MONETARY APPROACH TO BALANCE OF PAYMENTS: ITS APPLICABILITY AND POLICY IMPLICATION FOR NEPAL

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I. Introduction

Monetary approach to balance of payments (MABP) is the modern version of the classical price-specie-flow theory developed by David Hume in the eighteenth century, the proponents of this modern version being Johnson (1973, 1977), Mundell (1968, 1971), Frenkel (1971), Musa (1974, 1976), Swoboda (1976) and the economists in the IMF (Polak, 1957; Argy, 1969). The basic thrust of the MABP is that balance of payments is ' an essentially monetary phenomenon', in that the demand for and supply of money play crucial role in its determination[1]. It explains that any excess of money supply (money demand) will be alleviated by an outflow (inflow) of foreign reserves thereby creating deficit (surplus) in the balance of payments. The flow process is in-built in the balance sheet identity of a central bank in which domestic money supply equates a constant multiple of foreign exchange reserves and domestic credit such that the level of foreign reserves adjusts to offset any imbalance between the demand for money and the supply of domestic credit. The fundamental contribution of MABP is its recognition of the importance of stock-flow adjustment mechanism in balance of payments determination.

Some of the features of MABP are in order. First, MABP is macro-economic in nature, i.e. the theory explains overall balance of payments (or the exchange rate) by focusing directly on the interaction of simple aggregate relationship and has nothing to say about its component parts. Second, surplus (deficit) in the balance of payments (BP) is the outcome of disequilibrium in money market and such BP disequilibrium is self-correcting unless it is sustained by policy actions. Third, demand for money is a stock relation and international reserves are determined by adjustments of the money stock. Fourth, measures like devaluation, import control and tariff have only transitory effects on the balance of payments and exchange rate change is only a substitute for changes in domestic credit which operates on the BP through real balance effect. Fifth, Walras's law relation between excess demands and supplies in various markets is the key to the analysis of the BP. Sixth, the theory is valid in the long-run when the assumptions of money market equilibrium (i.e. real quantity of money in any country can not exceed the real quantity demanded), wage-price flexibility and equalization of prices of traded goods in all countries are more applicable. In the short-run, non-monetary factors are also supposed to

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1. This does not, however, mean that balance of payments is an 'exclusively monetary phenomenon' because MABP takes explicit account of the influence of 'real' variables such as the level of income and interest rate on balance of payments (see Musa, 1976)

exert some impact on the BP. Last, the stock of money is endogenous as it is linked with the BP of the country. In the absence of sterilization, monetary authority can control only the composition of the money stock but not the quantity per se.

The basic version of the MABP is based on the assumptions of stable demand for money that is a function of a few macroeconomic variables, perfect arbitrage in goods and capital markets which tend to equate prices and interest rates respectively across countries, price flexibility and full employment, equilibrium in the money market[2], no sterilization policies by the authorities and fixed exchange rate regime[3] .

With these assumptions, the proper framework within which to analyse the disturbances on the overall BP is the money market. According to Walrasian law, the sum of the flow of excess demand for goods and securities, i.e. deficit in the BP, must be equal to the flow excess supply of money. Surplus (deficit) in the BP can be formulated as follows:

$$B = \phi [M^D (...) - M^S] \ldots \ldots (1)$$

Where, B = changes in international reserves, M^D = demand for money, M^S = Money supply, and ϕ = desired (usually constant) speed of adjustment of the M^D and M^S to each other.

