

MONETARY POLICIES AND OPTIONS FOR DOMESTIC ECONOMIC STABILIZATION IN PAPUA NEW GUINEA

NGO VAN LAM

I. INTRODUCTION

LIKE most other developing economies, Papua New Guinea (PNG) is a primary resources exporting country. During financial years 1972-77, for example, total exports accounted for over 40 per cent of GDP. The principal component, copper, was responsible for about 55 per cent of merchandise earnings. The remainder was divided between coffee, cocoa, and copra (26 per cent), and other agricultural, forestry, and fishery products. The very heavy dependence on foreign trade and the nature of exported commodities render the PNG economy highly vulnerable to cyclical external price fluctuations.¹ These disturbances, coupled with a still developing financial framework, impose serious constraints on domestic economic stabilization.

This paper attempts a detailed analysis of monetary and exchange responses to cyclical export instability. Emphasis is laid on the monetary transition period preceding full financial independence at the beginning of 1976, when PNG assumed power to vary the exchange rate of the kina. Attention is also focussed on relevant policy options available for the maintenance of a hard currency and stable money prices which have been two basic aims on macroeconomic management in PNG [11, pp. 2-3].

II. MONETARY IMPACT OF EXPORT INSTABILITY

Cyclical fluctuations in merchandise earnings tend to exert a highly disruptive influence on internal monetary variables. In theory, the mechanism of credit creation by commercial banks would indirectly aggravate the primary effects of an external disturbance. Contraction in loans and advances may have to take place at a time when private liquidity and demand should be sustained to counter the restrictive impact of an export depression. On the other hand, excessive bank

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¹ For example, the export price index of copper shot up from 100 in 1972-73 to 183 during 1973-74, and declined to 98 in 1976-77. The export price index of coffee (cocoa) was 118 (232) during 1974-75, and 421 (394) in 1976-77. Copra prices were at 87 index points during 1972-73, 277 in 1973-74, 90 between 1975-76, and 189 within 1976-77.

lending during a commodity price upswing may add further inflationary pressures on aggregate money and incomes. This is the famous "classical link" whereby the banks become an endogenous magnifying element of an externally induced instability [3, pp. 40–43].

This classical relationship is operationally dependent on a number of conditions. Firstly, as far as bank supply of reserves is concerned, an export generated surplus of non-bank receipts over payments is the only way to replenish bank liquidity. In other words, the monetary base² is presumably determined fairly rigidly by the size of the trade balance. This in turn implies that the banks have no access to international money markets, that there is no central bank credit extended to commercial banks and that government monetary policy, for various reasons, remains neutral over the export cycle. In their demand for reserves, the banks are assumed to maintain a well defined target relationship between liquid assets and deposit liabilities. This target is presumably not significantly different from the legal reserve ratio. Given these reserve demand and supply conditions, the behavior of commercial banks can be regarded as being a series of more or less automatic adjustments between bank credit and liabilities in response to an externally generated reserve gain or loss over the export cycle.

The second requirement is that, as far as local demand for bank accommodation is concerned, foreign trade financing provides the main source of banking business. Besides, the export sector so dominates the domestic economy that profitable new lending opportunities would be available only during an export upswing. These requisites imply that the volume of private borrowing must be mainly governed by the performance of the trade sector, and that there exist no fiscal and monetary measures officially imposed for stabilization purposes.

The necessary conditions for the full transmission of the initial impact of export instability to domestic monetary variables are highly restrictive. Besides, they appear to be only *partially* applicable to the internal financial environment of PNG. It is true that the trade balance constitutes the most important single factor affecting bank deposits and liquidity, and that trade financing has proved to be the largest source of domestic demand for bank accommodation. For example, credit demand from the export sector averaged 61 and 53 per cent of bank lending for business and total bank advances respectively during 1974–76. The corresponding figures for the financing of import wholesaling and retailing activities were 14 and 12 per cent [13, June 1976, pp. 28–31 and March 1977, pp. 16–19]. However, most of the local banks are subsidiaries or branches of Australian banks. These financial institutions, including the Papua New Guinea Banking Corporation, and the government sector do have varying degrees of access to affiliated financial companies and capital markets overseas. In particular, official obligations repayable in external currencies constituted 65 per cent of total public debt in 1976 [10, p. 130]. Besides, the Bank of Papua New Guinea (BPNG) provides short-term advances to the government, totalling over K6 million

² Consisting of foreign reserves and central bank credit to the government and the commercial banks.

as at June 1977. It is also prepared to act as lender of last resort to the banks especially through the bill discounting facility. However, this option has yet to be taken up by the banks.

