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I. Introduction

The three former High Commission Territories of Botswana, Lesotho and Swaziland (B.L.S.) retain a special significance on the African scene by virtue of their peculiar relationship with South Africa. While their geographical positions force them into a high degree of economic and political dependence on South Africa, they are very much a part of Black Africa, and their post independence efforts to arrest a degree of "genuine" independence from their dominant neighbour is a matter of considerable interest to economist and politician alike. This interest is made all the stronger by the widely held view that South African policies towards the three states are establishing precedents for, or are at least indicators of, policies towards those "homelands" of South Africa which are already nominally independent or shortly to obtain that status.

This paper is concerned with one aspect of BLS attempts to obtain a degree of genuine economic independence namely that involving the substantial reorganisation of monetary and financial arrangements which they have negotiated and implemented during the past four years. As well as describing the main features of these changes, it also attempts to critically evaluate the likely implications of the changes for the conduct of economic policy. The paper however begins with a brief sketch of monetary arrangements in the BLS countries prior to 1974.

II. Monetary Arrangements prior to 1974

The position, in brief, was that all three of the countries operated as though they were regions of South Africa. The South African Rand, as issued by the South African Reserve Bank (SARB), had been the sole legal tender in each country since 1961 having replaced the South African Pound which had been in a similar position previously. There had been no explicit agreement to formalise this arrangement although the de facto position seemed to cause few practical difficulties. However it did mean that the "seignorage" associated with the currency issue (i.e. the interest income which holders of currency give up and, in effect, transfer to the issuer) accrued to South Africa and not the BLS countries. The South African

Reserve Bank effectively operated as the central banker for the whole of the monetary area since the common currency was associated with free movement of funds between all four countries and the BLS had no economic instruments available to influence either the internal or the external value of the currency. In particular, only the South African Reserve Bank had the power to provide fiduciary financing. Similarly, there was no regularised political forum in which BLS could exert any influence on the conduct of monetary policy.

The major commercial banks which operated in BLS, namely Barclay's and Standard, were also the dominant financial institutions. Although in theory controlled from the U.K., their operational control came from South Africa and they conducted business in BLS as though they were branches of their parent banks using standard South African banking practice. Thus cheque clearing was conducted through clearing accounts in Johannesburg, the only reserves held in BLS were in the form of till cash, and the only capital was fixed property. Interest rates followed those in South Africa and were effectively dictated by head offices and ultimately the S.A.R.B. The only local discretion concerned the precise premium over prime rates that would be charged to particular borrowers. Large loans were always referred.

Similarly, the insurance companies operating in BLS were predominantly branches or agencies of companies controlled from South Africa with premiums set at the same levels as those prevailing in "comparable" areas of South Africa. The most serious complaint against the conduct of insurance business was that no fund was held in BLS and that, as a result, local savings mobilised by, for example, life business and private pension funds were almost all channelled to South Africa for investment there. While this may have been a commercially defensible arrangement as far as the companies were concerned, the loss of capital funds to the lesser developed countries of Southern Africa was viewed with concern in BLS political circles. Some offset, albeit modest, was provided by the capital inflows arising from the operations of South African credit companies. Unfortunately, however, these were mostly geared to financing the purchase of imported consumer durables.

It would be misleading, but only slightly, to convey the impression that financial institutions and policy were entirely controlled from South Africa. A limited number of modest indigenous institutions operated in BLS even before 1974 (for example, the Swaziland Credit and Savings Bank and the National Development Bank in Botswana), and the BLS countries retained a nominal control over exchange control arrangements in relation to countries outside the Southern Africa monetary

union. However, in practice, this second element of independence was heavily constrained. The South African authorities had agreed to release foreign exchange to BLS residents for any transaction permitted by South African exchange regulations, plus any permitted by the independent BLS regulations provided that the latter were not set too far out of line with their own regulations or were not an attempt to circumvent them. While this ruling was administered without any apparent difficulties, its two provisos did of course rule out any substantial originality or initiative from BLS in the conduct of exchange policy.

In summary, prior to 1974, Botswana, Lesotho and Swaziland were little more than regions of South Africa so far as monetary and financial arrangements were concerned. This generated three main categories of difficulty for the countries which subsequent negotiations and legislation was designed to overcome.

- (i) The BLS countries did not have access to the seignorage which independent currencies would have generated;
- (ii) The institutional arrangements appeared to lead to a significant channelling of private capital funds mobilised in the BLS to South Africa;

and (iii) The monetary arrangements gave the BLS countries no scope for independence in monetary policy. This implied accepting a given exchange rate, a given level of monetary expansion and given interest rate and credit policies.

In their attempts to address the problems referred to in the preceding paragraphs the three BLS countries have each chosen their own separate solutions. Botswana decided to move to full central banking while Lesotho agreed to continue to use Rand as its currency. Swaziland, however, established a currency board with its own currency issue completely backed by Rand. Botswana and Swaziland have thus chosen to extract seignorage by the issue of their own currencies, while Lesotho, who has retained the use of the Rand, has been able to obtain financial compensation from South Africa for the sacrifice of seignorage.

