

**THE VIABILITY OF REGIONAL MONETARY INTEGRATION:**

**THE CASE OF THE SOUTHERN AFRICAN  
COMMON MONETARY AREA**

by

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## ***ABSTRACT***

Through mutual trade in goods and assets, economies become closer linked - integrated - and this changes the way these economies react to their own and each other's economic policy and disturbances. Recognising this, the countries may chose to enter into integration arrangements which facilitate goods and asset trade and may permit co-ordinated action in the policy sphere. A monetary integration arrangement unites more closely the monetary systems of a number of countries, and this may be in the absence or presence of a broader *economic* integration arrangement (for example a common market). This thesis examines aspects of the integration arrangement known as the Common Monetary Area (CMA), between South Africa, Lesotho and Swaziland.

Chapter 2 outlines theoretical considerations of the desirability of monetary integration, while Chapter 3 uses a model to analyse the effects of goods and asset market integration on the economic policy and disturbance transmission of two countries. Chapter 4 describes the institutional and historical setting of the CMA, as well as the reasons behind the changes made to the legal arrangement in 1986. Chapter 5 presents a critique of an attempt to analyse the CMA as an optimal currency area, while Chapter 6 analyses the state of broader *economic* integration over the CMA, and assesses its implications for *monetary* integration. Chapter 7 addresses empirically the question of the *degree* of asset and goods market integration and explains the implications for monetary integration, while chapter 8 analyses the situation of Botswana, a non-CMA member, to assess its importance for the CMA and its relation to the debate surrounding the continued existence of the CMA.

The conclusion that is reached is that, given extant levels of goods and asset market integration, the members of the CMA (especially the smaller members) would benefit from greater *joint* policy making and policy co-ordination, i.e. greater monetary unification.

Except where specifically indicated in the text, this thesis is wholly my own work and has not been submitted for a degree in any other university.

John Stuart

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## ***LIST OF ACRONYMS***

BLS:	Botswana, Lesotho, Swaziland
BOP:	Balance Of Payments
CMA:	Common Monetary Area
DC:	Developed Country
EACB:	East African Currency Board
EC:	European Community
EIU:	Economist Intelligence Unit
GDP:	Gross Domestic Product
GST:	General Sales Tax
IMF:	International Monetary Fund
LDC:	Less Developed Country
OCA:	Optimal Currency Area
ODA:	Official Development Assistance
PTA:	Preferential Trade Area
RMA:	Rand Monetary Area
RSA:	Republic of South Africa
SA:	South Africa
SACU:	Southern African Customs Union
SADCC:	Southern African Development Co-ordination Conference
SARB:	South African Reserve Bank

## CHAPTER 1

### *INTRODUCTION*

#### 1.1 GOAL OF THE THESIS

The goal of this thesis is to elucidate the viability of the Common Monetary Area (CMA) between South Africa, Lesotho and Swaziland in order to be able to make recommendations about its future. Specifically, the thesis attempts to reach a conclusion about the viability and desirability of the current set of arrangements in the light of theoretical and empirical considerations, in order to enable judgements to be made about the desirability of either increased or decreased monetary unification in future.

#### 1.2 DEFINITIONS

There appear to be at least two interpretations of the term ‘monetary integration’, and it is necessary to define it in the sense it is used in this thesis. The first interpretation is that used by Corden (1972), who understands it as a term describing an *institutional* or *legal* monetary link between states. Whilst Corden defines this institutional structure as an *exchange rate union*, others are more flexible, defining monetary integration in terms of a variety of institutional arrangements. Kafka (1969) defines monetary integration as “any arrangements under which the effects of the existence of separate currencies merely approach, more or less, the existence of a single one” (p.135). Thus Kafka allows for a *degree* of monetary integration, implying that the term does not apply fixedly to any single type of arrangement. Gros (1989) suggests that since there are different interpretations of the term ‘monetary union’, “there are different degrees of monetary integration that approximate to different degrees of this definition of monetary union” (p.219). These different interpretations of ‘monetary union’ will be examined and explained in the following chapter, so that their importance for the task at hand might be better understood.

Suffice to say that, for now, the term ‘monetary integration’ will be understood to imply some form of legal arrangement that two or more sovereign countries enter into to unite more closely their monetary systems.

The second interpretation of the term refers to the state of two or more countries which are closely financially linked. This ‘financial linking’ involves a high degree of substitutability between the assets of the countries, such that their interest rates and asset prices move closely together. This interpretation will *not* be used here, since the Allen-Kenen model, which the thesis makes extensive use of, defines this state rather as “asset market integration” (Allen and Kenen, 1980, p.14). Use will also be made of the term ‘goods market integration’ which is understood to imply a high degree of substitutability between the *goods* of two or more countries.

It is important to note that the first interpretation refers to an actual legal arrangement, while the second encompasses extant linking between countries’ financial systems regardless of the legal arrangement or exchange rate regime. The idea that the latter may exist regardless of the degree of the former is an important one for this thesis, since it will be shown later that existing asset and goods market integration often *necessitate* a formal integration arrangement due to their limiting effects on the independent functioning of economic policy. To avoid confusion, the practice here shall be to refer to the first interpretation as ‘monetary unification’ and the second as asset market integration. Where the term ‘monetary integration’ is used, however, the first interpretation will be applied to it.

### 1.3 THE STRUCTURE OF THE THESIS

A brief outline of the nature, purpose and methods of research of each chapter follows:

#### **Chapter 2: The Theory of Monetary Integration**

This chapter will review the literature on monetary integration in general, with specific attention to developing country monetary integration. It will also include a section on the relative merits of the *degree* of monetary integration in the light of more recent

contributions to the debate. The advent of monetary integration in Europe has spawned substantial contributions to the debate, and many of these are used in the chapter. The purpose of this chapter is thus to introduce the debate around monetary integration, point out the direction of its development and emphasis and establish its relevance to the task at hand.

### **Chapter 3: Asset and Goods Market Integration in an Exchange Rate Union**

This chapter will focus the analysis of monetary integration by describing a theoretical model and observing its functioning under a variety of conditions. The purpose of the chapter is to provide a theoretical basis for an ultimate empirical investigation into the CMA situation.

### **Chapter 4: Monetary Co-operation between South Africa, Lesotho and Swaziland**

This chapter examines the historical, institutional and legal background of the CMA, and provides a functional summary of the agreement itself. The reasons behind the advent of the agreement are discussed in detail, as well as the changes that were made to it and their reasons. The purpose of this chapter is to put the agreement in historical and institutional perspective and to uncover the problems it entails for the smaller countries - Lesotho and Swaziland.

### **Chapter 5: The CMA and Optimal Currency Area Theory**

An attempt was made recently to analyse the CMA in terms of the optimal currency approach, one of the theoretical paradigms examined in Chapter 2. This chapter discusses the weaknesses of this study and indicates why an alternative approach must be used. Its purpose is thus both to describe and criticise the study and also to hint that another solution is required.

### **Chapter 6: Economic Integration *versus* Disintegration in the CMA**

Antecedent to monetary integration is broader economic integration - the relations that govern trade and infrastructural links, among others, between countries. The CMA overlaps with two arrangements relevant to economic integration (although only one is a true integration arrangement) - the Southern African Customs Union (SACU) and the

Southern African Development Co-ordination Conference (SADCC). The purpose of this chapter is to describe the nature, functioning and success of these arrangements as well as their relation to one another. Their implications for monetary integration can then be ascertained.

## **Chapter 7: The extent and Implications of Goods and Asset Market Integration in the CMA**

Without a quantitative assessment of the actual degree of integration between the members of the CMA, pronouncements and recommendations about the viability and desirability of the monetary union would lack credibility. Therefore the purpose of this penultimate chapter is to attempt to add empirical weight to, and confirm, the findings of earlier sections of the thesis on the practicability of the union. This is achieved by applying the model of Chapter 3 to the CMA in order to assess the degree of asset and goods market integration. The implications for the CMA can then be established.

## **Chapter 8: The Debate for more or less Monetary Unification: The CMA or Flexibility?**

The absence of Botswana from the CMA and its apparent monetary autonomy poses an interesting question: would Swaziland and Lesotho be better off outside the CMA and with a greater degree of flexibility between their currencies and the rand? This chapter attempts to answer this question by analysing the nature and implications of Botswana's monetary autonomy and then assessing the relative merits and demerits of continued CMA membership, by Swaziland and Lesotho, or otherwise.

## **1.4 THE USE OF THE THESIS**

The overall purpose of the thesis is to enhance the understanding and appreciation of an important integration arrangement in Southern Africa. It will thus be of use both to other academics interested in the field and as a tool for policy makers involved in the area of monetary integration and policy. Few integration arrangements in Africa have endured, and for this reason the CMA is especially important - it can provide valuable lessons for past, existing and prospective arrangements.



## CHAPTER 2

# ***THE THEORY OF MONETARY INTEGRATION***

### 2.1 INTRODUCTION

This chapter is divided into three major parts. Firstly, Sections 2.2 and 2.3 deal with the two ‘traditional’ approaches to the study of monetary integration. The first of these approaches, which has been termed the ‘optimal currency area’ (OCA) approach, attempts to single out one or more characteristics of a region that would indicate the desirability or preferability of a ‘currency area’ over that region - i.e. a common currency unit.<sup>1</sup> The second which I will call the ‘net benefit’ approach, is a more pragmatic approach in that it bases the decision for a currency area on foreseen costs and benefits of currency areas, rather than attempting to deal with the more abstract and less identifiable ‘characteristics’ of the OCA approach. There is a need to look at both approaches since the theoretical argument that is developed in this thesis incorporates elements of both: the OCA approach is essentially concerned with estimating the extent to which two or more independent currency areas resemble a *single* country (in economic terms) and thus warrant a single currency; the net benefit approach primarily emphasises the loss of policy autonomy associated with monetary unification. The analysis in Chapter 3 draws on elements of the logic of both since it develops an analysis of the loss of *economic* autonomy against the background of the existence of high levels of economic integration. In other words, the fact that the degree of economic autonomy (or lack of it) is dependent on the degree of economic closeness (integration) between two or more regions, is recognised.

The second major part of this chapter, Section 2.4, examines considerations specific to monetary integration among *developing* countries, and thus provides insights into the issues

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1. The first to coin the term ‘optimum currency area’ was Robert A. Mundell in “A Theory of Optimum Currency Areas”, *American Economic Review*, Vol 51, September 1961.

affecting especially the two less developed members of the CMA - Lesotho and Swaziland. This section could thus point to potential conflicts of interest in the CMA between the less and more developed nations.

Finally, Section 2.5 sketches an argument for *full* monetary union where monetary integration has been embarked upon by nations. It is shown here that any 'lower' form of monetary integration is always inferior to full monetary union, i.e. a common currency and a union central bank. These lessons are carried into later chapters.

## 2.2 THE OPTIMAL CURRENCY AREA APPROACH

The discussion of 'characteristics' is divided between 'real' or non-monetary characteristics and monetary characteristics. This is consistent with the Chapter 3 analysis where a distinction is made between goods market and asset market factors. In addition a third 'characteristic' is examined - that of the level of existing policy integration.

### 2.2.1 Real Characteristics

#### 2.2.1.1 *Labour Mobility*

Mundell (1961) cites labour mobility as the most important determinant of an OCA. It facilitates adjustment between regions and prevents economic slowdown because it implies employment equalisation over areas which, in its absence, would be characterised by extremes of high and low employment. In support, Scitovsky (1969) explains the wage equalising function of labour mobility: unions will not push for unrealistically high wages if there is the threat of an influx of labour from surrounding regions in response. Thus labour mobility keeps employment and wages consistent over areas in which it is significant and makes regions in a currency area better able to adjust to payments imbalances between themselves.

However, the usefulness of labour mobility as an adjustment mechanism is doubted by Lanyi (1969) and Corden (1973) among others. Their main objection is an important and

somewhat obvious one: that labour is simply *not* mobile over any considerable distance, even within countries, and cannot be expected to become so in the near future.<sup>2</sup> Continents, even regions are too culturally, racially and climatically diverse to permit this. They argue instead that economic adjustment by exchange rate change or macroeconomic policy is still far more viable.

### 2.2.1.2 *Degree of Openness*

A country is defined to be more 'open' the greater the proportion of tradeable to non-tradeable output.<sup>3</sup> A high degree of openness between regions has been suggested as an important criterion for currency area formation and it is especially important for this thesis because of its relation to goods market integration. While they do not imply the same thing, it can be argued that they are positively related in that increasing openness would conceivably foster increasing integration while a high level of integration would imply a high degree of trade between countries and thus high mutual openness.

McKinnon's (1963a) argument for currency area formation between open countries is based on the ineffectiveness of exchange rate adjustment between such countries. In the first place, he argues, exchange rate adjustment would cause sympathetic price adjustment among tradeables in order to maintain competitiveness in the face of high foreign demand elasticities.<sup>4</sup> The price instability resulting from exchange rate fluctuation would impact negatively on the economy and reduce the worth of such exchange rate adjustment as openness increased. Alternatively, price stabilisation would require non-tradeable sector deflation, also with a high economic cost. Secondly, with the high marginal propensity to import associated with a high degree of openness, any exchange rate variation will become tantamount to price variation and thus spark off pressure for wage adjustment to maintain real wages. When wages are adjusted, any advantage bestowed on a trade deficit country by a depreciation will be mostly removed, since expenditure on imports can

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2. The example Corden uses encompasses the E.C. countries, but his argument seems universal and compelling. Labour mobility of any significance cannot be expected over areas of cultural and racial diversity.

3. This definition is accepted by Tower and Willett (1976) and McKinnon (1963a).

4. These high foreign elasticities imply a further characteristic of the area in question: that it is *small* in the context of the world.

continue unabated. Thus there is a low level of 'exchange rate illusion' associated with open countries. The ineffectiveness of the depreciation is reinforced by another effect - that of the low import elasticities associated with more open economies. The lower these elasticities the greater the exchange rate adjustment required to alter real expenditure by a given amount. Orcutt (1955) makes the same point in respect of the usefulness of exchange rate adjustment under openness.

Further, Machlup (1966, p.40) points out that openness reduces the employment impact of tight financial policy and thus justifies policy adjustment rather than exchange rate adjustment to disturbances. Tight policy affects import demand more as openness increases and thus less of the negative affects of the deflation are felt locally. Instead, the tight policy is translated into effective balance of payments (BOP) adjustment.

Tower and Willett (1976, p.41) note that openness serves, through its effects on spending and the BOP to increase competition and 'spread' disturbance adjustment within a currency area. It will be found in Chapter 3 that the same conclusion applies for an increase in goods market integration.

A further argument for the ineffectiveness of exchange rate adjustment in open areas is put forward by Tower and Willett (1976, p.44). They give three reasons why a devaluation would increase expenditure and thus, through the multiplier, nullify its BOP effect. Firstly, they argue that local wealth will increase more for devaluation the greater is the level of openness. This follows from the fact that wealth holders in open countries are likely to hold a larger proportion of foreign assets than otherwise to minimise the risks involved in the purchasing power fluctuations common to open economies (this follows from McKinnon's first point). Secondly, wealth will also increase for a devaluation through the devaluation's effect on the stock of *physical* capital, the value of which will rise if it is mostly imported. These wealth effects can be expected to stimulate expenditure, regarding any BOP improvement. Finally, Tower and Willett point out that investment expenditure can also be expected to rise for a devaluation if imported investment goods make up a large proportion of investment and if investment plans are relatively fixed.

McKinnon's (1963a) argument has been criticised on two points. Firstly, Corden (1972) argues that McKinnon's idea of the price instability of exchange rate variation is conditional on the assumption of external, or world price stability. If external price instability is the case then flexible rates are more desirable. Secondly, McKinnon has not demonstrated that there is a *positive* gain in adopting fixed exchange rates, only that the cost of their adoption is less.

In conclusion, however, it must be accepted that in general, openness (and hence integration) imply an increasing desirability of exchange rate stability, and thus currency area formation.

## **2.2.2 Monetary Characteristics**

### **2.2.2.1 *Financial Integration***

'Financial integration' is defined in terms of financial capital mobility. The more mobile capital is between regions, the higher the degree of financial integration. Further, 'mobile' in this context refers to the inter-regional interest elasticity of investment: the higher it is the more 'mobile' is the capital. Thus as financial integration increases, inter-regional interest rate movements must of necessity become closer, and closer 'financial integration' in this sense is entirely compatible with the concept of asset market integration used in Chapter 3.

Certain writers have argued that high financial integration between areas will facilitate adjustment to payments imbalances and thus reduce the need for flexible exchange rates. Scitovsky (1969) suggests that adjustment is achieved by wealth transferral less painfully the higher is the degree of capital mobility. This is because the transfer of assets required to correct imbalances is achieved with less price and interest rate adjustment in either country. Further, Ingram (1962) specifies that integration should apply to long-term securities if this means of adjustment is to have any meaningful effect. If capital flows are mostly short-term, the regions will lack the fundamental asset market structure required to produce meaningful capital flow adjustment, since short-term securities are transferred too readily and their holding depends on short run interest rate fluctuations. Thus there

may exist no true link between the asset markets of countries, albeit that short-term integration is apparent.

The criterion of financial integration is not accepted by all as a compelling reason for currency area formation. Fleming (1971) argues that, under fixed rates and in the absence of exchange control, high capital mobility may lead to harmful speculative short-term capital flows which aggravate inflation or depression conditions. This will be the case where changes in desired investment exceed or fall short of changes in desired saving, exacerbating inflationary or demand deficient conditions.

Ishiyama (1975) points out a further problem with capital flow adjustment: that of the possibility of a lack of sufficient acceptable assets to enable capital flows of the required magnitude. This argument is, however, subject to empirical qualification.

Finally, Tower and Willett (1976) make the point that the existence of endogenous capital mobility may not be in itself so important as the ability of monetary and fiscal authorities to create and influence capital flows. Thus they imply that what is essential is the existence of asset markets structured to permit high capital mobility rather than the pre-existence of self-propelled capital flows themselves. In this they raise the question that Ishiyama raised earlier; again, it has an empirical answer.

#### **2.2.2.2 *Inter-regional Price and Wage Flexibility***

In the absence of exchange rate flexibility, some other method of relative real income adjustment is required to promote payments adjustment. Capital mobility has already been examined as one method, and labour migration is an indirect way of achieving the same thing. Tower and Willett (1976) suggest another: the presence of wage and price flexibility across regions. Through wage and price adjustments, it is possible to effect a change (increase or decrease) in the real income of a region *relative* to another without changing the apparent real income *within* the area and thus minimising the consumption and employment costs. The relative change in real income will force a change in import expenditure, correcting the payments imbalance in the desired direction. For example, a worsening trade balance due to declining export demand will be favourably reduced if

*prices* rather than outputs in the export sector drop and translate through to the rest of the economy as a decline in aggregate demand (through the affects of export sector wage reductions).<sup>5</sup> The decline in aggregate demand will then hopefully effect a reduction in imports, although imports need not decline by as much as the initial imbalance if foreign export demand is reasonably elastic (since part of the deficit will be removed by the increase in export demand).

Although the existence of price and wage flexibility appeals intuitively as a substitute for exchange rate flexibility, it is unfortunately not of much use here. Since the intention here is to examine goods market integration, it is necessary to look at cases in which inter-regional prices become even more *inflexible* due to the increasing degree of substitutability between goods as goods market integration increases. In Chapter 3 this will be examined in more detail.

### **2.2.2.3    *Similar Inflation Rates***

The argument that candidates for a currency area should have similar rates of inflation is based on the assumption that the primary cause of payments imbalances is due to differences in such rates. Fleming (1971) and Haberler (1970) ascribe to this view, suggesting that the imposition of fixed exchange rates in the absence of close inflation rates would lead to imbalances. Behind divergent inflation rates lie differences in monetary expansion, trade union pressure and structural factors, implying that *these* factors should show compatibility between regions if a viable currency area is to be established.

While the logic behind the argument is compelling, it may not be an important one if inflation rate equalisation is relatively easily achieved, as is suggested by Parkin (1972).<sup>6</sup> Parkin argues that the primary cause of inflation rate divergence is differential monetary expansion and, since he believes in a high level of price and wage flexibility, he therefore suggests that inflation rate equalisation is easily accomplished. This argument, if valid,

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5. Interestingly, the more open the economy the larger will be the export sector and thus the more effective price and wage flexibility. This is another argument for openness.

6. The question of inflation rate equalisation and its costs are more thoroughly examined in Section 2.3.2.1.

would tend to de-emphasise the problem of divergent inflation rates. The related question of whether departure from a chosen point on the Phillips curve imposes high costs on currency area candidates is addressed in the following section.

### 2.2.3 Policy Integration and Interdependence

Most writers have recognised that macroeconomic integration as well as policy integration which “promotes competition, makes financial markets more efficient and removes barriers to factor mobility” (Tower and Willett, 1976, p.46) is not only desirable but ultimately necessary for a successful currency area. Ingram (1969) and Haberler (1970) argue that similar attitudes to problem solution and policy formation are as important as any of the economic characteristics studied. Further, Tower and Willett (1976) emphasise the importance of regional development policy co-ordination: redistribution to depressed areas should be combined, where possible, with programs encouraging factor migration, so that economic homogeneity in welfare and income is promoted within the currency area.

What seems antecedent to policy co-ordination within a currency area is the issue of agreement of problem and policy *attitudes* among currency area candidates. However, a high degree of policy *interdependence* (due possibly to high goods and asset market integration) may preclude the option of first determining whether candidates agree on policy co-ordination. They may have no choice but to co-ordinate their policies, given a high level of integration, and the question then becomes one of ‘the how’ not ‘the why’ of policy integration. Policy interdependence between integrated areas is examined closely in Chapter 3, where it is examined as an argument for total policy co-ordination - monetary and fiscal unification.

Fleming (1971) discusses some of the conceivable problems of policy integration, one of these being the requirement of symmetry of problems between regions. If problems do not complement each other - for example a depressed/deficit region and an inflated/surplus region - then policy clashes may result, eventually exacerbating conditions. Again, it will be possible to look more closely at policy integration and its effects using the model of Chapter 3.



Finally, Ishiyama (1975) raises the issue of the political aspects of policy co-ordination. The surrender of political power required to make monetary and fiscal unification work is often considered too severe by national authorities. This is why a full monetary union is often foregone in favour of an exchange rate union - which often proves to be a sub-optimal option. This issue of the *degree* of unification is one of the more important questions addressed in the analysis in Chapter 3.

#### 2.2.4 A Critique of the OCA Approach

Before proceeding to examine the alternative approach to monetary integration some of the shortcomings of the OCA approach which seem to justify an alternative will be looked at. Ishiyama (1975) has pointed to four major problems which are examined in turn.

The first is one of the *emphasis* of the OCA approach - being on the ineffectiveness and/or uselessness of flexible exchange rates rather than on the positive gains supposedly arising from the creation of a currency area. The alternative approach does, however, fill this deficiency. Secondly, it is not specific about the nature of disturbances (in terms of cause, magnitude, duration and frequency) and lacks explicit models. For present purposes, these aspects will be taken care of by the model of Chapter 3, which is capable of supporting analysis of cause, duration and frequency as well as magnitude (to a limited extent) of disturbances. The model is also not limited to analysing microeconomic disturbances (for example, shifts in demand) which is Ishiyama's third objection to the traditional approach, but is capable of handling macroeconomic disturbances and fluctuations as well (for example, differential rates of monetary expansion).

Finally, and importantly, the OCA approach fails to make explicit the benefits attainable from currency area membership. Thus a proper comparison and evaluation of membership *versus* non membership is not possible. Again, the alternative approach suggested by Ishiyama is able to fill this deficiency in the OCA approach.

Something more might be said about the nature of the OCA approach - it might be too *abstract* both in terms of the 'optimality' notion and in terms of the characteristics it attempts to identify. If one is faced with the problem of a dissolving exchange rate union

one may achieve better results by looking at macroeconomic fluctuation and its consequences within the union than by attempting to estimate labour mobility or financial integration for example.<sup>7</sup> Thus the OCA approach is of limited use by itself, it apparently requires use in conjunction with an alternative approach which is able to emphasise important issues that it cannot. This alternative approach is examined next.

## **2.3 THE NET BENEFIT APPROACH**

### **2.3.1 The Benefits of Monetary Integration**

The most popular argument for a common currency has been put forward by Mundell (1961), Aliber (1972), Tower and Willett (1970 and 1976) and Grubel (1970) among others. It is simply this: that a common currency reduces transaction costs of currency conversion and uncertainty about exchange rate fluctuations and thus enhances allocative efficiency. It is also optimum store of value due to the large domain over which it commands goods and service. Grubel (1970) argues that larger and more efficient markets could grow under a common currency due to the removal of the uncertainty and cost of currency conversion and the improvement in allocational efficiency that it bestows.

Further, Mundell (1961) and Kenen (1969) argue that the usefulness of money declines under flexible rates for smaller and more open economies and thus recommend a common currency between such areas. Kenen explains that due to their lack of economic diversification, low import and export demand elasticities, and higher propensities to import, small open countries are more liable to suffer from exchange rate instability under flexible rates. Further, there is the problem of speculative capital flows; the small asset markets of these countries would make them easily influenced by a small number of speculators who would be able to reap gains by speculating in forward markets when exchange rate fluctuations are expected. These fluctuations will then be exacerbated, forcing a larger change and destabilising the economy.<sup>8</sup>

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7. This suggests the approach taken in this thesis.

8. Again, one encounters an argument for currency area formation among small, open economies.

A third argument for monetary unification centres on the expected increase in goods and asset market integration that it would foster and the resultant improvement in resource allocation, economies of scale and growth (see Kindleberger, 1972). There are some doubts, however, that increased integration would remove the need for exchange rate change although it has made such change more difficult (Oppenheimer, 1974).

Mundell (1973) and Kafka (1969) point out an obvious gain that can be expected to arise from a common currency - that of reserve minimisation due to reserve pooling. A smaller quantity of reserves is needed in a common currency area than the sum of the individual amounts since disturbances that previously affected each country individually are now more likely to offset each other. If reserve requirements are minimised, allocative efficiency must improve as those funds can be invested where most productive. Kafka points out, in addition, that reserve savings can also be made on intra-area trade by the granting of credit between currency area members.

There are also non-economic arguments for currency area formation, specifically those referring to political and institutional benefits from formation. Williamson (1976) argues that currency area formation encourages and enables fiscal and policy integration; Lamfalussy (1976) holds that it will give regions more diplomatic leverage. It is generally believed, however, that fiscal integration is a far more difficult step than monetary integration and requires a great deal of effort and sacrifice by the countries involved. Fiscal integration will be discussed at the end of Chapter 3, where the implications of goods and asset market integration for monetary and fiscal unification are debated.

The issue of speculation and its minimisation under fixed rates has been critically addressed by Ishiyama (1975), who points out the possibility of continued speculation within the currency area if an adjustment in parity between one of the countries and the others becomes necessary. This possibility cannot be ruled out, particularly as "irrevocably fixed exchange rates are hard to imagine among nations" (p.363). Tower and Willett (1976), in emphasising the reserve gain to be made from currency area formation, qualify their argument by pointing out that the same arguments for currency area reserve saving may be made in arguing for *flexible* rates. Thus at least two of the 'benefits' from currency area formation are not undisputed or free of problems.

## 2.3.2 The Costs of Monetary Integration

### 2.3.2.1 *Loss of Control of Internal Balance*

The fact that the creation of a currency area might lead to a loss of control over *internal* balance was pointed out by early critics of monetary integration - among them Fleming (1971) and Corden (1972). Corden's argument recognises the fact that inflation rate equalisation is required between members of a monetary union but that its achievement will, in the presence of Phillips curve relationships, require departure from the optimal inflation/unemployment position for at least some of the members of a monetary union. Departure from optimal inflation/unemployment positions will always occur when nations have different Phillips curve relationships - reflecting structural differences between them. They may also have different preferences as regards the acceptable amount of unemployment and concomitant inflation, but if their Phillips curves are different it will not matter if they *do* agree on the acceptable level of either unemployment or inflation, the other variable (inflation or unemployment) will still have to change.

Two situations exist in which a country will not have to sacrifice employment for inflation rate equalisation. The first is trivial: if one of the countries dominates politically or economically it may be able to maintain its own inflation rate and force less influential countries to equalise theirs with it. This situation does not offer much hope for the monetary union as a whole, however, since overall unemployment will still change and other countries will have to suffer the welfare losses of departing from their preferred Phillips curve positions.

Secondly, it may be possible to alter growth rates of nominal after-tax wages or growth rates of productivity, which would then change the Phillips relationships so that inflation rates could be equalised with no change in unemployment (De Grauwe, 1975). This could be achieved by fiscal transfers with wage taxes in low inflation countries and subsidies in high inflation countries. Alternatively, if productivity growth rates are to be equalised, regional policies promoting education, population upliftment and investment need to be followed. These may impose a high cost on the union, however, and some members may not be prepared to shoulder it. The unavoidable conclusion is that monetary integration

among regions with dissimilar Phillips relationships and optimal inflation/unemployment trade-offs will always require losses and adjustments which may be serious enough to negate what advantages the union may have to offer.

### **2.3.2.2 *Loss of Monetary and Fiscal Policy Autonomy*** ✓

Implied in the requirement of inflation rate equalisation is the subjugation of national monetary policy to that end. In a full monetary union, monetary autonomy is entirely forfeited to the union central bank, but even in a simple exchange rate union, monetary autonomy is limited. Monetary expansion can not take place without regard to its effect on the inflation differential (or equality) with other union members, and monetary policy must therefore be co-ordinated across the union. Mundell (1962) and Fleming (1962) point out that capital outflows will rob expansionary monetary policy of its output effect anyway, and serve to distribute the expansion evenly across the union. This occurrence, and its relation to the level of asset market integration, are examined in Chapter 3, in the context of a specific model.

What of fiscal policy? Arndt (1973) shows that in a model of a two-country monetary union and outside world, fiscal policy may require co-ordination in order to solve each member's external balance, since there is only *one* monetary policy tool - the unified monetary policy - but *two* external balance targets (after internal balance targets have been reached with fiscal policy). Johnson (1971) explains that fiscal policy will also be limited by government debt constraints - if monetary policy is limited then so is the borrowing ability of government, which will have to look outside the union for finance.

The question of loss of policy autonomy is taken up again in Chapter 3 where, as was mentioned, it is possible to pose it in the context of a specified model. It is found that policy autonomy at moderate to high levels of goods and asset market integration is limited anyway, thus the emphasis is placed not so much on the disadvantages of the *loss* of autonomy so much as the prescriptions for making policy work in its presence.

### 2.3.2.3 *Exacerbation of Regional Problems*

If monetary integration leads to an increase in the power and domain of trade unions, it is feared that the resulting decline in the flexibility of real wages will exacerbate regional problems (Allen and Kenen, 1980, p.388). Depressed regions will suffer increases in unemployment and the labour migration resulting will deprive these areas of the best workers. Alternatively, higher productivity areas will experience an influx of labour which may exacerbate transport and housing congestion and drain the supply of other social services.

Labour migration may not be the only problem. If regions of current account deficits and surpluses exist alongside one another and if capital is mobile, it may exacerbate those imbalances by moving from the deficit regions to the surplus regions, which are likely to offer the more attractive investment opportunities. While these capital movements may tend to equalise private rates of return, they may not equalise social rates, as Cairncross (1974) points out, further entrenching regional social problems.<sup>9</sup> Thus the costs of monetary integration are, from the point of view of regional economies, potentially quite high as well.<sup>10</sup>

### 2.3.2.4 *Qualifications*

In qualifying the argument concerning the loss of control over internal balance, Tower and Willett (1976) point out that, as the degree of openness of a country increases, its ability to trade-off *domestic* inflation with local unemployment decreases due to a decline in the level of 'exchange rate illusion'.<sup>11</sup> Instead, due to the large component of foreign goods in the expenditure bundle, local economic agents revise their income and wage demands more and more in accordance with *foreign* inflation as openness increases. Countries operating under these conditions are limited in their inflation/unemployment choice anyway, and do not stand to lose much by foregoing the option of exchange rate variation

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9. These capital movements may require the provision of social services (due to externalities) and thus increase the pressure on high growth areas.

10. See also Johnson (1971), Hirsch (1972a and b) and Kaldor (1970, 1971).

11. The degree to which individuals are prepared to accept a decline in their real incomes relative to the outside world.

and linking their exchange rates. Once again, the argument that openness increases the case of monetary integration has been supported, albeit from a different angle.

Further, Allen and Kenen (1980, p.386) point out that many of the problems relating to BOP adjustment in an exchange rate union would not occur in a full monetary union. For one, the monetary union would not suffer from inconsistent monetary policy as there would be only one monetary authority anyway. This would help to solve the problems of divergent inflation rates, which could more easily be harmonised. In addition, they suggest that payment flows in a monetary union would be smaller than those in an exchange rate union, both because exchange rate speculation would be totally ruled out in a monetary union and because the highly integrated financial markets would facilitate automatic capital flows. Also, capital flows generated by countries defending their reserve positions in an exchange rate union would not occur in a monetary union since external reserve settlements take place at the union level. Some of these arguments are considered again in the final section of this chapter.

What can be concluded from this is not that currency areas are without adjustment and macroeconomic problems, but that the extent to which they suffer from these problems depends in part on the degree to which monetary unification has taken place. This argument will be encountered again in Chapter 3, where it is shown that the problems of a single exchange rate union are often resolved not by less unification but by more. In addition, this topic of the relative superiority of various degrees of monetary integration is considered in Section 2.5 of this chapter.

## **2.4 MONETARY INTEGRATION AMONG DEVELOPING COUNTRIES**

By looking at the desirability, in general, of monetary integration among developing countries, it will be possible to enhance an understanding of the desirability of the CMA. This section thus complements Sections 2.2 and 2.3, especially the latter section, since it

examines theoretical considerations of monetary integration but with application to *developing* countries.<sup>12</sup>

#### 2.4.1 Goals and Formulae of Monetary Integration among LDCs

There are problems in applying the theory of monetary integration to developing countries. Firstly, as Nana-Sinkam (1978, p.89) points out, the theory is based on an idea of monetary integration as forming one of the last stages of economic integration between advanced market economies. There is little to be found concerning rudimentary monetary co-operation between less developed economies. Further, Nana-Sinkam (1978, p.90) explains that both customs union theory and monetary integration theory espouse “a continuum of formalised stages of integration ... ” therefore hindering the analysis of integration between countries relatively more or less developed. Nana-Sinkam argues instead that an approach must be taken which places monetary integration in the context of *development* and analyses its role as a facet of this development. In particular, he sees the question of whether economic integration and/or fiscal harmonisation should precede or follow monetary integration, or whether they need to be initially considered at all, as important (p.91).

In light of the developmental role of monetary integration, then, it is possible to identify various proposed reasons for enhancing monetary integration. Firstly, Robson (1968, p.49) believes that at least some form of monetary integration is necessary to fully realise the gains of market integration. For investment reasons, Robson argues that “effective integration demands an assurance of freedom of payments ... at stable rates of exchange” (p.49). Alexander Kafka (1969, p.136) supports Robson on this first point and also specifies that stable exchange rates are required. In addition, he offers two more reasons for monetary integration, the first being “economising on international reserves” (encountered earlier), and the second, the strengthening of what he calls “multi-lateral surveillance” (p.136). This latter issue presumably refers to the strategic aspects of political co-operation, the former is a well-known justification for monetary co-operation

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12. It is appreciated that South Africa is more advanced than a typical ‘developing country’; however, it is held to possess a *dualistic* economy which is characterised by an advanced and a developing sector alongside one another.



and one that has been mentioned before (Chapter 1). Finally, Nana-Sinkam points to five reasons for monetary co-operation in modern Africa, reasons which go beyond the simple facilitating of trade:

- (1) the impracticability of the independent monetary areas of small, open economies (a familiar argument: see Section 2.2.1.2 above);
- (2) dissolution of trade links with Europe;
- (3) dissolution of links between monetary authorities;
- (4) increases in the cost of “decentralised policy-making” due to external pressures; and
- (5) problems of adjustment and illiquidity since the “demise of the old order” i.e. the Bretton Woods system (1978, p.93).

He therefore argues for the expansion of co-operation and integration and the formation of new institutions and policies to counter these problems and enable development. There are many degrees of co-operation, however, and all may have some benefit.

The simplest form of monetary co-operation is monetary policy harmonisation, which Robson (1968, pp.50-51) sees as necessary to prevent the external payments and capital flight problems consequent upon differential monetary expansion in an economic grouping. Alternatively, a minimum requirement in an economic grouping is the agreement to limit credit to central government to that required to reach external balance, which Robson states amounts to “*de facto* harmonisation” (p.51).<sup>13</sup>

## 2.4.2 Recognising the Capacity for Monetary Integration

Determination of the stage of integration that a country has either arrived at or is prepared for is explained by Nana-Sinkam (1978, p.94). Firstly, “political and economic interest structures” will reflect the requisite changes; secondly, the levels of “economic and political sovereignty” that governments are prepared to give up reflect importantly on the

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13. Otherwise, unbridled credit expansion would enlarge incomes and import volumes and result in a deteriorating external payments situation.

type of integration arrangement possible and, thirdly, the existing trade and payments structures indicate which further arrangements are “technically sustainable”. However, as Nana-Sinkam points out, there is no “standard path” to financial development - the possibilities and combinations of structures and arrangements are many and varied (1978, pp.94-95). He does, however, specify certain characteristics of the economies initially prepared for agreements to “underwrite the integration of trade relations and product and factor markets ... ” (p.91). The prospective members should have low external (to the group) trade/GNP ratios, developed “monetary and fiscal infrastructures” and a predisposition on the part of governments to co-operate (pp.91-92). It is these countries which can benefit from increased integration and co-operation to make resource utilisation more efficient and promote development.