Moreover, government monetary policy is by no means neutral over the export cycle. In theory, the legal reserve ratio and other supplementary requirements can be suitably modified. Compensatory open market operations, direct changes in the interest rate structure, qualitative or quantitative credit controls, and moral suasion may be relied on to achieve the desired monetary effect. Finally, variations in the exchange rate can be made, especially when it is thought necessary to insulate the local economy from external financial disturbances. In reality, however, the still-developing nature of the monetary sector in PNG implies relatively limited policy options available for domestic stabilization. Although the BPNG was established in November 1973, complete financial independence, in the form of the separate power of exchange rate determination, was achieved only at the beginning of 1976. In any case, the available measures for monetary control are, as the bank itself recognizes, relatively few in number and of varying degrees of effectiveness.

III. LIMITED FINANCIAL INSTRUMENTS

Open market operations to change the money supply and hence indirectly modify the rate of interest cannot be conducted because, for all practical purposes, there exists no local securities market. Treasury bills of three- and six-month maturities were introduced in October 1974 primarily to provide a short-term outlet for bank surplus funds. Although the BPNG has made a cautious offer to rediscount these papers at attractively lower rates since May 1976, this facility is mainly designed to increase the flexibility of short-term investment options rather than to influence commercial bank lending policies. Besides, the banks are encouraged to deal in bills among themselves so as to even out temporary liquidity pressures. In any case, the bank's ability to redeem commercial bank holdings of treasury papers, which increased from K8.4 million to almost K20.5 million between 1975-76, would certainly be rather limited due to potential foreign reserve loss through the creation of high-powered money, consisting of cash and bank deposits at the BPNG, and a statutory limits on all forms of credit to the government in any particular year.

As far as government securities are concerned, most long-term paper, which accounts for about two-thirds of internal public debt, is placed with and fully held by various banks and provident funds mainly in the form of private treaty loans. This provides rather limited scope for private bond transactions. In this connection, however, it is worth noting the potential of monetary control afforded through deposits by the governments and other statutory bodies within the domestic banking sector, which totalled over K69 million in 1976. By switching these substantial balances between the BPNG and the commercial banks, the government may be able to alter bank liquidity and hence loans and advances in a manner similar to open market operations. The only difference is that when

securities are sold or bought by the BPNG, the private money supply is accordingly modified. Such a locational transfer policy may be useful when differential controls over the liquid reserves of individual banks are desired [3, pp. 57–58].

The effectiveness of statutory reserve variations in influencing volume and cost of domestic credit is also seriously reduced because of the existence of a substantial level of excess liquidity held by the banks. The quarterly average of approved local assets as a proportion of total deposit liabilities amounted to over 50 per cent between June 1976 and May 1977, compared with the required ratio of only 15 per cent for 1976 and 25 per cent in May 1977. The existence of such surplus reserves must, however, be interpreted with caution. The proceeds and credit requirements of merchandise exports, particularly copper, normally exert a very strong influence on bank deposits and hence liquidity. Thus, fluctuations in external prices, the disbursement of BCL (Bougainville Copper Ltd.) profits and corporate tax liabilities, and pronounced cyclical or seasonal movements in export credit demand produce marked changes in bank balance sheets. For example, about K54 million was transferred to the BPNG in November 1976 as the first instalment of BCL annual tax obligations to the government, and this produced a considerable reduction in bank term deposits. In addition, the behavior of other large time deposits, of K100,000 and over, is also very volatile as they are primarily governed by export trade performance [1, pp. 38–39].

Even with these reservations, the bank liquidity ratio, which never fell below 40 per cent, has been very high by normal commercial standards.³ Two interesting implications follow. Private banks in PNG do not necessarily adopt a more aggressive lending policy merely as a result of a cyclical increase in export earnings and hence bank reserves. Assets in excess of the statutory level could easily be invested with overseas affiliates before October 1975, or could be placed as interest-bearing deposits at the BPNG since then. On the other hand, the banks are certainly able to withstand fairly substantial pressures on their liquidity without immediately curtailing credit availability or raising the cost of bank accommodation. Thus, domestic money creation appears to depend primarily on factors other than the available volume of bank reserves. This observation is well illustrated by the behavior of bank loans and advances during the initial period of monetary independence. Internal credit was not only sustained but actually increased by about 13 per cent despite an absolute decline of bank liquid assets from K128.6 million to K84 million between September 1975 and June 1976 [13, March 1977, pp. 4–5]. It is therefore clear that if the classical link operates at all in the PNG context, it does so only on the side of local demand for investible funds.