Swaziland and Lesotho are linked by virtue of the fact that they are both signatories, together with South Africa of an agreement^{1/} which formalises the monetary arrangements between the three states. This agreement provides that Swaziland and Lesotho may, if they wish, issue their own currency, but that if they decline to exercise this option, South Africa will make compensatory payments representing a return on the Rand

currency circulating in their respective areas. Swaziland chose to exercise the option and issued her own currency (Emalangeni) on the sixth anniversary of her political independence, 6th September 1974. Lesotho has, for the moment, chosen not to exercise the option and Botswana, prior to the conclusion of the 1974 Agreement, announced her intention to establish a fully independent central banking system which she did in mid-1976.

In the subsequent three sections, we discuss some of the institutional changes which have been wrought since 1974 and attempt to critically evaluate their likely impact on the three main problems just identified. Institutional changes are identified in so far as they are relevant to elicit certain major propositions but no attempt is made to present a full catalogue of these changes.

III. The Seignorage Issue

The central question here is whether there are any particular advantages to the three methods of extracting the seignorage as chosen by the respective countries. On purely financial grounds, the answer appears clear: the Lesotho solution is the most efficient method of attaining the, narrowly defined, objective of maximising the total financial return on currency in circulation. This is most easily seen by noting that there

are three elements which together determine the seignorage (S) associated with a currency issue namely (i) the amount of the issue (I), (ii) the cost of issuing and administering the currency (C) and (iii) the rate of return (r) which can be earned on the investments made possible by the issue. In summary,

$$S = r I - C$$

Let us consider each of these three elements in turn.

(i) The currency in issue

For the purpose of calculating the seignorage actually received, the three countries differ in the following manner.

In the case of Botswana, where the Rand has ceased to be legal tender, the value of I is equal to the full amount of the new local currency (the Pula) actually in issue. After a period of transition this should be equal to the actual amount of Rand that would have circulated in the absence of the institutional changes. In the case of Lesotho, the Rand currency in issue cannot be measured, and for the purpose of the 1974 Agreement was proxied by a negotiated figure, which is probably higher than the actual.

In the case of Swaziland, the 1974 bilateral agreement with South Africa requires that Rand and Emalangi will circulate together and will both have the status of legal tender. Thus the value of I , in the case of Swaziland, is not the full amount of the currency in circulation but only that part taking the form of Emalangi. To give an indication of the magnitude of the continuing loss of seignorage to which this dual currency system may give rise, it is interesting to note that the negotiated figure of Swaziland's currency issue for the purposes of the 1974 Agreement was R15.5 million whereas by mid 1975, the Emalangi issue had only reached R6.0 million.^{2/} It is impossible to say whether this discrepancy arises because of the slowness on the part of the Swazi's to accept the new currency, the fact that Rand still circulates as legal tender or because of a serious overestimate in the negotiated figure.

However, it is clear that the Lesotho approach provides for a larger principal (I) on which a return can be obtained than the Swazi case. The Swazi solution could only match that of Lesotho if the South African authorities agreed to pay seignorage on the notional Rand in circulation; that is the difference between the negotiated Rand figure and the actual Emalangi in circulation. The Botswana solution is similarly likely to lead to a higher I than in Swaziland as Rand is no

longer legal tender in Botswana. However, as the negotiated figure for Botswana was also likely to have been somewhat higher than the actual currency in circulation, the Lesotho solution provides for the highest base (I) for maximising the total return (S).

(ii) The cost of issue

The cost in the case of Lesotho is, of course, zero: the entire cost of the currency in issue in Lesotho being borne by South Africa. For the other two countries the costs, while not enormous, are non-trivial. For example, in the case of Swaziland, the cost of currency design and minting as declared by the new Monetary Authority of Swaziland after 6 months of operation was approximately E240,000. Other costs such as handling, security and so on are expected to be in the region of E100,000 per annum. Thus once again the Lesotho solution is the best if the objective is simply to maximise the total return (S).

(iii) The Rate of Return (r)

In the case of Botswana the foreign currency generated by the issue of the Pula ^{3/} less the cost of the issue is available for investment as the authorities see fit. The portfolio

will normally be broad and include short, medium and long term foreign securities and deposits, some direct investment in physical capital and domestic Government stocks. The return (r) for Botswana will depend upon the precise make up of this portfolio. For Lesotho and Swaziland the return (r) is already determined by agreement with South Africa. In Swaziland's case the Rand currency holdings of the Monetary Authority of Swaziland yield a zero return while the interest on the required Rand deposit account at the SARB has been fixed at two per cent below the yield to redemption of the most recently issued South African Government long-term domestic stock. Lesotho has a similar yield on her notional currency in circulation - two thirds of the yield on the same Government stock.