Since the BP is connected with a flow excess supply or demand for money and/or a stock adjustment in the money market, BP is a monetary phenomenon. But this does not preclude the effect of non-monetary factors on the BP. Proponents of MABP posit that the effect of such factors should also be analysed within the framework of monetary analysis[4] . Musa (1976) argues that capital mobility, non-traded goods, sticky prices, inventory accumulation, disequilibrium behaviour, growth and many other complications will not provide any escape from the essentially monetary character of the BP, particularly in the long-run. If a country adopts commercial policy instruments like tariff, quota, exchange control, etc. this reduces the volume of imports below its free market level. This pushes upwards the domestic price of importables and, through substitution, the general level of prices. When prices rise, there is an increase in the stock demand for money balances, and if the increase in demand is not met from domestic component of the money stock (i.e. domestic credit), the same is met from external component (foreign assets)

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2 This occurs because 'the residents can get rid of or acquire money either through the international market for commodities or through the international securities market' (Johnson, 1973).

3 But this is not a necessary assumption for, if exchange rates are flexible, MABP becomes a theory of exchange rate determination without distorting the main thrust of the theory.

4 Musa (1976) argues that the effect of a tariff on the BP can not be analysed except in an explicitly monetary model. He holds that the argument that tariff improves BP by discouraging imports is fallacious, and shows that in the long-run tariff has no effect on BP thought of as a flow but has an effect on the level of reserves through the effect on long-run demand for nominal money balances.

thereby causing a BP surplus (or a reduction in deficit). Similarly, the theory does not rule out the impact on BP of increase in the prices of key export goods.

In spite of attempts to relax many of the assumptions, the MABP has faced several criticisms. Tsiang (1977) opines that the so-called Walrasian law is a much abused and highly tricky concept in monetary economics which is more to confuse than to enlighten, and the basis of MABP that the law relation between excess demand and excess supplies is the key to the analysis of the BP is unfounded. Further, he argues that the formulation of BP equation (as shown in eq. 1) has little predictive value unless M^D can be precisely specified and is known to be stable[5]. Similarly, Hossain (1988) argues that MABP can not tell anything about whether any change in foreign exchange arises from changes in the trade account (or current account), capital account or a combination of the two; MABP thus overlooks many issues that are important for the pursuit of economic policy[6]. It is also argued that empirical studies on MABP are only an artifact than a confirmation of the theory; this is because the estimated model is dominated by the money accounting identity which has no empirical content. Whiteman (1975) points out that MABP is not applicable to current problems because it neglects short and medium term issues which are to be analysed for forcasting and normative policy prescriptions. The most talked criticism against MABP is the assumptions it holds, particularly the exogeneity assumptions of domestic component of the money supply, of prices and interest rate and of the level or rate of growth of real income. The most controversial is the assumption of exogeneity of domestic credit, for it implies that monetary authority does not sterilize reserves via some changes in domestic credit (Johannes, 1981). If monetary authority follows some accommodative monetary policy by sterilizing (even partially) the impact of reserves on money supply, then the problem of reverse causation will arise. This will create simultaneous equation bias to all the empirical studies based on single equation specification[7].

Regardless of the weaknesses of MABP, it is relevant in our context for various reasons: (i) it provides less complicated empirical framework for policy evaluation as compared with alternative analysis, (ii) by aggregating current and capital accounts, it suggests that a country can sustain deficit in current account by attracting foreign capital and maintaining a surplus capital account, (iii) in a country where domestic credit is adopted as a major monetary policy tool, use of MABP is relevant, (iv) monitoring of the

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5 Tsiang (1977) argues that transaction demand theory of money (implicit in the MABP) is theoretically inconsistent. He exhibits that the ratio of volume of trade to income has a significant bearing on the demand for money in open economies, which none of the proponents of MABP have recognised. Once this variable is recognised, the whole money demand relation becomes less stable.

6 For instance, the persistent current account deficit may be balanced by capital inflow. MABP implies that it would create no problem so far BP is in equilibrium. But the real situation is that the country is living beyond its means i.e. absorption is exceeding income.