The second implication relates to the rate of bank earnings on excess reserves and hence the cost of credit. From October 1975, bank overseas balances no longer formed part of total approved liquid assets. Subsequently, the bulk of bank external resources were localized, at comparatively attractive rates, in fixed

³ The ratio of approved liquid assets to deposits was raised by 2 per cent per month, from 15 per cent in December 1976 to 25 per cent in May 1977. Such a significant adjustment was, however, designed purely to widen the scope for future monetary action.

or call interest-bearing deposits with the BPNG and, to a lesser extent, in treasury bills. Thus once controls over capital transaction⁴ with Australia became operational at the beginning of 1976, the bank was in a position to determine the cost of loans and advances through the rates it offers for bank lodgements of excess reserves. This commenced in May when the returns available at the BPNG were no longer linked with those available in Australia.

Besides the capacity to alter the cost of bank money, two other instruments are available and have been relied on for domestic financial control, namely, selective credit guidelines and exchange rate variations.

IV. FINANCIAL POLICY SINCE INDEPENDENCE

Monetary policy traditionally has been designed to modify aggregate consumption and investment demand so as to achieve an acceptable balance between the rate of price increases and the level of employment. Thus, in a situation where total expenditure appears to be unable to absorb the available amount of goods and services at the ruling market prices, a cheap money policy is called for and vice versa. However, the most important financial priorities in PNG have been the maintenance of stable external and domestic values of the kina. Monetary policy has therefore been primarily intended to *limit* local credit demand to a level judged consistent with the relatively limited amount of foreign reserves available, particularly during the initial period of financial independence [1, p. 46].

Consequently, although the economy was in a serious state of depression in 1975 no downward pressures on the prevailing rates of interest, which were still closely reflecting the conditions of high inflation and liquidity squeeze in Australia, were applied. Such a move was not then possible as capital transactions with Australia remained unrestricted until the beginning of 1976. Besides, it would also be contrary to the fiscal policy of expenditure restraint for 1975-77, and could therefore have proved counter-productive to the hard currency strategy, given the very high private propensity to import and remit overseas.⁵

In fact, as a result of the appreciable fall in bank term deposits partly associated with the anticipated speculation against future exchange movements and kina convertibility, interest rates were permitted to *rise* marginally above the Australian levels throughout the first three quarters of fiscal year 1976-77. For example, the weighted average rate on overdrafts was increased from 12.03 per cent in December 1974 to 12.40 in November 1975 and 12.41 in May 1976

⁴ All current payments, and remittances of excess expatriate earnings, overseas owned capital and dividends can, however, be made without any restrictions [1, pp. 52-53].

⁵ The behavior of private remittances, which averaged 28 per cent of f.o.b. merchandise imports between 1972/73 and 1975/76 [8, p. 15], and imports tend significantly to narrow down the scope for domestic expansionary options in a recession. This is because such policies would quickly generate extra import demand and thus potential payments problems. On the other hand, private external leakages, which are essentially cyclical in nature, would be of considerable assistance to monetary stability in an expansionary environment. They help reduce inflationary pressures on output and prices, and potential credit multiplication through a reduction in the monetary base.

[13, p. 32]. At the same time, qualitative restrictions on bank lending were introduced in March 1976. Preference was to be given to investment demand which would earn or save foreign exchange or include a high PNG equity [1, p. 47]. Subsequent to these monetary developments, bank loans and advances, apart from seasonal needs, remained fairly stable at a lower level. The private sector as a whole appeared to be cutting down on working capital requirements by reducing stocks [13, p. 3].

The persistent rise in bank deposits from about the second half of 1976 clearly signified that the monetary transition had been successful and that the trade balance had become strong again due to the coffee and cocoa price boom and the partial recovery of copper unit values. These events, together with major confidence-boosting developments in Australian aid and Ok Tedi mining negotiations early in 1976, initiated several important monetary and exchange measures. The BPNG had apparently been feeling its way towards an independent interest rate policy in conformity with internal economic conditions through the introduction of attractive call and term deposit facilities in May 1975. This independent line became evident when exchange control was extended over all capital transactions at the beginning of 1976, effectively closing off Australia as a financial repository for surplus bank assets.

However, it was not until May that the rates offered to bank lodgements at the BPNG ceased to reflect the Australian interest rate structure. Rising net overseas, about K30 million for 1975-76, and bank liquidity permitted a more expansionary credit policy through the two interest rate reductions of half a percentage point each in September and December 1976. Due to the usual time lag in bank adjustment procedures, these downward movements were not expected to be fully implemented until well into 1977. However, available information indicated continuing depressed credit demand from non-export activities over the March quarter. Seasonal business needs of tax financing were not reflected in the pattern of bank advances, thus pointing to a relatively high level of liquidity in the private sector [13, March 1977, p. vi]. Due to smaller than expected export advances for coffee and as a further stimulus to the domestic economy, the rate of interest was reduced by another three quarters of a percentage point in July. Papua New Guinea's interest rate policy has therefore been set solely in line with internal conditions since the second half of 1976, although the primary monetary objectives have remained as external convertibility and stable money prices.