A priori there is no reason why any one of these solutions should yield a higher gross yield than any other. They all approximate to a yield on a portfolio of short, medium and long term investments. The return for Botswana will, however, be higher if the average level of interest rates in South Africa is lower than in the rest of the world and if the Rand depreciates against a given basket of currencies. If the opposite happens then Botswana always has the option of investing its reserves in South Africa, although it does have to bear the costs of portfolio management and transaction costs. In short, there is little clear-cut advantage to be gained in

any solution with respect to 'r' but, on balance, Botswana may have the opportunity to attain the highest yield.

In summary, therefore, Lesotho's arrangement will probably lead to the highest net return (S) as it is preferable to Swaziland on two out of three grounds -- principal (I) and cost (C) -- and is equal on the third (r). It is similarly preferable to Botswana on the grounds of principal (I) and cost (C) while it seems only marginally less desirable on grounds of return (r). Botswana's solution is preferable to Swaziland's on grounds of principal (I) and return (r) while both have to bear the cost of currency issue. Consequently, in terms of net return (S) the ranking of solutions is Lesotho, Botswana and then Swaziland. In this area the case for an independent currency seems weak.

IV. The Reallocation of Capital Funds

There is little doubt that the capital outflows from BLS to South Africa associated with pre 1974 institutional arrangements, constituted a strong plank in the political argument for institutional change. The statement that poor countries are using their capital funds to finance rich countries is one which would elicit sentiments of righteous indignation from almost any part of the political spectrum. Thus, to quote

the Swaziland Minister of Finance in his 1973 Budget Speech,

"This outflow of saving present an intolerable situation . . . As a nation would not we be better off if we stopped as far as was practicable, this outflow and diverted it to finance local development? Secondly, would it not be possibly by so doing to increase our tempo of development and direct it to finance development internally in addition to the aid we get from overseas? The answers to both questions is obviously in the affirmative".

However, it is clearly true that the affirmative answers do require the condition that local development is being constrained by shortages of capital funds and it is not clear that this is the case.

Under the new banking legislation^{4/} in both Swaziland and Botswana, the commercial banks are prevented from holding more than small working balances with foreign banks. Thus, whereas previously the curtailment of a capital outflow (e.g. via the insurance companies) would have increased bank deposit liabilities and net bank claims on foreign banks (an asset), by equal amount (relative to the situation in which the outflow was allowed), the asset item will now be an increased deposit with the monetary authority. Since this represents an obvious increase in bank reserves, it provides the basis for an increase in domestic lending provided again that there is a demand for such additional lending. If there is not the respective

monetary authorities will necessarily use their funds to accumulate foreign reserves possibly in the form of Rand securities. Thus all that would happen in this case is that a given capital outflow would move out via the monetary authority rather than through the commercial banks, with a consequent diversion of the benefits of the interest accruing from the ownership of the associated foreign assets.

In this connection it would be unfair to argue as though the commercial banks, prior to 1974, operated with the express intention of furthering either directly or indirectly the transmission of BLS savings for use in South Africa. On the contrary, there is plenty of evidence that the banks frequently took upon themselves the role of unofficial monetary authority providing funds to offset the seasonalities and the other capital outflows that did occur, thereby insulating the balance between the supply and demand for credit from such outflows, as well as from variations in the demand for credit. The following figures, for Swaziland, in Table 1 below indicate the magnitude of the quarterly movement of funds between Swaziland banks and their Johannesburg head offices. The figures compare with the GDP of Swaziland of less than R100m.

The more substantial point to direct against the commercial banks is that while they appeared to have satisfied

TABLE 1 Change in Net Balances Due to Overseas Banks by
Swaziland Banks (Rm.)

| | | | | | |
|------|-----------|------|----------|------|----------|
| 1970 | I - 7.5 | 1972 | I - 9.4 | 1973 | I + 15.7 |
| | II - 1.1 | | II - 2.9 | | II - 4.5 |
| 1971 | I + 1.9 | | IV - 5.2 | | IV - 7.2 |
| | II + 2.9 | | IV - 4.8 | | IV + 0.6 |
| | III + 0.6 | | | | |
| | IV + 7.6 | | | | |

the visible demand for credit, they did so on the basis of South African practice concerning acceptable security and type of business, and using prevailing South African interest rates and conditions of loans generally. It is perfectly possible that different and more flexible institutional arrangements could have elicited a larger demand for credit and higher real investment at the same time as providing for more allocative efficiency in the financial markets by reducing the extent of self-financing and informal financing arrangements.