7 But this is countrer argued that the authorities may adopt sterilization policies in the short-run but such policies do not continue in the long-run because the authorities will either run out of domestic credit if BP surplus persists or will run out of foreign reserve assets if deficit persists (see Hossain, 1988).

external sector as a conditionality for multilateral loan (particularly the IMF and IBRD loan) also focuses on the overall BP as the target variable, and (v) it establishes a direct relationship between money stock and balance of payments which no other theory can do. Further, many of the assumptions of MABP hold in our context. First, the money demand function is stable. Second, Nepal maintained a fixed exchange rate regime for a long time. Third, Nepal is a small open economy and its openness to India, the major economic partner, is reflected in free trade, capital flows and labour mobility. Fourth, Nepal is a price taker in international market and international prices can explain a sizable portion of the variation in domestic prices in the long-run. Last, MABP provides a convenient framework for an analysis of discrete changes in exchange rates which Nepal opted for during the study period.

II. Empirical Studies

Review of the empirical studies based on the monetary approach to balance of payments reveals that a large number of the studies have obtained results consistent and favourable to the MABP. Examining MABP for Australia, Zecher (1976) found that Australian reserve flow had one-to one negative relationship with changes in domestic credit and money multiplier and one-to-one positive relationship with the growth of real income. Empirical study of Sweden by Genberg (1976) also observed negative relationship between domestic credit and foreign reserves. Estimation of the reserve flow equation using 2SLS method did not alter the findings of OLS estimation indicating the absence of sterilization policy. He argued that sterilization would imply (i) an extraordinary stability of the central bank's behaviour with respect to policy formulation and (ii) the amount of sterilization of a magnitude consistent with the demand for money which was implausible to attain. Bean's (1976) estimation of the reserve flow equation for Japan also indicated that the authorities could peg reserves by manipulating the domestic component of the monetary base.

Replication of the reserve flow equation for developing countries, however, produced mixed result. In a study of three developing countries - India, Pakistan and Thailand Uddin (1985) found the model to explain satisfactorily the reserve movement in Thailand, but not in India and Pakistan. For India, both the reserve flow and sterilization equations fared badly. For Pakistan, the results were relatively more encouraging but not fully satisfactory. This was attributed to the strict exchange control policies exercised by the authorities. For Thailand, both the reserve flow and sterilization equations were satisfactory suggesting that the authorities could attain desired level of international reserves through the control of domestic credit. But Bhatia's (1982) study for India exhibited a strong relationship between net domestic credit and balance of payments. Similarly, Kannan (1989) also observed monetary disequilibrium affecting BP significantly in India. He also examined the impact of excess money demand on the various components of the BP and found that most of them were affected by monetary disequilibrium. But Raghavan and Saggar's (1989) finding was at variance with that of Kannan. Their study exhibited a very ambiguous direction of causation between reserve flows and domestic credit. Their conclusion was, therefore, that MABP was not an appropriate model for explaining movements of reserve flows in India.

In a comparative study of the impact of exchange rate changes and changes in domestic credit on BP in developed and developing countries, Connolly and Taylor (1979) observed that the impact did not differ greatly. They found exchange rate devaluation to improve BP unless accompanied by acceleration in domestic credit. The study exhibited that acceleration in the rate of growth of domestic credit exerted approximately equal deterioration in the BP as a proportion of the money stock.

In a study of the U.K., Akhtar, Putnam and Wilford (1979) observed changes in reserve flows 'closely and reliably related to fiscal variables underlying domestic credit'. They argued that domestic credit did not necessarily be a monetary variable, but a fiscal variable when largely composed of government debt held by the central bank. Their result showed that the same effect on BP that could be achieved by changes in money stock would also be achieved through changes in government expenditure, taxes and public borrowing from the private sector.

Sundararajan's (1986) general equilibrium model of the trade balance and inflation in India was a synthesis of the monetary and elasticity approaches to the BP. Basically intended to compare the dynamic responses of devaluation with the response of tight credit policy, his study found a one per cent reduction in domestic credit to have a similar effect on the BP as a 10 per cent devaluation had in the short-run.

