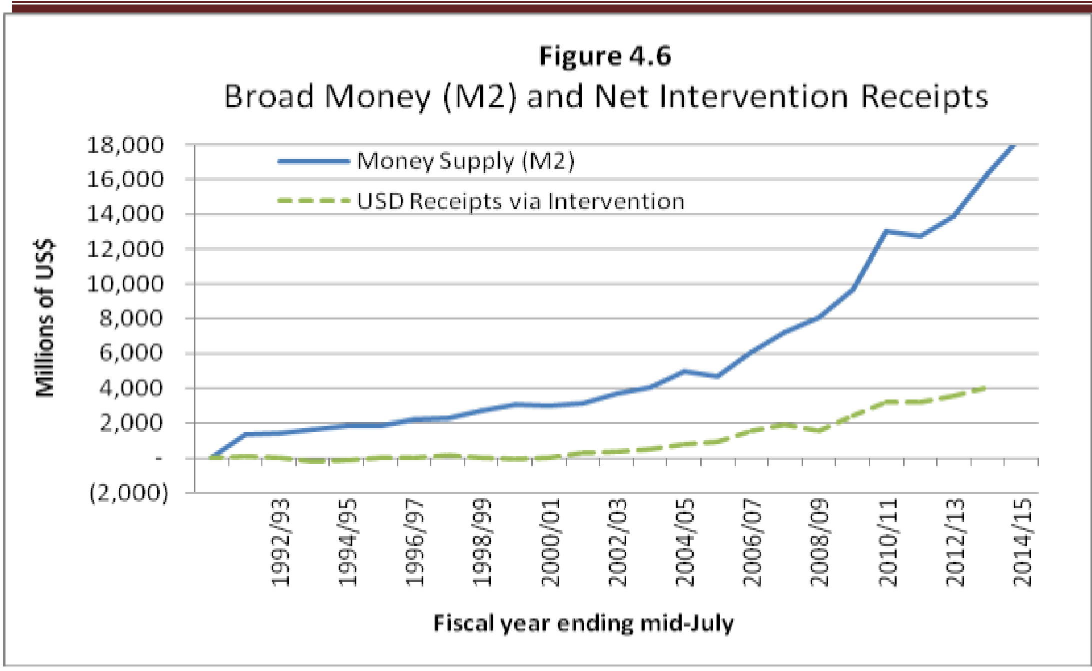
Table 4.4

Broad Money (M2) and Intervention Receipts

Amount in USD Million

Fiscal Year	Money Supply		Intervention		Intervention as Percent of Money Supply (M2)
	Amount	Growth Rate Percent	Amount	Growth Rate Percent	
1991/92	1,369.1	-	8.7	-	0.6
1992/93	1,424.0	4.0	110.5	1,170.1	7.8
1993/94	1,649.0	15.8	47.5	-57.0	2.9
1994/95	1,836.5	11.4	-163.6	-444.4	-8.9
1995/96	1,843.9	0.4	-123.0	-24.8	-6.7
1996/97	2,228.4	20.9	9.6	-107.8	0.4
1997/98	2,260.4	1.4	6.0	-38.0	0.3
1998/99	2,731.0	20.8	161.0	2,605.9	5.9
1999/00	3,046.2	11.5	42.1	-73.9	1.4
2000/01	3,000.5	-1.5	-67.3	-259.9	-2.2
2001/02	3,152.7	5.1	5.1	-107.5	0.2
2002/03	3,709.8	17.7	315.3	6,142.6	8.5
2003/04	4,052.3	9.2	381.1	20.9	9.4
2004/05	4,938.5	21.9	476.9	25.1	9.7
2005/06	4,680.5	-5.2	760.7	59.5	16.3
2006/07	6,099.0	30.3	915.8	20.4	15.0
2007/08	7,231.8	18.6	1,571.5	71.6	21.7
2008/09	8,078.4	11.7	1,897.6	20.8	23.5
2009/10	9,666.8	19.7	1,600.7	-15.6	16.6
2010/11	12,985.5	34.3	2,410.4	50.6	18.6
2011/12	12,757.4	-1.8	3,186.1	32.2	25.0
2012/13	13,846.1	8.5	3,224.0	1.2	23.3
2013/14	16,329.2	17.9	3,520.9	9.2	21.6
2014/15	18,566.4	13.7	4,032.5	14.5	21.7
Total	**147,483.4**		**24,329.8**		**16.5**

Sources: 1. Nepal Rastra Bank, FEMD
2. NRB, Quarterly Economic Bulletin, Vol. 50, mid-Jul 2016, Table 1, page 2