We would therefore take the view that the halting of capital outflows which receives so much political attention, is something of a red-herring from an economic point of view. The central role of the new monetary authorities is not so much to engineer this, though undoubtedly they will do so. It is rather to provide a set of institutional arrangements which has some flexibility to overcome the inadequate security and high

administrative costs associated with small farmers and other formerly, disadvantaged borrowers, to strengthen the markets for government and other paper so as to ease the problems of government financing and generally to deepen and broaden domestic financial markets so as to maximise the undoubted development benefits accruing from a high level of financial intermediation.^{5/}

Thus an integral part of the new monetary arrangements, particularly in Botswana and Swaziland, has been the establishment of a network of new institutional arrangements geared to improving the mobilisation of saving and increasingly to direct the way in which this saving is used. For example, in Swaziland the Monetary Authority of Swaziland Order, 1974, imposed the need for banks and other financial institutions to hold cash reserves which included deposits at the Monetary Authority. The Financial Institutions Order, 1973 required banks and other financial institutions to hold certain quantities of liquid and other prescribed assets and notably government securities. New insurance legislation was enacted and a National Insurance Corporation was established so as to ensure that funds mobilised and premiums collected would be invested within Swaziland. Finally, a National Provident Fund was set up thereby creating another channel through which local investments could receive finance.

Inevitably, in the early stages, a good part of the funds mobilised in this way will end up being invested in government debt, and hence as government deposits with the Monetary Authority. Thus the Government and the Monetary Authority will be able to jointly determine the extent to which funds are re-allocated to commercial banks, to specialist lending agencies or, indeed, to finance higher government spending. Clearly this reallocation of funds needs to be organised with some wisdom, and the experience of other countries shows how political pressures can easily work to turn an exercise of this type into a device for maximising the government's own share of total national resources.^{6/} For the moment we should stress the potential for a beneficial re-allocation of capital funds which is inherent in the new arrangements and which was not available hitherto.

The question as to whether the precise arrangements made by any one of the three countries contains advantages in this respect relative to those made by the other two, permits of no clear-cut answer. While a fully-fledged Central Bank may be expected to permit some of the crucial decisions to be taken with a degree of objectivity and independence from political pressure which is not available to the less weighty institutions of Lesotho and Swaziland, there is absolutely no guarantee of this.

V. The Scope for an Independent Monetary Policy

However, when we turn to the conduct of monetary policy, there are two obvious ways in which the Botswana arrangements have advantages even over those of Swaziland. First, since the Botswanan arrangements incorporate the full powers of fiduciary issue normally available to Central Banks, the seasonality in the demand for credit can be financed through Central Bank loans to the commercial banks. In the Swaziland case, the Monetary Authority is heavily constrained by the need to maintain 100 percent backing for the new currency and even seasonal credit demands will still involve a dependence on funds from South Africa: though these may come increasingly from the SARB direct rather than by way of the commercial banks. It is of course surprising that a limited provision for a fiduciary issue to meet seasonal credit demands has not been incorporated in the Swaziland arrangements: even some of the otherwise rigid Currency Board arrangements formerly operating in parts of colonial Africa allowed for this.

Secondly, and again because of the existence of the fiduciary issue, the Botswanan authorities have far greater flexibility in the manner and the extent to which they can provide finance to Government.

However, this advantage over Swaziland should not be overdrawn because the structure of the Botswana economy and the nature of its links with the Rest of the World, inevitably mean that its freedom of manoeuvre in the conduct of monetary policy is heavily constrained. In this section we attempt to demonstrate this point by using calculations from a simple model of monetary processes in an open economy as first propounded by Polak ^{7/}, and later elaborated by Newlyn ^{8/}. The model itself is defined in the Appendix.

The central issue is that while Botswana now ^{has} her own foreign exchange reserves and needs to maintain these at some "reasonable" level, any monetary expansion will generate a loss of reserves which will be relatively large because of Botswana's exceedingly high import propensity.

To illustrate this imagine that Botswana's import bill were to rise by Pula 15 million because of inflationary forces in the South African economy which is her major source of imports. Under the old monetary arrangements, this would precipitate some fall in nominal income and in Botswana's nominal money supply. Given the simple assumptions of Polak's model and the relevant Botswana parameters (see the Appendix), the fall in nominal income would be approximately P. 20 million and the fall in the money supply would be about P. 2 million.

However, this decline in activity would induce a fall in imports which would eventually come to equal the initial rise in the import bill. Thus, the balance of payments would eventually be restored to its original position but only after a period during which the autonomous rise in imports exceeded the induced fall, thereby causing declines in both foreign reserves and the money stock.

One advantage of Botswana's new monetary independence might appear to be that her Central Bank could intervene in the process just described to avoid the fall in income which is otherwise unavoidable. It can do this by creating an extra amount of domestic credit equal to the initial rise in the import bill. This will indeed be successful in averting the deflation of the money stock and incomes but since it will also induce a rise in imports of about P.15 million, (according to the calculations shown in the Appendix) the overall balance of payments will also suffer a deterioration of this same amount. The full list of effects of both the initial rise in import prices, and the subsequent Central Bank intervention are shown in Table 2 below in columns (1) and (2) respectively. It will be seen that the total loss of foreign reserves is exactly equal to the injection of domestic credit multiplied by the number of periods for which that higher level of credit is maintained.