In a test of the MABP for Nepal, the only one study conducted so far, McNown (1980) specified the estimating equation by choosing the ratio of balance of payments to money supply as the dependent variable and changes in exchange rate and domestic credit of the banking sector as the independent variables, and by clubbing together foreign prices and real income growths and treating them as constant. He observed a negative and nearly one-to-one relationship between domestic credit and balance of payments and positive relationship between exchange rate changes (measured in terms of domestic currency per unit of foreign currency) and balance of payments.

III. Model Specification

Following the general practice, we have derived the balance of payments equation from the system of money market equations consisting of the demand for money, the supply of money and an identity showing equilibrium in the money market. The demand for money function is specified as:

$$M^D = P.\ Y_p^{\alpha}\ e^{\beta\pi^*} \qquad \text{..... (i)}$$

where Y_P = permanent real income, π^* = expected rate of inflation, P = price level, and α and β = income and opportunity cost elasticities of the demand for money (M^D).

The functional form in equation (i) implies that M^D is homogeneous of degree one in the price level, i.e. there is no money illusion in the economy. Permanent rather than

current real income is chosen because (a) permanent income is more independent of monetary policy and is more closely related to real resources and technological changes and (b) permanent income is considered as a more appropriate scale variable compared to current income.

The specification of interest rate in the demand for money function supposed to analyse MABP is viewed as a proxy of world interest rate which is possible only if interest rate in a country is determined by market forces and is susceptible to internal monetary developments. But the interest rate in Nepal was officially administered during the sample period and did not reflect the domestic monetary or international market conditions. Moreover, substitution of assets in the Nepalese economy is mainly between money and physical assets. In such a situation, adoption of interest rate as an argument in the demand for money function (that is intended to analyse BP) is inappropriate. Instead, expected rate of inflation which works as an opportunity cost variable in the process of portfolio substitution between monetary and physical assets is choosen in this context.

Following popular practice, money supply function is specified as:

$$MS = m.\ H. = m\ (NFA + NDA) \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (ii)$$

Where NFA = net foreign assets of the central bank
NDA = net domestic assets of the central bank,
m = money multiplier, and
H = high-powered money

Equation (ii) states that monetary base is composed of domestic and international components.

Equilibrium in the money market implies:

$$M^D = M^S \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (iii)$$

This equation implies that the time is long enough to allow all markets, including the money market, to reach at equilibrium

Substituting equations (i) and (ii) into (iii),

$$m\ (NFA + NDA) = P.\ Y_p^{\alpha}.\ e^{\beta\pi^*}$$

Transforming into logarithmic form,

$$\ln m + \ln (NFA + NDA) = \ln P + \alpha \ln Y_P + \beta\pi^*$$

Differentiating with respect to time;

$$d\ln m + dNFA/(NFA+NDA) + dNDA/(NFA+NDA) = d\ln P + \alpha d\ln Y_P + \beta d\pi^*$$

Approximating by first differences and rearranging, we get:

$$\Delta NFA/(NFA+NDA) = \Delta \ln p + \alpha \Delta \ln Yp + \Delta \beta \pi^* - \Delta \ln m - \Delta NDA/(NFA + NDA)$$

The corresponding estimating equation is:

$$\Delta NFA/H = \alpha \Delta \ln Y + \beta \Delta \pi^* + \varnothing \Delta \ln P - \partial \Delta \ln m - \phi \Delta NDA/H + U$$

Where H = NFA+NDA and U is stochastic error term.