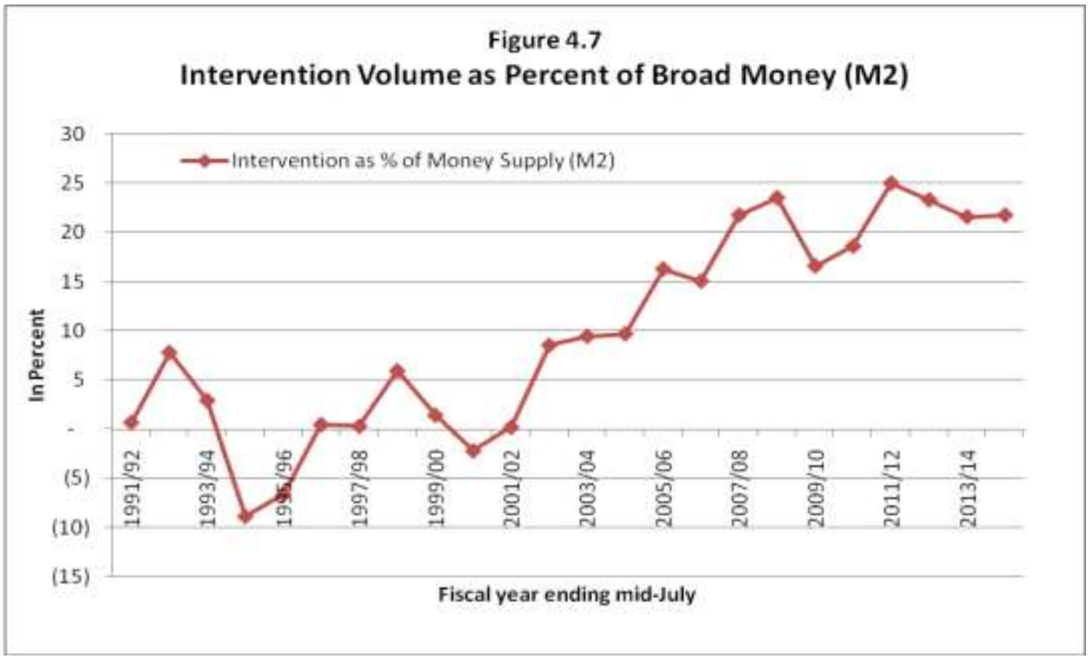


Figure 4.6 shows that USD receipts from intervention have been constantly increasing since FY 2001/02, constituting a significant part of M2 which has a greater rate of increase. Figure 4.7 shows that the intervention volume as percent of M2, though becoming negative in the three years before FY 2001/02, has been on an increasing upward movement, but registering declines in four recent years.

4.10 USD Purchased via Intervention and USD sold to Purchase INR

To discharge the foreign exchange management responsibility, NRB intervenes in the local foreign exchange market and absorbs the excess liquidity or injects it. It also purchases INR to meet the market demand by selling USD. The available data on USD purchases by way of interventions and USD sold to buy INR has been presented in Table 4.5:

Table 4.5

USD Purchased through Intervention and USD sold to Purchase INR

Amount in Millions of USD

Fiscal Year	USD Purchased (net) through Intervention	USD Sales to Purchase INR	USD Sales to purchase INR as percent of USD Purchased through Intervention
2003/04	381.1	210.0	55.1
2004/05	476.9	350.0	73.4
2005/06	760.7	600.0	78.9
2006/07	915.8	930.0	101.6
2007/08	1,571.5	1,730.0	110.1
2008/09	1,897.6	1,520.0	80.1
2009/10	1,600.7	2,190.0	136.8
2010/11	2,410.4	2,740.0	113.7
2011/12	3,186.1	2,660.0	83.5
2012/13	3,224.0	3,120.0	96.8
2013/14	3,520.9	3,140.0	89.2
2014/15	4,032.5	3,500.0	86.8
Total	**23,978.0**	**22,690.0**	**94.6**

Source: FEMD, Nepal Rastra Bank

As indicated above, NRB sold a large volume of USD annually to meet the growing INR demand. The volume of INR purchases (against sale of USD) is growing sharply. On average, NRB sold 94.6 percent of the amount acquired through intervention to buy INR from FY 2003/04 to FY 2014/15. During the four fiscal years (2006/07, 2007/08, 2009/10 and 2010/11) the amount of USD sold to purchase INR exceeded the amount of net USD purchased by intervention. This is an indication that a substantial amount of remittance is being used to finance the trade deficits with India. It is also a likely reflection of the overvalued peg, which may be causing a permanent shortage of INR in the recent years.