### 2.4.3 Appropriate Measures for Developing Countries

What then are the measures that should be followed by these countries? Kafka suggests that as a first step, intra-area exchange controls should be removed so that capital movements may be freed up and asset market integration facilitated (1969, p.137). Kafka dismisses the possibility of intra-area flexible exchange rates for at least two reasons: firstly, it is unlikely in developing countries that there will be sufficient speculation, let alone *stabilising* speculation, required to make the systems workable. Secondly, exchange rate fluctuation will result in changes in relative prices between countries which “will not be conducive to the growth of intra-trade in less than perfect markets, where goodwill has to be built up over the years” (1969, p.138). Kafka thus advises that a system of pegged rates, which are adjustable only in the face of fundamental disequilibrium, should be adopted. This sort of arrangement will necessitate increased levels of reserves since, as Kafka shows, under normal conditions countries usually deal with deficits by allowing exchange rates to change while surpluses are allowed to add to reserves. However, with exchange rate fixity deficits will have to be financed.

Further, Kafka suggests that at least part of the Area’s reserves should be pooled but that drawing on them should not be automatic (1969, p.141). Instead, the past performance of each country should be taken into account in determining the eligibility of that country

for reserve credits.<sup>14</sup> Kafka goes on to allude to the well known advantages and economies of reserve pooling *vis-a-vis* third countries and the extension of intra-area mutual credits. However, he explains that certain characteristics of *developing* countries - limited mutual trade and the unlikelihood of offsetting terms of trade - seem to indicate that these gains may only be small among them (1969, p.142).

A further measure, mentioned by Robson (1968, p.51), relates to the internal policy making of integrating countries. His arguments concerning monetary policy harmonisation of less sophisticated countries he believes apply as much even to full monetary unions among more advanced developing countries. Where credit is expanded in one country of a monetary union, care must be taken to ensure that it does not increase its imports out of hand, thereby making the other members of the union pay for its development efforts. The final measure would be that overall union credit expansion, hopefully equitably distributed, should “preserve external balance in the national monetary BOP, over a period of years” (1968, pp.51-52).

These sentiments pre-empt some of those expressed in the Chapter 3 findings of the Allen-Kenen model concerning monetary policy in the presence of economic integration, although in the developing country case, the need for policy harmonisation springs from the desire to advance equitable development rather than from the need to avoid sterilisation of mutual monetary policy. The latter considerations are less important to developing countries - precisely because they are possessed of less developed asset markets and engage in integration efforts in order to develop and advance their economies, rather than merely to increase policy efficacy and efficiency.

#### **2.4.4 Costs and Benefits**

Finally, this section deals with the projected costs and benefits associated with developing country monetary union. Whilst these considerations, discussed by Saleh Nsouli (1981, pp.41-44) apply to *full* monetary union - i.e. a common currency and union central bank -

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14. Kafka does not say who is supposed to police the drawing of monetary area reserves. In a full monetary union it would be the job of the union central bank.

there is nevertheless an extent to which the mentioned benefits and costs apply to lower levels of integration. The rationale for discussing benefits and costs at this stage is simply this: having discussed limitations of conventional theory, degrees, purposes and measures of integration, the 'functional' considerations of monetary integration are, in a sense, only lacking a discussion of projected *results*, since the actual establishment and composition of the monetary union have already been dealt with.

Monetary integration, according to Nsouli, will serve to increase overall investment in the area (1981, p.42). He gives four reasons for this: firstly, exchange risk is reduced due to exchange rate fixity and funds flows facilitated by the absence of exchange control. Secondly, domestically-generated resources are more likely to be invested domestically as the range of opportunities expands with the investment area. Thirdly, the stability of a common currency, owing to the fact that its value is determined at the union level, would serve to attract additional foreign capital, and fourthly, resource allocation is improved since funds are able to flow to the optimal use opportunity in the area.

An increase in the level of savings may also be made possible by monetary union, to the extent that it can encourage investment and stimulate growth and thereby raise per capita income. Financial intermediation can also be increased as the range of opportunities is expanded over the whole union and intra-regional financial markets develop (Nsouli, 1981, p.42). Nsouli addresses the question of whether monetary union will expand intra-regional trade. He finds that this is more likely in the long run than in the short or medium term, since 'infrastructural limitations' are ingrained and not amenable to adjustment through the advent of monetary co-operation alone. In the long run, however, 'changing production patterns' that result from the changes in investment may facilitate increased trade (1981, p.43). In Section 2.3.1 above, the promotion of goods market integration - which comes about by trade - is mentioned as a benefit of monetary union.

A further advantage mentioned by Nsouli relates to enhanced external exchange rate stability. The logic is that the larger monetary area of a monetary union will permit smoother adjustment due to the increased likelihood of offsetting disturbances over the area. The argument is not new - diversified monetary areas were held to be a better idea by Kenen (1969) due to this shock-accommodating possibility and the likelihood therefore

of greater external payments stability. Nsouli also mentions the possibility of exchange reserve economies in a monetary union; these have also been discussed by Kafka (1969) and Mundell (1973).

On the costs side, Nsouli sees monetary policy limitations and interest rate equalisation as important possible problems. Uniform monetary policy implies uniform credit growth and this may not suit the development needs of particular countries in the union. Interest rate equalisation may also harm less advanced, 'low-return' countries since their costs of funds may not be met by their returns on capital (1981, p.43). This could result in adverse intra-regional capital flows, with the more advanced areas ending up with all the investment. This problem is particularly important among capital-starved developing countries.

Finally, Nsouli emphasises the possible fiscal policy constraints in a monetary union. The existence of a union central bank limits the use of deficit financing through sale of debt, but tax revenue sources are also limited in developing countries, as well as private sector borrowing (due to crowding-out). Thus government spending is sure to be more limited in a monetary union than otherwise, the only advantage being that of the imposition of *spending* discipline due to the constraints (1981, p.44).

Thus, as Nsouli points out, the benefits have to be weighed against the costs, the final outcome and decision for or against monetary integration depending on considerations specific to each area. In this he has applied the 'net benefit' approach to currency area formation among developing countries. In the case of the CMA, the issue (at least for Swaziland) has not been concerned with more monetary unification but rather with less, due to an increase in costs experienced by the smaller countries. Since, as has been mentioned, a full *de facto* monetary union existed from the start, the question of *formation* of a monetary union has never been important. Instead, the choice between the *status quo* and less monetary integration seems to have been the most important.

## 2.5 THE SUB-OPTIMALITY OF AN EXCHANGE RATE UNION *VERSUS* A FULL MONETARY UNION

What is discussed in this final section of the chapter is a set of purely economic arguments for monetary union *versus* some less intense form of monetary integration. Therefore the debate has shifted somewhat from that in the first section - the degree of monetary integration is debated rather than its desirability *per se*. This approach is clearly more relevant (than that in the first section) to countries that are already integrated financially and in other ways, and thus have no choice about the absence or presence of some formalised monetary integration arrangement, only about its nature. These arguments are thus more relevant to members of the CMA, who experience close asset and goods market integration, than those in the first section.

There is much evidence to suggest that a simple exchange rate union will be functionally inferior to a full monetary union. Indeed, this idea is one of the most important conclusions of the following chapter, where the Allen-Kenen arguments concerning policy autonomy of monetary unions are discussed. These and other arguments supporting the idea of the inferiority of an exchange rate union will be put forward here, after initially defining in detail the meanings of 'monetary union' and 'exchange rate union'.<sup>15</sup>

Daniel Gros (1989, pp.219-230) has exhaustively analysed the factors surrounding the extent and degree of monetary integration. By identifying six considerations of the degree of co-operation, he permits distinctions to be made between the levels of integration corresponding to 'exchange rate union' and 'full monetary union'. The first consideration of Gros' is the "credibility of the exchange rate commitment" (p.222). He argues that a first requirement for monetary union is the certainty in the minds of economic agents that exchange rate fixity is permanent. Permanent fixity need not be the case for a simple exchange rate union, however. Secondly, he suggests that any remaining bands of permissible fluctuation (within the definition of 'fixity') detract from full monetary union, while thirdly the existence of *bid-ask* spreads among commercial banks has the same

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15. The central theme of the following chapter is the effect on countries of goods and asset market integration, and thus the present analysis does not pre-empt any of its analysis or findings.

effect.<sup>16</sup> In essence, both imply a lack of perfect substitutability between currencies, something which Gros sees as defining full monetary union (p.221). Fourthly, the legal tender status of the currency is an obvious indication of the degree of monetary union. Universal legal tender status is seen as a preliminary stage to the introduction of a common currency, since it is not possible without the elimination of bid-ask spreads and margins of fluctuation. Universal legal tender status thus implies a stage further in exchange rate union. Fifthly, Gros suggests that if prices are to be quoted in two different currencies, an inefficient situation typical of simple exchange rate unification is implied (p.223). The levels of goods market integration that occasion competition between substitutes of different national origin in the same market would therefore seem to require at least preliminary monetary co-operation, and a common currency would obviously be the most effective and desirable situation. Finally, the practice of using different currencies in different sectors of the economy would not happen in a full monetary union, it therefore typifies the exchange rate union case. The example Gros gives is the use in the 'wholesale financial sector' of an international currency and the use in the retail sector of a domestic currency.

To summarise, an exchange rate union is typified by the following characteristics (a monetary union possesses none of them): non-certainty of exchange rate fixity; margins of fluctuation; commercial banks' bid-ask spreads; different national currencies are all legal tender (i.e. no common currency); prices of goods and services are quoted in more than one currency and different currencies are used in different sectors of the economy. Gros then defines three levels of monetary unification:

- (1) "*Ex post* macro monetary union" - an exchange rate union with non-permanent fixity - "escape clauses".
- (2) "*Ex ante* macro monetary union" - an exchange rate union with permanent fixity. The mentioned characteristics, besides the first one, still apply however, and thus the currencies are not perfect substitutes.

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16. A 'bid-ask spread' is the difference between the exchange and face values of a unit of currency at conversion. Gros sees the existence of bid-ask spreads and bank commission as resulting from the need by banks "to cover the costs they incur by holding bank notes in different currencies and by having to set up several accounting systems" (1989, p.222).

- (3) “Micro monetary union” - this is a full monetary union in the sense that the currencies are perfect substitutes - they are in fact “one money” (1989, pp.223-224).

The distinctions between the various degrees of monetary union have been discussed in detail due to the complexity of the CMA case. The CMA has been, since 1986, three separate currency areas - a full micro monetary union between South Africa and the TBVC states and Namibia, a near-complete monetary union with Lesotho, and something approximating an *ex post* micro monetary union with Swaziland. Whilst the present situation with Swaziland resembles a near-complete monetary union, the contingency of de-linking and the advent of non-legal tender provisions in the 1986 agreement lead to conditions more typical of an *ex post* macro monetary union, or exchange rate union. The situation in Namibia, although unchanged at time of writing, will in all likelihood end up like that of Botswana - an eventual flexible exchange rate relationship with South Africa after an initial period of exchange rate fixity during the tie-cutting stage.<sup>17</sup> However, such considerations are beyond the scope of this section: what is important here are the implications concerning the optimality, efficiency and functionality of the particular situations. Ignoring for the present the various ways the CMA (or most of it) resembles a full monetary union, the most important consideration pertaining to the *status* of the CMA is the lack of a *common currency*. Further, whatever can be said about the degree of *substitutability* of the currencies of the CMA, it falls short of full monetary union by an additional factor - the fact that the South African Reserve Bank, whilst appearing in terms of power and capacity to be the union central bank is *not jointly controlled by the members of the CMA*. On the importance of this, consider the words of Casella and Feinstein: “the organisation of a *jointly* controlled central bank is crucial for a common currency ... ” (1988, p.3) (my emphasis). The reasoning behind this is discussed later. Suffice to say that it can be concluded that, whatever it is, the CMA is not a full monetary union, and this fact lies behind the reasoning for the focus of the Chapter 3 model, as well as the arguments put forward next.

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17. Namibia joined the CMA on independence but has also announced plans to establish its own central bank and currency by 1992.



The Allen-Kenen model of Chapter 3 permits conclusions to be drawn about policy effectiveness between highly integrated nations. It is stated there that, since harmonisation of policy targets *and* instruments is necessary to permit realisation of those targets, some form of policy co-operation is necessary between interdependent countries. Interdependence increases as goods and asset market integration increase, and the existence of a degree of monetary co-operation - exchange rate union - is found to have the effect of enhancing integration. Thus if the institutional arrangements enhance integration, and if this integration decreases policy autonomy, there is a strong argument for establishing a monetary union with a union central bank. The undertaking of separate policy by a national central bank is found almost always to necessitate offsetting policy by the other, at cost to both and often without ultimate success. Hence it is postulated that a union central bank is required, which will guarantee policy autonomy and require only agreement on targets. More on this in the next chapter.

A second argument for full monetary union flows from the analysis by Casella and Feinstein (1988) of the welfare effects of macroeconomic policy under various monetary unification arrangements. Briefly, they find that exchange rate union with common legal tender is problematic since each country finds it possible to exploit the other (pp.9-12).<sup>18</sup> This happens since each is able to finance government expenditure through the issue of fiat money, increasing nominal local wealth as well as real local wealth, since claims on the foreign country's tradeable goods are not eroded by depreciation. The optimum issue of fiat money becomes larger as the government's time horizon (its propensity to favour the future generation over the present) increases. However, the spiralling monetary expansion boosts world inflation eventually, thereby lowering utility. There is thus no equilibrium since "for any amount of currency issued by the foreign government, the home government desires to supply more" (1988, p.11). Unless issue of the common currency can be controlled by a union central bank, the flexible exchange rate case is the only alternative. However, even here successful operation of the monetary union requires that

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18. The situation they describe (pp.9-12) is entirely hypothetical and meant only to demonstrate the impracticality of common currencies without a common monetary authority. In this there is the tacit assumption that the goal of a common currency has already been established, the only further considerations relating to the issue and administration of the currency. It is unfortunate, however, that they did not analyse a more realistic case - that of an exchange rate union with non-perfectly substitutable currencies.

the members are either very similar in size and influence or very dissimilar - implying that a monetary union between countries of various sizes is not viable.<sup>19</sup> This conclusion would not seem to preclude the CMA though, it being composed of countries of very dissimilar size and influence.

The realisation of the full range of benefits for the three degrees of monetary co-operation is analysed by Gros (1989, pp.227-229). Whilst all three - *ex-ante*, *ex-post* and micro monetary union - entail the loss of the freedom of exchange rate adjustment, the micro monetary union allows the most benefits. Specifically, it permits:

- (1) Eradication of the use of surprise inflation by governments.
- (2) An increase in trade as exchange rate stability is fully felt.
- (3) An increase in the transparency of prices of tradeables and the removal of transaction costs of trade.
- (4) Enhancement of the power and status of the area.
- (5) Reduction of the exposure of members to external shocks. (Gros, 1989, pp.227-228)

An *ex-post* monetary union can only partially permit benefits (3) and (5), while an *ex-ante* monetary union additionally prevents the complete realisation of benefits (1) and (2) (see Gros, 1989, table p.229). Gros thus concludes that, when considering monetary integration, *only the most complete form is desirable in any but transitional stages*.

On this point, Nana-Sinkam (1978, p.151) criticises the 'either/or' approach to flexible rates/monetary union adopted by earlier authorities, citing Ingram, Johnson and Sohmen. As part of the transition to full monetary union, he sees the advent and existence of earlier stages of monetary integration as quite acceptable: " ... it seems to me an unnecessarily extremist position to claim that a single common currency must exist from the beginning ... " (p.151). The importance of *transition* seems especially relevant to developing countries, whose nascent financial systems and political aspirations may not permit the entry into a full monetary union and common currency.

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19. See Casella and Feinstein (1988, pp.16-17), especially the diagram opposite p.17.

## 2.6 SUMMARY AND CONCLUSION

The original currency area approach bases its decision for or against establishment of a currency area on its assessment of the degree to which a number of regions are economically homogenous, i.e. the degree to which they resemble a single country, economically speaking. The characteristics it examines are factor mobility, openness, inflation rates, policy integration and inter-regional price and wage flexibility. The net benefit approach bases its judgement for a currency area on a comparison of the foreseen costs and benefits of unification, rather than dealing with conceptually difficult and abstract 'characteristics'. The 'development' approach views the decision for monetary union in the light of the goals and peculiarities of *developing* countries. It is like the net benefit approach except that its hierarchy of costs and benefits is different (although there is significant overlap). If monetary integration can increase investment and improve resource allocation it is likely to be desirable among developing countries, although the importance of *transitional* stages is stressed. Some authorities feel that the loss of policy autonomy and sovereignty would jeopardise developing country monetary unification, but this assumes that there *is* sovereignty to lose. If the countries are so closely tied that their goods and asset markets are interdependent anyway, as will be seen is the case in the CMA, then a new set of considerations become relevant - that of the *degree* of monetary unification. This comes about if extant goods and asset market integration has progressed beyond a point such that the bloc members do not have the choice of the 'insulation' offered by flexible exchange rates since their interdependence means their policy and disturbances are mutually felt *regardless* of the formal monetary arrangement. In this case, cognisance should be taken of the fact that full monetary union can be shown to be superior to all less intense forms of co-operation, and this lesson is carried into the remainder of the thesis.

In the next chapter the focus is on integration of goods and asset markets as a factor affecting the choice of a currency area in terms of the effect of integration on the independent policy functioning of member countries and the transmission of disturbances. Conditions and outcomes are limited by using a model, and the effects of economic integration can thus be explicitly examined.

## CHAPTER 3

# ***ASSET AND GOODS MARKET INTEGRATION IN AN EXCHANGE RATE UNION: THE ALLEN-KENEN MODEL***

### 3.1 INTRODUCTION

Having examined the theoretical contributions to the issue of what makes a good currency area, it is possible to focus the analysis and examine explicitly the functioning of an exchange rate union under various conditions. To do this, use is made of Allen and Kenen's Chapter 11 model of "Asset markets, Exchange Rates and Economic Integration", as well as their graphic analysis, developed in later chapters. The authors state that the purpose of their model is:

" ... to show as precisely as possible how market integration limits autonomy in monetary and fiscal policies, to show how one government may be required to react to decisions by another and to assess the gains that may accrue from the co-ordination or harmonisation of national policies and from outright policy unification" (p.377).

The analysis will draw selectively on insights provided by the Allen-Kenen model into the functioning of an *exchange rate union* rather than a full monetary union as defined in the previous chapter. The reason for this is that the CMA, while not being a proper exchange rate union is not a full monetary union either. However it is certainly closer to being an exchange rate union, since each member has its own central bank and currency, and the various currencies are not perfect substitutes as is required for a full monetary union. Thus the analysis is based on the logic that the existence of separate central banks indicates that there is at least the *intention* by each to carry out independent policy, and this is demonstrated as being impractical by the model. The reason for this is that it is found that

the typically high levels of goods and asset market integration of an exchange rate union promote policy and disturbance transmission through the union, increasing the cost and decreasing the effectiveness of independent policy, and making at least policy co-ordination necessary. However, a better solution is seen to be that of full monetary union - a common currency with a *jointly* controlled union central bank. The justification for this argument is concerned with the necessity of the harmonisation of both policy targets *and* instruments where integration and interdependence prevail, and the fact that an exchange rate union rarely accomplishes policy co-ordination as well as a full monetary union. Indeed, Allen and Kenen suggest that “the integration of targets may be more harmful than helpful unless it is accompanied by an appropriate integration of instruments” (pp.380-381).

The idea that an exchange rate union will be inferior to a full monetary union was put forward by early writers (Sohmen, 1969; Johnson, 1963; Ingram, 1962) who advanced various arguments, for example Ingram’s assertion that capital mobility would not be sufficiently accelerated in a mere exchange rate union due to foreign exchange restrictions required to protect the fixed rate. Other more recent arguments in favour of full monetary union were advanced in the previous chapter. Allen and Kenen’s argument flows from their analysis of policy interdependence, and it is the one emphasised here.

The chapter begins with an examination of the portfolio balance approach - that used by Allen and Kenen - and its departure from the more conventional Keynesian model. Next is a summarised version of the two country model and a brief comment on the nature of goods market characteristics assumed by Allen and Kenen. After that some of the comparative static solutions of the model are given in tables adopted from Allen and Kenen, and finally a graphical analysis of policy and disturbance effects under integration is undertaken.

### 3.2 THE PORTFOLIO BALANCE APPROACH

The central thesis of the portfolio balance approach is that the short run exchange rate (or change in reserves) is determined by the capital account. In essence, the exchange rate is the variable which generates ‘portfolio balance’ between domestic and foreign assets

(Krueger, 1983, pp.86-88). This is because the demand for foreign assets is a function of domestic and foreign interest rates (as is the demand for domestic assets) as well as the exchange rate. Although one of the domestic assets is money, Allen and Kenen are quick to point out the difference between their version of the portfolio approach and the monetary approach to the BOP. Firstly, they do not assume that money is neutral; instead they allow for its effects on real variables and economic activity, which they see as important, even in the long run. Also, the assumption of money neutrality places limitations on assumptions of foreign asset holdings and hence preclude a full analysis of portfolio behaviour.

Secondly, Allen and Kenen do not see the exchange rate as determined entirely within the money market. The exchange rate clears the money market - it is the 'price' of money - but it is determined jointly by bond markets (as was mentioned). Further, the long run exchange rate is determined by both asset and goods market behaviour and is not solely a monetary phenomenon.

How does the portfolio approach expand on the mainstream Keynesian approach? Firstly, behaviour and equilibrium requirements are fully specified in all three asset markets - domestic money, domestic bonds and foreign bonds. Asset demand is constrained by *wealth* which influences and is added to by saving; through its influence on saving, wealth influences expenditure (Allen and Kenen, 1980, p.9).

In addition, to ensure short run exchange rate determination in asset markets, Allen and Kenen make two important assumptions to differentiate asset and goods market behaviour. Firstly, they assume that the *manner* of adjustment in other market is fundamentally different: while goods market adjustment is by *flows* of goods, asset market adjustment is by *stocks* of assets. Thus asset adjustment is immediate and portfolios are continually in balance. Secondly, the demand for money is determined by the same determinants of the demand for other assets - interest rates and wealth and *not* by income as is usually the case. This assumption is critical to the portfolio approach since if income was made to affect money demand, goods market disturbances that changed income would impinge on asset markets and thus the exchange rate. Goods markets do effect asset markets but only in the long run - through their effect on the level of saving and thus wealth.

Although some of these assumptions may seem restrictive, the portfolio approach does offer a workable explanation for the empirical observation of short run exchange rate behaviour, and improves on the monetary approach in that it does not need to assume perfect substitutability between assets, or money neutrality to do this (Krueger, 1983, p.90).

### 3.3 THE ALLEN-KENEN TWO COUNTRY MODEL

Allen and Kenen explain that their two country market is designed primarily to analyse interdependence, since it is interdependence that reflects on the existing amount of policy autonomy and existing policy autonomy that determines the sacrifice involved in policy unification.<sup>20</sup> If the existing level of policy autonomy is low due to high interdependence - then that sacrifice may not be large and the country may stand to derive a net benefit. Thus Allen and Kenen analyse the effect of interdependence on policy autonomy and the effect of market integration and the exchange rate regime on interdependence. The model must therefore be able to accommodate an analysis of interdependence, and the model that follows does, in that the countries it deals with are large enough and advanced enough to influence one another.

#### 3.3.1 A Summary

The two countries are called 'North' and 'South' and trade mutually and with the outside world, and can affect the prices of each other's output but not the price of 'foreign' output.<sup>21</sup> There is an unlimited supply of the world bond at a constant interest rate and each country holds these bonds and each other's bonds, but foreigners do not hold domestic bonds. There are five assets - North bonds, South bonds and world bonds as well as North and South money - and three traded goods - North, South and world goods. Non-traded goods markets are omitted to avoid over-complicating the analysis, but Allen

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20. See Allen and Kenen (1980), pp.297-320. Reference is also made to their chapter on "Similarities and Symmetries in Goods and Asset Markets", Chapter 12, pp.321-335.

21. 'Foreign' refers to the outside world; both of the two neighbouring economies are considered 'domestic'.

and Kenen point out that their omission does not prevent analysis of incomes, interest rates and exchange rates.

The 'market agents' - firms, households, the central bank, the government and foreigners - all behave normally; there are no 'quirks' concerning them in the Allen-Kenen model. Further, markets are perfectly competitive and continuously clearing and transaction costs and response lags (to price, interest rate changes etc.) are absent.

Finally, asterisked variables are desired quantities, 'barred' variables are exogenous, superscripted 'f' variables are in world prices, superscripted 'prime' variables are in South prices and all others are in North prices. Subscripted 'zero' variables are world variables (for example, the world good) and subscripted 'one' and 'two' variables are North and South variables respectively.

Presentation of the model is shortened by omitting equations for the South or world that are *direct* replicas of North equations. Thus the model of country North and the outside world is presented, and South is a direct replica (unless otherwise specified).<sup>22</sup>

### 3.3.2 Production/Labour Market

$$Q_1 = Q_1(*E), \quad Q_{1EE} > 0, \quad Q_{1EE} < 0 \quad (3.1)$$

Production of Good 1,  $Q_1$  is a function of total demand for labour  $*E$ . Gross Domestic Product is defined as follows:

$$Y = P_1 Q_1 \quad (3.2)$$

where  $p_1$  is the price of Good 1.

Wage income:

$$w = P_1 Q_{1E} (*E) \quad (3.3)$$

The wage is equated to the marginal revenue product of labour,  $P_1 Q_{1E}$

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22. Allen and Kenen (1980, pp.303-320) themselves present the model in its entirety.



Equality of demand and supply of labour:

$${}^*E - E = 0 \quad (3.4)$$

In the classical variant, labour supply is fixed; in the Keynesian variant it is perfectly elastic at a fixed wage.

### 3.3.3 Commodity Demand, Savings and Wealth

Northern balance sheet:

$$W^h = L^h_1 + B^h_1 + (\pi/\pi')B^h_2 + \pi B^h_0 \quad (3.5)$$

$W^h$  is household wealth,  $L^h_1$  demand for money,  $\pi$  the Northern exchange rate (in units of local currency,  $\pi'$  the Southern exchange rate<sup>23</sup>,  $B^h_2$  holdings of the Southern bond and  $B^h_0$  holdings of the world bond.

Wealth accumulated through time  $T$  in consequence of saving,  $S$ , and exchange rate changes:

$$W^h = \int_0^t S dt + \int_0^t \left[ \left( \frac{\pi}{\pi'} \right) B^h_2 + \left( \frac{\dot{\pi}}{\pi} - \frac{\dot{\pi}'}{\pi'} \right) + (\pi B^h_0) \frac{\dot{\pi}}{\pi} \right] dt \quad (3.6)$$

Desired saving:

$${}^*S = S(r_0, r_1, r_2, Y^d, W^h); \quad S_0, S_1, S_2 > 0; \quad 0 < S_y < 1; \quad S_w < 0 \quad (3.7)$$

where  $r_0, r_1, r_2$  are the interest rates on the bonds and  $Y^d$  is disposable income:

$$Y^d = Y + r_0(\pi B^h_0) + r_1(B^h_1) + r_2(\pi/\pi')B^h_2 - T^h \quad (3.8)$$

where the second, third and fourth terms represent interest income and  $T^h$  is taxes. Northern consumption of all three goods is influenced by total desired consumption,  ${}^*C$ , and all three prices:

$${}^*C_i = C_i(P_0, P_1, P_2, {}^*C) \quad (i = 0, 1, 2) \quad (3.9)$$

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23. Thus  $\pi/\pi'$  represents the exchange rate between the North and South; we have as yet not assumed any fixity between their exchange rates. When we do,  $\pi = \pi'$  and  $B^h_2$  are effectively valued in Northern currency.

constrained by

$$^*C = P_0^*C_0 + P_1^*C_1 + P_2^*C_2 \quad (3.10)$$

defined by

$$^*C = Y^d - ^*S \quad (3.11)$$

The behaviour of the demand functions  $^*C_i$  is defined by the following, where  $e_{ij}$  represents the cross elasticity of demand for good  $i$  in terms of the price of  $j$ :

$$e_{ij} > 0$$

thus the goods are gross substitutes

$$e_{ij} - \sum e_{ij} = 1$$

they are homogeneous of degree zero in prices and consumption and:

$$P_i^*C_i e_{ij} = P_j^*C_j e_{ji}$$

$$i, j = 0, 1, 2, \quad i \neq j$$

The marginal propensities to spend sum to zero:

$$\sum M_i = 1 \quad \text{and} \quad M_i = P_i C_{i_k} \quad i = 0, 1, 2$$

### 3.3.4 Government Consumption and Foreign demand

The Government consumes both local and Southern goods but not foreign goods:<sup>24</sup>

$$^*G_1 = \bar{G}_1 \quad (3.12)$$

$$^*G_2 = \bar{G}_2 \quad (3.13)$$

Government expenditure,  $G_i$  is policy determined, hence the bar.

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24. This omission is made to simplify the analysis; the Northern government's consumption of  $G_2$  allows analysis of fiscal expansion under interdependence. Domestic government consumption of  $G_0$  would not contribute much to the analysis.

Foreign demand,  ${}^*C_1^f$ , depends on prices and desired overall consumption:

$${}^*C_1^f = C_1^f(P_0^f, P_1^f, P_2^f, {}^*C^f) \quad (3.14)$$

$${}^*C^f = \bar{C}^f \quad (3.15)$$

and foreign demand is also exogenous.

Goods market arbitrage ensures purchasing power parity:

$$p_0 = \pi p_0^f \quad (3.16)$$

$$p_1 = \pi p_1^f \quad (3.17)$$

$$p_2 = \pi p_2^f \quad (3.18)$$

### 3.3.5 Goods markets

The price of foreign output is fixed and supply is perfectly elastic

$$p_0^f = p_0^f \quad (3.19)$$

The markets for both domestic goods clear continuously for the North:

$${}^*C_1 + {}^*C_1' + {}^*C_1^f + ({}^*G_1/p_1) + (G_1'/p_1') = Q_1 \quad (3.20)$$

Since no excess demands occur, there is no unintended saving

$$S = {}^*S \quad (3.21)$$

### 3.3.6 Household Asset Demand

The demand for all four asset types depends on interest rates and wealth:  
money:

$${}^*L_1^h = L_1(r_0, r_1, r_2, W^h) \quad L_{10} < 0; \quad L_{11} < 0; \quad L_{12} < 0 \quad (3.22)$$

World bond:

$$\pi {}^*B_0^h = B_0(r_0, r_1, r_2, W^h) \quad B_{00} > 0; \quad B_{01} < 0; \quad B_{02} < 0 \quad (3.23)$$

Home bond:

$${}^*B_1^h = B_1(r_0, r_1, r_2, W^h) \quad B_{10} < 0; \quad B_{11} > 0; \quad B_{12} < 0 \quad (3.24)$$

South bond:

$$(\pi/\pi')^*B^h_2 = B_2(r_0, r_1, r_2, W^h) \quad B_{20} < 0; \quad B_{21} < 0; \quad B_{22} > 0 \quad (3.25)$$

The signs of the partial derivatives imply that the bonds are gross substitutes. Further, all four of the equations are homogenous of the first degree in wealth. The Budget constraint:

$$W^h = {}^*L^h_1 + {}^*B^h_1 + (\pi/\pi')^*B^h_2 + {}^*B^h_0 \quad (3.26)$$

Interest rate semi-elasticities sum to zero, wealth semi-elasticities sum to one:

$$L_{ij} + \Sigma B_{ij} = 0 \quad L_{1w} + \Sigma B_{iw} = 1 \quad j = 0, 1, 2$$

### 3.3.7 The Central Bank

The central banks issue money and hold both domestic bonds and foreign exchange reserves. There are no commercial banks. The Bank's assets are:

$$L_1 + W^c = B^c_1 + (\pi/\pi')B^c_2 + \pi R \quad (3.27)$$

$W^c$  represents the Bank's wealth - the sum, through time  $T$ , of capital gains and losses due to exchange rate changes:

$$W^c = \int_0^t \left[ \left( \frac{\pi}{\pi'} \right) B^c_2 \left( \frac{\dot{\pi}}{\pi} - \frac{\dot{\pi}'}{\pi'} \right) + (\pi R) \frac{\dot{\pi}}{\pi} \right] dt \quad (3.28)$$

Demand for bonds is policy determined and thus exogenous:

$${}^*B^c_1 = \bar{B}^c_1 \quad (3.29)$$

$${}^*B^c_2 = \bar{B}^c_2 \quad (3.30)$$

### 3.3.8 Reserve Settlements

Reserve settlements and intervention can take place in two different ways under the model. The first is 'mandatory asset settlement': here  $R$  and  $R'$  are *held* in world currency and any holdings by a central bank of the partners currency, due to intervention to influence the bilateral rate, must be redeemed by the partner central bank. The partner must then undertake open market operations to offset the money supply effects of the change in its

reserves. Alternatively,  $R$  and  $R'$  need only be *expressed* in world currency and still comprise the partner country's currency, or rather *claims* on that currency since the two Banks can under this system agree to accumulate claims on each other's currency. The accumulated claims would, however, change the partner's money supply and allow future money supply impacts as the partner's currency is used as a reserve asset. The mandatory asset settlement arrangement ensures that further money supply effects of intervention do not take place.

### 3.3.9 Exchange Rates

Allen and Kenen suggest four separate exchange rate regimes and list their implications for reserves and exchange rates. Only *one* is examined - that most relevant to the CMA - the case of a mutual peg and an external float with foreign exchange intervention<sup>25</sup> conducted solely by the north - the dominant nation. This is Allen and Kenen's 'Case 1' (1980, pp.312-313).

The bilateral exchange rate:

$$z = (\pi/\pi') \quad (3.31)$$

is fixed in this case:

$$z = \bar{z}$$

thus

$$\pi = \bar{z} \pi' \quad (3.32)$$

The sum of reserves,  $R^t$  is also fixed, since changes in  $R$  and  $R'$  offset each other:

$$R^t = \bar{R}^t \quad (3.33)$$

The behaviour of resources in this manner is consistent with mandatory asset settlement.<sup>26</sup>

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25. This intervention is to stabilize the mutual peg; it does not affect the joint float, which is entirely free floating.

26. See "Case 1" in Allen and Kenen, (1980, Table 11.1, p.313) for a summary of the exchange rate and reserve effects of the exchange rate regime.

### 3.3.10 Government Expenditure and Fiscal Policy

The Government receives taxes,  $T^h$  from residents and transfers,  $T^f$  from non residents as well as interest income. It spends on Northern and Southern goods and pays interest on domestic bonds.

The Budget deficit is thus:

$$D = \bar{G}_1 + \bar{G}_2 + r_1 B_1 - T^h - T^f - [r_1 B_1^c + r_2(\pi/\pi')B_2^c] \quad (3.34)$$

The first term in square brackets is interest payments, the second, interest receipts. The government does not hold foreign bonds,  $D$  represents the deficit size and  $B_1$  the stock of public debt.

The stock of bonds is determined by the path of deficits over time  $T$ :

$$B_1 = \int_0^T D dt \quad (3.35)$$

Deficits are policy determined:

$$D = \bar{G} \quad (3.36)$$

Further, deficits are created by tax reductions and are eventually removed by tax hikes to balance budgets. Allen and Kenen assume that transfers from non residents offset net domestic interest payments:

$$T^f = r_1(B_1^h + B_1^c) - [r_0(\pi B_0^h) + r_2(\pi/\pi')(B_2^h + B_2^c)] \quad (3.37)$$

The first expression represents interest payments, the second, interest receipts. Thus taxes  $T^h$  become the only form of government income and the control of the deficit is, by virtue of this fact, achieved only by varying them.

### 3.3.11 Asset Markets

Supply of world bonds is perfectly elastic at a fixed world interest rate:

$$r_0 = \bar{r}_0 \quad (3.38)$$

And market clearing is thus by quantity. Since  $r_1$  and  $r_2$  are variable, market clearing in domestic bonds is by interest and exchange rate fluctuation. The market-clearing equations for bonds and money are:

$$^*B_1^h + ^*B_1^{h'} + ^*B_1^h + ^*B_1^{c'} = B_1 \quad (3.39)$$

$$^*L_1^h = L_1 \quad (3.40)$$

Further, all desired demands for bonds and assets are realised; there are no frustrated plans.

$$^*B_1^c = B_1^c \quad (3.41)$$

$$^*B_2^c = B_2^c \quad (3.42)$$

$$^*B_1^h = B_1^h \quad (3.43)$$

$$^*B_2^h = B_2^h \quad (3.44)$$

$$^*L_1^h = L_1^h \quad (3.45)$$

### 3.3.12 Summarised Equations

It is now possible to write the goods market, bond market and money market equations as functions of all the endogenous variables.

Goods market:

$$C_1(z\pi'\bar{p}_0^f, p_1, zp'_2, Y^d - ^*S) + C'_1(\pi'\bar{p}_0^f, p_1/z, p'_2, Y^{d'} - ^*S') + C_1^f(\bar{p}_0^f, p_1/z\pi', p'_2/\pi', \bar{C}^f) + (\bar{G}_1/p_1) + (z\bar{G}_1'/p_1) = \Theta_1(p_1) \quad (3.46)$$

where

$$\Theta(p_1) = Q_1$$

output is a function of its price.