The expected signs and values of the coefficients are:

$$\alpha > o,\ \beta < o,\ \varnothing \cong 1,\ \partial = -1,\ \phi = -1$$

α is expected to be positive because increase in real income will lead to a higher demand for money and if the demand is not met from domestic sources of the money supply, it will be met from foreign sources, i.e. foreign assets, via. balance of payments surplus. The value of α is expected to be around unity if the money demand function is properly specified[8]. Many empirical studies on the demand for money have also observed the coefficient to be around unity. In our case, we expect the coefficient to be greater than unity because of the process of monetisation and saving behaviour of the public which lead to demand for money for causes other than the transaction demand. β is expected to be negative because with higher expected rate of inflation, people desire to dispose the amount of money they hold on foreign goods or securities resulting in a outflow of reserves or the deficit in the BP. $\varnothing$ is expected to be positive and approximately one because, on the assumption of no money illusion, the demand for nominal money balance will be proportional to the rise in prices; if the demand is not met from domestic source of money stock, the same will be met from foreign source, i.e. the surplus in the balance of payments. ∂ is expected to be -1 because a rise in money multiplier will increase money supply and, given the quantity demanded, the excess supply of money is eliminated through outflow of reserves, i.e. deficit in the BP. ϕ, the offset coefficient, is expected to be negative because an increase in money stock through domestic credit expansion creates an excess supply of money, given the demand for it; then equilisation of money supply to its demand is made through an outflow of reserves, i.e. deficit in the BP. If the demand for money equation is correctly specified, ϕ will be -1 even if credit expansion exerts influences on output, prices or the rate of interest (Frenkel et al, 1980). However, if monetary authorities adopt some sterilisation policies, ϕ will deviate from -1. Further, in the absence of perfect capital mobility, it is not possible to dispose (acquire) excess (deficient) money supply through purchase (sale) of goods and securities in the international market; thus the offset coefficient is likely to be small.

Data

NFA and NDA are derived from the balance sheet identity of the central bank

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8 Tsiang (1977) shows how the income elasticity coefficient becomes biased when the estimating equation is misspecified.

where NFA = foreign assets minus foreign liabilities, NDA = domestic credit (credit to the government, government enterprises, commercial banks and the private sector) minus net other liabilities, m = M_1/H, P = consumer's price index (base 1979/80 = 100) and Yp is the three year moving average of the real GDP. Expected rate of inflation is derived from the error learning process. The general form of the equation for deriving this variable is $\pi_t^* = Q\pi_{t-1} + (1-Q)\pi^*_{t-1}$ where π_t = rate of inflation at period t. Several alternative weights (Q) ranging from .1 to .9 are applied to the lag structure and the one that maximises R^2 in the demand for money function is picked up for final estimation of reserve flow equation. For the starting year, $\pi_{t-1} = \pi^*_{t-1}$. The monetary figures are annual averages of the month-end values.

Method of Estimation :

It is assumed that the explanatory variables in the estimating equation are exogenously determined. Real permanent income is assumed to be exogenously determined by non-monetary factors whereas price level is supposed to be exogenously determined by the purchasing power parity whereby domestic price is the function of international prices and the exchange rate of the domestic currency. So is the case with expected rate of inflation. Most importantly, it is assumed that domestic component of the monetary base is independent of its foreign component, i.e. NDA is exogenous to NFA. It means that the central bank does not pursue any sterilisation policy to offset the expansionary impact on high powered money of increase in NFA by squeezing the domestic component of the base. Until we do not relax these assumptions, the equation can be estimated using the ordinary least squares method. So the parameters are estimated by OLS method.

IV. Empirical Results:

The regression of change in net foreign assets of the central bank (regarded as a representative of balance of payments of the country) as a proportion of high powered money ($\Delta NFA/H$) on growth rate of real permanent income ($\Delta \ln Yp$), growth rate of prices ($\Delta \ln P$), changes in the expected rate of inflation ($\Delta\pi^*$)[9] growth rate of the money multiplier ($\Delta \ln m$) and change in net domestic assets as a proportion of high powered money ($\Delta NDA/H$) for the period of 1967 through 1990 produced the following result:

$$\Delta NFA/H = \underset{(3.11)^*}{2.31\Delta \ln Yp} + \underset{(.99)}{.676\Delta \ln P} \underset{(-.03)}{-.0006\Delta\pi^*} - \underset{(-2.72)^*}{1.064 \ln m} - \underset{(-12.5)^*}{1.136\,\Delta NDA/H}$$

$\bar{R}^2 = .867$ F = 38.6 DW = 2.45.