Another financial instrument which has been relied on to carry out government policy emphases is variations in the exchange rate. Since its introduction, the kina has been pegged to the Australian dollar, initially at one for one. However, the Australian currency was slightly depreciating, relative to the value of the basket of currencies to which it was tied, in the first half of 1976. The kina was therefore marginally undervalued and this produced an unnecessary upward pull on domestic prices of non-Australian imports. In July 1976, the kina was revalued by 5 per cent against all currencies so as to restore its former relationships, particularly with the U.S. dollar and Japanese yen, and to partially insulate internal prices from world inflationary influence [13, Sept. 1976, p. 6]. After the November

Australian devaluation of 17.5 per cent and the subsequent series of marginal upward adjustments in the Australian dollar, the kina was permitted to appreciate by about 10 per cent against the dollar in December.⁶ This positive realignment was again made so as to protect domestic purchasing power against rising prices from PNG's most important import supply source.

As analyzed in detail elsewhere [6, pp. 27-32], the anticipated benefit of a revaluation in terms of lower internal unit values for imported commodities has apparently not materialized in practice. A more important factor in the determination of retail import prices seems to be the size of an variations in the gross profit margins of the import distributing and retailing sector. The magnitude of such markup has been very substantial especially on items not subject to regulatory price controls [6, Table 6 and Appendix 3]. It follows therefore that the price effects of a revaluation, unless very substantial, can easily be absorbed by an increase in gross margins. Or conversely, real internal purchasing power could be preserved or even raised without the necessity of an exchange appreciation. The necessary conditions are a voluntary compression of wholesale and/or retail markups, constantly vigilant efforts to enforce official price controls, and/or the encouragement of a greater degree of competition within the import sector through, for example, the establishment of a statutory trading arrangement for direct imports and sales to national customers [6, pp. 34-35].

V. PROBLEMS IN FINANCIAL CONTROLS

From the above analysis of policy instruments and operations since independence, it is clear that the two major financial measures in PNG in the near future will be selective credit guidelines and variations in the interest and exchange rates. Although the former can directly influence the level and direction of bank lending, they are essentially negative in their impact. The banks cannot easily be persuaded to make loans which they expect to be unprofitable and/or risky merely by their being prevented from accommodating requests which are officially regarded as of low priority but which are, nevertheless, highly remunerative and safe. One of the solutions to the problem of "commercially" unsound credit proposals from national borrowers in high priority areas is through a government-sponsored expansion of the lending resources and activities of the Papua New Guinea Development Bank. From a longer-term view, a detailed review of commercial operational practices should be made so that the necessary modifications to render traditional bank lending procedures more suitable to local needs can be carried out.

With respect to the second set of policy measures, the effectiveness of variations in the rate of interest (being the cost of money over time) and the rate of exchange (being the cost of currencies across nations) depends largely on the extent to which the level and fluctuations of overseas capital (which have proved to be very disruptive to monetary stability elsewhere) can be controlled, and the costs of

⁶ This represented, however, a net devaluation of about 6 per cent relative to other major currencies.

controlling them. There are very few appropriate *indirect* instruments. Specific taxes may be devised, but they have to be widely based and their rates should be readily adjustable. Even so, they may not be able to cover all possibilities and loopholes, and taxation laws are not easily amended in the face of operating difficulties. Monetary measures such as variations in the statutory ratio, the imposition of a variable interest-free deposit ratio for capital inflow at the BPNG etc., can be implemented. However, they may produce an *unintended* change in the general direction of monetary policy and thus, prove to be counter-productive.

Direct controls on foreign capital movements are therefore essential and are at present being enforced by the monetary authorities in PNG. However, even on the basis of the eight national aims or national investment priorities, it is always difficult to arbitrarily separate socially desirable capital movements from potentially disruptive ones. Funds intended for one purpose may often arrive under the guise of another or be dressed up to suit official criteria. Besides, the longer any set of controls is kept in force, the more likely it is that ways of circumventing them will be devised. Indeed, one of the more notable consequences of increasing capital fluidity across national frontiers during the past decade is the ability of international money to discover new channels for movements [2, pp. 23–24]. Furthermore, problems will arise when there is no cash transaction in the passage of funds. To be effective direct official controls must necessarily be extended to cover external trade in response to the growth and incidence of substantial suppliers' credit and transfers among multi-national businesses. Thus, a contraction in internal money can be offset to a significant extent by an expansion of trade indebtedness, a reduction in royalty and interest charges borne by, or the amount of dividends and contribution to group expenditure expected from, the local subsidiaries or branches. At the same time, international companies can effectively alter their holdings of overseas currencies through appropriate transfer-pricing practices among the network of affiliated firms. To overcome these complications requires an extremely sweeping set of controls on both capital movements and intra-corporate transactions. Such comprehensive regulations are presently neither attempted by the monetary authorities nor desirable, given PNG's high degree of dependence on trade and capital exchanges. Indeed, the costs of such comprehensive interference, in terms of resource distortions and possible official corruption, could be greater than the benefits gained from potential stability.