Bond Market:

$$B_1(r_0, r_1, r_2, W^h) + zB'_1(r_0, r_1, r_2, W^{h'}) + \bar{B}_1^c + \bar{B}_1^{c'} = B_1 \quad (3.47)$$

Money Market:

$$L_1(\bar{r}_0, r_1, r_2, W^h) = [\bar{B}^c_1 + z\bar{B}^c_2 + z\pi'R - W^c] \quad (3.48)$$

Allen and Kenen point out that  $W^h$  and  $W^c$  can be replaced by the expression for the histories of savings and capital gains, Equations (3.6) and (3.28), for the comparative static solutions. Changes in the history of savings variable,  $W^{hs}$ , and history of public debt,  $B_1$  are described by the following two dynamic equations:

$$\dot{W}^{hs} = *S = S(r_0, r_1, r_2, Y^d, W^h) \quad (3.49)$$

$$\dot{B}_1 = \bar{D} \quad (3.50)$$

$\bar{D}$  becomes zero when the government decides to end the deficit at time  $t=k$ .

Solving the systems takes place for impact and steady state effects; for the steady state, savings are set equal to zero. Allen and Kenen prove that the system is stable (Allen and Kenen, 1980, pp.353-355).

### 3.4 ON SIMPLIFICATIONS AND SYMMETRIES

In order to reduce the number of parameters in the solutions, Allen and Kenen simplify the model by making certain assumptions and imposing symmetry in goods and asset markets. These are now briefly examined.

#### 3.4.1 The Balance of Payments (BOP)

The following equation is derived:

$$[(p_1C^f_1 + p_1C'_1 + z\bar{G}'_1) - (p_0C_0 + p_2C_2 + \bar{G}_2 + [T^f + r_0(\pi B^h_0) + r_2(zB^h_2 + z\bar{B}^c_2) - r_1(B^h_1 + \bar{B}^c_1)]) + [\dot{B}^h_1 - \pi\dot{B}^h_0 - z\dot{B}^h_2] = R \quad (3.51)$$

The first square-bracketed term on line 1 represents the 'visible' part of the current account, the second the 'invisible' part of the current account. The square-bracketed expression on line 2 is the capital account.



### 3.4.2 Propositions

The following flow from the analysis and definition of the BOP figure:

1. Since savings and the budget deficit become zero in the long run, so must the current account.
2. Overall cancellation of interest income by  $T^f$  and  $T^{f'}$  does not require that each source of interest income is separately cancelled.
3. Regional transfers are also irrelevant in determining the mutual balance of North and South with the world.
4. The joint change in reserves,  $R^t$  can be zero even when the bilateral reserve flow  $\dot{R}^b$  (the net flow between North and South) is not.
5. One country can be in global balance but have a surplus with the other and a deficit with the rest of the world.

### 3.4.3 Goods Market Symmetries

Allen and Kenen do not assume identical tastes, in order to enable a proper analysis of integration. Thus they assume that the marginal propensity of each country to spend on its home good is the same and likewise for the imported good. The marginal propensity to consume on the imported good is of course less than that on the home good, implying a bias towards the home good in either country. Formally,

$$m_1 = m_2', \quad m_2 = m_1' \quad \text{and} \quad m_1 > m_2$$

When *full* scale goods market symmetry is assumed, the following apply: price elasticities are symmetrical, government and foreign demands are symmetrical, production functions are the same and employment levels are the same initially. These conditions are assumed when analysing interdependence, not from the start.

### 3.4.4 Asset Market Symmetries

Allen and Kenen point out that asset market symmetry is more logical than goods market symmetry and thus easier to assume. It is easy to assume preference for home bonds over partner's bonds and preference for partner's bonds over world bonds since the last two are

respectively bad and worse substitutes for the first. Wealth holders are simply more secure about home assets, which contain less risk of default (1980, pp.328-330).

1. Northern bonds are not perfect substitutes for Southern or world bonds:

$$0 < -B_{ij} < \infty \quad 0 < -B_{ij} < \infty \quad j = 0, 2$$

2. Northern money is a better substitute for Northern bonds than for other bonds:

$$0 < -L_{ij} < -L_{11} < \infty \quad j = 0, 2$$

3. Northerners hold more Northern bonds and will buy more for an increase in wealth than other bonds:

$$B_1^h > zB_2^h, \quad \pi B_0^h \quad B_{1w} > B_{jw} \quad j = 0, 2$$

However, quantitative in addition to qualitative symmetry is required, and Allen and Kenen thus impose further restrictions (p.331):

1. The initial bilateral exchange rate,  $z$ , equalises stocks of wealth between the partners (and interest rates are equal).
2. The two money demands are symmetrical in the roles of  $r_1$  and  $r_2$  but identical with respect to  $r_0$
3. The Northern demand for the Northern bond and Southern bond is identical to the Southern demand for the Southern and Northern bond, respectively. Furthermore,  $r_1$  and  $r_2$  have symmetrical and opposite roles in the Northern and Southern asset demand functions. Thus asset demand is symmetrical.

The assumptions mean that money and bond holdings in North and South are initially equal, and that the symmetrical partial derivatives of the asset demand functions are also equal.

### 3.4.5 Saving Functions

The saving function are identical with respect to the role that wealth and income have on savings level. They are symmetrical in the roles of interest rates:

$$S_y = S_y'; \quad S_w = S_w; \quad S_1 = zS'_2; \quad S_2 = zS'_1; \quad S_0 = zS'_0$$

### 3.4.6 Bilateral Balancing

Although  $p_2C_2 = p_1C'_1$  due to symmetry assumptions, bilateral balancing cannot be assumed because government demands may still be different.

### 3.4.7 Crowding Out

Allen and Kenen preclude the possibility of large changes in absorption due to interest rate changes by assuming that saving (the 'mirror' of absorption) is more sensitive to wealth than to interest rate changes, but that money demand is more sensitive to interest rate changes than wealth changes.

$$(S_w/S_i) < (L_{1w}/L_{1i}) \quad i = 0, 1, 2$$

Further, proportionality in interest rate effects on saving and money demand is assumed in order to preclude ambiguities of changes in  $r_0$ :

$$(S_0/L_{10}) = (S_1/L_{11}) = (S_2/L_{12})$$

Symmetry assumptions ensure that all these other conditions hold in the South as well.

## 3.5 COMPARATIVE STATIC RESULTS

The solving of the simultaneous systems is undertaken by Allen and Kenen (pp.336-373). However, only the summarised results for impact and steady state effects will be examined, and these will be presented in tables adopted from Allen and Kenen. Table 3.1

shows impact effects under a flexible external exchange rate while Table 3.2 shows steady state effects. A brief breakdown of some of the unencountered terms follows:

$\delta c_{01}^t$  a shift of consumption from Northern to foreign goods

$\delta c_{02}^t$  a shift of consumption from Southern to foreign goods

These shifts refer to total net consumption on the goods.

$\delta Y^{dt}$  a change in total disposable income

$\delta r^t$  a change in the aggregate interest rate

$\delta \hat{\pi}'$  a change in the joint float; the 'hat' is a reminder that it is not just the Southern exchange rate that is changing.

The entries in the tables indicate the sign of the expected change in the column variable as a result of a change in the row variable. A 'plus' indicates a change in the same direction and a 'minus' a change in the opposite direction. A 'zero' indicates that *no change* is expected and a question mark indicates that the change is *indeterminate*.

Table 3.1      Impact Effects Under a Flexible External Exchange Rate

Disturbance		Effect										
		$\delta \hat{\pi}'$	$\pi \delta R$	$\delta r_1$	$\delta r_2$	$\delta r^t$	$\delta p_1$	$\delta p_2'$	$\delta Y^d$	$\delta Y^{d'}$	$\delta Y^t$	$\delta Y^d$
$\delta r_0$		+	0	?	?	?	+	+	+	+	+	+
$\delta B_1^c$		+	-	-	-	-	+	+	+	+	+	+
$\delta B_2^{c'}$		+	+	-	-	-	+	+	+	+	+	+
$\delta D$		0	0	0	0	0	+	+	+	+	+	+
$\delta D'$		0	0	0	0	0	+	+	+	+	+	+
$\delta G_1$		0	0	0	0	0	+	?	-	?	?	-
$\delta G_2'$		0	0	0	0	0	?	+	?	-	?	-
$\delta c_{01}^t$		0	0	0	0	0	-	-	-	-	-	-
$\delta c_{02}^t$		0	0	0	0	0	-	-	-	-	-	-

Table 3.2      Steady-State Effects Under a Flexible External Rate

Disturbance		Effect										
		$\delta \hat{\pi}'$	$\pi \delta R$	$\delta r_1$	$\delta r_2$	$\delta r^t$	$\delta p_1$	$\delta p_2'$	$\delta Y^d$	$\delta Y^{d'}$	$\delta Y^t$	$\delta Y^d$
$\delta r_0$		+	?	?	?	?	+	+	+	+	+	+
$\delta B_1^c$		+	?	?	?	?	+	+	+	+	+	+
$\delta B_2^{c'}$		+	?	?	?	-	+	+	+	+	+	+
$\delta B_1$		+	?	?	?	+	+	+	+	+	+	+
$\delta B_2'$		+	?	?	?	+	+	+	+	+	+	+
$\delta G_1$		+	-	+	-	0	+	+	-	+	1	0
$\delta G_2'$		+	+	-	+	0	+	+	+	-	1	0
$\delta c_{01}^t$		+	-	+	-	0	-	+	-	+	0	0
$\delta c_{02}^t$		+	+	-	+	0	+	-	+	-	0	0

## 3.6 THE EFFECT OF INTEGRATION ON MACROECONOMIC POLICY IN AN EXCHANGE RATE UNION

What follows is a graphical analysis of macroeconomic policy in an exchange rate union. Both monetary and fiscal policy are dealt with.

### 3.6.1 Monetary Policy

First the effects of monetary policy on union *aggregates* are analysed, and then individual effects. The aggregate effects do not depend on either the bond traded or the bank involved, and the individual effects depend only on the bond traded.

#### 3.6.1.1 Aggregate Effects

Refer to Fig. 3.1A. Curve  $W^tW^t$  gives combinations of the average interest rate and aggregate wealth that clear the bond market, curve  $M^tM^t$  are points at which the money market clears and  $S^tS^t$  gives points at which desired saving is zero.  $S^tS^t$  is steeper than  $M^tM^t$  by assumption - that money demand is more responsive to interest rate changes than saving -  $W^tW^t$  is negatively sloped because a fall in the interest rate is required to maintain bond demand for an increase in wealth, whereas  $M^tM^t$  and  $S^tS^t$  are positively sloped because a fall in wealth requires a drop in the interest rate to prevent either an increase in desired saving or an increase in money demand. In Fig. 3.1B,  $B^tB^t$  gives combinations of the average interest rate and the exchange rate that clear the bond market: a depreciation which raises wealth<sup>27</sup> requires a fall in the interest rate to offset increasing bond demand. Curve  $L^tL^t$  gives combinations that clear the money market: a depreciation and the corresponding increase in wealth increases demand for money which must be offset by a rise in the interest rate.

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27. Due to capital gains realized on foreign asset holdings.

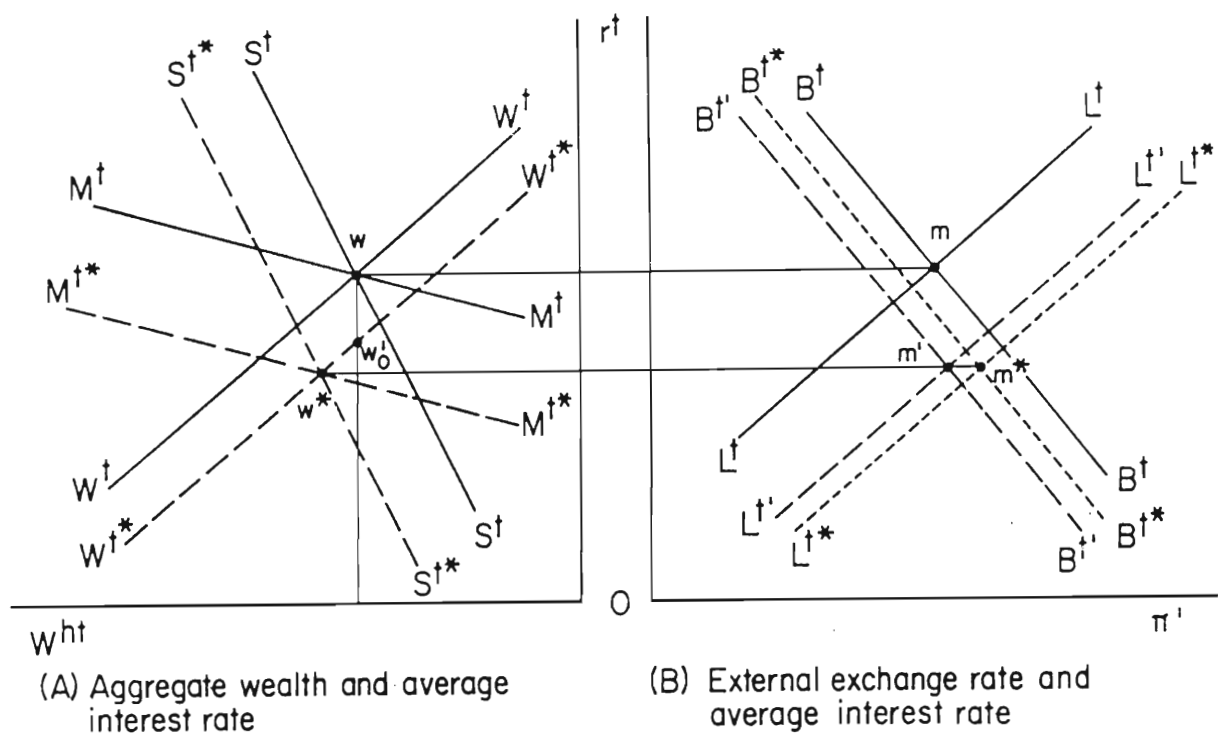


Figure 3.1 Asset market effects of an open-market purchase of either bond

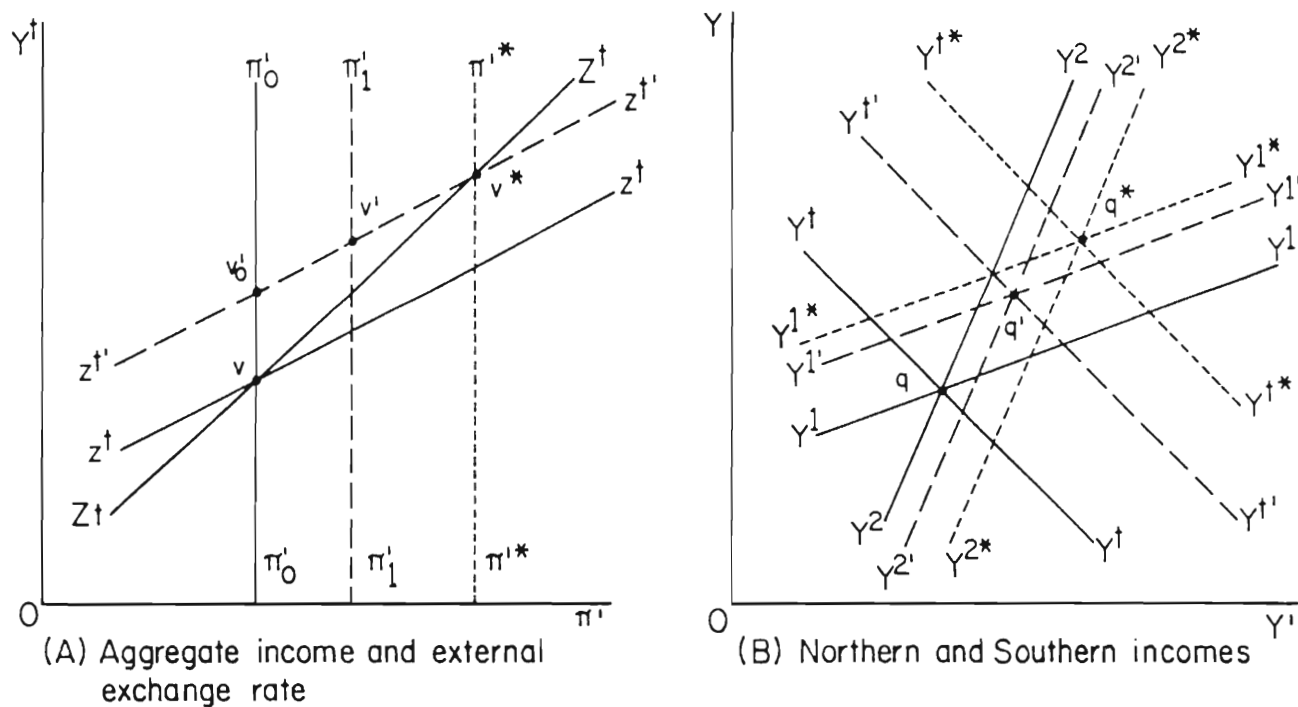


Figure 3.2 Goods market effects of an open-market purchase of either bond

For an open market purchase of either bond by either bank,  $W^*W^*$  shifts down to reflect the increase in demand for bonds and  $B^*B^*$  shifts in Fig. 3.1B. The increase in the money supply shifts  $M^*M^*$  down as well, and  $L^*L^*$  likewise shifts out in Fig. 3.1B. The shifts in  $W^*W^*$  and  $M^*M^*$  show the required fall in the interest rate to maintain demand at the initial level of wealth. Equilibrium moves to  $w^*$  and there is dissaving at this point -  $S^*S^*$  does not shift on impact.

The depreciation of the currency with the shifts of  $B^*B^*$  and  $L^*L^*$  can be interpreted as the rise in the home currency price of foreign bonds to offset the increase in demand for them due to the increase in the money supply.

The rise in wealth and fall in  $r^*$  reduce saving and thus increase absorption. This effect is strengthened by expenditure switching due to the depreciation. The effect on income can be seen with the aid of Fig. 3.2.

In Fig. 3.2A  $z^*z^*$  gives the short run relationship between aggregate nominal income and the exchange rate: a depreciation causes expenditure switching which raises local prices and thus local income.  $Z^*Z^*$  is the analogous long run relationship but is steeper since in the steady state saving is zero and thus the income boosting effects of a depreciation cannot be dissipated into saving. The curve  $\pi^*\pi^*$  is the exchange rate schedule which shifts left and right but is unrelated to income.

The increase in absorption shifts  $z^*z^*$  up and  $\pi^*\pi^*$  shifts right due to the depreciation, short run equilibrium is displaced and to  $v^*$  where income is higher. Since  $v^*$  lies above  $Z^*Z^*$  there is dissaving and a current account deficit which results in a further depreciation, steady state goods market equilibrium moving to  $v^*$ . In Fig. 3.1A, the zero saving curve  $S^*S^*$  shift down to intersect at  $w^*$ . In Fig. 3.1B,  $m^*$  shifts out to  $m^*$  as the exchange rate depreciates, moving  $B^*B^*$  and  $L^*L^*$  out slightly.

In conclusion, an open market purchase raises union income permanently under a flexible rate, the extent of the increase effect is larger for an increase in substitutability of domestic and world bonds since the depreciation and the capital outflow are both larger.



### 3.6.1.2 Individual Effects

The individual effects depend on the bond involved but not on the bank. Use is made of a four-quadrant diagram to represent the movements in wealth - Fig. 3.3, Figs. 3.3B and 3.3D are the asset market diagrams for North and South, respectively, in Fig. 3.3C,  $W^{ht}W^{ht}$  shows combinations of levels of wealth in North and South for constant aggregate wealth. Fig. 3.3A shows the relationship between Northern and Southern interest rates. Curve  $r^1r^1$  shows combinations of  $r_1$  and  $r_2$  that are consistent with a constant average interest rate but curves  $r^1r^1$  and  $r^2r^2$  show combinations of either interest rate that clear the Northern and Southern bond markets, respectively. The slope of  $r^1r^1$  is less than one since, although an increase in  $r_2$  requires an increase in  $r_1$  to prevent excess supply of  $B_1$ , this increase need not be as large as the  $r_1$  increase due to the assumption of  $B_{11} > |B_{12}|$ .

After the open market purchases of  $B_1$ ,  $r_1$  falls and substitution of  $B_2$  for  $B_1$  pushes  $r_2$  down as well, but not as much. In Fig. 3.3A,  $r^1r^1$  shifts down and  $r^2r^2$  up; the fall in  $r^2$  is seen to be less than that of  $r^1$ . However, capital flows out of both countries and the exchange rate depreciates. The capital gains due to the depreciation are identical, by symmetry, and thus each country experiences an equal increase in wealth. Curve  $W^{ht}W^{ht}$  shifts out and  $x$  shifts to  $x'$ .

To analyse income effects, refer back to Fig. 3.2B. Curve  $Y^1Y^1$  shows combinations of output in North and South that clear the market for Good 1. The slope of  $Y^1Y^1$  is less than one since a given increase in Southern income will result in a smaller increase in Northern income, because Southerners are assumed to prefer the Southern good to the Northern. Analogously, curve  $Y^2Y^2$  has a slope greater than one. Curve  $Y^1Y^1$  is the locus of combinations of national levels of income adding up to a constant aggregate income.



Now, because  $r_1$  falls more than  $r_2$  for the open market purchase, Northern absorption rises more than Southern and demand for Good 1 rise more than demand for Good 2. Thus  $Y^1Y^1$  shifts out more than  $Y^2Y^2$  and equilibrium falls to  $q_1$ . Curve  $Y^1Y^1$  shifts out, but the increase in aggregate income is distributed unevenly - Northern income rises by more than Southern. However, as asset market integration increases,  $r_1$  and  $r_2$  become even closer linked and the income increase more evenly distributed. In addition, as goods market integration increases, the links between  $P_1$  and  $P_2$  become stronger and demand increases in one country which lead to price changes cause closer price changes in the other country and hence income changes. Thus market integration decreases policy autonomy in an exchange rate union.

Towards the steady state, the Northern current account improves less than the Southern due to its larger income increase. This indicates that Northern dissaving or saving must increase or improve less, respectively.<sup>28</sup> Thus  $W^h$  falls more or rises less than  $W^{h1}$  and since  $W^{ht}$  is constant, wealth is redistributed to the South. In Fig. 3.3C, equilibrium shifts to  $x^*$ . The increase in wealth in the South rises its demand for bonds and  $r_2$  falls further, while the rise in the Northern rate due to its fall in wealth cause the two interest rates to converge. If a current account deficit occurs with the open market purchase, depreciation causes aggregate income to rise but Southern income rises faster than Northern due to its falling interest rate. Thus the income changes in North and South also converge. In Fig. 3.2B,  $q'$  moves to  $q^*$ , in Fig. 3.3B  $v'$  moves to  $v^*$ , in Fig 3.3D  $n'$  moves to  $n^*$  and in Fig. 3.3A  $s'$  moves to  $s^*$ .

Although monetary policy was able to influence impact income, it is apparent that in the steady state, the aggregate changes are far more evenly distributed between the countries, even in the absence of high market integration. Thus, long-run monetary policy control over individual steady state income changes in an exchange rate union is not possible. Wealth and interest rate changes may be controlled; however, they will be larger for the country in which the bond is purchased.

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28. The North can be in a state of dissaving or saving.

What of the distribution of reserves? Observe that the steady state money market curve of the North has shifted in slightly and that the Southern money market curve has shifted out. But this does not imply a distribution of reserves to the South - shift in  $M^1M^1$  would have taken place even with no change in reserves - and instead the distribution of *wealth* must be determined to gauge the outcome. The answer is that reserves are distributed from North to South, revealed by the movement from  $x$  to  $x^*$  in Fig. 3.3C. Thus the open market purchase has cost the North in reserves, while failing to provide it with any net income improvement over its partner.<sup>29</sup>

Three things can be concluded from their analysis; firstly, that integration increases the effect on the partner of an open market purchase and that incomes and interest rates coverage to the steady state. The income effect is also permanent, unlike that under a fixed external exchange rate, which Allen and Kenen analyse elsewhere. Secondly, it is clear that the partner's income effect on impact is larger the greater the degree of substitutability between North and Southern bonds, but that the steady state income effect depends on the goods market responses to the depreciation. Thus, goods market integration is more important for analysing long-run interdependence of monetary policy.<sup>30</sup> Finally, the central bank engaging in monetary policy must be prepared to lose reserves to the partner country and these are larger the greater the degree of asset market symmetry.

### 3.6.2 Fiscal Policy

The impact and steady state effects of three fiscal instruments are analysed - a balanced budget increase in government spending, a tax cut and an interval of deficit spending. The

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29. Allen and Kenen do point out, however, that the presence of goods market asymmetries can modify the outcome.

30. Drawing on the discussion on pages 448-449 it is clear that goods market symmetry *must* be assumed to be able to make any clear statement about the paths of individual incomes to the steady state. With any goods market asymmetry, Southern income can rise by more than Northern income for example, and thus the central bank needs to know the nature of the asymmetry to be able to control individual incomes. Goods market asymmetry also makes for ambiguity in current account, individual wealth and individual interest rate changes. In brief, independent monetary policy is considerably frustrated by goods market asymmetries.

last two instruments are different from the first in that they lead to a permanent increase in the supply of bonds, since the government must issue bonds to finance its expenditure. With a balanced budget increase in spending, however, the expenditure is financed by a increase in taxes and the supply of bonds does not change. Fiscal policies have no impact effects in asset markets and thus, at least under the model, are not affected by the exchange rate regime. However, their effects on the exchange rate in the steady state must be determined, and also their effects on the South and its reaction.

### 3.6.2.1 *Impact Effects*

Refer to Fig. 3.4. Deficit spending on the Northern good shifts  $Y^1Y^1$  out to  $Y^{1'}Y^{1'}$ , and Northern and Southern income are raised, the latter due to income and substitution effects of the increase in the price of Good 1 and the increase in demand for Good 2. Aggregate income  $Y^1Y^1$  shifts out to  $q'$  which reflects the impact increase in union income. The increase in  $Y'$  was due to spillover effects of the northern budget deficit and these increase as goods market integration increase. Graphically, an increase in goods market integration reduces the difference in the slopes of  $Y^1Y^1$  and  $Y^2Y^2$ . Thus as  $Y^1Y^1$  gets closer to the  $45^\circ$ , the effect of the shift in it will be felt to an increasing degree on Southern income. An increase in goods market integration, therefore, reduces the extent to which independent fiscal policy can be pursued (although the effect of a budget deficit on *aggregate* income is still the same).

A similar result obtains for decrease in home-goods bias (as  $m_1$  approaches  $m_2$ ). Here, the fiscal policy effect is also dissipated to the South in greater measure as home-goods bias decreases, since the slopes of the income curves become more alike. With a budget deficit, the larger increase in national income occurs in the country whose good is purchased.

A tax cut is different from a budget deficit in that it increases income in the country of origin by less than the deficit. Although the size of the deficit  $D$  is the same, not all of it is spent since individuals will save some of the increase in their income. This means that less will be spent on Good 1 and  $Y^1Y^1$  shifts out less. However,  $Y^2Y^2$  also shifts out due to the direct increase in demand for Good 2 producing equilibrium at  $q'$ , where the

increase in  $Y$  is less than that for a budget deficit but it is larger than the increase in  $Y'$ , due to home-goods bias. The results of increasing market integration and decreasing home goods bias are the same as those for a budget deficit - the income changes become closer and thus structural interdependence increases.

A balanced budget increase in spending leads to an increase in demand for Good 1 as well as a decrease due to the increase in personal taxes. However, the increase outweighs the decrease because not all of the income taxed will be disposable income - some of it will be savings. Thus curve  $Y^1Y^1$  in Fig. 3.5 shifts out. However,  $Y^2Y^2$  will shift in because the drop in Northern demand for Southern goods is not matched by an increase in their government expenditure. Thus  $Y'$  can increase or decrease depending on whether the spillover effects of the  $Y$  increase outweigh the direct reduction in demand for Good 2. As goods market integration increases, the income curves converge to the  $45^\circ$  and the aggregate income increase is distributed more and more evenly between them.

With a decrease in home goods bias, however, the curves get closer but the inward shift of  $Y^2Y^2$  is amplified and the chance of a fall in  $Y'$  is increased. This occurs because, as home goods bias decreases, the Southern good is assumed to contribute a larger portion of the Northern expenditure bundle, and with an increase in taxes there is therefore a larger drop in expenditure.

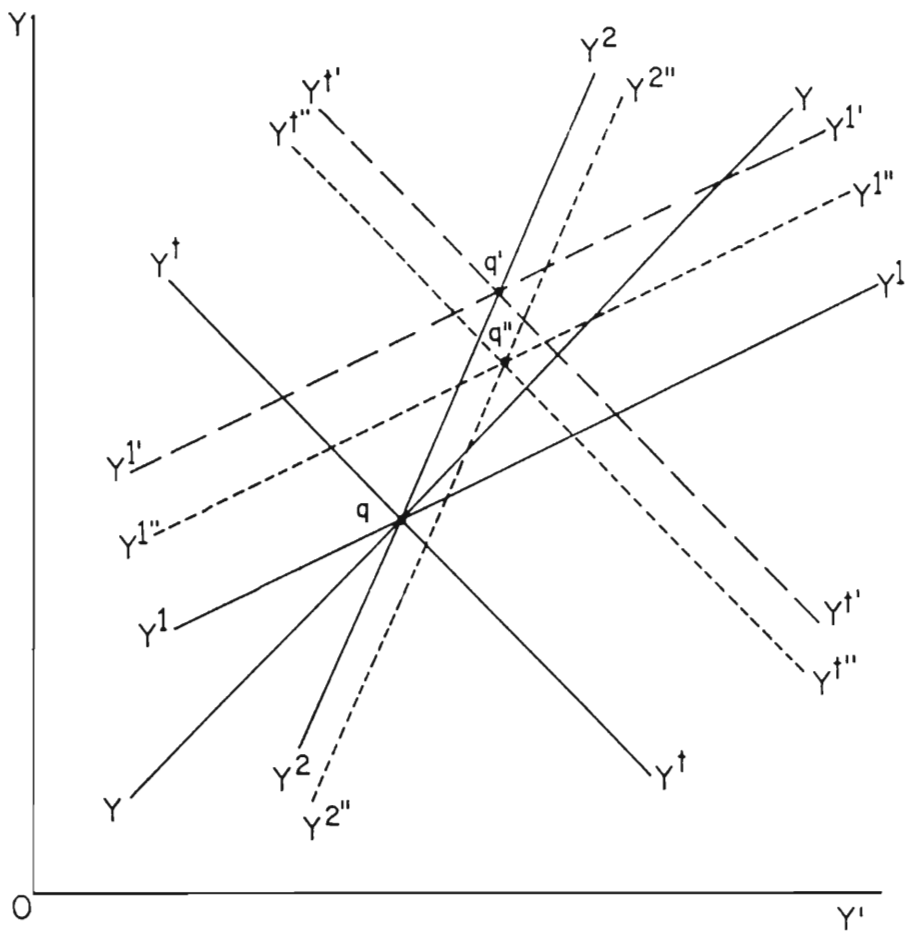


Figure 3.4 Effects on individual goods markets of Northern deficit spending and a tax cut

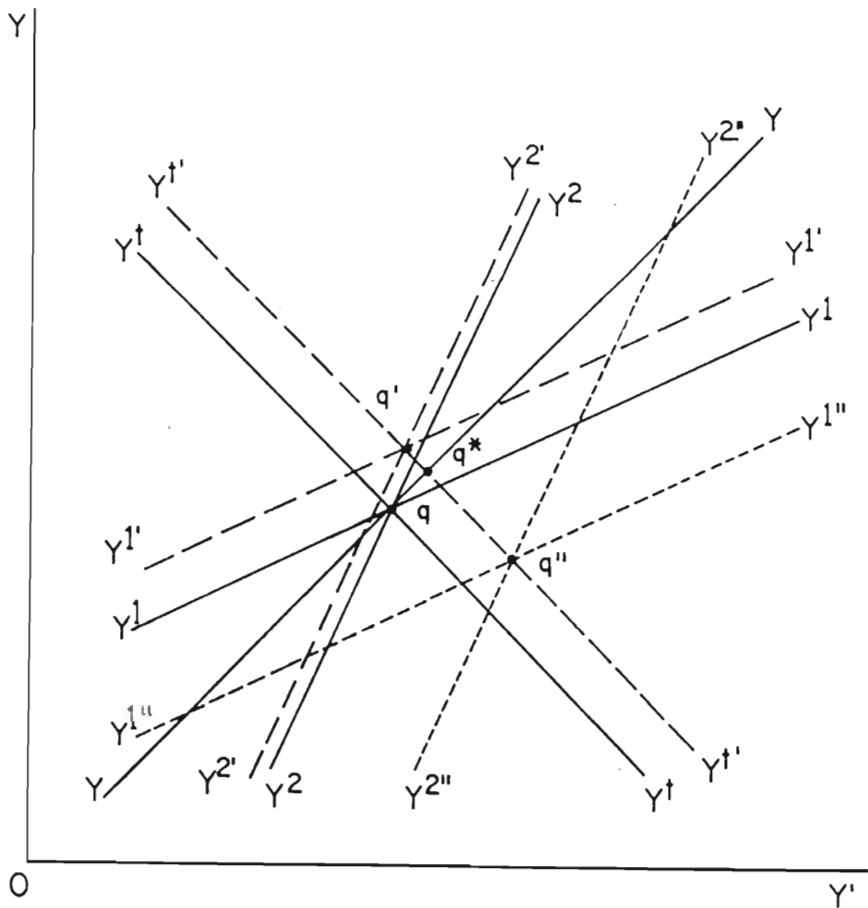


Figure 3.5 Effects on individual goods markets of a balanced budget increase in Northern spending on both goods

The presence of goods market asymmetry can change the *extent* of income changes in both countries, but it cannot change the direction (p.478).

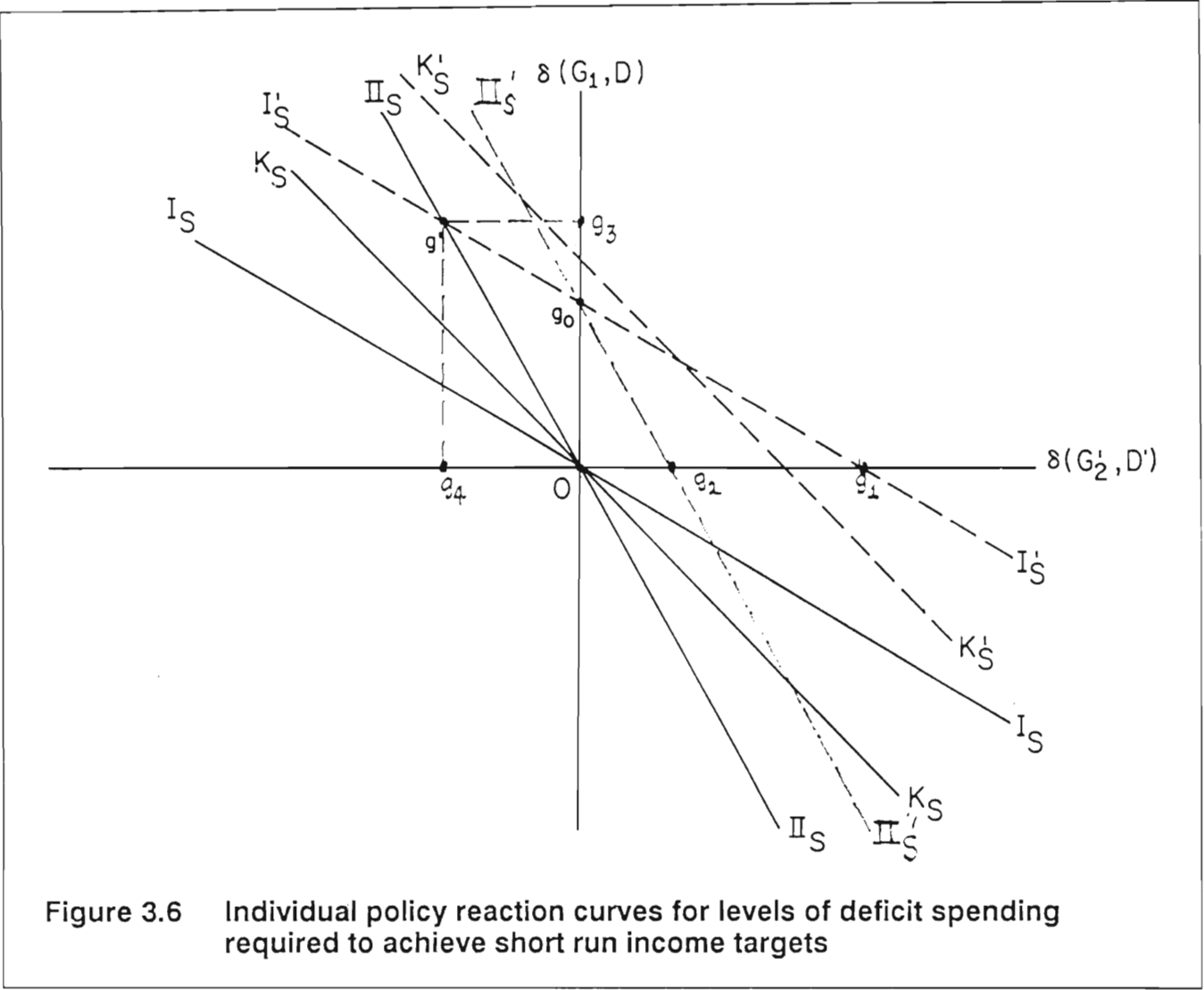
### 3.6.2.2 Policy Interdependence

The degree of policy interdependence depends on the degree of structural interdependence, i.e. the level of integration and the degree of home goods bias. When structural interdependence is not high, the income changes in the country undertaking the fiscal policy will be greater than those in the neighbour but they will still exist. The neighbour country must then undertake offsetting policy if it objects to the change in its income.