(Figures in parentheses are respective t-ratios, * and ** indicate significant at 5 per cent and 10 per cent levels respectively).

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[9] Expected rate of inflation was estimated with the following equation $\pi^*_t = Q\pi_{t-1} + (1-Q)\pi^*_{t-1}$. The values of Q were assumed between .1 and .9. The R^2 maximizing value of Q was .7. Hence the accepted equation for estimating π^*_t was: $\pi^*_t = .7\pi_{t-1} + .3\pi^*_{t-1}$

All the coefficients in this estimated equation have theoretically correct signs. The coefficient on domestic credit known as the 'offset coefficient' is not significantly different from -1 which shows that each rupee increase in net domestic asset (credit) as a proportion of high powered money will reduce net foreign assets as a proportion of high powered money by the same rupee. The coefficient on money multiplier also reveals that there is one-to-one negative relationship between growth in money multiplier and foreign reserve flow as a component of high powered money. The opportunity cost variable (measured by expected rate of inflation) has shown a very insignificant negative impact on reserve flows. Moreover, the coefficient on real permanent income is significantly different from unity and that on prices is statistically insignificant. This indicates that there may be some relationship between Y_p, P and π^* and the effects of prices are also swamped by Y_P or by π^*.

Alternative estimation dropping the expected rate of inflation from the estimating equation has improved the adjusted R^2 along with a significant coefficient on growth of prices. The estimated equation is:

$$\Delta NFA/H = \underset{(3.96)^*}{2.294}\Delta \ln Y_P + \underset{(3.33)^*}{.655}\,\Delta \ln p - \underset{(-2.79)^*}{1.064}\,\Delta \ln m - \underset{(-12.87)^*}{1.136}\,\Delta NDA/H$$

$\bar{R}^2 = .874$ F = 54.1 DW = 2.45

In this equation, all the coefficients are highly significant having theoretically correct signs. Although the coefficient on prices is less than unity, its hypothesised value (one) falls within the confidence interval at 5 per cent level of significance.The sizes of other coefficients have not undergone any change.

Substituting permanent real income by current real income and the expected rate of inflation by alternative series (one year lagged actual rate of inflation), the reserve flow equation is re-estimated.The result is:

$$\Delta NFA/H = \underset{(3.02)^*}{1.153}\Delta \ln Y + \underset{(4.52)^*}{.953}\Delta \ln p - \underset{(-.28)}{.226}\Delta\pi^* - \underset{(-3.97)^*}{1.71}\Delta \ln m - \underset{(12.21)^*}{1.039}\,\Delta NDA/H$$

$\bar{R}^2 = .863$ F = 37.2 DW = 1.70

In this estimated equation, all the coefficients have theoretically correct signs and are significant at 1 per cent level except for that on $\Delta\pi^*$ which is not significant at any acceptable level of confidence. The 'offset coefficient' is around unity which implies that there is one-to-one negative relationship between changes in net domestic credit and change in net foreign assets as proportions of high powered money. This also indicates that no sterilization policy is adopted by the central bank to neutralize the impact of reserve flow on money supply. The coefficients on real income and prices are also not significantly different from one. Theoretically, the coefficient on real income is expected to be around

unity if the money demand function is correctly specified. The estimated coefficient which is around unity thus implicitly supports that the specification of the money demand function using real income and expected rate of inflation as the explanatory variables is correct. The coefficient on price which is also around unity reveals that full adjustment of price changes in the demand for money and hence in the flow of foreign component of the money stock (i.e. reserve changes) is made within the same period (year) and hence no existence of 'money illusion' in the economy. The coefficient on money multiplier is also significant but its magnitude is greater than the expected value of -1.