Another problem, which has also to be dealt with by financial authorities elsewhere, relates to the question of disruptive private attempts to anticipate official policy variations in the rates of exchange and/or interest over the export cycle. These variations exert three major effects. They directly influence the short-run relative prices of, and hence cause appropriate substitution between, domestic and foreign goods or between government paper and other financial assets. Secondly, they indirectly modify the levels of private wealth through their impact on the internal or overseas real values of foreign or domestic financial assets. This wealth effect would in turn initiate subsequent changes in aggregate con-

sumption and investment demand for goods and services. Moreover, when modifications in exchange and interest rates are correctly anticipated or speculated against, an increase in the private net worth of those who benefit or is always achieved at the expense of the public sector [12, pp. 2-4]. For example, if government paper or foreign currencies are expected to rise (fall) in price, such assets would be quickly acquired (disposed of) by the private sector dealing with the central bank. Since the public sector acquires assets which are expected to decline in value, there occurs a transfer of high powered money from the central bank to the banking network when private speculation is validated. Accurate anticipatory interventions thus stimulate inflation and balance of payment deficits regardless of the *direction* of change in financial policy [12, pp. 16-21].

It follows that well-judge speculation not only tends to reverse the substitution and wealth effects of exchange or interest rate variations, but also prevents policy instruments from fully achieving the desired impact. The burden of adjustments placed on other official measures is therefore increased. Even in cases where anticipation tends to reinforce the intended policy influence, the strength of adjustment may be greater than originally allowed for. The existence of private speculation against variations in the rate of exchange or interest thus greatly complicates the official task of economic stabilization.

Given the importance of the current and capital accounts and the fixed but adjustable exchange (and interest) rate regime within the financial structure of PNG, the potentially disruptive impact of private speculation, although presently an unknown quantity, cannot be discounted. The solution is probably not to maximize surprise with *large* and *sudden* policy alterations. As may be expected with any sharp shock treatment, such measures would produce major upsets of plans since the substitution and wealth effects, especially those associated with shattered expectations, would be correspondingly large and serious. Entrepreneurs could suffer severe losses and the profitability of current and capital transactions be substantially affected. Such occurrences would generate both instability in and damage to the economy, and initiate risk-averting resource allocations which would increase future costs. In this connection, Australia's experience in the early 1970s may be of some relevance. Economic adjustments there were characterized by a dramatic record of sizable and discrete variations. On the one hand, the lack of smoother changes (arguable in itself) was both the cause and effect of the unstable real supply of money and the unstable real interest rate as well as the general erratic behavior of inflation. On the other, it induced a high rate of bankruptcies and speculative gains which created appreciable socio-economic tensions [12, pp. 27-30].

VI. APPROPRIATE FINANCIAL RESPONSES FOR ECONOMIC STABILIZATION

The government of PNG has adopted a stabilization approach which is likely to generate a steady expansion of domestic demand through the slow but stable rate of real expenditure growth of 3 per cent per annum [5, p. 17]. Such a spending pattern would involve considerable fiscal and exchange surpluses during

the upswing phase to serve as reserves for the financing of appreciable budget and payments deficits in the subsequent downturn. An accommodating monetary "strategy" or approach must therefore be envisaged to facilitate fiscal stabilization and help maintain both external convertibility and stable money prices.

A. *Indirect Responses*

The creation of an efficient framework for the mobilization and transfer of excess private income to the government sector, through the organized money market, should be one of the more important monetary objectives. Indeed, so long as a substantial amounts of surplus urban and village earnings can be channelled through captive savings institutions or the banks during an export boom, action to sustain or even promote a higher rate of internal growth may not necessarily be incompatible with general financial stability. This is because domestic borrowings from compulsory savings sources and (under certain conditions to be explored shortly) the banking system tend to provide a non-inflationary means of deficit financing. The importance of such a channel depends on the spread on the banking habit, and thus the dis-hoarding of (presumably) large accumulated cash balances within the village sector.⁷ It also requires the development of a more extensive network of branch and inland banking, and the growth of such captive savings institutions as the proposed National Provident Fund and, to a lesser extent, the marketing boards.