In Fig. 3.6, curve  $I_s-I_s$  is the Northern fiscal reaction curve - it shows level of deficit spending for a constant level of Northern income and it runs through the origin to indicate that no change in income is desired. Curve  $II_s-II_s$  is the corresponding Southern curve. A Northern deficit has a stronger effect on Northern income than it does on Southern so  $I_s-I_s$  has a smaller slope than  $II_s-II_s$ . Thus for example, a increase in Northern income requiring an  $Og_0$  deficit in the North will require a deficit of  $Og$  in the South. These lie on the shifted policy reaction curve,  $I_s'-I_s'$ .

Assume the North wishes to raise income in accordance with curve  $I_s'-I_s'$ . It undertakes  $Og_0$  of deficit spending, assuming there is to be no reaction by the South. However, this has the equivalent effect on  $Y'$  of a deficit of  $Og_2$ , which lies on the shifted  $II_s'-II_s'$  curve but if it is assumed that the South does not wish to have its income altered,  $II_s-II_s$  must be treated as its policy reaction curve. The South must therefore cut its spending, but this has the effect of partially offsetting the Northern spending deficit and the North will have to increase its spending beyond  $Og_0$  to accommodate this negative spillover. The required fiscal policy combination is determined by the intersection of  $II_s-II_s$  and  $I_s'-I_s'$ , where the North must undertake  $Og_3$  of spending and the South a spending cut of  $Og_4$ .





As structural interdependence increases  $I_s'-I_s'$  becomes steeper and  $II_s-II_s$  becomes shallower, moving the point of intersection further to the northwest and necessitating even larger compensating fiscal policies. Thus structural interdependence places limitations on policy interdependence; and the same result holds for the other two types of fiscal policy.

### 3.6.2.3 *Steady-State Effects*

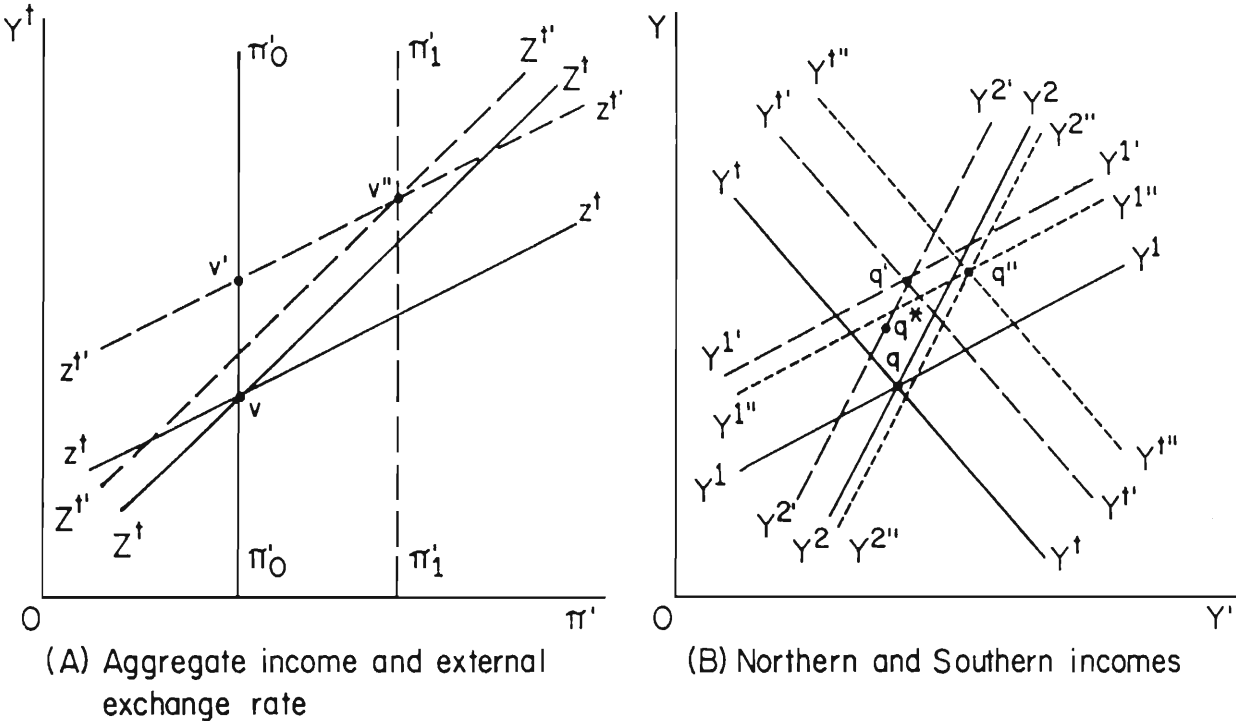
The effects on the outcomes of fiscal policy of exchange rate changes have not yet been determined, and this requires an analysis of the changes to the steady state, when asset markets are affected by the changes in saving and thus change exchange rates. Firstly balanced budget changes in spending, which do not alter the supply-of bonds, are examined, and then deficit spending and a tax cut, both of which do. Under a flexible rate, changes in the supply of bonds affect wealth and income and are thus important to analyse.

In Fig. 3.7A,  $v'$  represents the short run increase in total income, after the initial increase in expenditure for a balanced budget increase in spending. The individual effects are shown in 3.7B, equilibrium being at  $q'$ .

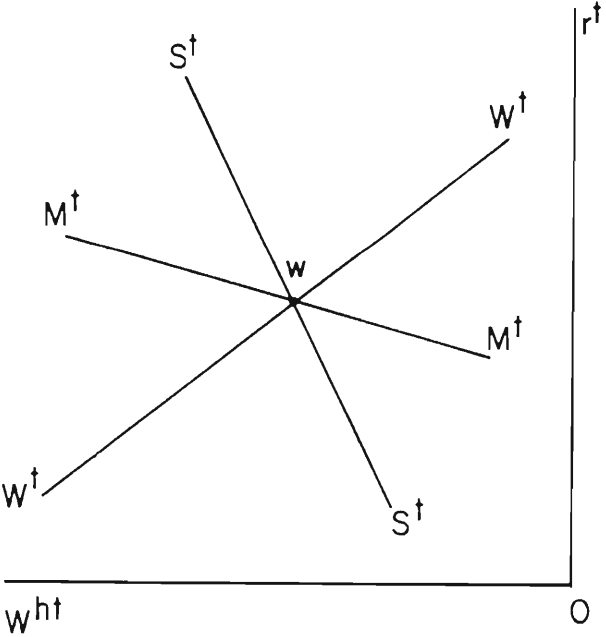
The current account deficit at  $v'$  is accompanied by dissaving (since  $v$  'lies' above the long run curve  $Z'Z'$ ) and the exchange rate depreciates.<sup>31</sup> Expenditure switching then causes an increase in aggregate income, and steady state equilibrium is displaced to  $v''$  in Fig. 3.7A.

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31. Dissaving causes a decline in desired holdings of bonds and the excess flow supply of  $B_0$  results in a capital inflow as capital is repatriated. The inflow is not large enough to offset the current account deficit, however, and the depreciation still occurs.



**Figure 3.7** Goods market effects of a balanced-budget increase in Northern spending on the Northern good



**Figure 3.8** Asset market effects of a balanced-budget increase in Northern spending on the Northern good

The asset market effects are explained by Fig. 3.8.  $W^tW^t$  does not shift because there has been no increase in the supply of bonds and neither does  $M^tM^t$  since the money supply is policy determined. Aggregate wealth remains constant because the capital gains conferred by the depreciation offset the effects of the dissaving and decline in desired bond holdings.<sup>32</sup> Since  $w^h$  and  $r^t$  do not change,  $S^tS^t$  cannot shift and aggregate disposable income thus remains constant, implying that steady state aggregate income increases by the amount of the government expenditure.

The income changes are shown in Fig. 3.7B,  $Y^tY^t$  shifts out to  $Y^{t''}Y^{t''}$ , representing the aggregate increase. Since Northern dissaving and its current account deficit are larger than the South's, wealth is redistributed to the South and  $r_1$  rises while  $r_2$  falls to clear the bond markets.<sup>33</sup> These wealth and interest rate movements raise expenditure and thus income in the South, but Northern demand will fall unless the effect of the depreciation outweighs the negative interest rate and wealth effects. In Fig. 3.7B it does not, and  $Y^tY^t$  shifts in slightly. Equilibrium moves to  $q''$  where  $Y^t$  is higher, but  $Y$  can be higher or lower than it was at  $q'$ .

Thus the North's balanced budget spending raises its income as well as that of the South, but at the expense of reserves (wealth). This parallels the result for monetary policy. An increase in asset market integration would not change the size of the income increase, but it reduces the difference between  $r_1$  and  $r_2$  and thus the 'quantity' change - that of wealth - to clear the bond markets is larger. An increase in goods market integration narrows the difference in income changes but does not effect the size of the change in aggregate income. Allen and Kenen point out however, that the individual effects of the relaxation of the assumption of goods market symmetry are not clear (p.520).

A tax cut and a budget deficit will change the supply of bonds over time, and this possibility must be examined. The steady state effects are shown in Fig. 3.9.  $W^tW^t$  shifts up due to the increase in supply of bonds for a budget deficit and  $S^tS^t$  shifts out as

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32. Northern disposable income is reduced by the tax increase and so desired saving declines. This accounts for the dissaving as individuals re-establish equilibrium in their desired savings.

33. Money also moves to the South due to the  $W^h$  and  $r_1$  effects, and this is tantamount to a redistribution of reserves from North to South.

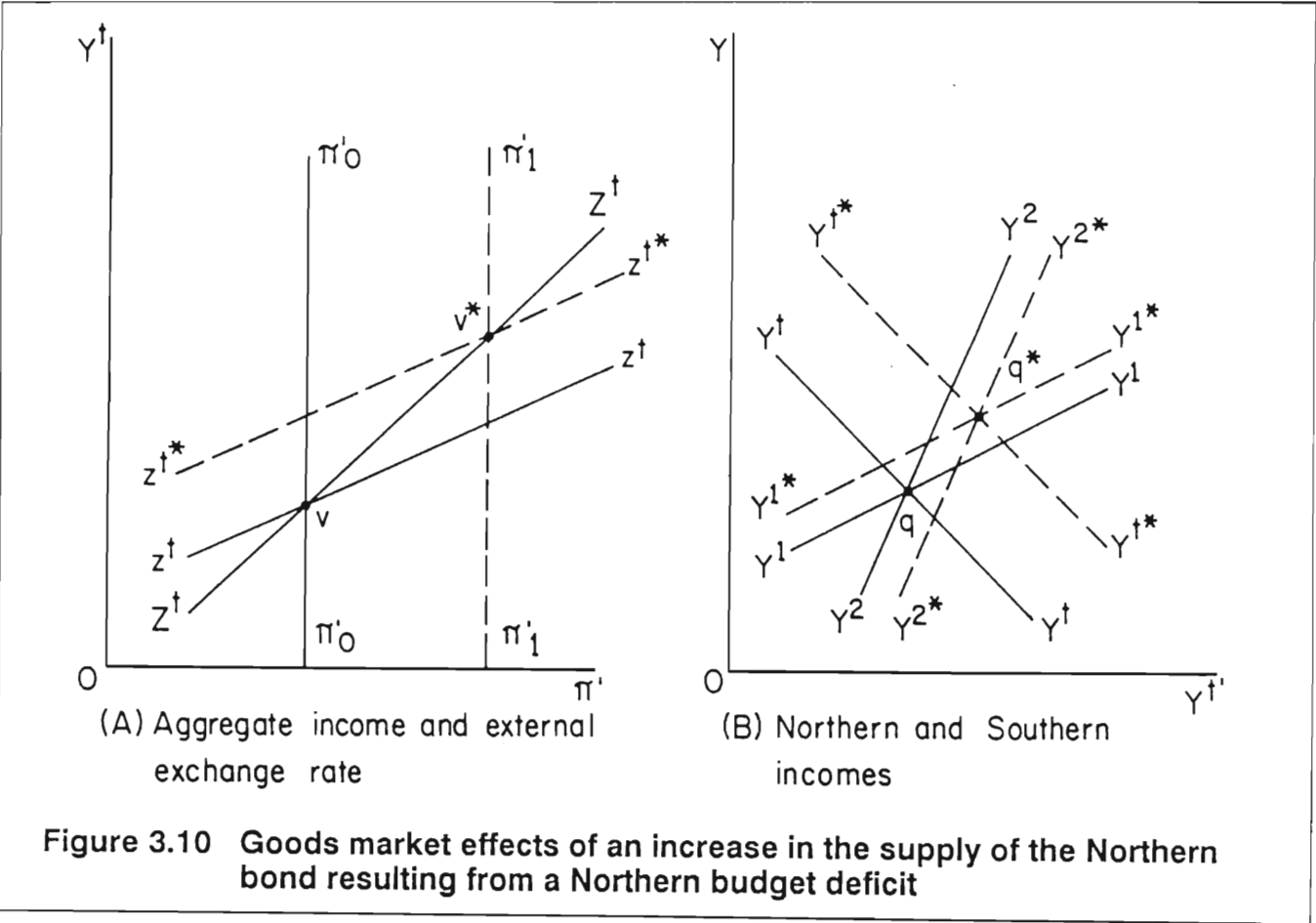
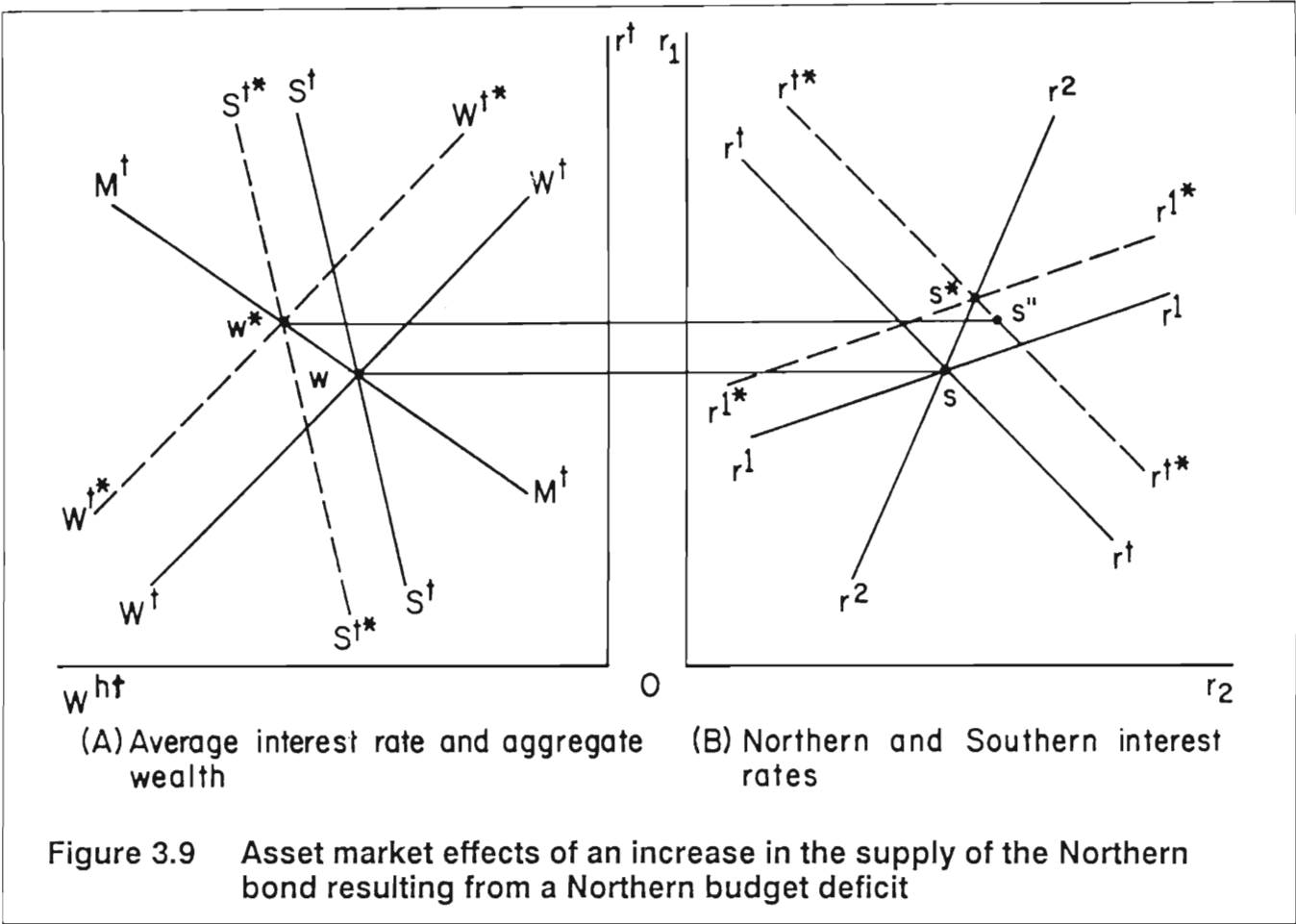
dissaving declines. The interval of dissaving implies on increases in aggregate disposable income and absorption and this raises  $Y'$ . The position is represented at point  $v^*$  in Fig. 3.10A.

The individual interest rate effects are seen in Fig. 3.9B. Curve  $r^1r^1$  shifts up due to the increase in supply of  $B_1$ , and spillover effects cause  $r_2$  to increase as well.<sup>34</sup> An increase in asset market integration reduces the difference in the increases of  $r_1$  and  $r_2$  and thus the difference in increases in saving and wealth.

Income responses are determined entirely by goods market characteristics, and Allen and Kenen show that with full scale goods market symmetry, the individual income increases are identical regardless of the level of integration. This is occasioned by the fact that the depreciation will cause symmetrical and equal expenditure switching in both countries and thus equal changes in absorption.

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34. No shift in  $r^2r^2$  is shown although it could shift up or down. It will shift up if the wealth redistribution to the South causes an increase in demand for  $B_2$ .



### 3.7 THE EFFECT OF INTEGRATION ON ASSET AND GOODS MARKET DISTURBANCES IN AN EXCHANGE RATE UNION

To complete the analysis of an exchange rate union, a brief analysis of the effects of disturbances on the asset and goods markets is undertaken, and the effects of integration are carefully examined. However, much of what there is to discover has been discovered in the previous section, and new sections will not be expanded on in any detail unless they offer new insights.

#### 3.7.1 Asset Market Disturbances

##### 3.7.1.1 *A Shift in Demand for Bonds*

An increase in demand for either  $B_1$  or  $B_2$  resembles an open market purchase of either of those bonds except that the money supply does not change. The average interest rate falls and capital flows out as households increase their holdings of the foreign bond. This causes a depreciation and further capital gains which increase wealth and the demand for bonds and lowers the interest rate further. The interest rate decline and depreciation increase absorption and thus income, which is higher in the steady state than on impact. Steady state wealth is redistributed away from the country whose bond is involved but that country experiences a greater initial increase in its income. However, towards the steady state, incomes converge and the eventual income changes are equal regardless of the level of integration. If the increase in demand for one bond was mirrored by a fall in demand for another, i.e. a shift in demand took place, then opposite movements in income and interest rates occur, causing a drop in output in the country where bond demand has fallen and a rise in output in the other country. As integration increases, however, the income affects are averaged out. Indeed, even with normal levels of integration, aggregate variables do not change and adjustments are seen only in individual variables, which mirror each other. Thus a demand shift of this nature 'redistributes' income and wealth between the two countries.

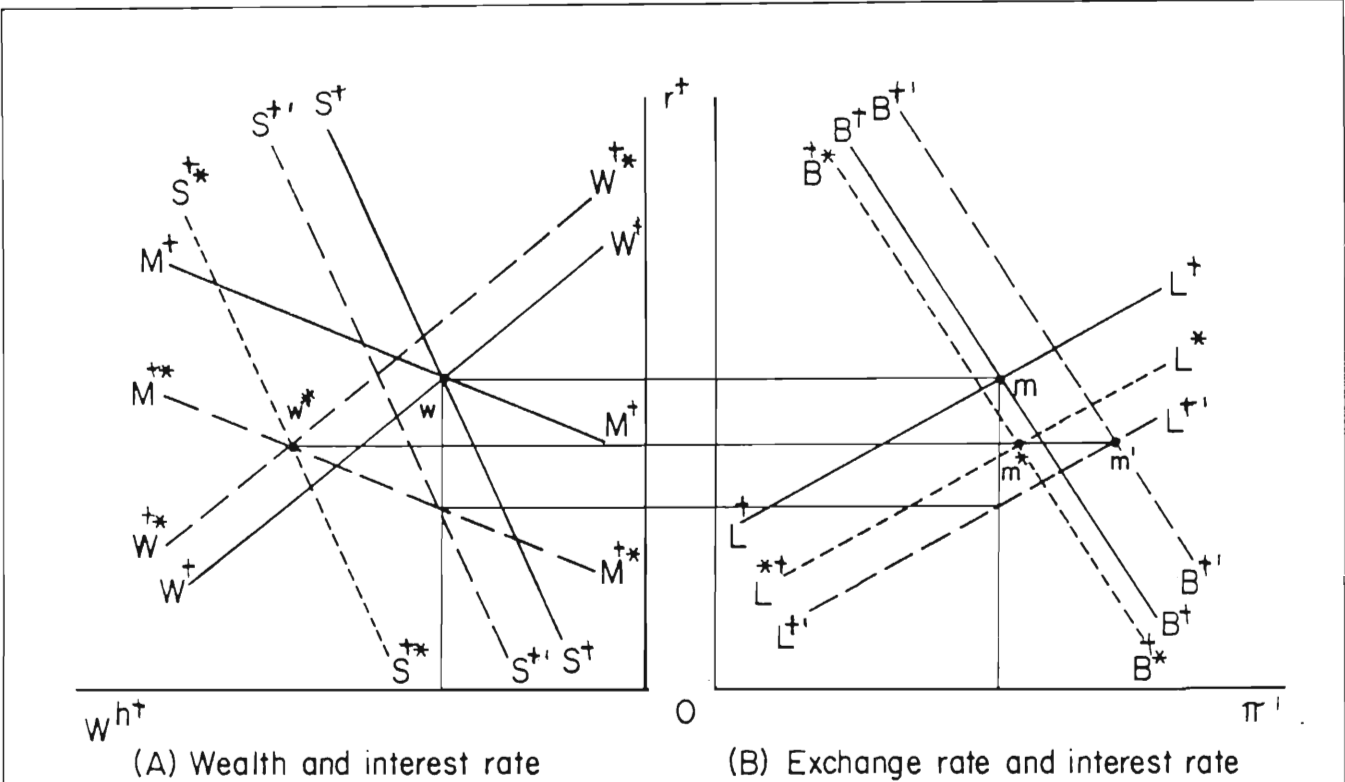


Figure 3.11 Effects on asset markets of an increase in the foreign interest rate

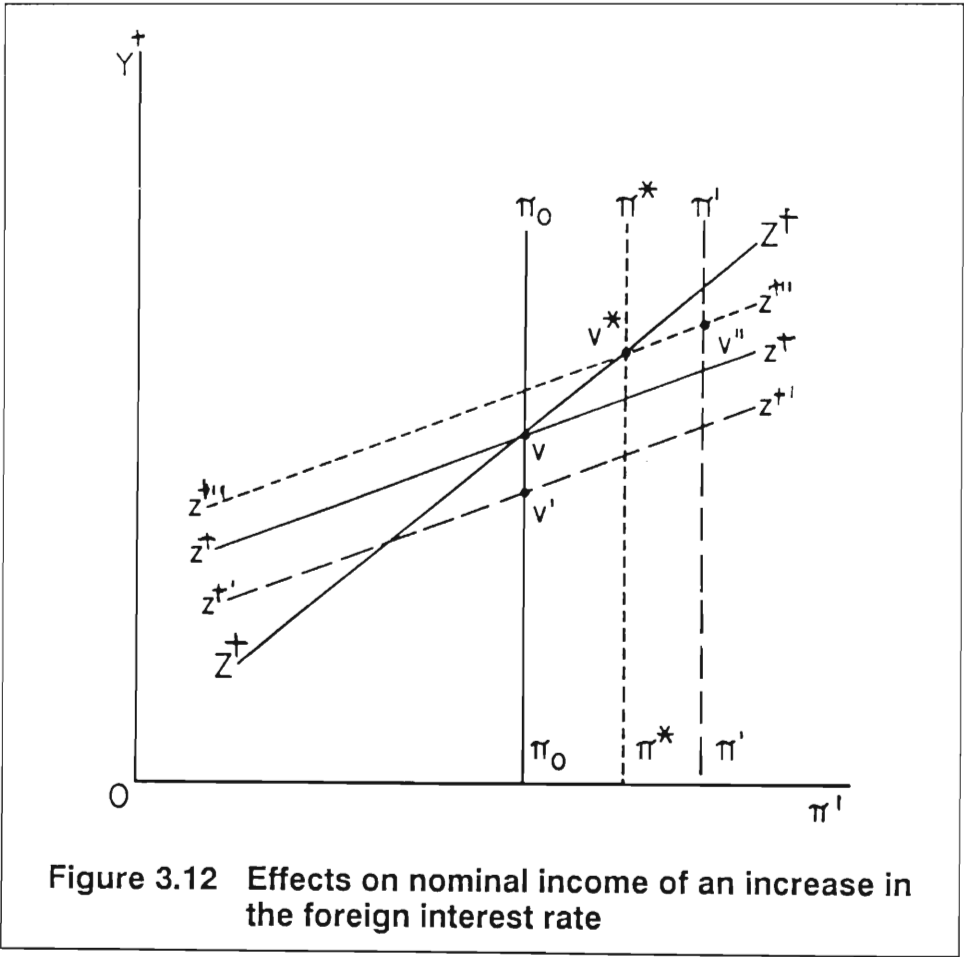


Figure 3.12 Effects on nominal income of an increase in the foreign interest rate



### 3.7.1.2 A Rise in the Foreign Interest Rate<sup>35</sup>

A rise in  $r_0$  will, assuming a moderate degree of substitutability between bonds, result in a decline in demand for local bonds and a capital outflow as households increase their holdings of  $B_0$ . The local average interest rate must rise to clear the market at initial levels of wealth and  $W^t W^t$  in Fig. 3.11 shifts up. The rise in  $r_0$  also reduces demand for domestic money and  $M^t M^t$  must shift down so that the interest rate at the present level of wealth will equal supply. Curve  $S^t S^t$  is also affected, because the  $r_0$  increase increases desired saving,  $r^t$  must fall to offset the increase so that desired saving is zero in the steady state and this causes  $S^t S^t$  so shift down.

Although wealth is shown to rise and  $r^t$  to fall, the change in  $r^t$  is ambiguous: it depends on the relative slopes of  $W^t W^t$  and  $M^t M^t$ . Income rises as  $z^t z^t$  and  $\pi^t \pi^t$  shift out (Fig. 3.12) but the steady state rise is less than the impact rise, as saving falls to the steady state. Thus an increase in  $r_0$  will increase domestic income, and an increase in union integration with the outside bond market will amplify the income increase, as well as the depreciation (pp.133-134).

What of the individual effects? Due to assumptions about asset and goods market symmetry, the income, interest rate and wealth effects will be exactly halved between North and South. Each therefore experience an equal increase in wealth and income, although the effects on  $r_1$  and  $r_2$  are ambiguous. This flows from the fact that the change in the average interest rate is indeterminate without specific knowledge of the relative slopes of  $W^t W^t$  and  $M^t M^t$ .

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35. In order to remove ambiguities, we must assume that there is no foreign crowding out,  $S_w L_{ii} - L_{1w} S_i > 0$  ( $i = 0, 1, 2$ ) zero local crowding out is already assumed but we must also assume that  $L_{1i} S_0 > = L_{10} S_1$   $i = 0, 1, 2$  (p.126).

### 3.7.2 Goods Market Disturbances

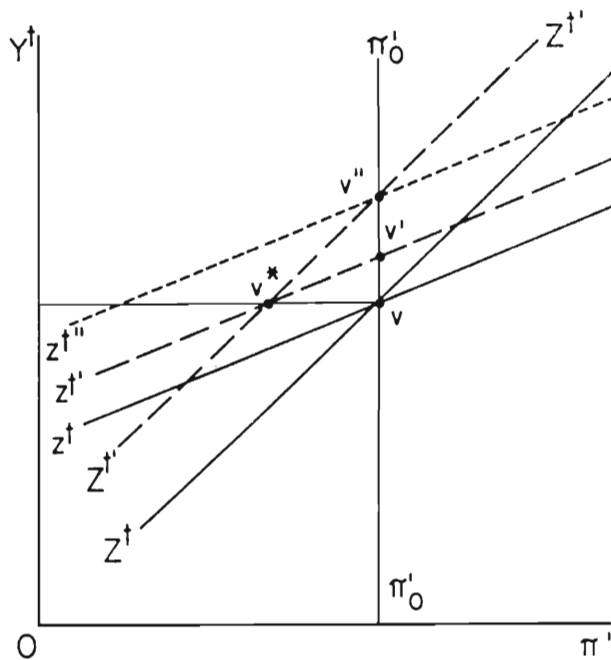
#### 3.7.2.1 *An External Disturbance*

An external disturbance is a shift between one of the local goods and a foreign good. Thus the analysis will focus on a shift from Good 0 to Good 1, arising in any market - the North, South or foreign.

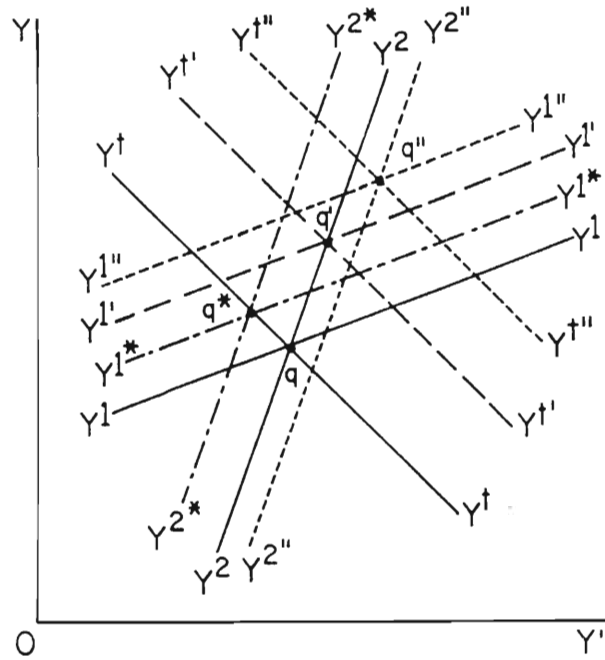
On impact  $z'z'$  shifts up and income rises in Fig. 3.13. However, since  $Z'Z'$  also shifts up and  $v'$  lies below  $v''$ , the zero saving point for that exchange rate, there is positive saving and a current account surplus. The current account surplus causes an appreciation and since wealth and the interest rate do not change (there is no asset market effect), saving can only be brought back to zero by a fall in disposable income. Thus  $Y^1$  must fall and this is achieved by the expenditure switching effects of the appreciation. Equilibrium is established at  $v^*$ , where income is at its old level. The individual effects are clear only if goods market symmetry is imposed. On impact,  $Y^1Y^1$  shifts out to  $Y^{1'}Y^{1'}$  in Fig. 3.13B and  $Y^2Y^2$  stays put, thus  $Y$  increases more than  $Y^1$ . In addition, the North runs a current account surplus due to the increase in demand for its good but the South can have a surplus or deficit on its current account.

The appreciation caused by the demand shift stimulates a capital outflow as households restore their value holdings of foreign bonds, this leaves the North in net surplus and the South in net deficit since the union's BOP is zero by the capital outflow. Hence  $W^h$  and  $R$  must rise while  $W^{h'}$  and  $R'$  fall, also  $r_1$  will fall and  $r_2$  rise. These mirror reactions occur because aggregate variables do not change. In addition, since aggregate income returns to its initial level, there are equal and opposite changes in  $Y$  and  $Y^1$ . Northern income will fall by less than Southern, because its wealth rises and its interest rate falls. Thus  $Y$  does not fall all the way back to its initial level but  $Y^1$  falls beyond its own.

As integration increases, the income changes become more equal, i.e. the fall in  $Y$  increases and the fall in  $Y^1$  decreases until, with perfect integration, each returns to its old level. Thus integration reduces the difference between the changes in income for a shift to one of the domestic goods.

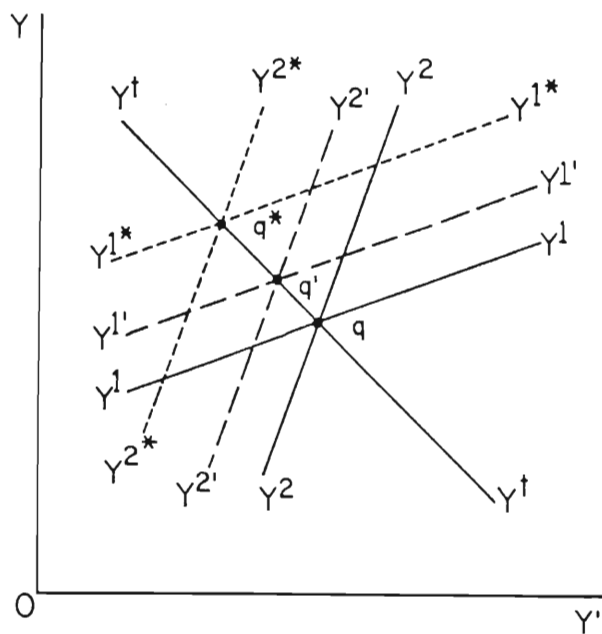


(A) Aggregate income and external exchange rate



(B) Northern and Southern incomes

**Figure 3.13** Goods market effects of a shift in demand from the foreign good to the Northern good



**Figure 3.14** Goods market effects of a shift in demand from the Southern good to the Northern good

### 3.7.2.2 *An Internal Disturbance*

We examine the effects of a shift in demand from the Southern good to the Northern Good.

Firstly, there is no effect on aggregate variables when goods markets are symmetrical. The increase of Northern income is mirrored by a decrease in Southern income and the Northern current account surplus is mirrored by the Southern deficit. Thus there is positive saving in the North and an accumulation of asset holdings while there is Southern dissaving and a decline in asset holding. This implies a wealth redistribution to the North. Due to home asset preference, moreover, Northerners will demand fewer Southern bonds and more Northern bonds than are sold by Southerners and excess demands and supplies will force  $r_1$  down and  $r_2$  up. The interest rate movements will then result in a convergence of saving, until each current account balance becomes zero (p.465). In the steady state, Northern income, wealth and reserves are higher but those in the South are lower. In addition  $r_1$  is lower but  $r_2$  is higher than before the demand shift.

In Fig. 3.14  $Y^1Y^1$  shifts up but  $Y^2Y^2$  shifts in and equilibrium is established at  $q^*$  in the steady state. Aggregate income does not change.

With goods market asymmetry, national variables will still move in opposite directions but the income changes will be different. There will, however, be a permanent appreciation of the external flexible exchange rate.

## 3.8 CONCLUSION

It was suggested at the outset that the model would show the sub-optimality of an exchange rate union between two integrated countries where a more complete form of unification was possible. This has now been achieved - the analysis has shown clearly how policy autonomy declines as the level of goods and assets market integration increases. What is more, it has been argued elsewhere that the formation of an exchange rate union will enhance financial (asset market) integration implying that the exchange rate union will

itself be a reason for further unification. Short run monetary control of income is limited but possible under high integration, long run influence is determined by goods markets and where these are not closely symmetrical, monetary policy aimed at offsetting individual countries may not work at all. However, if the countries recognise that they are integrated - that they resemble a single homogenous country - they may decide to conduct monetary policy as if they were one country and form a monetary union. This will save reserves and ensure more effective policy by eliminating the possibility of duplicated policy and removing the need for offsetting policy. A monetary union will thus guarantee policy harmonisation and only target harmonisation will then have to be agreed upon.

Further questions arise, however, concerning the operation of fiscal policy between integrated areas. It has been shown that autonomy in independent fiscal policy declines, as does monetary autonomy, with increased integration. However, as Allen and Kenen point out, goods market integration rarely reaches the intensity of asset market integration, and the question of fiscal unification is, for this reason and others, subject to much greater debate and dispute than that of monetary unification (p.542). What *will* benefit integrated areas, exchange rate unions or monetary unions is at least a degree of fiscal policy co-ordination, since the costs of offsetting policy were seen to increase with integration. This, however, implies common thinking about treatment and correction of macroeconomic problems which cannot be assumed to exist between any regions, even highly integrated ones.

To assist in making a case for or against further monetary unification in Southern Africa the model will be put to use in Chapter 7 where it will be applied, in some modified form, to the CMA situation. However, the insights provided by the model into the broad issues surrounding monetary integration will be carried into all the remaining chapters of this thesis.