TABLE 2 The Effects of Higher Import Prices and Expanded Domestic Credit

| Effect on | (1) Partial Ef- fects of Im- port Price Rise | (2) Partial Ef- fects of Domestic Credit Ex- pansion | (3) Total Effects (1) + (2) |
|--|--|--|--------------------------------------|
| 1. Income | -20 | +20 | 0 |
| 2. Imports | } flows | +15-15 = 0 | +15 |
| 3. Balance of Payments | | 0 | -15 |
| 4. Money Supply | -2 | +2 | 0 |
| 5. Foreign Reserves | } stocks | -2 | -15n + 2 |
| 6. Domestic Credit Outstanding | | 0 | +15 |
| n = the number of periods for which the higher level of credit expansion is maintained | | See the Appendix for details of the numerical calculations underlying this result. | |

The major point coming out from Table 2 is that the reserve losses associated with an independently engineered and sustained increase in domestic credit is a very high proportion of that increase. Thus if Botswana is faced with an external disturbance when her reserve holdings are approximately "correct", then the scope for offsetting the deflationary

effects of this disturbance are extremely limited. The money stock equation of the model shows more specifically that the scope for real control of the money stock depends on two parameters namely the money stock : GDP ratio and the import : GDP ratio or, on cancellation, the ratio of money stock to imports. Unfortunately, Botswana is one of the least monetised economies in the world so her money : GDP ratio is very low (about 0.1), but she has an exceptionally high import propensity (in the region of 0.75). Combining these we see that an attempt to expand the money supply, for whatever reasons, by 100 would cause an actual change after all adjustments had worked through of only about 13 : the whole of the difference being accounted for by reserve losses.

While the analysis has been formulated in relation to Botswana, it applies equally to the suggestion from earlier in the paper that Swaziland's bilateral agreement with South Africa would have conferred greater monetary independence on her if it had allowed for some deviation from the principle of 100 per cent rand backing for the currency. The amount of extra freedom which this would confer is now shown to be extremely small since the relevant parameters have a similar magnitude in Swaziland as in Botswana. Where it would be most useful is in helping to meet seasonal demands for credit arising from the growing and harvesting of major crops such as sugar. In these

cases, the reserve losses associated with credit expansion are purely transitory. It would also have the political advantage of freeing Swaziland from her continued dependence on the SARB referred to earlier.

The central conclusion from this analysis is that the amount of independence now available to Swaziland and Botswana in relation to the control of their respective money supplies is highly constrained.^{9/} In the case of Swaziland this is mainly because of the terms and conditions of the bilateral agreement, while in the case of Botswana it is because of the underlying structure of the economy and especially its high import propensity and low degree of monetisation. However, monetary policy is not restricted in its scope to the control of the money supply. It also encompasses exchange rate and interest rate policy and we conclude this section by a brief consideration of the amount of independence now available in these areas.

In the case of Swaziland, the automatic convertibility of rand and emalangeni and the 100 per cent backing rule, together exclude any possibility of Swaziland's independent use of exchange rate adjustment to correct economic disturbances. In the case of Botswana, neither of these constraints are present and exchange rate policy is available. Indeed, a 5 per cent revaluation of the Pula relative to the Rand was

engineered shortly after the establishment of the new Central Bank, in order to neutralise the effects on the Botswanan economy of a rise in the rates of South African sales duty. This adjustment achieved most of the same results as the possible expansion of domestic credit referred to earlier but without the reserve losses that such an alternative policy would have involved. However, revaluation clearly had distributional consequences - lowering the real income of exporters relative to consumers of imported goods - which on this occasion, and because of the preponderance of large scale international capital in the export sector, were easily argued to be unobjectionable. In general, this example indicates the value of an independent exchange rate to structurally dependent economies.

In relation to interest rate policy, it is clear that some of the constraints on money supply control impinge in the area of interest rates as well. In the case of Swaziland, and because of the need for a continued dependence on funds from South Africa, the interest rates at which an expanded demand for credit is met must reflect South African rates unless the government accepts the need for some subsidisation. In the case of Botswana the creation of enlarged domestic credit to meet expanded credit demands at low interest rates would generate the reserve losses analysed earlier and possibly exacerbated, in this case, by induced capital outflows to South Africa. In

neither case therefore would one expect the new arrangements to lead to any substantial divergence in the general level of interest rates away from South African levels.

Rather more important, are the powers which are now available to the monetary authorities in both Swaziland and Botswana to influence the structure of interest rates, as well as the pattern of credit flows to particular users. While this process can easily become politicised, there clearly is a need to move away from the rigidities of a foreign dominated banking system, as well as to allow the allocation of credit to give some cognisance to social criteria as well as purely commercial ones. This is now much more possible in both economies.