The shift of surplus private or bank resources can also be influenced by the BPNG by means such as the exclusion of overseas balances from the definition of approved liquid assets in October 1975. This, de facto, made possible a partial mobilization of the bank's external reserves through a substantial rise on treasury bills on issue, from K8.4 million to K20.5 million between 1975 and 1976. However, the excess lending power of commercial banks has remained unchanged because treasury paper constitutes an approved liquid asset. An examination of the current reserve structure of the banks also reveals a considerable potential for non-expansionary deficit financing. For example, interest bearing fixed deposits for periods from one to twelve months at the BPNG averaged almost K50 million for 1976 and totalled over K100 million as at March 1977. The corresponding figures for bank call deposits of between one and thirty days are K23.7 million and K20.4 million respectively [13, Mar. 1977, pp. 4-5]. Another de facto transfer of these surplus assets could be made by a redefinition of the composition of approved liquid reserves. For example, the banks may be required to hold or invest a certain percentage of their fixed and/or passbook savings deposits, both of which amounted to K165 million in March 1977, in government securities with a maturity date of more than three years.

Although both short-term treasury bills and longer-term government bonds

⁷ The ratio of currency in private circulation over demand plus savings deposits, at just over 21 per cent for 1976, is certainly not a good indicator of rural hoarding behavior. This is because this ratio is seriously affected by the much lower propensity to hold cash of the high income earning expatriate population and other urban dwellers. Informed estimates of the probable amount of hoarding by the rural export sector as a result of the current coffee and cocoa boom ranges between K8 million and K10 million.

may be regarded as equally suitable means for the channelling of private or bank resources to sustain excess public spending, deficit financing through bonded obligations is, from the government's viewpoint, much more preferable because private savings create long-term public assets. More importantly, from the standpoint of monetary policy, large holdings of treasury paper are not desirable because they can easily be activated to underwrite private consumption, remittances, or capital outflow. Moreover, deficit financing by means of treasury bills is highly expansionary as it involves only a change in the structure of banks' interest-bearing liquid reserves with bank surplus lending power being unchanged. Thus, when loan proceeds are spent, the banks will find themselves with enlarged deposits without any reduction in the initial level of their liquid assets.

B. *Direct Responses*

Appropriate financial measures to implement the required policy strategy and emphases depend largely on economic conditions prevailing at the particular phase of the export cycle. Also, monetary instrument settings may have to be more extreme or severe than necessary because fiscal and financial policy may individually pull in opposite directions.⁸

1. *An export price boom*

Cyclical increases in external earnings would produce sizable budget surpluses, increase Mineral Resources Stabilization Fund (MRSF) and marketing board accumulations, higher cash holdings by village smallholders, greater incomes and savings within the corporate export sector and, through the consumption multiplier effects, increased earnings flow into local manufacturing and import-substituting activities. All these factors contribute to the accumulation of a large payments surplus. At the same time, increasing bank deposits and reserves would exert a downward pull on the rate of interest. Greater local demand and the reduced cost of credit are highly conducive to the emergence of excess aggregate expenditure. The banks may decide to accommodate an excessive volume of credit requirements due to the multiplicity of profitable lending opportunities. Alternatively, surplus demand for labor may appear in separate pockets or sections of the economy because, among other factors, under the present wage indexation arrangements real incomes tend to lag behind price increases by at least six months and any immediate productivity gains would accrue to capital owners.

If corrective measures are to be taken, three options are available. Firstly, selective increases in taxes may be imposed. Their impact depends on the kind of fiscal levies that are raised,⁹ the accuracy of private anticipation of tax changes

⁸ Since each set of policy measures may be designed to achieve the objective for which it proves to be most efficient, it is not necessarily inconsistent to have a combination of relative fiscal stimulus and monetary restraint. See [7, pp. 70-76].

⁹ Generally, indirect taxes on goods and services tend to be more deflationary in real terms than same-yield income levies. This is because the direct tax is paid partly out of savings while the entire sales tax would fall on consumer outlays, quite apart from their initial price effects [14, pp. 47-49]. See also [4, pp. xxii-xxiv].

and the magnitude of accompanying avoidance responses in terms of postponement or advancing of import orders or export initiatives etc., and recognition and implementation time lags. However, fiscal settings tend to be irreversible and the dampening effects of higher levies on investment and labor demand, and hence economic activity, in the next downturn must also be taken into account. Alternatively, monetary restraint can be introduced. A rise in the interest rate would more adversely affect domestic firms than companies with overseas affiliations or with access to external capital resources, for reasons already noted. An interest rate increase can be supplemented by selective credit controls so as to influence the volume and direction of bank credit to particular sectors or activities. Thirdly, the exchange rate can be revalued. This may reduce planned overseas investment in local projects due to higher domestic wage and other costs in external currencies, and affect the level of demand for bank loans from import-competing industries and the export sector.