## CHAPTER 4

# ***MONETARY CO-OPERATION BETWEEN SOUTH AFRICA, LESOTHO AND SWAZILAND***

### **4.1 INTRODUCTION**

In the preceding chapters theoretical aspects surrounding the analysis and functioning of a currency area were examined, and the conclusion was reached that the economic similarity and interdependence of regions is a good general indicator of the viability of the area as a monetary union. In assessing the case for or against monetary union between South Africa, Lesotho and Swaziland,<sup>36</sup> therefore, it is necessary to examine (among other things) historical and existing monetary interdependence and co-operation between these countries. This is the purpose of the present chapter, which describes and analyses the various monetary agreements between the relevant countries, as well as the conditions that brought them about. This is done after initially examining the monetary and financial systems of the Three, which it is hoped will provide some understanding of the level of financial market development in the CMA and the important disparities that exist. Therefore, this chapter sketches the historical and institutional background of existing monetary integration and interdependence which is necessary before going on to an analysis of the functional usefulness of the CMA in later chapters.<sup>37</sup>

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36. These countries will be referred to collectively as 'the Three'.

37. Thus little is said in this chapter concerning the *viability* of the CMA. The focus is rather on its evolution as an institution.

## **4.2 THE MONETARY SYSTEMS OF SOUTH AFRICA, LESOTHO AND SWAZILAND**

### **4.2.1 Aspects of the Monetary Systems of Developing Countries**

The importance of studying the monetary system in order to understand the nature and behaviour of 'money' in any country is stressed by Nana-Sinkam:

“ ... the banking system in any particular country influences to a great extent the items included in 'money' or excluded from it” (1978, p.63).

Thus in order to understand 'monetary integration' more fully it is important to understand and have a working knowledge of the monetary systems, and their problems, of the relevant countries.

It is possible to identify certain monetary characteristics and problems which are common to developing countries. Certain ingrained characteristics forbid adequate realisation of the goals of sufficient saving, an efficient credit generating mechanism and satisfactory investment projects, which are, according to Furness (1975, p.23) the three requirements for creating the desired financial base for development. However, according to Furness it is precisely these features that are lacking in most developing countries. Each will be examined in turn.

Furness argues that the four typical sources of saving in a country (private, corporate, government and foreign countries) are for the most part inadequate in developing countries (1975, p.24). Private saving is limited by low incomes, high consumption levels, a lack of incentive and a limited range of saving options, while corporate saving cannot take place in any great measure where 'an indigenous entrepreneurial class has scarcely emerged' (p.24). Government saving is also not normally possible due to the unlikelihood of an excess of tax revenue over expenditure where the taxable sector of the economy is small and increasing pressure exists for the provision of public goods (p.25). External sources of capital, while present, are often too small to effectively make up for the lack of internal provision.

The upshot of the savings problem of developing countries is thus, according to Furness, a lack of effectiveness of monetary and fiscal policy due to a scarcity of loanable funds (which would normally, via the interest rate, permit the government to manipulate economic activity).

The 'savings problem' is often accompanied by the problem of insufficient demand for credit (Furness, 1975, pp.25 - 26). Whilst a flourishing demand for credit was responsible for the 'industrialisation and capital accumulation' of developed nations, Furness suggests that credit demand has fallen off in developing countries as expatriate capital departed and waned with the breaking away of developing nations from the former colonial powers (1975, p.26). In essence, 'effective demand for credit from the local population was not sufficient' and could not substitute for the departed impetus provided by colonial capital (p.26).

What must happen, then, according to Furness, is that the developing nations must establish the financial machinery *in anticipation* of the expanding demand for credit and thereby facilitate it. This conclusion reached by Furness will be important in the context of the debate surrounding monetary integration and its effects on the development of the Three.

There are financial structure problems peculiar to Africa which Robson (1968) and Nana-Sinkam (1978) have identified. Robson has pointed out the existence of a wide range of financial systems in the many currency areas<sup>38</sup> and has cautioned about the difficulty of making integration schemes work in this environment (1968, p.73). Nana-Sinkam identifies four major problems of African systems (1978, pp.69-74). Firstly, he has observed a high degree of private credit utilisation by certain governments and warns of the "rationing of credit to the private sector" and the checks on investment that are consequent (1978, p.70). In the presence of inadequate saving, as described by Furness, this crowding-out problem can have serious consequences for growth. Secondly, he notes that credit expansion has often outstripped the growth of real output, with inflationary

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38. Admittedly, the situation has changed somewhat since 1968, but if anything, there has been more monetary *disintegration* than the reverse since then. See Nana-Sinkam (1978, pp.75-88).



effects. Reasons advanced for this include the difficulty of accurately determining gross domestic product (due in part to the existence of large subsistence sectors), seasonal fluctuations in the supply of money and a 'narrow conception' of consumer prices (p.71). Inappropriate use of the interest rate is a third problem that one can identify in Nana-Sinkam (p.73). Due to interest rates that have been *too* low in most African countries, companies have invested their excess resources overseas at more attractive rates, and thus contributed to the problem of inadequate saving which Furness identified. Fourthly, the mobilisation of funds is hampered by the underdeveloped financial structure and Nana-Sinkam does not see government-established development banks and the like as an appropriate solution "since these institutions are protected from the discipline that the raising of loans from the market necessarily imposes" (1978, p.74).

Thus one can identify monetary and financial problems of developing countries in general as well as some specific to African countries. The importance of identifying these problems will become clear as the monetary systems of the Three (discussed in Section 4.2.2) and the effects of integration on them (later sections) are analysed.

#### **4.2.2 The Monetary Systems and Recent Monetary Events in South Africa, Lesotho and Swaziland**

The purpose of this section is to describe in brief the monetary conditions and events in the Three prior to and after the signing of the Rand Monetary Area (RMA) Agreement in December 1974. The intention is simply to give an idea of the level of sophistication of the various monetary systems, and no attempt is made to outline the provisions of the agreement: this is done later.

##### **4.2.2.1 Lesotho and Swaziland Prior to the RMA: Common Arrangements**

The International Monetary Fund *Surveys of African Economies* Volume 5 provides a useful source of information on the state of the monetary systems of Lesotho and Swaziland for the period of interest (IMF, 1973, pp.19-27).

Prior to the RMA,<sup>39</sup> neither country had a central bank and neither had a national currency. The rand was in circulation and legal tender in both and were distributed by the commercial banks. After 1969, access to the South African capital market was granted to the two countries and their securities were granted 'approved' status, thereby allowing them to borrow subject to the same conditions as South African public entities (IMF, 1973, pp.19-20). This substituted for their lack of capital market facilities in this early period.

The commercial banks operating at this time were Barclays Bank International Limited and Standard Bank Limited, which were under legal control from their London head offices but worked closely with their South African offices. In Lesotho, the Standard Bank operated as banker to the government while Barclays Bank was banker to the Swaziland government. Other financial institutions operating in both were postal savings schemes, development banks (only from 1972 in Lesotho), building societies and insurance companies (IMF, 1973, pp.20-21).

Interest rates paralleled South Africa's, with commercial banks charging slightly more on overdrafts to the governments than the South African Reserve Bank's rate. The commercial banks attracted most of the deposits with relatively higher time deposit interest rates than other institutions (p.23).

Neither Lesotho nor Swaziland could undertake exchange rate management since the rand's value was determined by the South African Reserve Bank. From February 1961 to December 1971, the rand was pegged at  $R1 = US\$1,40$  (i.e. one troy ounce of fine gold = R25), after which it was devalued against the dollar. In August of that year it was pegged to sterling and depreciated against the dollar when the UK government allowed sterling to float in June 1972. Thus it was again pegged to the dollar in October 1972 and only began to float independently in 1979 (IMF, 1973, p.24; Economist Intelligence Unit (EIU), 1989a, p.15).

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39. Other writers have made a distinction between the *de facto* and the *de jure* monetary union. Here 'the RMA' will be taken to mean the *de jure* monetary union.

The Exchange Control regulations in Lesotho and Swaziland were identical to South Africa's, in keeping with the policy of a *de facto* monetary union. The two governments were expected to enforce South African provisions so as to disallow exchange control evasion through their monetary systems. There was no exchange control between the Three. The situation had not been formalised, however, with arrangements resting "largely on ad hoc exchanges of letters and unwritten understandings" (IMF, 1973, p.25). Outward capital transfers to non-sterling area countries were more strictly controlled than sterling area transfers. The latter type were permitted so long as they originated in the remitting country, thus preventing exchange control evasion (p.26).

This then was the state of affairs in Lesotho and Swaziland in the early 1970s. How the situation changed subsequent to the signing of the RMA agreement is discussed next.

#### **4.2.2.2    *South Africa, Lesotho and Swaziland to the Present***

There is a stark contrast between the levels of sophistication and development of the monetary systems of Lesotho and Swaziland on the one hand and South Africa on the other. Financial development in South Africa has proceeded to the point of securities markets and diverse financial institutions, whilst the major financial institutions in Lesotho and Swaziland are still commercial banks. However, the monetary systems of Lesotho and Swaziland have become increasingly sophisticated since the signing of the RMA agreement although it is not claimed that the agreement was responsible for this development. If anything, the development of their monetary systems increased the pressure from the Lesotho and Swaziland governments for a formal agreement. The changes in the formal arrangements and the reasons for them are discussed in Section 4.3 of this chapter: they should be understood, though, in the context of the divergent degree of monetary system sophistication that characterises the RMA. By discussing each monetary system in terms of money and banking characteristics, currency arrangements, financial markets, financial institutions, external payments and exchange control arrangements respectively, it is hoped that this understanding will be facilitated.

#### 4.2.2.2(a) South Africa

Central Banking in South Africa is carried out by the South African Reserve Bank which deals with government, commercial banks and discount houses. The Reserve Bank was established in 1921 in terms of the Banking and Currency Act of 1920, with the following primary functions:

- (1) to be the sole issuer of banks notes in the country,
- (2) to be banker to the commercial banks, and
- (3) to be 'lender of last resort' to the other financial institutions (Solomon, 1983, pp.158-159).

The functions of a central bank can be divided into 'active' and 'passive', the latter conventionally being those associated with monetary policy. Besides these 'passive' functions outlined above, the Reserve Bank also acts as custodian of the gold and foreign exchange reserves of the country and acts as banker to the government. It assumed this latter role in 1927 (Solomon, 1983, pp.159-160).

The 'active' functions of the reserve bank include manipulation of the Bank Rate, open market operations and moral suasion.<sup>40</sup> Conventional use of the Bank Rate was dropped in 1982, but then re-introduced in 1985. Open market operations have only recently (1973) become practicable due to the inadequacy, for a long time, of the long- and short-term securities markets (Solomon, 1983, pp.160-162).

The legal categories of financial institutions were established by the Banks Acts of 1965 and 1972. The categories are: commercial bank, merchant bank, general bank and discount house. Banks fall into categories depending on their major activity, demand deposits indicating a commercial bank, merchant business a merchant bank, short-term investiture of funds a discount house and if no activity predominates, the institution is classified as a general bank.

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40. 'Moral suasion' is no longer considered a practical means of achieving monetary policy goals (Solomon, 1983, p.160).

Today there are five large commercial banks, four discount houses and a range of building societies (which are allowed to undertake many banking functions, thus the distinction between banks and building societies is blurring). There are also a number of savings institutions such as pension institutions and insurance companies (EIU, 1989, p.42).

The increasing sophistication of the financial markets and the increasing mobility of capital has led to large, unprecedented fluctuations in interest rates and contributed to a high money supply growth rate. Thus monetary policy has had to become more flexible, moving from 'direct' controls to more 'market orientated' controls which typify monetary trends in advanced Western countries. At the time of writing, interest rates have been allowed to rise fairly sharply to curb excessive credit demand - M3 growth having far exceeded its target in 1988 (EIU, 1989, p.43).

The South African currency, the rand, is issued by the South African Reserve Bank in Pretoria and coins are minted at the South African Mint, also in Pretoria. Its international value is determined by a 'managed float' system conducted by the Reserve Bank, with dual values for commercial and financial transactions. The dual exchange rate system was reintroduced in 1985 in an attempt to reduce the impact of capital outflows on the commercial exchange rate, which had depreciated severely<sup>41</sup> by the end of 1985 and had boosted inflation as petrol prices and importable finished and intermediate goods prices rose. The rand has never recovered its pre-1984 values, and although the effective exchange rate index showed some improvement in 1987, by 1988-89 the index had fallen again (EIU, 1989, p.16).

The financial markets in South Africa are as sophisticated and advanced as those in any developed country, with the Johannesburg Stock Exchange (JSE) handling the full range of public and private securities and equity. Net domestic investment has been restrained, however, more by lack of confidence in the economy than by the high capital flight. The latter phenomenon, also occasioned presumably by lack of confidence in the economy for political reasons, has led to a rise in the proportion of locally owned business to foreign owned as local management buy out foreign holding companies. Personal savings, after

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41. Based on an effective exchange rate index (EIU, 1989, p.16).

rising from 1980 to 1985, have again fallen up to 1988. Corporate saving has remained fairly constant since 1986 although government has been a net dissaver since 1983 (EIU, 1989, pp.39-40).

Since 1985, South Africa's BOP situation has comprised a capital account deficit (long and short term flows) and a current account surplus. In 1985 foreign banks withdrew credit lines to South Africa in protest against the increasing level of political repression practised by the South African government, and this precipitated a debt crisis. Foreign institutions called in loans and new credit facilities became unavailable. South Africa has therefore had to make a concerted effort to redeem foreign debt without the assistance of foreign banks or the IMF, and this fact combined with the problem of capital flight has meant a continued forced current account surplus since 1985. Import restrictions in the form of surcharges have been employed to maintain the current account surplus and these have been especially necessary in times of net rise in local economic activity (EIU, 1989, pp.46-50).

The freeing-up of exchange controls since 1961 had to be reversed with the 1985 debt crisis when even non-residents faced restrictions on outward capital movements. All non-resident capital transactions take place in financial rands (EIU, 1989, p.51).

#### **4.2.2.2(b) Lesotho**

Before 1980, the Commissioner of Financial Institutions performed rudimentary central banking functions after which the Lesotho Monetary Authority took over with the introduction of the Lesotho currency (see below). The stated functions of the Authority were to issue and redeem notes, to promote monetary stability and to promote financial conditions to facilitate development (Barclays Bank, 1981, p.25). In August 1982 the Central Bank of Lesotho was established, taking over from the Monetary Authority and assuming all the tasks and responsibilities of a central bank (EIU, 1987, p.55). The Financial Institutions Act regulates the functioning of the four commercial banks: Barclays, the government-controlled Lesotho Bank, Standard Bank Limited and Standard Bank of South Africa Limited (Barclays Bank, 1981, p.25). The Act stipulates licencing requirements, minimum capital and resources and has 'prescribed investments' clauses -

requirements for certain investments to be held by the registered institutions. In addition there are liquid assets ration provisions, credit extension restrictions, acceptable securities stipulations and mandatory audit provisions (Collings *et al.*, 1978, pp.112-114).

The Lesotho Bank (short for Lesotho National Development Bank) operates partially as a development bank and partially as a commercial bank. It is 100 per cent government-owned and was established in 1972. The Lesotho Building Finance Corporation, established in 1976, assists and encourages long term financing of housing and other building types. The Lesotho Agricultural Development Bank was established by the government in 1978 with the goals of assisting crop and livestock farming (Barclays Bank, 1981, pp.25-26 and Collings *et al.*, 1978, p.113). Although there are many insurance agencies, only four insurance companies operate and only one of them, the Lesotho National Insurance Company, has a registered office in Lesotho. Thus the insurance business is fairly small in Lesotho (Barclays Bank, 1981, p.26).

Lesotho's currency, the maloti, was introduced in January 1980 along with the Lesotho Monetary Authority. 'Maloti' is the plural of 'loti' which is the single currency unit. The loti is divided into 100 cents: 'lisente', the name being a corruption of the English 'cent'. Leabua Jonathan, the then Prime Minister announced on its introduction that the rand should "for the foreseeable future, continue to circulate with it [the maloti], within our territorial borders" (quoted in Barclays Bank, 1981, p.25). Lesotho has no independent exchange rate policy and thus has no control over the value of the maloti, which is pegged to the South African rand in terms of the Rand Monetary Area Agreement and amendments (see below). Under the Rand Monetary Area Agreement, Lesotho has access to the South African capital market and this source of investment funding is taken to be necessary in light of Lesotho's poorly developed financial structure and insufficient savings: 9 - 15 per cent of disposable income over the past decade (EIU, 1988, p.55). The Agreement formalised the right of Lesotho and Swaziland to issue public securities but limited the holdings by South African institutions of these securities to no more than 1,5 per cent of their legal minimum holding of 'prescribed investments' and 'approved securities'. The situation as regards short term securities is less favourable - neither Lesotho nor Swaziland has any permanent right to issue Treasury Bills on the South

African market but the South African Reserve Bank has agreed to act as 'lender of the last resort' to their central banks in times of crisis (Collings *et al.*, 1978, pp.104-105).

Movements on the current account of Lesotho's BOP are far greater than capital account movements, with current account deficits and capital account surpluses typifying the situation. Migrant labourers' remittances make up the largest positive item within the current account but they are often only approximately 70 per cent of the merchandise imports figure. Thus workers remittances partially finance the trade deficit, with capital inflows comprised of official loans and investment along with inward transfers (on the invisible account) assisting as well. In 1986 and 1987, however, the Central Banks had to run down reserves to finance the balance. The Lesotho Highland Water Scheme is expected to provide relief as funds flow in from South African investors (EIU, 1988, pp.59-60).

Lesotho receives Official Development Assistance (ODA) aid and in 1987 this accounted for just over 50 per cent of unrequited transfers (the balance comprising Southern African Customs Union receipts and 'eastern bloc' grants)<sup>42</sup> (EIU, 1988, p.61). Lesotho has a high ratio of public external debt to GNP - 30 per cent in 1986, and a correspondingly low debt service ratio due to a large quantity of 'soft' loans with extremely long maturity periods (EIU, 1988, pp.61-62).

As far as exchange control policy is concerned, the 1974 Agreement did little besides formalise the *de facto* agreement whereby Lesotho agreed to enforce South African exchange controls. There is still no exchange control on movements within the RMA (Barclays Bank, 1981, p.26). The Agreement did, however, resolve ambiguities in the informal agreement and specified that foreign transactions originating in a particular country shall be subject to the sole responsibility of that country's monetary authority. The South African government has agreed to make foreign exchange available for the purposes of these approved transactions. Lesotho and Swaziland are expected to follow South Africa's exchange control policy but may make changes provided these do not result

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42. Although not all ODA disbursements are unrequited: loans are included in the ODA figure. However, at least 25% of the ODA figure should represent, by requirement, unrequited aid. In the case of Lesotho, for 1986, just under 90% of ODA disbursements represented grants (EIU, 1988, p.61).



in *looser* controls than South Africa's. The Agreement does allow them to depart from South African policy measures if the adoption of these would be contrary to national interest (Collings *et al.*, 1978, pp.105-107).

#### 4.2.2.2(c) Swaziland

Swaziland's Monetary Authority was established in 1974 and had as its functions the issuance and redemption of legal tender, the promotion of financial stability and the promotion of conditions suitable for economic development (Collings *et al.*, 1978, p.115). In 1981 the Monetary Authority became the Central Bank of Swaziland, although the nature of the Monetary Agreement with South Africa did not permit any greater monetary independence (EIU, 1988, p.91). The Bank has as its main task the administration of exchange control procedures, not being able to engage in independent monetary or exchange rate policy (by own choice since 1986) (Barclays Bank of Swaziland Limited, 1979, p.39). There are three commercial banks and one development bank in Swaziland: the Bank of Credit and Commerce International, Barclays Bank of Swaziland Limited, Standard Bank Swaziland Limited and the Swaziland Development and Savings Bank (established in 1965) (EIU, 1988, p.86). All the commercial banks are locally incorporated, subject to the Financial Institutions Order of July 1973; the Swaziland government has a 40 per cent equity participation in Barclays and Standard Banks (Collings, 1978, p.116).

The Swaziland Development and Savings Bank is publicly owned and managed, and was established to provide support and aid to the rural 'cash economy'. It thus provides financial support to agriculture, forestry, housing and small business. Initial capital (in 1965) consisted of grants from UK and USA development aid funds (Barclays Bank, 1979, p.43; Collings *et al.*, 1978, p.116). Recently, the bank has not been faring well, and it is reported to be "struggling" (EIU, 1988, p.86).

In September 1974 the Swaziland authorities issued a national currency, the lilangeni (plural emalangeni, abbreviated 'E'). They did not withdraw from the RMA negotiations however, and no independent monetary system was established since it was felt that this may prejudice South African trade and tourist links. The lilangeni circulated alongside the

rand and was covered fully by interest-earning deposits at the South African Reserve Bank. Initially, interest was only paid on the rand deposits (i.e. emalangeni in circulation) but after the South African Reserve Bank agreed to pay interest on all currency in circulation, thereby obviating the need for a rapid changeover of currencies (Colling, 1978, pp.114-116). The situation changed in 1986 with the Trilateral Monetary Agreement (see Section 4.4 below) when the two currencies were de-linked, the rand being finally taken out of circulation and the Swaziland Central Bank assuming, for the first time, the right to allow the lilangeni to depart from par with the rand (EIU, 1988, p.69). The reasons for these developments will be discussed in later sections.

Financial Institutions besides the four banks comprise the Swaziland Royal Insurance Corporation (est 1974), the Swaziland National Provident Fund (established in 1974), the Swaziland Building Society and “some savings and credit co-operatives” (Collings *et al.*, 1978, p.116; EIU, 1988, p.86; Barclays Bank, 1979, p.43). The Insurance Corporation is majority-owned by the Swaziland government and has “the monopoly of all insurance business in the Kingdom” (Barclays Bank, 1979, p.43). The National Provident Fund assists injured, sick or aged, inactive workers, and membership is compulsory for all economically active Swaziland citizens. The Building Society assists private home construction (Barclays Bank, 1979, p.43).

As with Lesotho, Swaziland’s interest rates parallel those of South Africa and there is free flow of capital between the two countries in terms of the Monetary Agreement. However, the Central Bank does have the power to prescribe interest rates in the banking system (Collings *et al.*, 1978, p.117; EIU, 1988, p.84).

Since 1985 Swaziland has run a BOP surplus, with a traditionally large trade deficit being shrunk considerably in 1986/87, presumably partially due to the depreciation of the rand-linked lilangeni. Non-visible current account items also improved in the mid 1980s - interest earnings abroad increased as well as South African migrant labour remittances.<sup>43</sup> The capital account showed a deficit in 1987 for the first time in five

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43. There was also improvement due to the reinsurance claims for the cyclone Demoina damage. However, this current account assistance is ‘one-off’.

years, due to a decrease in government capital borrowing permitted by a narrowed budget deficit. The direct investment account is still positive, however. ODA assistance increased in 1986 over the 1982-1985 levels; however, the proportion of loans in the total has risen substantially. In 1986 ODA grants comprised nearly 60 per cent of the 'official transfers' figure (EIU, 1988, pp.87-90).

While foreign debt levels have risen considerably in the 1980s, this has been largely occasioned by the depreciation of the rand-linked lilangeni. The depreciation also increased debt service drastically, although the debt service ratio obviously did not change much. The ratio, in 1980 equal to 7,1 per cent, has been described as "a modest burden in comparison with much of the rest of the continent" (EIU, 1988, p.90).

As noted earlier, the initial RMA agreement formalised the parallel South African exchange control policies followed by Lesotho and Swaziland. The 1986 agreement did not change the situation as regards external flows, however, it does permit Swaziland to restrict flows of funds between itself and South Africa. As yet, it has not done so (Gargano, 1986, p.80 and EIU, 1988, p.91).

### **4.3 THE RAND MONETARY AREA AGREEMENT**

In the previous section, the monetary systems of the Three were outlined and it was seen that those of Lesotho and Swaziland are in essence 'monetary satellites' of the large and sophisticated South African system. Considering this 'natural' integration of the three markets, then, it is not surprising that a formal monetary union of sorts came into being between them. It is the rationale behind the monetary union Agreements and their provisions that are analysed in this chapter, after a short initial section on the history of monetary affairs in the region.

#### 4.3.1 A History of Money and Monetary Co-operation in South Africa, Lesotho and Swaziland

Before the 1780s, metal currency in the form of Spanish Silver Dollars and later Dutch Guilders circulated in the Cape, after which the first paper currency, the rix dollar, was introduced. With the arrival of the British at the Cape in 1806, Sterling currency was introduced but became standard only after 1881, with the application of the Imperial Coinage Act to the Cape and Natal (Goedhuys, 1982, p.29).

In the early Transvaal Republic, the Pretoria Mint produced silver and gold coins for circulation: florins and *Krugerponde*, while Natal and the OFS used coins from the Cape and Transvaal (Goedhuys, 1982, p.29). Both the Free State Republic and Natal experienced coin shortages, however, with the Free State consequently embarking on a series of disastrous paper note issues to try and rectify the situation (Solomon, 1983, p.132). British currency became standard in the Union of South Africa and was minted from 1923 at the South African Mint in Pretoria. South Africa remained on the gold standard until 1932, when it decided to abandon the policy, Britain having done so the previous year. Sterling currency remained in use until February 1961 when it was replaced by the decimalised rand system (Solomon, 1983, pp.135-137). South Africa became a Republic the same year.

Lesotho and Swaziland became monetised after the contact of European hunters and traders in the nineteenth century. Initially - up to the formation of the Union of South Africa - 'monetary anarchy' typified the situation with various currencies in circulation, and the situation was rectified only in 1921 with the establishment of the South African Reserve Bank and the introduction of the South African rand. This became legal tender in the British protectorates as well (previously Bechuanaland, Basotuland and Swaziland), until decimalisation in 1961. The rand then remained the sole currency in Swaziland and Lesotho until the introduction of their own national currencies (1974 and 1980, respectively) (Collings *et al.*, 1978, pp.97-98).

Thus a *de facto* monetary union between the Three was the case from the time the Protectorates became properly monetised. There were no exchange controls between

them, and for external transactions residents of Lesotho and Swaziland were treated as South African citizens. Exchange control regulations were thus informal, as was Bank Legislation. Financial co-operation between the banks of Lesotho and Swaziland<sup>44</sup> and their associates in South Africa was also close, with deposits from the two being placed at South African branches and South African branches extending credit in times of need (Collings *et al.*, 1978, p.99).

This monetary co-operation and interdependence existed against the background of other economic co-operation, specifically the Customs Union Agreement of 1910 and 1969. In addition, the South African mines provided work (and still do) for migrant labourers, particularly Sotho. However, it (the monetary interdependence) deprived the two of effective monetary control and for the most part interest rates, exchange rates, money supply and exchange control were completely out of the hands of their authorities. Collings *et al.* note, however, that this state of affairs had some benefit: “ ... it also relieved the hard-pressed administrations in the new countries of the need to make difficult decisions on a wide range of monetary and external issues” (1978, p.100). The situation did not remain for long, however, as shall be seen.

#### 4.3.2 Reasons for the RMA Agreement

As has been noted, a *de facto* monetary union had existed between South Africa, Lesotho and Swaziland (and Botswana) from the time money had first been introduced to the Protectorates.<sup>45</sup> It was thus not for the purpose of *establishing* a monetary union that the RMA Agreement was signed but rather in order to legalise the informal arrangements and introduce some new items that appeared to be called for. This section will outline Lesotho's, Swaziland's and South Africa's reasons for wanting a formal monetary agreement.

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44. These countries shall henceforth, for the sake of convenience, be referred to as 'the Two'.

45. Before they became independent in the late sixties, Botswana, Lesotho and Swaziland had been protectorates of the British Empire. They remained members of the British Commonwealth after independence.

#### 4.3.2.1 *Lesotho and Swaziland*

Goedhuys explains that, since Lesotho and Swaziland did not have currencies of their own, they forewent the seigniorage gain that would accrue to issuers of currency (1982, p.18).<sup>46</sup> Thus they desired compensation for this forgone income. In addition, Collings *et al.* point out that the Two wanted “clarification of the extent of the right to independently authorise transfers of capital and profits originating in their own territories to destinations outside the rand area” (1978, pp.101-102). That is, they desired the right to exercise their own exchange control over local items. Further, Collings *et al.* state that the Two wanted better access to the South African capital market and provision for consultation of their authorities by South Africa’s when monetary and financial changes that would affect them (the Two) were being considered (1978, p.102).

This ‘agenda’ for the Agreement originated against the background of increasing monetary activity in the Two and the desire by them to ensure the healthy development of their monetary systems. There was evidence that commercial bank deposits had risen rapidly in the years immediately after independence: percentage growth figures for 1969, 1970 and 1971 (BLS, all deposits) standing at 16,22 and 23 per cent, respectively (IMF, 1973, p.22).<sup>47</sup> Other trends which showed a sharp increase in financial activity were the growth of loans to the private sector (an average growth of 25 per cent between 1968 and 1971) and an increased use for investment of local savings: the loans/deposits ratio increasing from 65 per cent in 1968 to 75 per cent in 1970 and 1971 (IMF, 1973, p.23). Hence the monetary systems of the Two were developing a momentum of their own; it was not surprising therefore that their authorities wished to facilitate this development by clarifying their position *vis-a-vis* the South African system.

#### 4.3.2.2 *South Africa*

The South African authorities had their own reasons for wanting the agreement, although they probably realised that it would mean some sort of compensation provision on their

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46. That is, the gain resulting from the earning of income from investments purchased with a medium of exchange with a higher face value than its intrinsic value.

47. Of these figures Botswana and Swaziland on average account for 40% of deposit volumes each, and Lesotho 20% (IMF, 1973, p.22).

part. Having conducted the new Customs Union Agreement in 1969, Collings *et al.* point out that the parties would have desired to “turn attention on some other anomalies of their situation” (1978, p.101). Primarily, then, to bring the BLS states under control and to “preclude the growth of unsound banking operations in the area”, the South African authorities would have been prepared to formalise the agreement and “cough up” the compensation forgone by the Two for such a long time (Collings *et al.*, 1978, p.101).<sup>48</sup>

A further, more general reason is implied by Muzorewa: capital was not completely mobile from South Africa to the BLS countries<sup>49</sup> and at the time of the article (1972) Muzorewa claimed that “the less developed members of the rand territory have taken and are taking measures to reduce the outflow of domestic savings to South Africa” (1972, pp.52-53). Thus the mobility of capital was being deliberately reduced prior to the Agreement, and the Agreement was therefore necessary to prevent monetary disintegration in the area.

Thus it was that negotiations for the formal agreement began in 1973 “towards a comparable [to SACU] treaty on currency and banking, in order to establish the rights and obligations of each party in that regard ... ” (Goedhuys, 1982, p.19). The details and provisions of the first Rand Monetary Area Agreement are the topic of the following section.

#### 4.3.3 Details and Provisions of the RMA Agreement

What follows is a summary of the Monetary Agreement between the governments of South Africa, Swaziland and Lesotho (Monetary Agreement, 1974). The summary will proceed by article of the agreement, of which there are eleven. The Agreement, which is legally a treaty, was signed at Pretoria on 5 December 1974.

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48. A *Financial Mail* article describing the provisions of the agreement is entitled “Monetary agreement: SA coughs up” (*Financial Mail*, 1974, p.1043).

49. Muzorewa cites examples of the limitations imposed by South African authorities on the investment in BLS of funds exceeding R100 000 (Muzorewa, 1972, p.52).

#### **4.3.3.1    *The Preamble***

This gives the motives for the Agreement, one of them being the desire “that the arrangements should encourage the advancement of the less developed members of the Rand Monetary Area and should afford to all parties equitable benefits ... ”.

#### **4.3.3.2    *Article 1: Definitions***

This article merely defines items such as ‘foreign exchange’, ‘exchange control provisions’ and ‘financial institution’.

#### **4.3.3.3    *Article 2: Legal Tender***

Only the rand is legal tender in the RMA, subject to a provision that the Two may issue their own “national note and coin” by prior arrangement with the South African government.<sup>50</sup>

#### **4.3.3.4    *Article 3: Transfer of Funds within the Rand Monetary Area.***

The free movement of funds in the RMA is provided for, subject to three limitations; the first being those occasioned by legal deposit requirements of local financial institutions. The second arises from possible measures implemented by respective authorities to encourage domestic investment and the third, from measures to curtail transfers which are deemed to be intended “to evade any such requirements prescribed or measures introduced by any other contracting party”.

#### **4.3.3.5    *Article 4: Access to the South African Capital and Money Markets and Related Matters.***

Access to the South African capital market is granted to the governments of the Two and their securities are given ‘prescribed investment’ or ‘approved security’ status subject to two provisions (Paragraph 1). The first provision limits the amount appropriable by the Two to 1,5 per cent of any financial institution’s minimum ‘prescribed investment’

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50. Note that by the time of the agreement, Swaziland’s lilangeni had already been issued.



holdings. Secondly, the securities of the Two do not qualify as *compulsory* investments for the purposes of financial institution legislation (Paragraph 2). Paragraph 4 provides for the concluding of bilateral agreements with the South African government which allow for the performance of 'lender of last resort' functions for the Two by the South African Reserve Bank. Collings *et al.* note that this amounted to a 'partial concession' to the governments of the Two for the failure by South Africa to agree to allow them to float Treasury Bills on the South African short term money market. The Two had hoped to secure the Treasury Bill provision in order to avoid having to continue to rely on commercial bank overdraft facilities, which were expensive (Collings *et al.*, 1978, pp.104-105).

Commenting on the arrangements, the then Secretary for Finance, Gerald Browne, said of the 1,5 per cent proviso: "This was felt by us to be a reasonable maximum, given the scale of their economies", and on the absence of a Treasury Bill proviso: "The Reserve Bank felt it would be going too far to accept outside securities as liquid assets" (quoted in *Financial Mail*, 1974, p.1043).

#### **4.3.3.6 Article 5: Gold and Foreign Exchange Transactions.**

Each government is made the sole authority for regulating transfers originating in its area (Paragraph 1). This regulation should be in line with the policies of the RMA and the exchange control provisions of South Africa, and amendments (Paragraphs 2 and 3) except that departures from them are allowed where subsequent amendments would adversely affect a country's "national interest" (Paragraph 3). The South African Reserve Bank shall provide foreign exchange to the governments of the Two for authorised transactions (Paragraph 5) and consultation is provided for should it be felt that a foreign exchange transaction in one country is being undertaken "with the intent or effect of evading the exchange control provisions of another contracting party" (Paragraph 6).

#### **4.3.3.7 Article 6: Compensatory Payments.**

Paragraph 1 explains that the intention is to compensate the Two for the rand currency circulating in their areas. Although it is not mentioned, this is of course the compensation

for the (previously discussed) forgone seigniorage of Lesotho and Swaziland.<sup>51</sup> The formula for calculating the amount of compensation is given as  $\frac{2}{3} X$  per cent of  $Y$ , where  $X$  is the rate of return on the most recent issue of South African government stock and  $Y$  is the rand circulation in the relevant area. Sub-paragraphs (d) and (e) explain how  $Y$  is arrived at and how changes in the figure are allowed for. Further, Paragraph 3 specifies that if either of the Two should issue its own currency then continued compensation would be subject to further negotiation. Initially, in the case of Swaziland, South Africa paid compensation on the residual rand in circulation but later agreed to compensate for the *entire* currency in circulation (rand and lilangeni). Collings *et al.* explain that the two-thirds factor is supposed to approximate the “weighted average earnings on an appropriate mix of long and short term foreign reserve assets” (Collings *et al.*, 1978, p.108).

The remaining articles of the agreement are of less economic interest. They include provisos for collection and exchange of monetary statistics (Article 7), consultation and the establishment of a commission to sit at least once yearly (Article 8), dispute settlement (Article 9) and entry into force, accession, termination and withdrawal (Article 10).

The Agreement remained in force until April 1986 when three amending agreements were signed. These agreements, and the factors that made them necessary are the topics of the next section.

#### 4.4 THE NEW AGREEMENTS

On 18 April 1986 two bilateral amending agreements between South Africa and Swaziland and South Africa and Lesotho and a third general amending agreement were signed and the ‘Rand Monetary Area’ became known as the ‘Common Monetary Area’. The first part of this section deals with the reasons for the amendments, which were largely to do with Swaziland’s dissatisfaction, and the second half looks at the details and provisions of the amendments.

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51. Although the formula represents estimated income that would have been earned had all the currency in circulation in a country been “wholly in income-earning assets” (Collings, 1978, p.107).

#### 4.4.1 Reasons for the Amendment of the RMA Agreement

In 1982, D.W. Goedhuys, advisor to the South African Reserve Bank, said in an address:

“It seems to me that one indispensable condition for maintaining the monetary union we have ... is to maintain the value of the rand as the central reserve currency of this union and very probably also of any future constellation of states” (1982, p.21).

As it happened, the severe depreciation of the rand in 1985 was one of the more important reasons given by Swaziland for its dissatisfaction with the status quo, but there were others, some having been voiced as early as 1981.

In a paper published in 1981, Guma analyses the effect of the institutional arrangements on the operation of monetary policy in Swaziland (Guma, 1981). He explains that the fixed rate of exchange between the lilangeni and the rand and the lack of intra-Area exchange controls (in effect, perfect capital mobility) have precluded the use of monetary policy by the Swaziland authorities. Swaziland faces an exogenous interest rate for four reasons; the first is the fact that its marketable assets are a very small proportion of the RMA total, the second the high ratio of foreign holdings of domestic assets to local holding of foreign assets,<sup>52</sup> the third the absence of restrictions on capital movements within the RMA and the fourth the small size of local demand for assets in relation to the whole RMA. Guma backs up his assertions with empirical evidence - he states that there has in fact been little deviation between the interest rates of Swaziland and the RMA (p.15). With the interest rate constant, any attempt by the authorities to alter the money supply will be self-defeating since the change will simply result in local investment or disinvestment of foreign assets, and the authorities will be forced to buy or sell the monetary change to enable the foreign transaction to take place (p.19).<sup>53</sup> Conversely,

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52. Thus a small change in the local interest rate will occasion foreign investors to disinvest while changes in the foreign rate will result in little reaction by local investors.