VI. Economic Solutions and Political Realities

The rather extensive changes in monetary arrangements which have been wrought in Southern Africa during the past four years, have clearly increased the economic autonomy of Botswana and, to a lesser extent, Swaziland. Lesotho has moved far less in the direction of monetary independence than the other two countries but, by way of compensation, has acquired a generous settlement in relation to the seignorage issue and at minimal cost. However, the substantial programme of institutional and legislative change cannot eliminate the fact that the structures

of these three economies severly constrain the achievement of true independence of monetary policy. Even in the case of Botswana, the pace of monetary expansion, the general movement of interest rates and the regulations for exchange control, will continue to be dominated by the economic environment in Southern Africa generally rather than by internal policy choices.

The major impact that the change in monetary arrangements has had has been to change the flow of funds within Botswana and Swaziland. While it is accepted that control over the level of total domestic credit is necessarily limited, nevertheless the new arrangements permit these two countries more control over the allocation of funds within the economy. In particular this power permits the authorities to provide improved access to credit to small scale agriculture and industry, it being assumed that large corporations are able to use their standing abroad to borrow externally if necessary. These powers will potentially have more impact on the development process than the ability to fix the exchange rate vis-a-vis South Africa or even the power to undertake fiduciary financing.

For these reasons one should not be over-critical of Swaziland's rather cautious approach to monetary reform and especially her failure to push for (or, at any rate, to achieve), a power of fiduciary issue and the cessation of rand currency

usage for domestic transactions. While this may be the unsuccessful outcome of hard political bargaining with South Africa, it might also reflect a hard-headed view of economic reality on the part of the Swazi authorities. Nonetheless, it is the view of this paper that these additional changes are worth continuing to strive for.

As to the reasons why Botswana opted for a relatively drastic change in arrangements as compared with Swaziland, in particular, and also Lesotho, a number of points need to be considered. First, Swaziland's economy derives substantial amounts of revenue from tourist trade from South Africa (in the region of 4 per cent of GDP), and with South Africa's restrictive attitude to providing foreign exchange for tourism outside the rand area,^{10/} a move to establish greater monetary autonomy would have almost certainly lead to a significant decline in tourist revenues. Botswana, with her far lower dependence on tourism, can regard this development with a certain amount of indifference.

Secondly, there seems little doubt that Swaziland was far more influenced than Botswana, by the argument that continued membership of the Rand monetary area was some sort of prerequisite for the continuation of trading arrangements in the Southern African Common Market. It may merely be that Botswana

assumed (rightly as it has so far turned out),^{11/} that the move to full central banking would not cause her to be ejected from the common market arrangements, while Swaziland and Lesotho assumed the opposite. Or, it could simply mean that Botswana was more able than either of the other two countries to regard such a development with a degree of equanimity. On the latter point two observations can be made. First all three B.L.S. countries benefitted tremendously from the government revenue point of view, as a result of the 1969 Southern Africa Custom Union Agreement (SACUA) which regulates trading arrangements in the area. However, both Swaziland and Botswana have obtained large alternative sources of revenue since 1969 (Swaziland from the sugar levy and Botswana from mineral royalties and taxes). In the case of Botswana, this alternative revenue source seems reasonably assured in the longer term thereby rendering continued dependence on SACUA arrangements rather less critical than they are for Lesotho and, to a lesser extent, Swaziland. Secondly, Botswana's development strategy is heavily dependent on mineral development and the exporting of meat neither of which seems likely to be critically affected, either from a trade point of view or from a capital financing point of view, by a cessation of SACUA arrangements. Swaziland, on the other hand, is pursuing a strategy of diversification, including the attraction of industrial capacity which is only likely to be viable if it has reasonably unhindered access to the large South

African market. Such a strategy would obviously be compromised by an ending of the present common market arrangements.

It has also been considered particularly important in Swaziland and Lesotho to maintain the free flow of funds that are part of the trilateral Monetary Agreement together with the resulting investor confidence that is expected to accompany this. As noted above, Botswana is less dependent upon the South African economy with respect to markets and as a result feels that investor confidence is relatively unimportant. Swaziland and Lesotho meanwhile are dependent upon both South African tourists and South African investors in manufacturing. Both are likely to be discouraged by exchange controls.

Lesotho's decision to retain the Rand as its currency must reflect its unusual economic circumstances and its geographical position. Not only is it the poorest of the BLS countries but it is also totally surrounded by South Africa. This is exacerbated by its mountainous terrain that makes internal communications exceptionally difficult. Many parts of the country, in fact, have closer relationships with neighbouring South African areas than with the capital Maseru. In this situation, the implementation of many of the measures adopted by Botswana and Swaziland to mobilize and reallocate domestic savings would be likely to have only limited effect in Lesotho. Similarly,

as the labour force is so highly dependent on the South African mines for employment and income and as miners are paid in Rand, it would be difficult to introduce a Lesotho currency that would replace the Rand within Lesotho. In these circumstances it is not difficult to understand why Lesotho opted for the lucrative financial settlement to bolster her weak public finances.