The implementation of the first two measures would curb imports and further improve the balance of payments, even if capital inflow in response to higher interest rates could be strictly controlled. It would also loosen the original degree of monetary restraint for two reasons. To begin with, credit needs of the government and the private sector would be lower. Moreover, there would be higher payments surplus and increased bank liquidity. The third option would tend to dissipate the stock of foreign reserves and reduce the rate of monetary expansion through smaller export proceeds and faster import flow, on realistic assumptions concerning the price elasticity of the relevant demand schedules. It may, however, prove to be a necessary measure, especially if the export upswing is also accompanied by rapidly overall inflationary pressures. Such a development may be attributable to excess aggregate spending, and/or rising import unit values from overseas disturbances. In this case, a revaluation would help reduce the magnitude of imported inflation and, at the same time, provide some breathing space for domestic processes of expenditure adjustment through appropriate monetary restraints.

2. *An export recession*

With the approach of a cyclical downturn, the developments during the upswing phase will be reversed. Reduced merchandise earnings and tax revenue gradually produce rising balance of payments and fiscal deficits. However, the counter-cyclical operations of the MRSF mean that excess public spending would be smaller than otherwise. Similar operations by the marketing boards would mean greater exchange loss than otherwise. To begin with, the running down of accumulated stabilization levies through an export unit bounty would help sustain aggregate rural consumption, and thus indirectly maintain urban employment and government tax flow. In addition, the maintenance of a steady rate of public expenditure, financed partly from surplus balances at the BPNG and MRSF, would preserve public sector demand, and hence the levels of urban employment and fiscal receipts. At the same time, the recession is likely to cause monetary contraction since pressures on bank liquidity due to reserve losses,

coupled with relatively constant credit demand from the non-export sector, would only partially be offset by increased government deficits and reduced loans and advances to export activities. The subsequent upward pull on the rate of interest would add an extra burden on demand internal investment demand and on the task of domestic stabilization.

The hard currency approach implies that suitable monetary responses in an externally generated recession would depend largely on the available stock of foreign reserves, and the rate at which these resources are being drained to finance excess local consumption. Other things being equal, one might expect that the stabilizing accumulation of overseas currencies during the upswing phase should be sufficient to help the domestic economy ride out of a cyclical trough without an appreciable cut in real aggregate spending. In other words, monetary conditions could be eased generally so as to reduce pressures on interest rates, and maintain real wages and employment. However, other factors or events can certainly not be taken for granted. Indeed, it is purely a matter of subjective judgment, based on quantitative assessments of current developments, whether or not the existing reserve stock is sustainable for the duration of the export depression. In the meantime, the rate of exchange drain should and can, indeed, be reduced without appreciably dampening domestic activities.

To begin with, how strongly a budget deficit tends to spur aggregate demand depends primarily on the means, and hence monetary implications, of government borrowing to supplement the running down of accumulated treasury balances. Deficit financing by printing new money, which is both non-redeemable and yields no interest, or by securing BPNG advances against government securities, redeemable or not, is most inflationary and can be ruled out in the context of present statutory limitations and financial priorities in PNG. Secondly, official dis-savings can be made up by the issuing of interest-bearing paper to the non-bank financial institutions or to the banking sector.¹⁰ In the former case, no significant changes in the money supply should occur because there has simply been a transfer of captive surplus private earnings to match excess government spending. Such borrowings would ease bank liquidity problems when spent, and would cause greater external leakages only when the import content of public outlays is higher than that of private consumption. In the latter case, the impact will tend, in varying degrees, to be expansionary and would also tend to create a greater payments drain and associated liquidity pressures. The only exception occurs when the banks reduce the volume of loans and advances to buy non-liquid government bonds, provided that the import content and investment productivity are equal in both sectors.

Thirdly, public deficits can be sustained through overseas loans, which have proved to be the most important funding channel in PNG. By providing additional real resources, in the form of importables and foreign currencies, external borrowings would not only reduce domestic monetary tightness but also make it

¹⁰ Opportunities for non-inflationary financing through sales of bonds to the non-bank public are not available at present due to low average income and the absence of a securities market.

possible to sustain or increase the level of economic activity without immediate payments problems. Government financing during a depression should therefore be biased in favor of long-term overseas loans. The present structure of public debt in PNG clearly indicates that credit-worthiness has not been a binding constraint. For example, official obligations payable in kina accounted for only 26 per cent while borrowings from international agencies and in external currency units, 34 and 40 per cent of total government indebtedness, respectively [9, pp. 130]. The much discussed issue of future debt servicing problems becomes important only when the extra external resources currently available are not sufficiently directed, or do not substitute for and induce other domestic factors towards industries that earn or save foreign exchange. Serious problems arise only when exports cannot be expanded due to resource immobility and/or limited overseas markets. Similarly, debt servicing difficulty can be expected when the rate of external borrowings cannot be reduced in better times. Given these reservations, monetary policy during the subsequent upswing might have to be tighter than otherwise so that extra resources, over and above the normal rate of stabilization accumulation, can be saved for debt repayment commitments. In this case, future growth might be less rapid than otherwise due to excess present consumption.