53. The example Guma gives is an attempted money supply expansion, local asset holders will increase their holdings of foreign assets and the central bank will be forced to supply foreign exchange and buy back local currency. Thus the attempted increase amounts to nothing.

sterilisation of BOP effects on the local money supply is also not possible under these conditions (p.21). Guma concludes that Swaziland will thus be unable to practise monetary policy until either a flexible exchange rate is adopted or some restrictions are placed on capital movements.

Guma's argument in favour of greater freedom for Swaziland's monetary policy was made at a time when South Africa's economy was relatively stable. Developments since then, however, seem to have only added support, if anything, to the call for a change in the arrangements. A number of authorities have called attention to the detrimental effect on the Swaziland (and Lesotho) economy of the 1985 depreciation of the rand<sup>54</sup> (Gargano, 1986 and Leistner, 1986) but writing before the actual crash, Guma (1985) sounds a warning of the negative effects of South Africa's exchange rate and BOP policy on Swaziland and also the harmful trend of the increasing bilateral dependence of Swaziland (pp.174-183). With regard to exchange rate policy, Guma explains that South Africa's actions might impose three separate types of costs on Swaziland. The first set of costs result from changes in the real value of the Area's external reserves and unfavourable movements in long term capital resulting from exchange rate fluctuations (p.174). Secondly, South Africa's import-substituting trade policy distorts import prices and "has been transmitted to Swaziland and Lesotho as structural elements of their economies" (p.176). A permanent distortion in the patterns of production of tradeable and non-tradeable goods and the nature of industrialisation has thus taken place in the Two. Thirdly, costs are imposed on the Two by South African policy that is irrelevant to their economic and payments conditions. Guma cites the example of the appreciation of the rand against the dollar in 1979/80 when the Swaziland export sector badly required a stable value to remain profitable (p.176). In addition, Guma argues that the fixed exchange rate and factor mobility permit fast and harmful transmission of South African monetary and fiscal shocks to the Two, and with no 'monetary means' of sterilising these impulses, they are forced to accept costly real adjustment. Guma thus concludes that "greater stability in inflation rates, more realistic interest rates and a smoother business cycle could, in principle, be brought about by choosing an alternative monetary standard" (1985, p.178).

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54. They are in fact wrong: Chapter 7 below shows that the depreciation stimulated local growth.

The economies of Lesotho and Swaziland also suffered from the effects of South African-induced high interest rates and tight monetary policy (Gargano, 1986, p.79 and Leistner, 1986, p.71). Tight credit conditions and high interest rates, while possibly assisting South African counter-cyclical efforts, have proven “unrealistically high, given Swaziland’s political tranquillity, and a vast pool of liquid reserves sitting unused in the banks” (Gargano, 1986, p.79). Imported inflation, both as a result of the rand’s depreciation (already discussed) and awry South African demand management, has also dogged the two countries (EIU, 1986c, p.59; Leistner, 1986, p.71; Gargano, 1986, p.80). Gargano cites an inflation correlation between South Africa and Swaziland between 1971 and 1983 of 90 per cent, due primarily to the high proportion of South African goods in Swaziland’s imports. However, non-tradeable prices are also affected, although not to the same degree, according to Gargano (pp.80 - 81). Gargano thus advises that Swaziland increase its control over its monetary conditions and “diversify its import sources” (p.81).

This call to increase the level of Swaziland monetary policy autonomy, in the name of stability and development, thus echoes Guma’s earlier-expressed sentiments. It can only be assumed that the rationale for amending the agreement applied to some extent to Lesotho, which also experienced a change in its position. These changes are described next.

#### **4.4.2 Details and Provisions of the Amended Agreements**

There are three separate amending agreements, all signed on 18 April 1986 and coming into force on 1 April. Swaziland’s need for a new agreement necessitated the signing of one with Lesotho since uniform requirements would no longer apply to the Two. However, since there were provisions remaining from the RMA Agreement that still applied to both countries, a trilateral amending agreement was signed in addition to the two bilateral agreements: this section examines each in turn.

#### **4.4.2.1    *The Trilateral Amending Agreement***

This agreement (Trilateral Agreement, 1986) is a short one, comprised largely of substitutions, additions and deletions to the original agreement (Monetary Agreement, 1974).

The first material change amounts to the deletion of the sixth paragraph of the preamble - the one which specifies that South Africa is to be responsible for the management of the gold and foreign exchange reserves of the RMA. The name of the area is changed to 'Common Monetary Area' and in other places the words 'Contracting Party' are substituted for specific references to South Africa, Lesotho or Swaziland. The effect of this latter practice is to place Swaziland and Lesotho on a more equal footing with South Africa in terms of the issue and specification of legal tender (Article 2), gold and foreign exchange transactions (Article 5) and consultations (Article 8). An appended article, Article 12, makes provisions for the concluding of separate bilateral agreements between any two of the 'Contracting Parties' that 'are not incompatible with the provisions of [the trilateral] Agreement'. A substituted Paragraph 5 of Article 5 specifies that future access to the South African capital market is regulated by those bilateral agreements.

#### **4.4.2.2    *The Bilateral Agreement with Swaziland***

Article 2 of the bilateral agreement (Bilateral Agreement (a), 1986) contains the most important material change: it specifies that each of the country's currency shall be legal tender in *its* domain only and further that authorised dealers shall 'convert notes' issued by either central bank but *not* at par. Swaziland is also no longer required to cover the issue of emalangeni with rand deposits at the Reserve Bank. Thus the rand ceases to be legal tender in Swaziland and exchange rate fixity is no longer specified. The intention is to allow the lilangeni to remain at par for the time being but to provide for its floating "later" (Gargano, 1986, p.80). At time of writing, the lilangeni is still at par with the rand (December 1989).

Article 3 allows for national note and coin to be repatriated from the other country and Article 5 provides for the cessation of compensatory payments to Swaziland, as a result of the termination of the rand's legal tender status (and thus circulation) in that country.

Finance Minister, S. Dlamini, stated, however, that shops and hotels may still accept rand for the convenience of tourists (cited in EIU, 1986b, p.53).

Swaziland is given control over its foreign exchange reserves by Article 4 which allows the Central Bank of Swaziland and authorised dealers access to the South African foreign exchange market. Swaziland is required, however, to meet its net requirements with its own reserve holdings. Previously, South Africa had managed all foreign exchange transactions arising in the RMA.

Article 6 contains the requirements for making changes to the applicable Exchange Control Provisions. Consultations between the governments are provided for when changes are envisaged, except in cases of emergency or where the changes amount to stricter controls. Previously Swaziland had been expected to closely follow South Africa's exchange control policy and amendments. Article 3 of the 1974 Agreement, which provides for free intra-Area flow of funds<sup>55</sup> remains intact and applicable to Swaziland. As before, both countries are expected to monitor and prevent transactions in their area which are deemed to be intended to circumvent the exchange control provisions of the other country (Article 7, Paragraph 2).

#### **4.4.2.3    *The Bilateral Agreement with Lesotho***

This agreement (Bilateral Agreement (b), 1986) makes no material changes to the relationship that existed between South Africa and Lesotho under the 1974 Agreement, save that it provides for joint management by the respective central banks of the pooled gold and foreign exchange reserves (Article 9). In addition, it specifies that the Lesotho Central Bank and authorised dealer shall have access to the South African foreign exchange market for the purposes of their own transactions (Article 10). These and other provisions are necessitated by the fact that at the time of the original agreement, the Lesotho Central Bank did not exist.

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55. Subject to a few minor restrictions: see Section 4.3.3.4 below.

#### **4.4.2.4 Summary**

The most important effects of the 1986 Agreement were the ‘cutting loose’ of the lilangeni from the rand and the provision for its free floating in the future, and the provision for the managing by Swaziland of its own foreign exchange transactions. These allow Swaziland a greater degree of monetary autonomy, which it can assume by degrees. Swaziland could also, in future, apply stricter exchange controls between itself and South Africa, thereby allowing itself more discretion in interest rate policy. It will thus be easier for Swaziland to overcome many of the problems raised by Guma and others.

### **4.5 CONCLUSION**

This chapter set out to explain and describe the historical and institutional setting of monetary co-operation between South Africa, Lesotho and Swaziland and to sketch the evolution of this co-operation. Initially, the relation between the Three were characterised by the disparities that existed between them: ‘co-operation’ was in fact more like ‘dependence’ between the Two and South Africa. However, with the evolution and sophistication of the economies of the Two, especially Swaziland, the nature of co-operation has changed and the degree of their potential control over their monetary systems has increased. This has been illustrated by the advents of firstly a written agreement where none existed, and secondly the adjustment of that written agreement to provide for more equitable treatment. The issue at stake seems to be the lack of control of the Two over their economies, but the solution is not necessarily the attempted sundering of links for that path is shown, in later chapters to be difficult and ill-advised. However, this chapter did not set out to discuss the viability or optimality of the CMA; that is the task of the next chapter.



## CHAPTER 5

### ***THE CMA AND OPTIMAL CURRENCY AREA THEORY***

#### **5.1 INTRODUCTION**

This chapter attempts to place in perspective a recent study of the CMA undertaken by Viviers (1988). Viviers has applied the OCA characteristics to the CMA situation, and has found in favour of all requirements save that of political agreement. The nature and rationale of the OCA approach has been discussed in Chapter 2 and it will be no more than alluded to here. However, in evaluating the study of OCA characteristics undertaken by Viviers, it will be worthwhile to bear in mind the arguments, especially those *against* the characteristics criteria, of Chapter 2. The evaluation of the monetary area in terms of the OCA criteria is not a sufficient test for monetary unions, as shall be seen, even against the background of the 'freeing up' of the CMA.<sup>56</sup> One reason for this is that theoretical considerations demonstrate that an exchange rate union is always inferior (or sub-optimal) to a full monetary union. These 'theoretical considerations' have been dealt with in the third section of Chapter 2. Secondly, it was pointed out in that chapter that certain closely linked nations may not have the choice of whether or not they are to become integrated: they may already be thus, the only choice left open is the degree of formal recognition of this as embodied in a monetary agreement.

#### **5.2 The CMA in terms of OCA Theory**

The OCA characteristics evaluated by Viviers include labour and capital mobility, openness, diversification, inflation rate correspondence, policy integration and "political

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56. That is, the advent of the new agreement and the increasing independence granted by South Africa to the Two, especially Swaziland.

impetus”<sup>57</sup> (1988, pp.150-232). Viviers’ detailed arguments and data will not be presented; instead, her main findings and conclusions will be given.

### 5.2.1 Labour Mobility

Viviers found that a high degree of *unidirectional* labour mobility exists - i.e. the migrant labour flows from Swaziland and Lesotho to South Africa - and that this migrant labour benefits the Two in terms of remittance income as well as South Africa (pp.159-160). While noting that sanctions and disinvestment pressures may in future lead to a termination of the migrant contracts, Viviers holds that at present, the labour mobility criterion for an OCA is satisfied in the CMA. In this respect, Viviers’ thinking is in line with the supposed central reason for the CMA; as Guma notes, “it may be argued that Mundell’s analysis of optimum currency areas (focusing on factor mobility) provides the underlying rationale for the CMA agreement” (Guma, 1985, p.171). Further, the existence of this labour mobility puts paid to the most important Chapter 2 criticism of this characteristic: that it would be difficult to rely on labour mobility as a factor enhancing adjustment between regions because of the unwillingness of workers to migrate to foreign nations for cultural and social reasons (see Chapter 2, Section 2.2.1.1). However, Viviers has overlooked an important trend - that the volume of migrant labour to South Africa is *declining* with time. This fact is made clear by Bardill and Cobbe (1985). Lesotho, which Viviers cites as providing approximately 70 per cent of migrant labour in 1986 (p.151), has experienced steadily declining migrant labour volumes since 1981. While the total amount of migrant labour has only decreased slightly since 1975 (net), the *proportion* of foreign labour has been declining. Bardill and Cobbe hold that it has declined from 77 per cent to 40 per cent since “the early 1970s” (1985, p.194). With regard to Lesotho, they predict the following: migrant work opportunities outside mining will “dwindle to zero” and non-Chamber of Mines employers regarding Lesotho’s labour as a “last resort” and in the presence of increasing local unemployment, will eventually terminate their migrant opportunities. Although Bardill and Cobbe see the Chamber as continuing its migrant employment for the foreseeable future, it employs only 100 000 out of approximately

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57. What she calls “politieke dryfkrag”.

140 000 workers. Thus in general, it seems as if labour mobility is declining between the Three, and this OCA requirement may at some time in the future no longer be satisfied.

### 5.2.2 Capital Mobility

Also important to an OCA, in terms of the Mundellian requirements, is capital mobility (or 'financial integration' as it was called in Chapter 2). Viviers' discussion of financial integration in the CMA is mostly concerned with demonstrating the presence of investment incentives in the Two and the absence of restrictions on funds flows between the Three (pp.160-167). In terms of capital flows to South Africa, it was seen in the previous chapter that banks in the Two had always deposited surplus funds at branches in South Africa and that the agreements provided for future restriction of these transfers to enforce minimum legal deposit requirements and to encourage investment (see Chapter 4, Section 4.3.3.4).<sup>58</sup> A lack of any other kind of exchange control in the CMA provides that funds flows *from* South Africa are only limited by perceptions and preferences of investors. Viviers states that respectable levels of South African investment in the Two do exist but that at the same time the Two find it difficult to compete with the decentralisation incentives offered in the TBVC countries.<sup>59</sup> Thus financial integration exists to the extent that deposits from the Two are made in South Africa and South African investment funds flow to the Two. However, there can be little doubt that this is not 'financial integration' in the Chapter 2 sense of the word. Lesotho and Swaziland have small, undeveloped capital markets, offering nowhere near the range of investments offered by the South African capital market.<sup>60</sup> Thus in the sense that capital flows take place between markets offering closely substitutable assets in terms of range and return, the CMA cannot be said to possess true 'capital mobility'. Instead, the CMA Could be described as possessing a single capital market with satellite 'investment havens' comprised of the embryonic capital

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58. Viviers is thus incorrect when she states that the absence of exchange control could be damaging to the Two in that they are unable to place any restrictions on funds flows to South Africa (1988, pp.167-168). One of the intentions of the RMA agreement was to provide legal means for the Two to ensure some minimum local placing of surplus funds.

59. 'TBVC' stands for 'Transkei, Bophuthatswana, Venda and Ciskei': the so-called 'independent' national states.

60. Swaziland began the establishment of a stock market in February 1990; Lesotho has not as yet done so.

markets of the Two, and to a lesser extent, Namibia and the TBVC countries. Viviers does not take account of these considerations.

### 5.2.3 Critique

Having apparently demonstrated the existence of labour and capital mobility, Viviers concludes that factor mobility sufficient for a currency area exists (p.168). However, she adds that its existence alone is not *justification* for a currency area, mentioning the possibility of conflict and disagreement among members, originating in policy disagreements, discrepancies in the sizes of the parties, volume and direction of trade, etc. (p.170). Whilst Guma (1985) aptly demonstrated the theoretical possibilities for conflict (see below) and the existence of costs to the smaller members of the CMA (see Chapter 4, Section 4.4.1), Viviers fails to take account of his more important assertions. Guma agrees that, with the presence of factor mobility in the CMA, an OCA could be 'approximated', so long as it is capable of steering the bloc toward these goals: "full employment, price stability and external balance ... " (Guma citing Mundell, 1985, p.171). In this sense, optimality is not quantitatively but *qualitatively* gauged - something that Viviers does not, in her entire analysis, take account of. If optimality is gauged in terms of the outcome of currency area arrangements, then the existence of conflict (mentioned by Guma and acknowledged by Viviers), instead of amounting to a separate consideration alongside 'clinical' economic optimality, feeds into, is part of, and detracts from, that 'optimality' itself.

In explaining the potential for conflict even alongside 'satisfactory' factor mobility, Guma firstly points to *theoretical* impracticalities in the Mundellian thesis. Briefly, his argument is this: whilst Mundell demonstrated satisfactory adjustment by factor mobility between *two* countries of a currency area, the introduction of a third country/outside world complicates the entire adjustment process in that the *symmetry* of imbalances between the two is removed. For example, a situation where Country A shared a deficit with its currency area partner, Country B and another outside country, Country B would have to run a global surplus exactly offsetting A's global deficit in order to generate the "correct" factor movements (Guma, 1985, p.172). This, of course, is improbable, leading Guma to conclude that "latent or explicit conflict in policy needs is at least as probable as

symmetry” (p.173) and thus to suggest that exchange rate variation be considered as an alternative adjustment method.

Finally, Guma describes the characteristics that would occasion the greatest degree of conflict. Firstly, the closer in economic size the members are the more likely that they will find attainment of consensus difficult (pp.173-174). Where there is one dominant member, however, it will be easier to style policy on the “greatest good for the greatest number”. Unfortunately, the smaller members, although not being able to voice strong arguments for themselves, may be left in unenviable situations. Secondly, the larger and more diverse is external trade, the greater the likelihood of conflict since the chance that individual external payments situations are dissimilar is increased (p.174). Thirdly, Guma holds that differences in exposure to external shocks and different “propensities to domestic instability” between countries lessens the likelihood of them being able to work together in a currency area (p.174). It is not suggested that the members of the CMA are characterised by all these disparities, rather the importance of Guma’s arguments lies in the acknowledgement of the propensity for conflict *even with so-called optimal factor mobility*.

#### 5.2.4 Openness

Viviers next measures the degree of *openness* of the CMA member countries and concludes that a sufficient degree exists between them to warrant a currency area on the basis of price stabilisation, especially in the smaller countries. The argument is based on the ineffectiveness of exchange rate adjustment by small open economies due to low “exchange rate illusion” (see Chapter 2, Section 2.2.1.2). However, it is questionable whether being part of a currency area with a plummeting external exchange rate will be any healthier for a country - since this was the situation recently faced by the Two.

#### 5.2.5 Diversification

In applying the criteria of *diversification*, Viviers obtains the result that *together* the Three (and Botswana) constitute a sufficiently diversified economic grouping for a currency area. However, it appears as if she has misunderstood the argument for diversification of a

currency area. Her assertion (p.178) is that small undiversified economies are good candidates for a currency area, whilst Kenen's original argument is the opposite. He claims that large, well diversified economies are better conditions for fixed exchange rates and hence currency areas, and he would hold that small undiversified ones are better off with flexible exchange rates (Kenen, 1969). Viviers' interpretation of the diversification criteria is close to that of the *openness* criteria, one which all credible authorities have recognised is at odds with Kenen's.<sup>61</sup> On finding that the CMA is a diversified area, Viviers should have rightly concluded, by Kenen's logic, that it is a good candidate for *fixed* exchange rates and thus should become part of a larger currency area; it is not an OCA *itself*.

### 5.2.6 Similar Inflation Rates

Viviers next measures inflation rate correspondence between the CMA members and finds that a high degree exists. Thus she counts this as a further argument in favour of a currency area (p.191). This is not incorrect, although this particular criteria may not be as important as believed, since some believe that inflation rate equalisation is easily achieved *ex post* (Parkin, 1972).

### 5.2.7 Policy Integration

It is not surprising, given the size of South Africa's economy in relation to the Two and the integration of goods and asset markets, that Viviers found a high degree of policy integration between them (pp.191-206). Viviers does not attempt to determine fiscal policy integration, but finds that monetary policy integration exists to a high degree and that exchange rate policy is unified. Whilst this is not disputed, determining that policy in the CMA is unified and integrated does not amount to a proof that an OCA criterion has been satisfied. Policy is of *necessity* integrated, due to the integration of markets, and if anything, sentiment in the Two, especially Swaziland, has been for an increase in policy-making independence or at least joint policy-making (Guma, 1985). The policy integration criteria is to do with similar attitudes to problem solution and policy formation, not with policy 'dependence' as is the case in the CMA.

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61. See for example the assertions made on this point in Presley and Dennis (1976, p.25).

### 5.2.8 Political Agreement

Finally, Viviers attempts to determine the “political impetus” (or talks of it) behind the CMA (pp.206-228). Her conclusion is that, based on the present attitudes of frontline states towards South Africa, and the gravitation of the Two towards economic groupings with them, there is little “political impetus” behind the CMA. This, therefore, is the only criteria that Viviers finds lacking for the CMA, but she holds that this is the most important for integration (p.231). If anything, the arguments presented later in Chapter 6 of this thesis agree with this assertion, but the reasons behind it are analysed differently. Chapter 6 examines considerations, both economic and non-economic, that threaten the cohesion of the CMA.

## 5.3 CONCLUSION

The ‘optimality’ of the CMA has thus not been satisfactorily established, but even without discussing ‘political impetus’, the economic analysis undertaken by Viviers does not tell us enough about the *functional* usefulness of the CMA. This study suffers from the problems raised against OCA characteristics in the first instance: that they are too vague and qualitative. In addition, the study appears to suggest that ‘monetary integration’ is something decided upon by politicians, not a state that exists between closely linked nations, that must be recognised and dealt with as such. Neither the true degree of integration of the members of the CMA nor the true choices open to them is yet known with clarity, and it will be part of the purpose of the final chapter to establish this.

## CHAPTER 6

# ***ECONOMIC INTEGRATION VERSUS DISINTEGRATION IN THE CMA***

### **6.1 INTRODUCTION**

The three members of the CMA are also members of the Southern African Customs Union (SACU) and two of them - Lesotho and Swaziland - are also members of the Southern African Development Co-ordination Conference (SADCC), a looser co-operation arrangement.<sup>62</sup> It would, under normal circumstances, be important to consider the effect an economic integration arrangement like SACU has on monetary integration arrangements, however the existence and positioning of SADCC makes the task even more important. SADCC's most important stated goal is to reduce dependence on South Africa, and this dependence reduction includes links of a monetary and financial nature as well as the more obvious trade and infrastructure links. This chapter must therefore assess the modifying effects of SACU and SADCC membership on the attitudes and practices of Lesotho and Swaziland with regard to monetary links with South Africa, and it will achieve this by analysing in detail the objectives and performance of SADCC as well as the position of the Two within SACU and their prospects concerning withdrawal or otherwise. In the conclusion to this chapter the implications for monetary integration will be briefly discussed. The first section (which follows) provides a rationale for developing country economic integration *per se*, by examining certain recent theoretical arguments for and against it.

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62. At time of writing, Namibia has declared its intention to achieve monetary independence by 1992 and it has joined SADCC. It appears, however, that it will remain within SACU. It joined the CMA recently as well, some time after the commencement of this study.



## 6.2 APPROACHES TO ECONOMIC INTEGRATION AMONG DEVELOPING COUNTRIES

The economic integration of an area is normally understood to begin with trade liberalisation between the specific candidate nations and progress to the formation of a custom union, or common market and even an economic union.<sup>63</sup> Early writers believed the benefits attainable from economic integration were limited to countries with large economies, developed industry and fairly complementary output (see Viner, 1950, p.135). However, more recent contributions suggest that less developed countries too can benefit from various forms of integration, although industrial development rather than trade promotion is the more important goal in this case (Cooper and Massell, 1965). Import substitution resulting from the trade-diverting effects of customs union formation is held up by Andic *et al.* (1971) as a viable strategy for promoting development while Balassa and Stoutjesdijk (1975) offer the 'project approach' to integration which advocates regional specialisation in production in order to reap economies of scale. This section will examine the problems experienced with integration by less developed countries as well as the motivation for integration and the criteria and goals of successful integration as seen by certain more recent writers in the field.

### 6.2.1 Factors Affecting the Success of Economic Integration among Developing Countries

Where integration between developing countries is undertaken according to strategies devised for *developed* countries, such attempted integration is bound to result in problems. Pournarakis (1979, p.115) argues that the trade discrimination and intra-bloc import substitution that is called for by the traditional integration formula will only result in trade diversion inefficiency and inflation within a *developing* bloc. Pournarakis emphasises that the "growth of the supply sector" is more important among developing economies than the liberalisation of trade among countries "which, by definition, have a limited potential to trade" (p.115). The emphasis on the growth of production as opposed to the growth of trade and intra-bloc demand will ensure that developing economies do not become

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63. A customs union only entails a common external tariff, whereas a common market incorporates intra-area factor mobility and an economic union, policy unification as well. See Robson (1980), p.2.

overloaded with inflation and inefficient production and Pournarakis seems to suggest a 'supply creates demand' logic in advocating this.<sup>64</sup>

Whilst Pournarakis and others point to the problems of inappropriate 'integration formulas' for developing countries, still others point to important differences *between* countries that retard integration. Penaherrera (1980a) identifies a pattern of problems "which, notwithstanding the variations due to the particular circumstances of each system, prevails in all cases" (p.68). He identifies four major areas of conflict, the first two of which are economic in nature, and thus of interest to us:

- (1) Dissimilar development levels having allegedly resulted from the maldistribution of the benefits of integration.
- (2) Structural differences between economies which affect the objectives of integration.
- (3) Incompatibility of political systems.
- (4) Problems of political relations between states.<sup>65</sup>

At the core of problem (1) is the location of industry within the bloc, since industrial development rather than trade creation is seen by developing countries as the most important and desirable goal of integration (Penaherrera, 1980a, p.71). Thus initially size of trade is not as important as its *composition*, which better reflects the effect of integration on industrial development. A country will be seen to have benefitted from participating in the integration scheme if it is 'ahead' in terms of development: relatively better able to "reap the benefits of integration in the industrial field" (1980, p.72). Penaherrera points out, however, that an absence of homogeneity in development levels will lead to conflict both because weaker countries will perceive that they will suffer from an unfair distribution of benefits and costs and because the more advanced countries will not 'need' the integration as badly. Penaherrera also adds that the overall *economic size* of the bloc is important in that it should be sufficiently large, as a market, "to allow the changes in industrial structure which integration is designed to bring about" (1980, p.73).

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64. Or at least a 'supply comes before demand' logic.

65. It is not, however, claimed that (3) and (4) are irrelevant for the CMA; they are taken into account in the following section of this chapter.

Goals become unrealised and unrealisable, then, when bloc members are at different levels of development and when the bloc itself is unviable in terms of economic size.

Problem (2) is concerned with differences in economic structure, outlook and policy that cannot easily be modified or removed in the name of integration (Penaherrera, 1980a, p.75). Thus it is important to distinguish these from policies and structures which do lend themselves to modification and harmonisation. Integration will cause conflict and be unsuccessful if it requires of a country "any policy conciliation which might in any way impose on it a regressive distribution of income" (1980, p.75). An example is the case of diverging inflation rates between countries - it would not be easy to impose exchange rate unification in such a case. Where such differences exist at least one country will have something to lose from integrating its economy with others.

Aside from these general factors affecting integration among developing countries, it is worthwhile to look at the intra-African *environment* of co-operation. Mazzeo (1984, p.229) admits that the "capacity for interaction" in Africa has increased, but mentions border disputes, ideological differences and growing intercountry inequality as important barriers to more intense co-operation and integration. Certain structures, attitudes and perceptions within the countries themselves are also seen by Mazzeo as problematic: the existence of unsound economic policy and an 'inward looking' approach to development that militates against true regionalism are factors he mentions (1984, pp.232-233). Thus he recommends a changed approach to development where regional co-operation is "put squarely at the service of national development" (1984, p.233). By reconciling national and regional goals of development, it will be possible to foster more intense forms of co-operation and remove the perception that integration is more of a burden than a boon.

### **6.2.2 The Goals of Economic Integration among Developing Countries**

It has been established that integration among developing countries differs from integration among developed countries in that developing countries have different agendas and requirements and thus necessitate different integration formulas. This implies that the *goals* of development integration are also different, and it is thus necessary to examine

them to establish these differences. Penaherrera (1980b, pp.175-176) has identified the following four goals or motives of countries engaging in integration:

- (1) industrial development and technological progress or “change in industrial structure”,
- (2) trade expansion and better utilisation of productive capacity,
- (3) to enhance the “capacity to negotiate with third parties”, and,
- (4) to enhance political relations among states.

Again, whilst it is not suggested that items (3) and (4) - the ‘political’ motives - are unimportant, it is items (1) and (2) - the ‘economic’ motives that are more pertinent to this chapter.

Penaherrera further distinguishes between (1) and (2) on the basis of “intensity” of the motivation, explaining that item (1) - industrial development or “change in industrial structure” - is the more intense motivation (1980b, p.176). This idea has been encountered before; it was said earlier that it could be expected that developing countries would place more importance on industrial development than trade expansion as a result of integration (the idea was first advanced by Cooper and Massell, 1965). The importance of ‘intensity’ of the motivations to integrate cannot be overstated, it is the relative intensity of the motivations that will determine the hierarchy of goals and the instruments used to achieve them. Furthermore, Penaherrera identifies three important country/bloc characteristics that will have a strong bearing on the intensity of the motivations (1980b, p.177):

- (a) level of development of a particular country;
- (b) economic size of the bloc, and the relationship of both of these to the size of the market required to enable the desired change in industrial structure; and
- (c) the homogeneity, or otherwise, of the bloc in terms of the distribution of development.

In terms of (a), the higher the level of development achieved by a particular country the less intense will be its Motive (1), but trade expansion, Motive (2), will be more

important. For Characteristic (b), the closer the bloc is to the desired size the more intense the overall motivation for integration. For Characteristic (c), the greater the degree of homogeneity the more intense the motivation to integrate since there will exist a “closer agreement on the selection of integration objectives and of the methods to be used in the process” (Penaherrera, 1980b, p.179).

It is apparent, then, that the achievement of the goals of integration depends on how intensely these goals are desired (as well as the factors mentioned in Section 6.2.1.1) and this is determined by the characteristics of the bloc itself and its member countries. Just how the various characteristics of the bloc affect the achievement of success with integration is looked at in the next subsection. It will also be possible soon to draw some conclusions about the CMA bloc’s position with regard to these characteristics and their effect on the success of integration.

### 6.2.3 Bloc Characteristics and the Success of Integration among Developing Countries

By postulating an ‘ideal type’ bloc, Penaherrera permits the comparison and analysis of various *non ideal* configurations, and enables speculation on their possibilities for success. He comes up with the following “ideal” configuration (Penaherrera, 1980b, p.180):

- (a) A low level of industrial development of candidate countries and a large divergence of size between desired bloc economic size and *individual* country economic size;
- (b) A large bloc economic size and one which is close to the size required to bring about the desired industrial development;
- (c) Homogeneity in the level of industrial development attained among member countries.

Penaherrera calls this ideal type “Model 1”, and by varying Factors (a), (b) and (c) comes up with another four models. These other models are characterised by the *absence* of one or more of the ideal type characteristics. Thus for example, only Factors (b) and (c) are satisfied in Model 2, i.e. the countries are typified by a high degree of industrial

development (Factor (a) is reversed). At first glance the CMA area<sup>66</sup> would seem to fit the description of Model 5, in which only Factor (b) is satisfied, there being heterogeneity in both development level and economic size between the countries.<sup>67</sup> According to Penaherrera, meaningful integration is not possible with this configuration, since the smaller, less developed countries would find their developing industry and markets at the mercy of the more advanced members (1980b, p.185). However, it could be suggested that the CMA area lies somewhere between Model 5 and Model 4, which is characterised by heterogeneous countries but with a net low level of industrial development. Admittedly it is unrealistic to suggest that South Africa has a low level of industrial development, but not unrealistic to suggest that the CMA (or a larger regional bloc) is characterised by a *net* low level of development. To say "South Africa is developed" is inaccurate - apart from the few developed nodes, the larger area, although densely populated in places, remain underdeveloped and supports standards of living as low as those found in other neighbouring states.<sup>68</sup> Thus the development motivation would not be unimportant to South Africa, and this mitigates the apparent absence of characteristic (a) above. Therefore the area could be analysed instead as a Model 4 type.

Penaherrera's prognosis for Model 4 is more encouraging than that for Model 5. Integration is possible, although conflict is likely between the more developed and less developed countries around the level of intervention in order to promote development (Penaherrera, 1980b, p.183). Since the more developed countries stand to gain by a *laissez-faire* approach - which will see market forces steer actively towards them - they will resist the less developed countries' attempts to institute planned development. Penaherrera thus suggests that compensating policy and redistribution is necessary to advance integration beyond the superficial, but that the "main difficulty is to ... induce the various parties to accept it" (1980b, p.184). He thus cautions against the problems that could be created by *political* considerations in this regard.

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66. Or indeed a large subcontinental grouping incorporating South Africa.

67. The nature of economic integration over the CMA area (in the form of SACU and SADCC) is discussed in Section 4.2 of this chapter.

68. The 'dualistic' nature of development in South Africa is an accepted principle, and one which seems to permit the perception that South Africa is on the whole a moderately developed country rather than a highly developed one.

#### 6.2.4 Co-operation *versus* Integration Among Developing Countries

It is the “political considerations” mentioned by Penaherrera that are seen by Mazzeo (1984, p.233) as the *most* important determinant of successful integration among developing countries. Indeed, Mazzeo believes that integration “presupposes the willingness of states to surrender at least part of their sovereignty”, but argues that even with advanced countries this remains an unrealistic expectation (1984, p.233). Mazzeo’s doubt as to the viability of integration stems from his belief that economic goals could never supersede political and state goals, therefore preventing the realisation of integration even where it is clear that its realisation would promote economic development. Mazzeo instead sees regional organisations as “forms of institutionalised diplomacy”, having the political function of diplomatic interaction as opposed to the economic functions associated with furthering integration (1984, p.234). Further, since meaningful integration is seen by Mazzeo to require of a country a degree of “self-confidence” born of a high level of national autonomy, he recommends that it (integration) should aim at “corroborating rather than debilitating national autonomy or self reliance” (1984, p.235).

Apart from Mazzeo’s political reasons for being sceptical about meaningful integration among developing countries, he also expresses reservations about an important economic goal of integration: regional economies of scale.<sup>69</sup> This would relate to Penaherrera’s Motive (1) for integration. Firstly, Mazzeo points out that developing countries do not possess the capital intensive production processes required to exploit economies of scale, and encouraging them would be foolish in the face of their labour abundant economies. Secondly, economies of scale require specialisation which militates against diversification which is seen by Mazzeo as the mark of a developed country (1984, p.236). Thirdly, capital intensity focuses development in the relatively advanced members of the bloc, reinforcing skewed development (perhaps this was in Penaherrera’s mind when dismissing his Model 5 configuration). Fourthly, capital-intensive technology may perpetuate inappropriate, elite consumption patterns. Mazzeo thus sees *intra*-industry specialisation as preferable as this will allow diversification to continue. Additionally, Mazzeo envisages

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69. Mazzeo’s views on the invalidity of the EOS arguments contrast with those of Balassa and Stoutjesdijk (1975), early proponents of this idea.

co-operation in the *services* sector as a viable alternative to the limited pursuit of integration of the production sector. 'Services' in this sense include "all abilities and infrastructures needed to support the national development effort" (1984, p.237).

### 6.2.5 Conclusion: Integration among Developing Countries

It was established, by reference to Pournarakis (1979) and Penaherrera (1980a), that integration among developing countries involves an emphasis on the fostering of industrial development and the growth in productive capacity of these countries. Certain conflict areas surrounding integration were then examined and it was found that dissimilar development levels, structural differences and an inward-looking mentality are likely to hamper integration efforts (Penaherrera, 1980a; Mazzeo, 1984). Drawing on Penaherrera's analysis (1980b) it was then possible to identify integration goals and the bloc characteristics that are most likely to permit their attainment, and it was suggested that the CMA area *does* possess characteristics favourable to forms of integration. However, Mazzeo's dissenting views, which were looked at next, suggest that in general, economic integration among developing countries is unviable due to the sacrifice of political power required by it and the untenable nature of industrial development driven by economies of scale (Mazzeo, 1984).

In general, it appears as if the *goals* of integration among developing countries - industrial growth through market expansion - do not differ substantially from those of 'developed' countries. However, there are potentially more difficulties with integration among developing countries due to heterogeneity in economic and industrial structure and development levels.

The following section will examine the existing integration and co-operation arrangements involving the member countries of the CMA, as well as their implications for monetary integration. Conclusions can also be made on the relevance of the arguments of the current section to the CMA situation.



## 6.3 ECONOMIC CO-OPERATION AND INTEGRATION ARRANGEMENTS IN SOUTHERN AFRICA

### 6.3.1 The Southern African Customs Union

SACU has its origins in the 1889 Customs Union agreement which was originally concluded between the Orange Free State and the Cape Colony. Basutoland (later Lesotho) and the two areas that formed Bechuanaland (later Botswana) joined a few years later, but a new Convention was signed in 1898 which then admitted the Natal colony. Conventions in 1903 and 1906 included Transvaal and Swaziland, although the latter and the other protectorates did not have the same status in the Union as the others. The formation of the Union of South Africa in 1910 resulted in a new customs union agreement between the protectorates and the Union, which was fairly stable and lasted until 1969 (Maasdorp, 1989, pp.4-16).