Finally, one can note that the amount of monetary independence which the three BLS countries have chosen to extract (or have succeeded in extracting) is inversely proportional to the proportion of their borders which they share with South Africa. While this proportion is also negatively associated with the amount of general economic independence which they, in fact, enjoy, this independence could itself be seen partly as a matter of the different choices of the three countries (vide tourism in Swaziland). We would conclude, with the not particularly surprising observation that, combining economic and political reality, true economic independence from South Africa remains a somewhat elusive concept, certainly for Swaziland, Lesotho, and, a fortiori, for the newly emerging independent homelands.

Appendix: The Limitations on Monetary Expansion in Dependent Economies

Polak's model of 1957 is based on a number of definitional identities and two behavioural parameters the first of which is the income velocity of circulation. Taking this as a constant we can write a simple relationship for the money value of GDP as follows:

$$P_t Q_t = P_{t-1} Q_{t-1} + \Delta Ms \quad (1)$$

where Q_t is the level of real GDP in time period t

P_t is the general price level (i.e. GDP deflator) and ΔMs is the change in the stock of money.

Defining $PQ = Y$, = the money value of GDP, we have

$$Y_t = Y_{t-1} + \Delta Ms \quad (1a)$$

This simply says that the money value of GDP cannot change unless the money supply changes. By consolidation of the balance-sheets of central and commercial banks, we obtain the following identity:

$$Ms \equiv R + DC \quad (2)$$

from which it follows that:

$$\Delta Ms = \Delta R + \Delta DC \quad (3)$$

where R = foreign exchange reserves (net), held by the banks,

DC = the level of outstanding domestic bank credit.

We also know that:

$$\Delta R = X_t - M_t + C_t \quad (4)$$

where X = the money value of exports

M = the money value of imports

C = capital inflows (net)

Substituting (4) into (3), we obtain:

$$\Delta Ms = X_t + C_t + DC_t - M_t \quad (5)$$

and defining the exogenous elements $X_t + C_t + DC_t = Z_t$, (5),

becomes:

$$\Delta Ms = Z_t - M_t \quad (5a)$$

In other words, and using the information in (1), the money value of GDP can only rise to the extent that the exogenous elements in Z_t exceed M_t .

The second behavioural parameter of Polak's model is the import propensity which, if taken as a constant, generates information about the level of imports in one of two possible ways, namely:

$$\left. \begin{array}{l} M_t = m Y_t \\ \text{or } M_t = m Y_{t-1} \end{array} \right\} \text{ where } 0 < m < 1 = \text{constant} \quad (6)$$

This assumption contains within it the implicit assumption that the elasticity of import demand with respect to the foreign:domestic price differential is equal to unity and is in turn equal to the elasticity of this demand with respect to the quantity of output.^{12/}

Substituting the first variant of (6) into (5a), we have:

$$\Delta M_s = Z_t - m Y_t \quad (7)$$

and, using (1a):

$$Y_t (1 + m) = Y_{t-1} + Z_t$$

$$Y_t = \frac{Y_{t-1}}{1 + m} + \frac{Z_t}{1 + m} \quad (8)$$

The story one can tell about Equation (8) is as follows. If attempts were made to maintain last year's income but no additional stimulus were to come from Z_t (i.e. $Z_t = 0$), then the money supply would fall by an amount $m Y_{t-1}$ which, in conjunction with the fixed velocity assumption, causes Y to fall to a new level namely $\frac{Y_{t-1}}{1 + m}$. If however Z_t is positive then this will boost the money supply, and so permit a rise in money income which, however, induces a further additional contraction of money through higher imports giving a net stimulus to Y coming from Z equal to $\frac{Z_t}{1 + m}$.

Alternatively using the lagged version of the import equation shown in (6), we derive:

$$Y_t = Y_{t-1} (1 - m) + Z_t \quad (8a)$$

Once again the attempted maintenance of an unchanged income (with $Z_t = 0$), causes a monetary contraction, because of induced imports, and a fall in income, but this time the expansionary monetary effect of a positive Z_t is not damped by induced imports since these are delayed until the subsequent

time period.

Further manipulations of the two variants of Equation (8), enable us to eliminate the non-exogenous term in Y_{t-1} .

For example successive substitutions in (8), (i.e.

$Y_{t-1} = \frac{Y_{t-2}}{1+m} + \frac{Z_{t-1}}{1+m}$ etc.) yields:

$$Y_t = \frac{Z_t}{1+m} + \frac{Z_{t-1}}{(1+m)^2} \dots \frac{Z_{t-n}}{(1+m)^{n+1}} \quad (9)$$

while a similar operation on (8a) yields:

$$Y_t = Z_t + (1-m) Z_{t-1} + (1-m)^2 Z_{t-2} \\ \dots (1-m)^n Z_{t-n} \quad (9a)$$

Associated with each of these two variants of the income equation is a corresponding import equation and money stock equation. For example, the import equation associated with (9a) is:

$$M_t = mZ_{t-1} + m(1-m) Z_{t-2} \dots \\ + m(1-m)^{n-1} Z_{t-n} \quad (10)$$

The money stock equation is:

$$\begin{aligned}
 Ms_t = & aZt + a(1 - m) Z_{t-1} \cdot \cdot \cdot \\
 & + a(1 - m)^n Z_{t-n}
 \end{aligned}
 \tag{11}$$

where a = the ratio of money stock to money GDP.