Dropping expected rate of inflation from the estimating equation and re-estimating the equation, we get the following result:

$$\Delta NFA/H = \underset{(3.80)^*}{1.21\Delta \ln Y} + \underset{(5.87)^*}{.913\Delta \ln p} - \underset{(-4.32)^*}{1.749\Delta \ln m} - \underset{(11.7)^*}{1.034\,\Delta NDA/H}$$

$R^2 = .869$ $F = 51.99$ $DW = 1.71$

This equation has a better fit compared with the earlier one. All the test statistics have shown improvements. The coefficients on real income and money multiplier have slightly increased, the coefficient on prices has slightly decreased whereas the offset coefficient has not undergone any significant change. This equation explains that change in the net domestic credit as a proportion of high powered money has an unitary negative impact on reserves as a proportion of high powered money.

The estimation of the reserve flow equation with various alternative specifications has manifested that the impact of changes in net domestic assets as a proportion of H has a one-to-one negative impact on the flow of foreign exchange reserves as a proportion of H. This strongly substantiates the hypothesis of the monetary approach to the balance of payments that excess supply of domestic credit, given, the demand for money, will result in a loss of international reserves to remove the disequilibrium in the money market. The coefficient on money multiplier has remained greater than -1 implying that growth in money multiplier has a greater than unitary negative impact on reserve flow as a proportion of H. The coefficient on growth rate of real permanent income has remained greater than two, contrary to the expected value of slightly greater than unity. This indicates that either the specification of Y_p as an explanatory variable or its approximation by three year moving average of the current real income is not appropriate. When current real income is substituted for permanent real income, the resulting coefficient on the income variable is around unity as per the hypothesis. This shows that current rather than permanent real income is the appropriate variable for reserve flow estimation. The coefficient on prices is also around unity implying no existence of money illusion in the economy, i.e. all changes in prices being realised by the people and adjusting to reserve flow through real balance effect.

The role of expected rate of inflation in affecting reserve flow is unrecognised in this estimation. Although various alternative measures of the expected rate of inflation were included into the estimating equation, the result uniformly exhibited that a variable of

this sort had no impact on reserve flows. This might be due to the absence of either information on economic activities and hence generation of expectations regarding price movements or rational behaviour of the people towards price movements.

IV. Conclusion

The empirical analysis of the monetary approach to balance of payments in the Nepalese context exhibits that one unit change in domestic credit as a proportion of high powered money has a nearly proportional negative effect on reserve flow as a proportion of high powered money. Money multiplier also has a greater than unitary negative effect on reserve flow. Rates of growth in real income and prices have a positive effect on the reserve flow which is in contradiction to the Keynesian approach that income and prices have a negative effect on the balance of payments. As the equation pertaining to the MABP has a good fit, we can infer that changes in the domestic component of the money stock have a significant bearing on the balance of payments. The conclusion we draw from this result is that the main focus of monetary policy in Nepal should be balance of payments stabilization. Similarly, the value of the off-set coefficient which is around unity implicitly conveys that the authorities have not exercised any activity to sterilize the impact of foreign exchange reserve on money stock. The coefficient on price, which is also around unity, implies that all goods are traded and any increase in domestic credit which increases domestic prices is ultimately reflected on the balance of payments through increased demand for nominal money balance so that real money balance could be maintained at the desired level. If the authorities do not allow domestic credit to rise, then the additional demand for money is met by disposing goods, services and capital in foreign markets and thus by acquiring foreign exchange assets. However, as there are several restrictions on the free flow of goods, services and capital to and from countries other than India, it can be inferred that most of the monetary imbalances are absorbed by the balance of payments position with India. Moreover, as the monetary approach has a good fit in the Nepalese context, the immediate inference we can draw is that money supply in Nepal is not exogenously determined by the monetary authority, rather it is endogenously determined by the demand for real balances by the public. The authorities, at best, can only determine the composition of money supply between its domestic and foreign components.

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