The 1969 renegotiation occurred as a result of the dissatisfaction of the BLS countries with certain South African practices under the old agreement, among them the restrictions on beef importation, restrictions under the agricultural marketing control boards, high South African tariffs and quantitative restrictions and the notion that they were not receiving a fair share of the customs revenue pool (Maasdorp, 1989, pp.10-14). The 1969 agreement, which is still in force (though amended), was generally considered to be more favourable to BLS than any previous arrangement, and incorporated a number of features beneficial to them. Among these were infant- and pioneer-industry clauses, a larger multiplier in the revenue-sharing formula and provision for consultation (Maasdorp, 1989, p.17). The revenue-sharing multiplier ensures that BLS receive 42 per cent more than the value of revenue earned on imports attributable to them, and this is “to compensate BLS for the fact that the common external tariff is decided on by the Republic and is geared to protect South African industries” (Matthews, 1984, p.257). Whether in fact such compensation is sufficient or appropriate is discussed along with other pertinent issues, in the fourth section of this chapter, although it is possible, as Maasdorp suggests, that “had South Africa not followed the policy known as ‘apartheid’, SACU would have received significantly less attention than has been the case” (Maasdorp, 1989, p.18). The “attention” focused on SACU comprises contributions vacillating between outright

condemnation and tacit acceptance of SACU and South Africa's role in it. In many cases the effect has been to identify SACU with South Africa's regional destabilisation and 'economic imperialist' roles, but as shall be seen, this was (and is) not always true.

### 6.3.2 The Southern African Development Co-ordination Conference

The Southern African Development Co-ordination Conference is an economic co-operation arrangement that grew out of a desire by its members to reduce economic links with South Africa and identify themselves more closely with the struggle for political liberation within South Africa. It was perceived by the 'frontline states'<sup>70</sup> that their dependence on the South African economy was incommensurable with their standpoint of political opposition to South Africa's *apartheid* policy. At a meeting at Arusha in 1979, the states identified the need to increase economic co-operation amongst themselves, whilst reducing it with South Africa - especially since they had inadvertently replaced dependencies on Smith's Rhodesia with dependencies on South Africa as part of the sanctions campaign against Rhodesia (Meyns, 1984, pp.201-202). As such, Zimbabwean independence in 1980 lent impetus to the SADCC initiative, and the frontline states plus Lesotho, Swaziland and Malawi attended a summit meeting in Lusaka on April 1st 1980 to formalise SADCC and signify their intentions to advance its objectives. The 1980 Summit was the crystallisation of almost six years of preliminary meetings and discussions, the most important of which was the Arusha Conference on 3-4 July 1979. This meeting was the 'Conference' that the SADCC was named after, although it was formally constituted as a co-operation arrangement only after the admission of the other states and the Lusaka summit (Abegunrin, 1985, pp.191-192).

The four 'development objectives' of SADCC are given by Meyns as follows:

- (1) reduction of economic dependence on South Africa in particular and the rest of the world in general;
- (2) promotion of intra-SADCC links to create *equitable* regional integration;

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70. Angola, Botswana, Mozambique, Tanzania and Zambia, later also Zimbabwe.

- (3) mobilisation of resources to promote national, inter-state and regional policies; and
- (4) action to secure international co-operation with the economic liberation strategy (Meyns, 1984, p.203).<sup>71</sup>

Further, Abegunrin points out that the SADCC Programme of Action is part of the liberation struggles in Namibia and South Africa, that it fits in with Organisation of African Unity (OAU) policy of promoting regional integration and that dependence reduction “is central to the achievement of economic development, and to the advancement of the dignity, and basic human needs of the people of Southern Africa” (Abegunrin, 1985, p.193). The Action Programme is comprised of sectoral projects or co-operation areas each allocated among the then nine members.<sup>72</sup>

Transport and communications was identified as the most important sector in terms of dependence reduction both because of the high degree of dependence on the South African network and because “the improvement of such links is fundamental to the implementation of projects in other important areas” (Meyns, 1984, p.203). Other areas of attention identified were: promotion of energy and electricity independence; self-sufficiency in food production; promotion of agricultural research; harmonisation of industrialisation; person power training and foreign aid (Abegunrin, 1985, pp.193-195 and Matthews, 1984, p.261)<sup>73</sup>

It is reasonable to assume that a scheme of this nature holds important consequences for monetary and financial links between its members and South Africa, even though this was not one of the seven focus areas. In fact monetary and financial independence was also identified as a priority, and it has specific importance for the CMA. The existence of SACU is important to that of the CMA, since the former is an economic integration arrangement over approximately the same area, and the SADCC also has consequences for SACU, and thus an indirect effect on the CMA. For various reasons, SADCC is not

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71. These objectives are laid out in more detail in the Declaration by the SADCC states: *Southern Africa, Towards Economic Liberation*, April 1980, Lusaka.

72. Namibia became the tenth member after its independence in 1990.

73. See Meyns (1984, p.205) for the sectoral allocation among members.

intended to be an *integration* arrangement and this should not change for the foreseeable future (Maasdorp, 1986, p.156). However, this fact alone does not preclude it from having an important effect on the other two integration arrangements in Southern Africa - SACU and the CMA. These effects are part of the topic of the remainder of this chapter.

### 6.3.3 The Preferential Trade Area (PTA)

The PTA comprises 19 central, east and southern African states and includes all of the SADCC members besides Botswana and Angola.<sup>74</sup> The goal of the PTA is 'to liberalise trade, encourage co-operation in industry, agriculture, transport and communications, and to create a regional common market' (EIU, 1988, p.93). Hence the PTA is (or is about to become) an *integration* arrangement, unlike SADCC, and Lesotho and Swaziland's membership thus poses direct problems for SACU (or has the potential to). Intra-area trade liberalisation began on July 1st 1984 and, although there have been a few problems with the speed of liberalisation and the advent and revision of trade 'rules of origin', the most recent summit approved final removal of customs barriers by the year 2000 (EIU, 1988, pp.93-94).

The conflicting dual membership of Lesotho and Swaziland of SACU and the PTA is at present resolved in favour of SACU, with the Two able to export preferentially to PTA countries but not being obliged to import preferentially from them. Their obligation not to reciprocate is required under the SACU agreement, and the PTA recognises and makes *temporary* allowance for this (Matthews, 1984, p.264).

At present, therefore, the PTA membership of the Two threatens neither SACU or the CMA, but it could in future. The stated goal of the PTA to form a *common* market certainly has long run implications for SACU and the CMA, but this is assuming that the prospect has some hope of success. Maasdorp (1990b, p.22) is sceptical about the viability of increased integration in the PTA, and also sees difficulties with even a post-apartheid South Africa's entry into it. A possible outcome then, is the cementation of the

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74. The members are: Angola, Burundi, Comoros, Djibouti, Ethiopia, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Somalia, Sudan, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe.

post-apartheid SACU with the departure of the Two from the PTA, and the CMA could well be strengthened as a result. Even if the PTA did succeed, it is not clear that the Two would consider compromising the closer ties they have with SACU especially with the *apartheid* problem gone.

## 6.4 THE VIABILITY OF THE SADCC INITIATIVE

Section 6.3.2 laid out the four development objectives of SADCC and suggested that they held important consequences for SACU and the CMA. This section evaluates SADCC's prospects and interim performance in achieving the first two: reduction of dependence and increased intra-SADCC links. Of the four, the first two are clearly of more significance to the existence and future of SACU and the CMA, thus they are focused on.

### 6.4.1 The Reduction of Dependence

The motivation for the reduction of dependence has already been established, it is important next to examine the nature of dependence and the performance of SADCC in reducing it thus far.

Nine years ago, Nsekela (1981, pp.12-14) cited the reduction of dependence on South Africa and on the rest of the world as the two most important goals of SADCC. "Disentanglement" from South Africa was seen as the most important goal of integration among Southern African states, albeit a "negative" goal in that it involved conditions which had to be overcome rather than "positive goals to be furthered" (p.12). The predicament of Namibia and the Two was seen as serious: Nsekela compared them to the outlying provinces of a single state rather than independent entities. He thus advocated dependence reduction as a national goal, perceiving that it would take more than simply a commitment to regional co-operation where its "possible achievements and limitations have to date been clouded by a greater degree of generalised moderate verbal enthusiasm than of serious posing of questions ... " (p.13).

Before examining the success of SADCC's dependence reduction Programme of Action, it is necessary to outline the types of dependence and their degree.<sup>75</sup>

#### **6.4.1.1 Forms of SADCC Dependence on South Africa**

Migrant labour dependence is often cited as one of the more important forms. The countries affected are, in order of dependence, Lesotho, Mozambique, Botswana, Swaziland and Zimbabwe (not officially), which have tens of thousands of citizens employed in South Africa, primarily in mining production (Hardy, 1987, p.45).<sup>76</sup> The incomes generated by migrant workers are an important source of foreign exchange for the countries (Abegunrin, 1985, p.196).

Dependence on South Africa's transport system is acute, with all the SADCC countries besides Angola, Tanzania and Mozambique relying heavily on South African rail and harbour facilities for import and export trade. Chingambo shows that in the early 1980s, whilst only 18 per cent of SADCC trade was with South Africa, over 90 per cent of Botswana, Lesotho, Malawi and Zimbabwe's trade passed *through* South Africa (1988, p.399). For the other countries the figure was 80 per cent.

Trade dependence is also high for all but Angola and Tanzania. Chingambo cites the results of an ODI study that showed that, on average, 30 per cent of SADCC imports came from South Africa but their exports to South Africa were only 7 per cent (1988, p.399). Lesotho, Swaziland, Botswana and Zimbabwe are the most dependent on trade with South Africa, but with imports exceeding exports. The problem is underscored by the fact that, on average, there is more SADCC-South Africa trade than intra-SADCC trade (Chingambo, 1988, p.398), and that SADCC's imports comprise what Abegunrin calls "survival products" (1985, p.197).<sup>77</sup>

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75. The dependencies described apply to the late 1970s/early 1980s era. Any changes in the situation are described later in this section when evaluating SADCC's success in dependence reduction.

76. Hardy's statistics are for the years 1965-1977, it should be noted however, that migrant labour volumes have been declining (Maasdorp, 1986, p.159). Malawi has terminated migrant labour flows to SA out of protest against the Chamber of Mines' compulsory AIDS testing.

77. For example, fuels, maize, canned food, beverages, fertilizer, iron and steel (Abegunrin, 1985, p.197).

Certain SADCC countries are also dependent on South Africa for energy provision. Lesotho, Swaziland, Botswana, Mozambique, Zimbabwe and Malawi are all dependent, to varying degrees, on South Africa's electricity and/or petroleum provision (Chingambo, 1988, p.399). South Africa is also not averse to using this as a weapon against these countries: Abegunrin cites the incident on 6 September, 1981, when South Africa delayed Zimbabwe's fuel deliveries and caused a dangerous shortage (1985, p.197).

SACU countries receive payments from the customs revenue pool, and, especially in the case of Lesotho and Swaziland, these payments are a large proportion of government revenue. Whether this amounts to "dependence" - as Chingambo (1988, p.398) suggests - is, however, a debatable issue. Whilst the revenue payments are doubtless important to BLS, their withdrawal from SACU would not mean an *end* to customs revenue, it would merely be collected by the countries themselves. Collection could, however, pose problems for the countries (Hanlon, 1986, p.88).

The 'dependence' relationships are not the only form of South African influence over SADCC, South Africa also has business interests in certain SADCC states. South Africa owns most industrial and mining concerns in Lesotho and Swaziland, and a "high proportion" in Botswana; they also own all "breweries, food-processing and grain-milling enterprises in addition to most wholesale and retail trade outlets" (Hardy, 1987, p.45). There are also "substantial links" with Zimbabwe and lesser ones with Zambia, Angola and Mozambique (p.46). To some extent the relocation of South African industries in BLS from 1985 on has been a "sanctions-busting" exercise (Maasdorp, 1988, p.39).

#### **6.4.1.2 Success of Dependence Reduction to Date**

The preceding description of the nature of dependence is based on data and information from the 'late seventies/early eighties' period - in other words the pre-SADCC or early SADCC period. The SADCC Programme of Action was intended to make inroads into the reduction of these dependencies, and although no time horizon was set, investigation into the situation ten years on will give a good indication of SADCC's *interim* success. Hawkins (1990) has exhaustively analysed SADCC's sectoral performance, and reference will be made to this study.

Whilst showing that SADCC has made “little progress” in reducing dependence, Hawkins nevertheless explains that “dependency reduction is a mirage in backward economies whose development necessitates infusions of capital, technology, expertise and foreign exchange” (p.20). Not only was the policy misguided, but the region experienced economic decline throughout the period, frustrating attempts at dependence reduction and “planned trade” (pp.4-18).<sup>78</sup> The latter policy refers to the attempt to reduce imports from South Africa and other developed countries to reduce ‘trade dependence’. As Hawkins has pointed out, however, trade is vital for economic growth in developing countries, not least in SADCC. The failure of planned trade is confirmed by the existence of an absolute and a relative fall in intra-SADCC trade from 1981 to 1986 (p.21) - reflecting the fact that external trade had increased. A further setback, especially in light of SADCC plans to promote equitable development, has been the increased concentration of industrial development, notably in Zimbabwe, Zambia and Malawi (p.22).

Whilst the official figures reflect small decreases in SADCC trade with South Africa, Hawkins is convinced that they “almost certainly understate the level of trade” (Hawkins, 1990, p.23). Furthermore, SADCC-South African trade remains greater than intra-SADCC trade - the ratio being three-to-one, and the *composition* of SADCC imports from South Africa has not changed: they are still what Abegunrin called “survival products” (Hawkins, 1990, pp.22-23). Thus SADCC has been unable to reduce trade dependence on South Africa and still relies on the latter for provision of manufactures and capital goods.

SADCC dependency on the South African transport system *has* been reduced over the decade. Zambia has begun to use Dar es Salaam and Beira for its copper shipments and Zimbabwe has increased its use of Beira, although the unavailability of the Maputo line has meant that it has had to resort to South African ports for certain traffic. Hawkins is cautiously optimistic about the prospects for decreased transport dependence (pp.26-27).

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78. For the period 1980-1988, per capita incomes in the SADCC region declined by 13 per cent (Hawkins, 1990, p.4)



As far as energy dependence is concerned, the situation appears to have changed little, with BLS and Mozambique remaining highly dependent on South Africa and Zimbabwe receiving much of its fuel requirements via South Africa (Hawkins, 1990, pp.27-28).

Although migrant worker numbers have declined, this 'reduction of dependence' amounts to little, since the SADCC countries have been unable to replace the lost jobs and have seen increases in domestic unemployment and underemployment (Hawkins, 1990, p.16). In any event, migrant numbers show an increase again to 1986 after reaching a low in 1982, although 1986 numbers are still below those of 1978. Further, reduction in migrant numbers may have been more a result of the Chamber of Mines' policy than SADCC-inspired action.<sup>79</sup> Data on Black migrant worker numbers are shown in Table 6.1 overleaf.

In general, then, dependence reduction initiatives have shown little success. The next section will examine the reasons for the lack of success and will differentiate between those of an exogenous nature and those related to failed policy.

**Table 6.1 Black Foreign Workers in South Africa, 1978-1986**

Country	1978	1980	1982	1984	1986
Lesotho	155623	140746	140719	138443	138193
Malawi	38525	32319	27558	29268	31411
Mozambique	49168	56424	52323	60407	73186
Botswana	34464	23200	26261	26433	28244
Swaziland	14054	19853	13659	16823	21914
Zimbabwe	27494	10377	11332	7492	7304
Angola	341	291	120	48	22
Zambia	843	918	787	1274	2421
TOTAL	320661	284128	279760	280188	302685

SOURCE: Cattaneo, 1990, p.52

79. The Chamber of Mines has stipulated that all migrants have to submit to AIDS testing and this has resulted in withdrawals by certain countries. The Chamber has also adopted a policy of increasing local employment at the expense of migrant employment.

#### **6.4.1.3 Sources of SADCC's Poor Performance**

The sources of SADCC's problems can be divided into three main groups: endogenous i.e. policy related; war and upheaval; and truly exogenous factors. These will be looked at in turn, starting with exogenous factors.

The region has been beset by natural disasters in the forms of sustained droughts and sudden floods over the decade, and these have taken their toll on the agriculturally-intensive economies of the SADCC countries. Little could be done, either, about the world recession of the early eighties and its effect on demand for, and prices of, SADCC's primary product exports. However, Maasdorp cautions against allowing these factors to screen the mistakes made by policy makers in not encouraging the maximisation of "the amount of local value-added in exports", or import substitution (1990a, p.12). Attention to these areas could have helped cushion the effects of the recession. Furthermore, certain economies suffered as a result of their failure to promote diversification of their output, for example Zambia (p.6). Thus the problems experienced by SADCC as a result of unfavourable terms of trade were not entirely unavoidable.

There is no doubt that the sustained conflicts and instability in Angola and Mozambique have caused untold problems not only for those countries but also for their SADCC neighbours. In addition, South Africa's role in instigating and fuelling these conflicts is undeniable, however, the war conditions are also not entirely exogenous, nor is South Africa's destabilisation the only cause of the economies collapse caused by the war. Nevertheless, the war conditions have seriously hampered SADCC, especially since Angola and Mozambique possess ports crucial for SADCC trade. In fact, Abegunrin suggests that one of the purposes of South Africa's role in the conflict is "to sabotage SADCC's efforts at promoting co-operation and liberation in the subcontinent" (1985, p.198). A SADCC study estimated the cost of the conflict at \$10 billion for the period 1980-1984, an amount which is in excess of the total of foreign loans and grants received by SADCC for the same period (Hardy, 1987, p.46).

The war impact can be divided into effects on the countries directly involved and those on their neighbours, as is done by Maasdorp (1990a). Maasdorp cites Angola and Mozambique's investment loss (despite natural resource endowment), refugee and migration problems, loss of harbour and transport earnings, collapse of output in certain sectors and large defence budgets (out of scarce foreign exchange) as their most important costs of the war (pp.3-4). Angola and Mozambique's landlocked neighbours also suffer as a result of the wars. Malawi, Zambia, Zimbabwe and Swaziland are forced to channel their trade to distant ports and via more roundabout routes, entailing greater direct expense and time wastage (p.4). In addition, Zimbabwe, Zambia, Tanzania and Malawi have incurred varying degrees of military expenditure in maintaining border security and have also been left with refugee problems as a result of the wars. It is clear then, that the internal instability of these countries and South African destabilisation has cost the SADCC economies much, and it is to be hoped that recent peace initiatives in both Angola and Mozambique will bear fruit.

However, much of the blame for SADCC's poor performance can be laid at the door of its policy makers. Maasdorp points out that

"in vivid contrast to the South East Asian 'newly industrialised countries' where the prevailing philosophy has been one of economic growth with a strong private sector input, no fewer than five of the SADCC countries adopted policies of either outright statism or of strong state interference in the economy" (1990a, p.5)

The countries concerned are Tanzania, Zambia, Angola, Mozambique and Zimbabwe, but all have now implemented structural adjustment programmes and appear to be taking a more market oriented path (Maasdorp, 1990a, p.7). Whilst these countries have suffered economic stagnation and regression brought about by failed industrialisation policies, foreign exchange and capital goods shortages and excessive state intervention, the BLS countries have fared somewhat better. Maasdorp explains that their membership of SACU and the CMA (in the case of the Two) has played a role in their relative success, ensuring them goods supplies and foreign exchange and also contributing to their attractiveness to South African investors (pp.10-12).

Thus, much of what the SADCC states have done to build up their economies and reduce their dependence on South Africa and the outside has been in vain. The BLS countries, although closely integrated with South Africa, have emerged relatively unscathed from a decade of stagnation and reversal, and have seen the goal of dependence reduction thwarted. It is to be expected therefore, that the SADCC influence on BLS integration with South Africa will remain minimal, so long as SADCC itself fails to make ground towards its stated objectives.

## **6.4.2 Increased Links Between States.**

### **6.4.2.1 *Prospects for Closer Co-operation and Integration***

SADCC's second objective is "the forging of links to create a genuine and equitable regional integration" (Meyns, 1984, p.203). Although SADCC itself is not a regional integration arrangement, the promotion of links is seen as part of the process of fostering *collective* self reliance. Meyns argues that this is important to the process of dependence reduction in that it enhances the ability of the member states to negotiate with the developed world (p.220). At the same time, increased integration among developing nations will promote factor mobility and improve resource allocation in general. SADCC's proponents are quick to point out, however, that integration should proceed slowly and should initially be of a low intensity so that its stability is not threatened. Maldistribution of integration benefits and polarisation of development industrialisation are seen as problems that could arise as a result of attempts at too rapid integration (Nsekela, 1981, p.92). Indeed, lack of agreement on policy and resultant polarisation are given as the causes of the demise of the East African Community (EAC) (Meyns, 1984, p.215) and this has consequently made SADCC's policy makers more cautious. Also, it is seen as imperative that SADCC states are not forced to relinquish too much of their national sovereignty as a result of increased integration, lest this lead to new dependencies and distortions, and weaken the arrangement. This requirement naturally places limits on the degree of integration, but in itself this is not seen as a problem - the forms of co-operation and integration adopted must in the first instance conform to the goal of dependence reduction on South Africa (Nsekela, 1981, p.15; Meyns, 1984, pp.215-216).

Finally, it is important to note that the “degree of priority or commitment to regional integration, especially in terms of ability to bear costs, varies markedly” (Nsekela, 1981, p.17). This is especially pertinent to the BLS countries which are more closely integrated with South Africa than the others. When closer integration with SADCC implies disintegration from South Africa, the BLS have the most ‘work’ to do and will bear the highest costs. This must also be taken into account when assessing the response of BLS to the SADCC initiative.

#### **6.4.2.2    *Enhancing Trade Links***

As has been emphasised, SADCC is not an integration arrangement. However, this does not mean that it cannot have as one of its goals, the enhancement of integration between members, especially if this stands to further its overall objective. Indeed, it is held that “intra-SADCC mobility of factors of production, goods and services is fundamental to the SADCC objective of collective self reliance” (Ng’andwe, 1987, p.181). However, although intra-trade grew in the early SADCC period, it has remained insignificant as a proportion of external trade - 5 per cent in 1985 was the early ‘peak’ (Chingambo, 1988, pp.393-394). Further, it has been pointed out elsewhere that SADCC-South African trade greatly exceeds this figure - Table 6.2 below clearly shows that this was the case for 1985.

**Table 6.2** Direction of SADCC Trade, 1985 (\$ million)

Country	SA	(%)	SADCC	Africa	DCs	LDCs	WORLD
Angola	X	0	0,0	9,2	1675,0	482,6	2190,3
	M	0	1,3	2,9	856,3	439,7	1318,9
Botswana	X	8					
	M	81					
Lesotho	X	40					
	M	97					
Malawi	X	7	25,3	58,9	225,8	71,7	302,3
	M	40	29,1	133,6	101,4	149,6	255,6
Mozambique	X	3	16,6	25,7	56,0	88,0	174,3
	M	12	34,5	60,7	246,7	182,4	480,2
Swaziland	X	37					
	M	83					
Tanzania	X	0	3,5	14,5	196,4	76,0	283,9
	M	0	12,2	64,9	664,3	349,7	1028,0
Zambia	X	1	21,6	31,6	494,9	238,7	738,1
	M	21	40,6	42,7	354,8	180,1	537,5
Zimbabwe	X	10	106,5	153,6	511,6	264,0	798,1
	M	18	85,2	92,4	350,7	135,7	624,9
MEAN/TOTAL*		12	173,5	293,6	3159,7	1221,0	4487,2
		39	202,9	397,2	2574,2	1437,2	4245,0

Notes: X and M stand for exports and imports, respectively.

Missing entries denote unavailable data.

\* Entry in first column is a mean, others are totals.

SOURCE: Chingambo, 1988, p.395

Maasdorp places part of the blame for this on the initial SADCC emphasis on transport and communications rather than directly on intra-trade, although he points out that recently, there has been more direct emphasis on the latter (1990a, p.12). This has gone

hand in hand with a more positive attitude to industrialisation and investment and a realisation of the important role that the private sector has to play in achieving these goals.

The absence of preferential tariff reduction incentives to intra-trade has been a cause of concern for some writers. Ng'andwe suggests that this may be an "overcautious approach" and points out that the enhancing of intra-SADCC trade will ultimately require co-ordination of monetary and fiscal policy (1987, p.182). However, due to the significant overlap of the PTA and SADCC, many see a future resolution to policy impediments of furthered integration in the merging of these two blocs (Ng'andwe, 1987, p.182; Abegunrin, 1985, p.202; Maasdorp, 1990b, p.19).

#### **6.4.2.3 *Monetary and Financial Links***

SADCC's plans for enhanced monetary links are of particular relevance to this thesis. Whilst SADCC's dependence reduction and intra-trade policies affect the CMA indirectly - through SACU - direct action, in the monetary sphere is obviously of direct importance to the CMA.

The monetary systems of SADCC's members are dissimilar. The predominantly socialist countries - Tanzania, Mozambique and Angola - have state-owned monetary systems while Zambia's system is part private and part state owned and the rest are mostly privately owned. All countries have nominally independent currencies, although Swaziland and Lesotho's are linked to the rand, the latter's irreversibly.<sup>80</sup> The rest operate fixed exchange rate regimes. The non-BLS members operate strict exchange control policies whilst Lesotho and Swaziland implement South Africa's policies (see Chapter 4) and Botswana has comparatively loose, independent exchange controls (Nsekela, 1981, pp.93-94)<sup>81</sup>

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80. In terms of the current arrangements: see Chapter 4.

81. The level of participation by the state in the SADCC economies is changing. Hawkins points out that all countries except Botswana and Swaziland have implemented IMF or World Bank structural adjustment programmes (1990, p.5).

As with the fostering of trade links, co-operation in the monetary sphere is held to be necessary for furtherance of collective self reliance in SADCC. Ng'andwe argues that monetary, as well as fiscal policy co-ordination is necessary to place regional resources at the disposal of the group, and to set up broad markets to facilitate regional industrial expansion (1987, p.183). Furthermore, co-ordination ensures that polarisation and distortions in resource allocation do not arise and the existence, if possible, of a "political umbrella" over the group allows benefits to be spread equitably (pp.183-185).

Monetary co-ordination can help to facilitate capital mobility, which is "basic to the flow of goods and services" and will thus promote intra-regional trade (Ng'andwe, 1987, p.187). A further goal is the improvement of convertibility of SADCC currencies, which will also promote intra-trade by removing the need for third currencies as media of exchange.<sup>82</sup> This strategy goes hand in hand with the reorganisation of production so that output is more geared to regional needs, rather than those of the industrialised trading partners. All this entails promotion in the end, of collective self reliance.

What degrees of monetary co-operation are called for? The most extreme form, as has been indicated elsewhere, is a monetary union with a single central bank and a 'common currency'. The advantages of this system include the promotion of intra-trade due to lack of foreign exchange requirement, pooled external reserves, economies of scale in currency administration, an increase in the ease of 'commercial calculations' and the possibility of a trade payments credit mechanism (Nsekela, 1981, pp.95-96). The most important problem, however, and one which renders this form inappropriate for developing countries, is the sacrifice of policy autonomy involved - national monetary policies are not possible and national fiscal policy is limited (see Chapter 2). The lack of a high degree of 'political co-operation' among SADCC members thus leads Nsekela to dismiss monetary union as a viable option for SADCC for the foreseeable future (p.96).<sup>83</sup>

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82. Ng'andwe points out that "trade between [SADCC] countries is usually through the medium of the internationally recognised currencies" (1987, p.187).

83. Recall however, that the Allen-Kenen model showed that independent monetary policy may be severely limited *in any case*, if goods and asset market integration is intense enough.



A less intense form of monetary integration is involved in an 'exchange rate union' or 'currency area'. This was defined above as involving a number of countries with a common peg but national central banks and national monetary policy. Theoretical arguments presented in earlier chapters suggested that it is an arrangement inferior to a full monetary union, but it does permit members a higher degree of policy autonomy. Nsekela considers this as a possible arrangement for SADCC but dismisses it on the basis that the required policy co-ordination necessitates excessive sacrifice of sovereignty, even though less sovereignty is sacrificed than in the case of a full monetary union. He cites the demise of the East African Currency Board as an example of the inappropriateness of this sort of arrangement to African conditions, and sees similar 'political differences' and 'structural inequalities' in SADCC as were present between the members of the EACB (1981, p.97).

Instead of integration then, it is argued that only policy co-ordination is possible between SADCC's members. The goals of monetary policy co-ordination have already been discussed - capital mobility and intra-trade is encouraged by increasing the substitutability of members' currencies - but fiscal policy co-ordination is called for as well, for the same reasons. Ng'andwe holds that joint fiscal policies should be "aimed at promoting intra-regional trade while protecting regional industries from outside competition" (1987, p.189). In addition, he calls for 'compensating mechanisms' to offset trade diversion, but cautions that previous arrangements along this line have not been effective enough, leaving weaker countries disadvantaged. As such, concerted fiscal policy co-ordination is vital to the success of the SADCC industrialisation programme (pp.189-190).

Other measures of monetary and financial integration that are recommended include a credit clearing house for intra-regional payments, agreement on policies to smooth and speed up, intra-regional payments and the enlargement and expansion of the East African Development Bank (Nsekela, 1981, pp.28-30).

Monetary disengagement from South Africa is considered a special problem for the BLS countries and Namibia, due to their high degree of integration with South Africa. Based on trade volumes with South Africa, Nsekela argues that Namibia could disengage most easily - setting up a national central bank and currency with "little difficulty" (1981,

p.107). In fact, the recently independent Namibia has, at time of writing, set up a central bank and plans to have fully introduced a national currency by 1992.<sup>84</sup>

Trade volumes between BLS and South Africa reflect a higher degree of market integration than between South Africa and Namibia, and disengagement/dependence reduction is thus seen as a more difficult task.<sup>85</sup> What is more, Nsekela points out that monetary disengagement by itself is pointless and that it is meaningful only alongside “broader restructuring of the numerous basic relationships with RSA production, trade, ownership, capital and labour flows” (1981, p.108). Granted that these “basic relationships” amount to high integration, it is doubtful whether BLS would be willing to bear the costs of severing them, especially in light of the fragility of their developing economies.<sup>86</sup>

The debate around the role of SACU in modifying BLS behaviour (as SADCC members) now comes into view. It is necessary to assess the degree to which SACU acts as a binding force between South Africa and BLS, as this binding force necessarily promotes monetary links as well. This task is undertaken next.

## **6.5 THE ROLE OF THE SOUTHERN AFRICAN CUSTOMS UNION**

Many writers, in identifying SACU with the South African state, have portrayed it as a burden to BLS and have attempted to make a case for their withdrawal. The intention of this section is to consider both these arguments and others suggesting a more constructive role for SACU. Lastly, the prospects for BLS withdrawal are reviewed.

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84. The prospects for, and methods of, disengagement are analysed in detail by Goedhuys (1990).

85. See Nsekela (1981), Table p.107.

86. The extent of this integration is determined in the following chapter according to the Allen-Kenen definitions as presented in Chapter 3.

### 6.5.1 The Position of Botswana, Lesotho and Swaziland

The assertions to the effect that BLS are prejudiced by SACU are normally backed up by a number of reasons. Firstly, it is held that BLS do not receive sufficient compensation for being in a customs union with a more developed country, or that there is something wrong with the compensatory mechanism. Cobbe (1980, pp.330-331) has pointed out that the stabilisation amendment that was introduced in 1976 has rendered the compensation rate indeterminate, since the revenue may only fluctuate between the 17 - 23 per cent limits. Secondly, the average rate of revenue of 20 per cent is based on South African imports and is a determining factor in the formula. However, if BLS imports differ in their duty content, then their actual revenue received amounts to either a net transfer to, or a net transfer from, South Africa. Cobbe suggests that the latter is the case.

Henderson (1985, pp.230-232) points out that there is a two-year lag between actual receipts of revenue and revenue earnings, and that this amounts to an interest free loan to South Africa. The fact that the South African members of the technical subcommittee of SACU agreed that this was unfair is seen by Henderson as an indictment against the South African government for refusing to renegotiate this individual article. More importantly, Henderson holds that the customs revenue to the BLS has fostered dependence on South Africa, and has permitted South Africa to maintain a 'dominant role' in their economies (pp.230-231).

A second source of problems for BLS is to be found in South Africa's import substituting approach to industrialisation and in its consequences for the use of trade barriers. Specifically, Cobbe has explained that South Africa's emphasis on quantitative restrictions has cost BLS both in terms of revenue foregone and also because the prices of various BLS imports from South Africa have been raised as a result of the non tariff barriers (1980, pp.331-332).

A related problem for BLS is their inability to take autonomous decisions and implement policies relating to trade policy. This entails the loss of a degree of fiscal policy autonomy. Maasdorp explains that this could mean a declining amount of revenue to BLS - since the size of the customs pool is determined only by South Africa, regardless of the

percentage share of BLS (1988, pp.42-43). Thus, for example, South Africa's adoption of GST in 1987 meant falling revenue for BLS as the import surcharge was phased out and they were faced with having to implement their own sales tax systems, which are complex, expensive and regressive (Hanlon, 1986, p.82; Maasdorp, 1988, p.43). The regressivity of South Africa's indirect tax structure is demonstrated by Cobbe, who thus concludes that BLS's lack of fiscal sovereignty has resulted in negative distributional effects in those countries (1980, p.332).

SACU's effect on industrial location is another area of contention. It is argued that South Africa's free access to BLS markets has prevented industrialisation in these countries, and that they have thus been unable to generate significant internal linkages - something which is important for industrial - led growth. Instead, their predominantly external linkages mean their expenditures on South African imports contribute to South African growth: they are more like the outlying regions of an industrial hub than separate countries with their own growth engines (Hanlon, 1986, pp.84-85).

Secondly, South Africa has implemented measures to encourage decentralisation to its lesser developed areas, especially the bantustans, and BLS are thus forced to 'compete' for investment by attempting to match or better the incentives offered.<sup>87</sup> Hanlon holds that BLS have been unsuccessful at this, and have lost more jobs this way than they have gained through SACU. In addition, he gives examples of cases where South Africa has actively worked against industrial projects in BLS, using its economic power to make these projects unviable. Henderson concludes that BLS were "very naive", believing that the 1969 Agreement was "about money" and not taking into account its broader development effects (1986, pp.85-86).

Maasdorp (1988; 1989) has questioned several of the assertions made against the customs union. Firstly, he shows that the compensation factor is not in fact indeterminate as Cobbe (1980) and others believe, rather, the stabilisation amendment is "superimposed" on the fixed rate, it does not supersede it (1988, his footnote 43). Secondly, he points out that it is BLS who emphasise the revenue benefits of SACU rather than the development

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87. It should be noted, however, that BLS do enjoy access to EC markets through the Lomé Convention.

effects, and that the compensation received is *intended* for the polarisation, trade diversion and fiscal policy loss effects of the union. Thirdly, even without the compensation factor, the formula favours BLS at the expense of South Africa for various reasons, one of which is the inclusion of excise duties and sales tax in the formula. Fourthly, the 'two-year lag' argument is incorrect since the formula 'forecasts' revenue based on a constant growth rate. Thus payments will only be incorrect if *estimation* methods are lagging behind. Walters (1989, p.43) also makes this point. With regard to industrial polarisation, Maasdorp concedes that SACU *has* been an impediment to BLS industrialisation, but he points out that *action* by South Africa to impede specific industries has only occurred when those industries "would have penetrated the South African market by flouting non-tariff barriers applicable there" (1989, p.27).<sup>88</sup> Moreover, Maasdorp has shown that BLS have failed to make adequate use of Articles 6,7 and 11 of the agreement, which allow qualified protection of industries in their economies (1988, pp.37-38). Henderson does, however, concede that aspects of these articles are ambiguous, and thus suggests that BLS seek to clarify them (1989, p.27).

Maasdorp also considers the argument that SACU has imposed South African tax structures, consumption and production preferences on BLS to their detriment, but finds it unconvincing. Whilst not denying the structural closeness of SACU economies, Maasdorp (citing Cobbe) emphasises that this 'integration' is not the *result* of SACU, but rather of "geographical, historical and economic" factors that bring the countries together (1988, p.45).

### 6.5.2 The Practicability and Desirability of BLS Withdrawal from SACU

Can a valid case for BLS withdrawal stand then? Meyns (1984, p.210) points out that BLS membership of SACU does not preclude them from full participation in SADCC, although such membership hardly seems consistent with SADCC's goals. It appears though, that the decision to withdraw is regarded by SADCC as one which must be taken nationally, and in national interests.

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88. One could still, however, attempt to justify BLS action, on the basis that they receive no benefit from non-tariff barriers but might experience costs due to these South Africa protectionist measures.

The difficulties that will be faced by BLS will not be easily overcome. Firstly, they will have to set up administrative customs and excise structures to replace those of South Africa, and will have to police their 'porous' borders to prevent illegal trafficking of goods. Secondly, BLS have no import houses and are reliant on South African importers. Contacts will have to be made and structures established from scratch in order to permit BLS access to foreign goods. Thirdly, South Africa may retaliate by hampering BLS goods whilst they are in transit on the South African transport network. Given BLS dependence on the South African system, this could be a serious impediment to their trade (Hanlon, 1986, pp.88-89). In addition, it is doubtful whether BLS would be able to fully replace the lost customs revenue by implementing their own tariff, since the amount they receive now is, of course, enlarged by the compensation factor.

Another option is the scaling down of the customs union into a free trade area. This would permit BLS to become more involved in SADCC and Lesotho and Swaziland could reciprocate in the PTA, however, as Matthews (1984, pp.257-258) has pointed out, BLS customs revenue would still fall since there would be reason for reducing the compensation factor.