Figure 4.8

Purchase of USD through Intervention and Sale of USD against INR Purchase

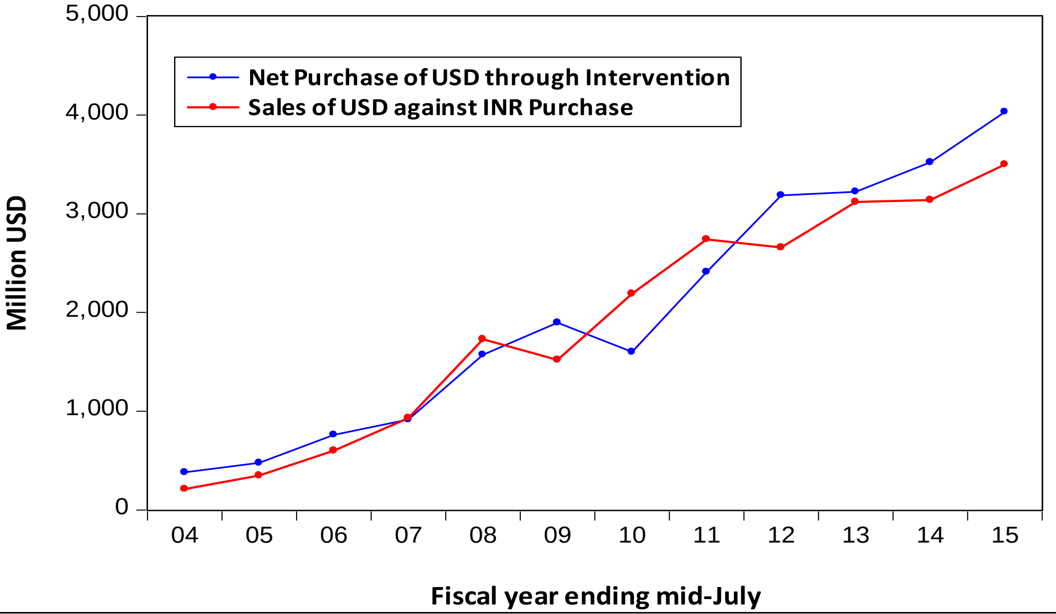


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Figure 4.8 shows that the net purchases of USD by interventions are often higher than the sales of USD to buy INR since FY 2011/12. However, both have indicated growing trends.

4.11 Effectiveness of Foreign Exchange Market Intervention

The effectiveness of Central Bank intervention is dependent on the channel through which it influences the exchange rate (Guinigundo, 2013). Whether or not the intervention is effective in influencing exchange rates, and the means by which it does so, are issues of crucial policy importance, and they have been the subject of vast academic and policy-related literature (Sarno & Taylor, 2001). There exists abundant literature on the effectiveness of foreign exchange market intervention. The overwhelming result of these studies is that foreign exchange market interventions are not effective (Bofinger, 2011) and may even increase volatility (Dominguez, 1998).

Since Nepal has adopted a fixed exchange rate with INR, the role of the NRB in the local foreign exchange market is principally to ensure orderly conditions. NRB focuses on the liquidity and a reasonable band in the cross rate of the convertible foreign currencies with respect to the outcome of the INR/USD rate multiplied by the peg rate. NRB, as a responsible Central Bank, always defends the peg system and the existing peg rate prevailing in the country. To sustain this objective, NRB regularly intervenes in the local foreign exchange market, mainly to mop up the excess foreign exchange liquidity, which is subsequently used to buy INR.

The Nepalese foreign exchange market, though very small, is functioning smoothly. International institutions like IMF and the WB have recommended the pegged exchange rate regime for Nepal which, however, imposes the burden of intervention.

4.12 Concluding Note

NRB's interventions in the domestic foreign exchange market so far have been motivated by an intention to mobilize USD. At other times operations have been undertaken to mobilize INR in order to meet the requirements of BFIs. The existing practice of non-sterilized buying or selling of excess/deficit foreign currency from/to commercial banks does not aim to correct misalignment in the exchange rate but to make the domestic foreign currency market liquid. To sustain the peg system in the short-term, NRB needs to frequently monitor and adjust the volume of INR in domestic market. Among others, the rapidly growing trade deficit with India and high INR demand resulting from deep economic ties between India and Nepal have put pressure on NRB to supply INR in huge quantities. Relative to the volume of USD purchase from commercial banks, the size of INR that NRB purchases annually has risen tremendously. Currently, NRB is not in a position to supply cash INR as required by the public due to rampant uses of INR in the large volume of informal trade with India and Nepal-India open border with high traffic of people.

So long as NPR/INR's existing inflexible peg is not broken, abundant reserves are not built up, reliable as well as diversified sources of foreign exchange earnings are not explored, trade concentration with India is not reduced and restriction is not imposed on free movement of people across two countries, the domestic foreign exchange market cannot be independent from the Indian foreign exchange market. However, in the long-term, Nepal has abundant potentiality in earning INR by exporting electricity to India. This may reverse the present practice of selling USD to buy INR. Nepal would then be in a comfortable position to manage the requirement of the INR in her territory.

With the improvement in the previously mentioned conditions, Nepal can move gradually from a hard peg to a soft peg and then to managed floating as a milestone in future with respect to INR and make the domestic foreign exchange market independent from the Indian foreign exchange market. The exchange rates with respect to other currencies can be determined based on cross rates with respect to USD in the international market. This also demands a freedom for the BFIs in their deployment of foreign exchange reserves.