Equations (9), (10) and (11) permit us to examine how changes in the components of the exogenous term Z (namely capital inflows, domestic credit expansion and exports) will affect money income, the balance of payments and the money supply.

Finally, if we sum the coefficient terms of (9a), (10) and (11), we derive expressions for the extent to which an initial change in Z will eventually (after all adjustments have been worked out), cause changes in nominal income, imports and money stock respectively. These expressions are:

$$\Delta Y = \frac{\Delta Z}{m} \tag{12}$$

$$\Delta M = \frac{m\Delta Z}{m} = \Delta Z \tag{13}$$

$$\Delta Ms = \frac{a\Delta Z}{m} \tag{14}$$

Treating the assumed rise in the import bill of P.15

million as an autonomous fall in exports, (and so in Z), and using estimates of the Botswana parameters based on 1975 averages,^{13/} the effect on the three variables is as shown in column (1) of Table 2. Similarly, the assumed increase in domestic credit can be plugged into the equations to give the results shown in column (2) of that Table.

Footnotes

- * The authors would like to thank Graham Pyatt, Geoffrey Wood, Geoffrey Dennis and the Economics Seminar at the University of Warwick for helpful comments. The work for this paper was substantially completed before Mr. Davies joined the I.B.R.D. Nonetheless, it should be emphasised that the views which it expresses are entirely personal to the authors and should not be imagined to represent the opinions of that organisation.
- 1 A Monetary Agreement Between the Governments of Swaziland, Lesotho and South Africa, November 1974. See also, The Agreement Between the Government of the Kingdom of Swaziland and the Government of South Africa on the Issuing of Notes and Coins, March 1974. The latter can be regarded as an appendix to the former in spite of its earlier date.
- 2 A similar, but more serious, manifestation of this problem was in Panama where the U.S. dollar dominated the currency in circulation despite the existence of a local currency. See, H.G. Johnson, "The Panamanian Monetary System", in Further Essays in Monetary Economics (London, George Allen and Unwin, 1972), p.
- 3 In practice this is equal to the amount of the Rand currency previously circulating.
- 4 This was enacted at about the same time as the local incorporation of Barclay's and Standard in 1974 in the case of Swaziland and 1975 in the case of Botswana, and the acquisition of an equity stake in the banks by the respective governments.
- 5 These benefits are examined theoretically in Alan R. Roe, "Some Theory Concerning the Role and Failings of Financial Intermediation in Less Developed Countries", Domestic Finance Studies Series, No. 51, (Washington, The World Bank, mimeo, July 1978).
- 6 In Sri Lanka, for example, something like 70 percent of the funds mobilised by way of non-bank financial institutions go to purchase government debt.
- 7 J. Polak, "Monetary Analysis of Income Formation and Payments Problems", I.M.F. Staff Papers, vol. VI (1957/58) pp.1-50.

- 8 W.T. Newlyn, "A Theoretical Basis for Financial Projections", E.D.R.P. Paper No. 112, (Makerere University, Uganda, Nov. 1966 mimeo). In recent years, the model has been further elaborated in a number of directions most particularly, in a series of articles in IMF Staff Papers. See, for example, M. Khan, "Experiments with a Monetary Model for the Venezuelan Economy", IMF Staff Papers, vol. XXI (July 1974) pp. 389-413. I Otani, "Inflation in an Open Economy: A Case Study of the Philippines", IMF Staff Papers, vol. XXII (Nov. 1975) pp. 750-774 and I Otani and Y.C. Park, "A Monetary Model of the Korean Economy", IMF Staff Papers, vol. XXIII, (March 1976), pp. 164-199. However, for our purposes, the simple form of the model will suffice.
- 9 This point is, of course, recognised by the monetary authorities in the respective countries. See, for example, Botswana Government, A Monetary System for Botswana, Government Paper No. 1. of 1975, Gaborone, March 1975.
- 10 A norm of R.500 per adult per annum.
- 11 Though it should be remembered that the break-up of other African common markets has had the abandonment of a common currency as its precursor. The most recent example is the East African Common Market.
- 12 This proposition is demonstrated rigorously in footnote 16 to J. Polak's article.
- 13 The average import propensity as measured in 1975 was 0.75 while the ratio of money stock:GDP was approximately 0.1. Both these parameters are taken from U.K., Ministry of Overseas Development, A Social Accounting Matrix for Botswana 1974/75, (London, mimeo, 1977).