A more relevant issue appears to be the state of international capital markets. It would indeed be a regrettable coincidence if reduced export demand is the result of inflationary conditions and tight liquidity overseas, as was the case in 1975. If terms are too high and the repayment period too short, then other non-expansionary loan sources, including borrowings from non-bank institutions and even the marketing boards, should be closely examined. It is also worth noting that the experience of Bougainville clearly indicates the need for more carefully timing the initiation of major investment projects.¹¹ It would be a great help to the task of stabilization management if such activities were to start at the beginning of an export depression and taper off during the initial upswing phase. However, the second requirement is not really essential as the government would certainly be able to reschedule some of its expenditure programs.

So far the discussion has been concerned with the possibility of some unique combinations of interest or exchange rate and budgetary position capable of achieving a certain measure of external and domestic stability at a sustainable level of reserve losses and minimum disturbances to consumption and employment, given the exchange constraints imposed by the export recession. It is, however, possible that no such policy combinations may be feasible. In other words, the current subsidization of domestic spending by drafts on accumulated foreign reserves, loans and grants, officially released at artificially low unit prices, may represent a futile attempt to keep down domestic prices and maintain employment as a result of living beyond national resources. Aggregate private expendi-

¹¹ The export recession of 1972, when the Somare government took office, was compounded by the winding down of construction in Bougainville. Employment at the copper project was reduced by over 60 per cent and private fixed investment by over 40 per cent in real terms [15, p. 45].

ture and government programs may thus have to be directly or indirectly cut through tightened fiscal and monetary policy. A downward adjustment in the exchange rate may also be necessary because the maintenance of an overvalued currency would lead eventually to external insolvency.¹²

In this connection, it is instructive to note briefly the possible causes of distortions or divergence between local and overseas cost relationships despite a cautiously restrained expenditure policy, the counter-cyclical operations of the MRSF and marketing boards and a deflationary biased wage indexation approach. Given the importance of imported commodities in the CPI, domestic costs may move substantially out of line because price inflation in PNG's most important suppliers is higher than the world average, especially if these trade partners absorb only a small proportion of PNG exports. For balance of payments reasons, a revaluation may not always be possible, while increased import taxes would certainly push up retail prices of imports and other substitutes and, through a chain reaction, the overall cost structure. A more feasible alternative is the diversification of import sources towards lower cost, more efficient producer countries with (preferably) stable prices, provided that profit margins within the import sector remain unchanged so that reduced import unit values will be passed on to consumers.

In addition, inefficient import substitution developments, particularly if sheltered behind tariff barriers or persistent import controls, would certainly raise local prices and costs in the long run. Alternatively, PNG may be seriously lagging behind other countries, including trade partners, in cost-saving productivity and technological improvements in domestic or export production, due to limited internal demand or considerations of greater labor employment. These possibilities imply that the overall local cost structure could be raised without the apparent existence of excess domestic demand and monetary disturbances (i.e., cost push inflation). They also point to the crucial importance of appropriate technical choice, and hence indirectly to the importance of government terms and incentives relating to investment proposals.

VII. CONCLUSION

The relatively underdeveloped financial structure in PNG also renders the task of insulating the domestic economy against external disturbances much harder due to the very limited range of policy options available. Selective credit controls, and variations in the rates of interest and exchange appear to be the major monetary instruments available for use in the near future. The former are essentially negative in their effects. The impact of the latter depends largely on, among other factors, the degree of effective control of capital movements and current transactions, and the costs of regulating them, and on the importance

¹² Import and exchange controls could impose an artificial payments equilibrium, but these measures would raise both import prices and (through indexed wages) domestic factor costs, distort internal resource allocation, and reduce external investments through impediments to overseas remittances of capital, earnings, and profits.

of private anticipatory or speculative interventions against official modifications of policy settings.

Monetary measures can be relied on to foster indirectly the creation of an extensive framework for the mobilization and transfer of excess private resources, through the financial sector, to underwrite excess public spending. Indeed, so long as the government could rely on non-expansionary deficit financing, action to *promote* growth may not be incompatible with the maintenance of domestic and external stability. An accommodating financial policy designed directly to facilitate official stabilization strategy would have to be constrained by the policy emphasis of external convertibility. However, the rate of exchange drain may be reduced and the stock of foreign currencies may be conserved without an appreciable impact on aggregate demand if overseas borrowings can be secured to meet a major proportion of public dis-savings during an export downswing.

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