It appears though, that withdrawal is both undesirable and unnecessary. Maasdorp (1988, pp.45-46) has criticised several of the traditional arguments against BLS membership, and has cited other writers (Hudson, 1981; Lipton, 1978) who advocate modifications to arrangement but not withdrawal. Maasdorp himself recommends that BLS push for renegotiation and cites Walters (1989) that "BLS ... now believe that no *fundamental* changes to the agreement are required" (1989, p.28) (my emphasis). Furthermore, with the changing political climate in South Africa, it is likely that BLS's *political* reservations about being in SACU will soon disappear.

## 6.6 FUTURE PROSPECTS

Having examined the roles of SACU and SADCC from the perspective of BLS, it will be worthwhile to assess the future prospects of these two arrangements. The task is made

interesting by the inter-relationships between the two: their futures are connected in many respects and both could undergo serious change or even cease to exist in the near future.

### 6.6.1 SADCC's Prospects

An important question that raises itself is: will integration in SADCC increase, decrease or change little? Hawkins (1990, pp.28-30) feels that, whilst "deepening" (i.e. increasing) integration is vital for SADCC, it stands to experience considerable problems in furthering it. Hawkins outlines four problem areas in this regard: firstly the problem of the non-acceptance by member states of the *need* for increased integration, although the SADCC secretariat sees its necessity. Secondly, the unwillingness on the part of members to relinquish 'the levers of economic power', thirdly the lack of sufficient technical expertise and fourthly, differences in levels of development and in policy application (pp.29-30). What is more, Hawkins finds that little coherence exists between members as regards their trade and investment/industrialisation approaches when harmonisation of these strategies is a prerequisite for successful deepening (pp.30-33). With regard to industrialisation the advent of a strategy to ensure the equitable distribution of industry is seen as imperative by Hawkins.

With regard to SADCC's relations with South Africa, there is every reason to believe that political change in the latter will lead to a thawing of attitudes, although, as Maasdorp (1990a, p.16) points out, South Africa must terminate all destabilisation activities in the subcontinent. A number of writers see the possibility of a regional common market in future, at least covering the area of the customs union, although fears are also expressed that South Africa could dominate the weaker countries to their detriment (Maasdorp, 1990a, p.16; Hawkins, 1990, p.35; Cattaneo, 1990, p.57). Hawkins feels that this threat would preclude integration of SADCC with the South African bloc, although co-operation would still be possible.

Thus it is argued that SADCC should either broaden itself - include additional countries to increase its strength in relation to South Africa - or it should seek close co-ordination with South Africa in the form of transport, energy and tourism agreements under a *modus vivendi* (Hawkins, 1990, pp.36-37). Either way though, it must do something about the

threat of South African economic dominance. Hawkins further suggests a two-stage agenda for the strengthening of SADCC: (a) it must 'cement' itself and increase convergence between members and, (b) it must ensure equitable distribution of the benefits of industrial development (pp.41-42). Thus hopefully will it survive the setbacks of the 1980s and the decline in importance of its original goal of dependence reduction on apartheid South Africa.

### **6.6.2 SACU's Prospects**

There is much evidence to suggest that, despite many of the points made against the customs union, it is in most respects a successful arrangement with basically satisfied members. Maasdorp (1990b, p.14) ascribes its success to the disparity in sizes of its members and particularly the smallness of BLS. He argues that the diminutive economies of BLS make import replacement industrialisation unviable for them, whilst their free access to the large SACU market benefits their export industries. This same fact makes customs union membership for other SADCC countries a less advisable proposition (Maasdorp, 1990b, p.15).

But although it appears as if the customs union is a satisfactory arrangement, the desirability of increased integration is not established. For BLS, the primary advantage in a common market would be labour migration effects, since their own economies do not seem capable of growing at the pace of their labour forces (Maasdorp, 1989, p.33). However, South Africa has its own unemployment problem, and if migration statistics are anything to go by, the possibility of it welcoming the labour inflows of its neighbours in a common market are slight. Thus the case for a common market is not clear, either between the present members of SACU or over a wider area incorporating SADCC countries.

Another approach is to make alternatives to SACU, especially in light of the revenue/development dichotomy. Maasdorp (1988, p.47) suggests however, that a shift to the emphasis of development as opposed to revenue generation necessitates a planned approach. In particular, provisions ensuring fair distribution of industry are necessary, as well as attention on transport links, investment incentives and funds allocation.



Finally, whilst a post-apartheid South Africa will remove any political obstructions to co-operation with South Africa, many economic problems will remain, especially those relating to South Africa's domination of the regional economy. It is questionable though, whether South Africa's new government will actually assist its neighbours in reducing dependence on it, rather it will be up to those neighbours to push for equitable development, and not to allow dependencies to increase and disparities to widen. A prerequisite is the securing of co-operation in restructuring the regional economy and implementing a regional development strategy, and SACU could provide a channel for this.

## 6.7 CONCLUSION

At the outset it was stated that the membership of *economic* integration and co-operation arrangements of the CMA countries was 'important' in that it would have modifying effects on their behaviour and possibly affect the viability of the CMA. However, *Botswana's* non-membership of the CMA seems to imply that such membership is not a prerequisite for gainful membership of the SACU.<sup>89</sup> This idea does seem to have some validity, although the possibility that the Two benefit *additionally* from the SACU by virtue of their CMA membership is strong. If the goods market integration fostered by the SACU is beneficial for the Two, then the monetary integration agreement, which facilitates goods market integration,<sup>90</sup> must also be worthwhile. The fact that the SACU is beneficial for the Two has been established in this chapter: it was indicated above that, whilst SADCC had struggled in its bid to reduce its dependence on South Africa and had experienced economic regression, SACU had ensured BLS of steady flows of imports, markets for exports and, in the case of the Two, access to foreign exchange. SACU was held to be 'fundamentally sound' and it was established that BLS are basically satisfied with the arrangement. Moreover, SADCC's ability to modify BLS' actions appears to be minimal: there are a number of impediments to 'deepening' within SADCC, and while it struggles to improve links between its members, it cannot expect them to reduce their links with non members, especially if these links are as intense as those in SACU. In addition

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89. Chapter 8 below analyses the Botswana situation and finds that its degree of monetary autonomy is not as significant as may be assumed, and further that its experience is not entirely transferable to the Two.

90. The rationale behind this process was described in Chapter 2.

the prospect of political change in South Africa will remove political barriers to economic co-operation with it and thus also BLS 'embarrassment' at participation in SACU. It will then be left for BLS to push for their desired modifications to the SACU agreement.

SACU's long run viability will thus depend on its ability to distribute the benefits of integration equitably among its members and to contribute towards balanced regional development. The considerations of section 6.2 of this chapter suggest as much: SACU as a model 4-type bloc is most compromised by its lack of homogeneity of industrial development levels. Furthermore, the evidence from the remainder of this chapter supports this fact. However if SACU has a role to play in a regional development strategy then so has the CMA, both indirectly as an arrangement supportive and facilitative to SACU and goods market integration, and directly as an enhancer of allocative efficiency and investment in the region. The function of this chapter has been to confirm that economic integration in the region has a role and a future, and therefore that monetary integration does as well; the function of the next is to illustrate, analyse and confirm the level of this integration.

## CHAPTER 7

### ***THE EXTENT AND IMPLICATIONS OF GOODS AND ASSET MARKET INTEGRATION IN THE CMA***

#### **7.1 INTRODUCTION**

The task of this chapter is to confirm what has been taken for granted throughout this thesis, namely that there exists a high degree of asset and goods market integration between South Africa, Lesotho and Swaziland, the members of the CMA. However this is not the only task of this chapter: it will also be necessary to assess fully the implications of any established integration levels for policy interdependence and disturbance transmission before recommendations and pronouncements can be made on the desirability of the current institutional arrangements. As was seen in Chapters 2 and 5, it is useless to attempt to assess the 'optimality' of a monetary area; what is required is an analysis of the *effects* such an arrangement has on economies, and whether the negative effects can be removed. Thus a better approach is to optimise the *effects* of a monetary arrangement - to ensure the benefits and costs are spread evenly among the members, and this goal is furthered by the adaption of bloc economic policy to the conditions which are created by goods and asset market integration. The Allen-Kenen model provides a valuable tool for assessing these conditions and their consequences, and the largest portion of this chapter will be dedicated to the application of this model to the CMA scenario. For the purposes of the application of the model, Swaziland will play the role of 'South' and South Africa, 'North'. Initially, however, it will be necessary to say something about the important limitations of the model and to justify the focus on Swaziland.

## 7.2 JUSTIFICATION FOR THE FOCUS ON SWAZILAND

Firstly a somewhat trivial-seeming though important reason - the Allen-Kenen model analyses only a two country monetary union, and thus it is necessary to choose two of the members of the CMA. One could alternatively analyse the South Africa/Swaziland and South Africa/Lesotho situations separately (a Swaziland/Lesotho scenario would be of little help), but this would entail unnecessary effort and would add little to the usefulness of the study.

The most important reason for looking at Swaziland alone is one that arises from the 'qualitative' hypothesis of the model, i.e. that greater monetary unification, or at the least greater monetary co-operation is called for rather than less. This idea rests on the existence of high costs relating to policy dependence that result at high levels of asset and goods market integration. Since Lesotho is more highly integrated with South Africa than Swaziland<sup>91</sup>, it would be easier to prove the quantitative hypothesis and imply the qualitative hypothesis if it were used rather than Swaziland. Thus the focus on Swaziland puts the burden of proof on the alternative hypothesis and ensures more credible results.

Finally, data availability suggests that Swaziland is a better bet, since Lesotho statistics are less detailed and reliable. Meaningful application of the model requires that about a decade of quarterly observations are used, and Swaziland data are more likely to be available in this detail.

## 7.3 THE LIMITATIONS OF THE MODEL

There are two broad categories of 'limitation': those inherent in the model itself and those that arise from the application of the model to a real world, non typical situation (for thus must the CMA situation be viewed).

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91. Table 6.2 in the previous chapter confirms that Lesotho's goods market is more highly integrated with South Africa's than Swaziland's. The fact that Swaziland opted for a national currency and central bank before Lesotho, and that it was first to voice feelings about de-linking suggest that its asset market is less integrated with South Africa's than Lesotho's.

### 7.3.1 Inherent Limitations

The following are identified by Allen and Kenen themselves (1980, pp.203-209):

- (1) Capital formation and claims to capital (equities) are omitted. Thus the analysis of investment and investor behaviour is limited.
- (2) Continuous clearing of markets and immediate optimisation of portfolios is assumed, thus forbidding analysis of disequilibrium in the markets.
- (3) The demand for money depends on wealth and interest rates rather than income, this is a characteristic of the portfolio-balance approach.
- (4) Expectations are stationary, thus there is no planning or contingency action since no change is expected.

Any economic model has to make limiting assumptions in order to be workable, and these limitations should be seen in this context. Other models which have been used as readily have been simpler and have contained more limitations, for example Richard Marston's, which was devised *after* Allen and Kenen's (see Marston, 1982, pp.407-442).

### 7.3.2 Limitations Arising From the Adaption of the Model

Before a theoretical model can be applied, the real world scenario must be analysed to detect areas of incompatibility between the actual scenario and the conditions assumed by the theoretical model. A number of discrepancies appear in this regard:

- (1) *Interdependence* does not apply in the CMA as it does in the model. Instead, the relationship is closer to one of *dependence* of the Two on South Africa. Whilst this may appear to be a serious problem, it can be partially circumvented by simplifying the model: specifically by
  - (a) disallowing 'effects' that run from South (Swaziland) to North (South Africa), and,
  - (b) treating certain variables as exogenous from the point of view of view of the South.

Modification (a) is of limited interest and importance since it is the reverse relationship between the Two and South Africa that is of interest. Modification (b) is a less trivial one, albeit necessary to maintain the simplicity and thus clarity of the estimated model - it is simply beyond the scope of this thesis to attempt a full simulation of the Allen-Kenen model and we are in any event only interested in 'one side of the story': the consequences of the dependence of the Two on South Africa. Thus the predictions of the model will be assumed only to hold true to the Two and the results of the model will be interpreted as such.

- (2) 'Integration', as it is understood in the context of the model can not be said to apply in the strict sense to the CMA: there is no perfect *substitutability* between the assets or goods of the countries. However a form of integration exists which very probably has the same effects as the type defined under the model. So long as the Two conduct a large portion of their trade with South Africa and maintain strong capital market links (as described in Chapter 4), the conditions will produce results that are the same, or very similar to those produced by true Allen-Kenen integration. Thus the test will be whether the model *predicts well* or not.
- (3) The model is based on the assumption that both countries are capable (assuming no complications arising from integration) of conducting 'mature' monetary and fiscal policy, but this is in doubt as regards Swaziland and Lesotho.<sup>92</sup> Furness (1975, pp.234-238) questions the ability of developing nations to undertake conventional monetary and fiscal policy. As regards monetary policy, open market operations are limited because the volume of securities and number of transactions are low and the government is obliged to keep bond prices stable to maintain market confidence. Direct controls are likewise limited: the nature of ownership of financial institutions often permits them to draw on international reserves when liquidity is tight. On the other hand, fiscal policy is limited due to the strong pressure to constantly expand

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92. South Africa itself was only able to begin conducting open market operations in 1972, when capital markets were sufficiently developed.

government spending to accommodate the needs of the growing economy. Also, tax policy is limited since sources are few and collection problematic. These considerations must be borne in mind when interpreting the results of the model. As it happens, the model does show that monetary policy is limited in Swaziland, but this is also a consequence of integration.

These considerations suggest caution in the application and interpretation of the model, though none seem to suggest that the exercise will not be of some use.

## 7.4 THE MODEL

### 7.4.1 The Objectives of the Model

The intention is to use the Allen-Kenen model to estimate the extent of goods and asset market integration between South Africa and Swaziland. The 'quantitative' hypothesis is that integration exists, but judgement will have to be used to assess whether the 'qualitative' hypothesis - that this integration is high enough to have an important bearing on the response of Swaziland to South African policy and disturbances - has some validity. If the latter can be ascertained with reasonable certainty it will give support to a central theme of this thesis: that greater levels of monetary unification, or at least co-operation, is required rather than less, which especially Swaziland has attempted to bring about recently. This will be achieved by testing only the reduced-form 'integration' functions of the larger Allen-Kenen model.

### 7.4.2 The Data

Quarterly data spanning the decade 1980-1990 is used.<sup>93</sup> All nominal values have been converted to real values for reasons advanced below. All variables that have been

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93. The data series for Swaziland GDP and government expenditure (SWGDP and SWGOVR respectively) have been 'converted' to quarterly series by simply replicating the annual entries. This is unfortunate but necessary since quarterly national accounts data for Swaziland are simply not available. However, if anything, this 'modification' is an ally of the null hypothesis in that there is less available variation to account for.

converted to real values have an 'R' appended. Since lag structures are used, the time period of the regressions is not the full decade but this does not prevent the attainment of satisfactory results, as shall be seen. In addition, certain series - such as GDP and money supply - have been seasonally adjusted. The data is presented in the Appendix, along with a description of its sources and other information about the estimated relationships.

### 7.4.3 Asset Market Integration - Estimating The $r^2r^2$ Curve

#### 7.4.3.1 *The Theoretical Relationship*

In Chapter 3, asset market integration was said to exist between two countries when there existed a degree of substitutability between the bonds of those two countries. As asset market integration increases, the interest rates of the respective countries begin to move together since any differentials between these interest rates are offset by funds flows between capital markets. In the case of complete asset market integration, interest rate changes must be exactly equal to maintain equilibrium. In Section 3.3.1 above, the prospects for monetary policy under various degrees of asset market integration was analysed, and it was found that the scope for effective individual monetary policy declines as the degree of integration increases. The existence of high degrees of asset market integration thus strengthens the argument for monetary union, or at least monetary policy co-ordination. Section 3.6.1.2 introduced the asset market curves of the two integrated countries and it was shown that the asset market responses are reflected in the slopes of the  $r^1r^1$  and  $r^2r^2$  curves (Fig. 3.3 above). As integration increases, the slopes of the curves approach unity since the differential between the individually-felt impacts for bond specific disturbances declines. Thus if Swaziland is treated as the 'South' and South Africa as the 'North', estimation of the  $r^2r^2$  curve will permit analysis of the degree of integration between the two countries, specifically the degree of *Swaziland's* integration with the much larger South African capital and money markets. The United Kingdom (UK) is treated as 'the outside world' because it is Swaziland's most important trading partner.<sup>94</sup>

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94. South African direction of trade data have been unavailable for some years, and so the 'outside world' country is chosen from the Swazi perspective. Direction of trade data for Swaziland show that, for the portion of the sample for which data are available, the United Kingdom was Swaziland's next most important trading partner after South Africa. The trade volumes to particular centres do fluctuate however - see the *Swaziland Annual Statistical Bulletin*, 1985, which seems to have the most detailed data on direction of trade.



The equation for the  $r^2r^2$  curve is given by Allen and Kenen (1980, p.435) as:

$$\partial r_2 = b_1 \partial r_1 + b_2 \frac{\partial \pi}{\pi} + b_3 \overline{\partial B_2^{ct}} + b_4 \overline{\partial r_0} + b_5 \partial W^{hs} + b_6 \partial W^{hs'} + b_7 \partial B_2' \quad (7.1)$$

The terms are defined in Chapter 3, but will be briefly re-defined:

$r_2$	The Southern interest rate.
$r_1$	The Northern interest rate.
$\pi$	The external flexible exchange rate.
$\overline{B_2^{ct}}$	This represents total (North + South) central bank holdings of the Southern bond.
$r_0$	The world interest rate
$W^{hs}$	Northern savings.
$W^{hs'}$	Southern savings.
$B_2'$	This represents total Southern bonds outstanding.

The coefficients are combinations of other parameters, whose detailed definition is not especially important here. However, their *predicted signs* are important for the task at hand.

Predicted signs are as follows:

$$b_1 > 0 \quad b_2 < > 0 \quad b_3 < 0 \quad b_4 < > 0$$

$$b_5 < 0 \quad b_6 < 0 \quad b_7 > 0$$

The signs of these changes (and others) have also been given in the tables in chapter 3, and certain of them were implicitly explained in that chapter. What follows is an explicit, though brief explanation of each of them.

The existence of any degree of asset market integration requires that  $b_1$  be positive since sympathetic movement in union interest rates is required to maintain union portfolio balance.

The sign of  $b_2$  is indeterminate under the model. This outcome is a result of the primacy within the model of the asset market in determining the short run exchange rate. However, the money market and bond market effects of exchange rate changes are at odds in their effect on the local interest rate. To illustrate, consider a depreciation due to an autonomous capital outflow. The depreciation *instantly* increases wealth as value holdings of the foreign bond rise, and households must increase their value holdings of local bonds and money to maintain portfolio balance. This shifts  $W^*W^*$  *down* and  $M^*M^*$  *up*, rendering indeterminate the final sign of the change in  $r^*$  (specific knowledge of the relative slopes of  $W^*W^*$  and  $M^*M^*$  is required). Since the sign of the change in  $r^*$  is unknown, so too are the signs of the changes in  $r_1$  and  $r^2$ .

The sign of  $b_3$  is negative and its explanation is straightforward. As central bank holdings of the Southern bond increase, there is an increase in liquidity and an increase in demand for both bonds. Thus  $r_2$  will fall as  $W^2W^2$  shifts down, reflecting the increase in demand for  $B_2$ .

Coefficient  $b_4$  is indeterminate under the theoretical model since  $r_2$  could rise or fall for a rise in  $r_0$ . Gross substitutability of local and world bonds suggests that  $r_2$  and  $r_0$  should move together, and the bond market excess supply that immediately results from a rise in  $r_0$  puts pressure on  $r_2$  to rise as well. However, there is a money market effect as well - The  $r_0$  rise reduces local demand for money (the model assumes that money demand varies inversely with all three interest rates) and puts pressure on  $r_2$  to *fall* to clear the money market. Thus a rise in  $r_0$  sets off conflicting forces on  $r_2$  and the eventual change depends on the relative strengths of these forces. Graphically, the final change depends on the slopes and relative shifts of  $W^*W^*$  and  $M^*M^*$  in Fig. 3.11 of Chapter 3. This particular diagram shows a net *fall* in  $r_1$  and implies that  $r_1$  and  $r_2$  fall as well, due to symmetry. The actual change in  $r_2$  is indeterminate however.

The sign of  $b_5$  will be discussed after coefficient  $b_6$  has been discussed, for reasons of economy. Both expected signs are negative for very similar reasons.

Firstly, a mistake in Allen and Kenen's definition of the  $r^2r^2$  curve must be pointed out. On page 435, their equation for the  $r^2r^2$  curve gives a *positive* expected coefficient for  $b_6$ ,

whilst  $b_5$  is shown as negative and the corresponding coefficients for the  $r^1r^1$  curve are also given as *negative*. Now there is no possibility of an asymmetrical effect of this sort, given the symmetry assumptions of the model, and one must conclude that the positive sign for  $b_5$  in the  $r^2r^2$  equation should be negative, as is the corresponding coefficient for  $b_5$  in the  $r^1r^1$  equation. To illustrate the negative relationship, consider the following: assume Southern disposable income increases, setting off an interval of saving. The positive saving adds to wealth, and this increases desired holdings of all three bonds and local money. Since both bond and money demands are homogenous of the first degree in wealth,  $M^2M^2$  shifts up and  $W^2W^2$  shifts down, making the initial part of the change in  $r_2$  indeterminate, as in the previous case. However, the chain of causality does not stop here. The increase in Southern demand for  $B_1$  will shift  $W^1W^1$  down and reduce  $r_1$ , raising *Northern* demand for  $B_2$ , which is relatively more attractive. As demand for  $B_2$  increases,  $W^2W^2$  shifts down again, dragging  $r_2$  below its previous level since there is no money market effect this time. The expected sign of  $b_6$  is thus *negative*, both intuitively and by demonstration.

It should thus be clear as to why the expected sign of  $b_5$  is *also* negative. Above it was shown that  $r_1$  would fall for an increase in Southern saving, by virtue of the bond market effect. Invoking symmetry, it is thus clear that the effect on  $r_2$  of an increase in Northern saving will also be negative.

Finally, the positive expected sign of  $b_7$  must be explained. Under the model, deficit financing is undertaken by issuing the home bond, in this case  $B_2$ . As the supply of  $B_2$  increases, then, its traded price falls, raising its return and putting upward pressure on the local interest rate. Therefore the supply of local bonds is positively related to the interest rate.

The exogenous variables have bars over them, all others are endogenous *according to the assumptions of the model*. Where these assumptions appear unrealistic in the context of the real model, they will be changed. The intuitive reasoning behind the new assumptions about exogeneity and endogeneity will be given when the econometric variables are discussed below.

The equation is already in the reduced form, thus suggesting that its solution requires a full simulation of the simultaneous model summarised by Equations 44, 45 and 46 in Chapter 3. This would be the case if it were not possible to modify the model and increase the proportion of exogenous variables to allow direct estimation of the  $r^2r^2$  equation as if it were a structural equation. This is in fact possible, since the discrepancy in sizes of the Swaziland and South African markets implies that certain 'endogenous' variables are actually exogenous to Swaziland. As was discussed in Section 7.3.4, 'integration' as it is understood in the context of the theoretical model would appear not to be the case in the CMA, since there is no true interdependence and interaction of markets. Rather, there appears to be a one-way dependence of the Swaziland markets on the larger and more sophisticated South African markets, and this implies that many of the variables of the model are not mutually determined, as would be the case if the countries *were* truly interdependent.<sup>95</sup> These considerations affect the way the theoretical model is interpreted and applied, and, if anything, permit its simplification. As will be seen, direct estimation of Equation 7.1 is possible, since many of the variables can be interpreted as exogenous for the reasons given.

#### 7.4.3.2 *The Estimated Relationship*

Thus the assumptions of endogeneity made under the model are simply not realistic in the context of the CMA, and certain variables that will be listed below will hence be treated as exogenous. For the purposes of estimation, the variables in Equation 7.1 above will be designated and interpreted as follows:

- $r_2$       Called SWINT, the endogenous Swaziland interest rate. Two measures of SWINT are used, SWINT1 is the Swaziland Central bank discount rate and SWINT2 is the Swaziland prime overdraft rate. Both are tested but the final model will utilise the better of the two.

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95. Such as would be the case if the countries were of similar economic size, as is the case in the Allen-Kenen model.

- $r_1$  SAINT is the exogenous South African interest rate, also interpreted as SAINT1 and SAINT2. SAINT is exogenous in the estimated model for the reasons given above.
- $r_0$  The world interest rate, WINT2, is the United Kingdom treasury bill rate.
- $\pi$  EXR is the nominal South Africa/UK exchange rate in units of the foreign currency. Thus the expected sign of EXR will be opposite to that of  $\pi$ , since the exchange rate under the model is designated in units of the local currency. EXR is also exogenous.<sup>96</sup>
- $B_2^{ct}$  Combined central bank holdings of the Southern bond will be interpreted as SWOMO, Swaziland central bank holdings of Swaziland government stocks and bonds. Changes in this variable can thus be interpreted as open market operations, and its influence will give an indication of the ability of Swaziland monetary policy to affect SWINT. It is exogenous.
- $W^{hs}$  South African savings, SASAV, are exogenous to the model.
- $W^{hs'}$  Swaziland savings and time deposits, SWSAV, are potentially endogenous, however it is not deemed a major violation to treat them as exogenous initially. SWSAV will certainly be comprised of a large proportion of corporate and government deposits and the role of SWINT in influencing savings from these sources is less certain.<sup>97</sup>
- $B_2'$  Total Swaziland government stocks and bonds outstanding are called SWBOND and are exogenous under the theoretical model. It is possible that

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96. Since events in Swaziland are unlikely to have any significant effect on the rand/pound exchange rate, given Swaziland's economic size.

97. In the theoretical model,  $W^{hs'}$  is *household* saving, and it responds to the same set of variables as do bond and money demand. The relevance of this behaviour to the Swazi environment is in doubt. See also Section 7.3.2.2 above.

they are not truly exogenous under the estimated model, and this possibility will be looked into.

Tables of all data series are given in the Appendix. For the econometric work, all series have been converted to real terms, this is in keeping with the fundamentals of the Allen-Kenen model, which does not permit analysis of inflation as a process. Allen and Kenen point out that:

“ ... the way in which our model is constructed - with stationary expectations, the continuous clearing of all markets and a well-defined stationary state - precludes consideration of inflation as a process. Prices do move up or down in response to disturbances, but these are once-for-all price changes, even though they are drawn out over time.” (p201)

The question arises as to the choice of an appropriate deflator. It was decided to use the Swazi consumer price index (CPI) for the Swazi data, this being the only available Swazi price index and also the index normally used to calculate ‘inflation’. For the sake of consistency, the South Africa CPI was thus used for the South African data.

Of the series, SWOMO, SASAV, SWSAV and SWBOND were simply deflated by the CPI's, becoming SWOMOR, SASAVR, SWSAVR and SWBNDR respectively. However, EXR was converted into a bilateral real exchange rate as follows:

$$RER = (SAPRIC/UKPRIC).EXR$$

Where SAPRIC and UKPRIC are the South African and British consumer price indices, respectively. SWPRIC is the Swazi CPI. SAPRIC, SWPRIC and UKPRIC were then used to generate SAINF2, SWINF2 and UKINF2, the year-on-year inflation rate indices for the three countries. The real interest rates SAINTR, SWINTR and WINTR were then

calculated by simply deducting the inflation rate series from the interest rate series SAINT2, SWINT2 and WINT2.<sup>98</sup>

The final model has the form:

$$\begin{aligned} \text{SWINTR} = & \beta_0 C + \beta_1 \text{SAINTR} + \beta_2 \text{RER}_{t-3} + \beta_3 \text{WINTR} \\ & + \beta_4 \text{SWSAVR}_{t-4} + \beta_5 \text{SWBNDR}_{t-2} \end{aligned} \quad (7.2)$$

The econometric results, along with the relevant signs, are presented in Table 7.1 overleaf, however, before discussing them it is necessary to say something about the variables in Equation 7.1 that do not appear in the estimated equation:

#### SWOMOR :

Swaziland Central Bank holdings of the government bond are negligible. In July 1990, the last date for which there are figures, the Central Bank held only 6,8 per cent of total bonds outstanding. This was a recent purchase - for most of 1989 the Bank held no government bonds at all.

#### SASAVR :

This variable is insignificant in the determination of SWINTR: the other variables are able to explain most of its variation. This is probably due to the fact that, whilst Swaziland savings may end up in South Africa, it is unlikely that South African savings would be directed to Swaziland since there is no shortage of areas of application of such funds in South Africa.

The regression output indicates a satisfactory fit. The adjusted  $R^2$  indicates that together, the variables explain 75% of variation in SWINTR. The F statistic far exceeds 3,75, the critical value at the 95% confidence level, indicating that the overall regression and the  $R^2$  figure are highly credible. The Durbin-Watson (DW) statistic is comfortably within the

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98. Two other real interest rates were calculated for the countries, using different inflation rates. Firstly, a quarter-on-quarter inflation rate was generated and multiplied by four to generate a 'yearly' series. This was then subtracted from the nominal interest rate to generate the real interest rate. The other method was to generate a three-month moving average of the quarter-on-quarter inflation rate and convert to 'yearly' to generate the real interest rate. These series were less successful than the true year-on-year real interest rates however.

rejection band of 0,192 on either side of 2, at the 95% confidence level. At the 99% confidence level, DW is easily within the rejection band of 0,409 on either side of 2. Visual inspection of the residuals reveals no discernible indication of heteroskedasticity over the sample range, and a residual plot is included in the appendix to confirm this. Finally, all variables are significant at the 95% confidence level and three of them, SAINTR, RER and WINTR are significant at the 99% confidence level.

**Table 7.1      Asset Market Regression Results**

Sample: 1981.1 - 1989.2

34 Observations

Ordinary Least Squares // Dependent Variable is SWINTR

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT	2-TAIL SIG
C	31.5307320	12.1891780	2.5867807	0.015
SAINTR	0.8778325	0.1417072	6.1946934	0.000
RER(-3)	-31.8365520	11.0313800	-2.8859990	0.007
WINTR	1.1856268	0.4255876	2.7858588	0.009
SWSAVR(-4)	-0.1326961	0.0508108	-2.6115717	0.014
SWBNDR(-2)	-1.0045655	0.4882344	-2.0575475	0.049
R-squared	0.787041	Mean of dependent var		1.98549
Adjusted R-squared	0.749013	S.D. of dependent var		5.15631
S.E. of regression	2.583239	Sum of squared resid		186.84751
Durbin-Watson stat	2.062169	F-statistic		20.69620

Although the results in Table 7.1 are good, it is worth noting that a nominal version of the same regression produces even better results, with only RER being less significant in nominal form. This could indicate that, except for the exchange rate, economic agents act on nominal variables, and are subject to a degree of money illusion in the asset markets. This supposition seems tenable, given the nature of the variables. Unfortunately, however, there is no way to analyse this with the Allen-Kenen model.<sup>99</sup>

99. Also of interest, the  $R^2$  of the nominal regression is much higher, at 95,6%, implying that the real regression explains less well than the nominal regression. This need not be the case, if, as is likely, the additional 'randomness' of SWINTR is due to the effect of the inflation rate, since SWINTR is a function of SWINT2 as well as the inflation rate. At any rate, a lower  $R^2$  need not indicate a 'worse' model, since: "... in regression analysis, our objective is not to obtain a high  $R^2$  *per se* but rather to obtain dependable estimates of the true population regression coefficients and draw statistical



Turning to the variables themselves, it is plain that SAINTR plays a very important role in the determination of SWINTR. The relationship holds almost as strongly when SAINT1 and SWINT1 are used for SAINTR and SWINTR and it is clear that whichever SAINT is used, it remains the most important determinant of SWINT. The coefficient of SAINTR is approximately 0,88, indicating a strongly positive, near-unitary relationship between the real interest rates. Again, a *nominal* regression of Equation 7.2 shows an almost exact linear relationship, indicating the presence of money illusion.

The coefficient of SAINTR can be interpreted as the slope of the  $r^2r^2$  curve of Chapter 3, and since it is close to 1, we can infer a high degree of asset market integration between South Africa and Swaziland. Reasons have already been given why 'integration' in the theoretical sense does not apply strictly to the CMA, and these will not be repeated. However, the extremely high coefficient of SAINTR does suggest that the Swaziland capital market is highly integrated with South Africa's, and this is one of the points that this chapter set out to prove.

Recall that it was impossible, *a priori*, to specify the expected sign of RER due to the ambiguity of the combined money market and bond market effects. Thus the negative sign on RER in the regression could indicate that, for the CMA, the money market effect of an exchange rate change outweighs the bond market effect. This result should be interpreted with caution since it is unlikely that significant capital mobility existed between the CMA and the rest of the world over the sample period, as a result of disinvestment and financial sanctions. The negative sign on RER is probably a result of the monetary authorities' attempts to slow capital flight with high interest rates when these capital outflows were depreciating the rand.<sup>100</sup> Although external capital mobility is probably low, this need not affect intra-CMA capital mobility, which is the sort that characterises asset market integration. The fact that the Swazi interest rate had to rise when the rand depreciated implies that the asset markets are highly integrated, but it also shows up one

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inferences about them" (Gujarati, 1988, p.186). As will be seen, the real regression model is more dependable.

100. Gerson and Kahn (1988) identified capital flight as the most important determinant of real exchange rate change in South Africa over the eighties.

of the negative results of integration - that of the transmission of shocks within the monetary union.

The coefficient of WINTR, the real 'world' interest rate is positive, and its magnitude implies that a unitary increase will cause a 20% greater increase in SWINTR, *ceteris paribus*. One could interpret this result as the dominance of the bond market effect over the money market effect for interest rate changes; the reverse of the scenario for exchange rate changes, but for the reasons given above regarding external capital mobility, it is unlikely that the 'pure' mechanisms are operating. It is more likely, however, that they are operating correctly for world interest rate changes than for exchange rate changes, given the 'role' that has been allocated to the former by the monetary authorities for the combatting of capital flight. For world interest rate changes, however, changes in the local interest rates would be required to be sympathetic, assuming that the bond market effect is stronger than the money market effect.

The negative sign of SWSAVR is consistent with the theoretical relationship, but again, one must exercise caution in interpreting it. The coefficient  $b_6$  is negative due to the 'indirect' effect of savings changes on the Southern interest rate, the 'direct' effect is ambiguous because it depends on  $W^1W^1$  and  $M^1M^1$  (see Section 7.4.3.1 above). However, an estimated  $b_6$  could be negative because of the direct effect as well - if in reality the Southern bond market effect outweighs its money market effect. Due to the discrepancy in economic sizes between South Africa and Swaziland there is no possibility of the indirect effect from Swazi savings to SWINTR, therefore the regression result implies that the direct effect has been proven negative i.e. the bond market effect outweighs the money market effect. Positive Swazi savings add to wealth, increase the demand for assets, raise the supply of loanable funds and thus decrease the interest rate. The nature of this process also seems to support the four-period lag on SWSAVR. The overall finding of a stronger bond market effect seems reasonable, since the Allen-Kenen assumption of a money demand based primarily on *wealth* is somewhat heroic, and if only partially valid would be consistent with a weak money market effect.

Finally, SWBNDR is the least significant of the variables and has the wrong sign; for some reason the supply of local bonds is negatively related to the interest rate. This is

likely due to some endogeneity on the part of SWBOND - a high Swaziland interest rate (result of a high South African interest rate) means government will be obliged to pay higher rates of return on new issues of bonds, and will thus turn to other sources of finance. Thus the interest rate will have an inverse effect on the volume of bonds, and this is an example of the fiscal policy constraints of the monetary union. It also confirms the high level of integration of the Swaziland capital market with that of South Africa.

### **7.4.3.3 Making Use of the Results**

The results of the estimation of the asset market relationship can be used for both structural analysis and policy evaluation.

It has been demonstrated that the Swaziland capital market is closely linked to that of South Africa, and that this 'linking' resembles, but is not exactly like, the asset market integration described by Allen and Kenen. Nevertheless, whatever the nature of the integration, *the consequences for markets and policy implementation are the same*, i.e. the scope for independent monetary policy, at least by Swaziland, is limited. This is borne out by the fact that the Swaziland Central Bank does not attempt purchases or sales of the government bond at any significant level and likewise seems passive as regards direct manipulation of interest rates.<sup>101</sup> This section has shown that it may not have much choice in the matter<sup>102</sup> at extant levels of integration and, as has been pointed out elsewhere, the best option is therefore to participate in a *true* monetary union with South Africa and Lesotho.

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101. For the period analysed.

102. Cf. the comments under "Monetary Developments" in the 1989/90 Central Bank of Swaziland *Annual Report*, (1990, p.12): "... to encourage domestic borrowing, the prime lending rate was kept at a widening margin versus that prevailing in the Republic throughout the year." If the findings of this section are correct then this sort of practice - direct control over the interest rate - will not be tenable in the long run. Section 7.4.5 below addresses the issue of SA/Swazi interest rate differentials in more detail.

## 7.4.4 Goods Market Integration - Estimating the $Y^2Y^2$ Curve

### 7.4.4.1 *The Theoretical Relationship*

‘Goods market integration’, in the sense it has been used throughout this thesis, refers to the state of substitutability between the goods of two (or more) nations that comes about when there is high mutual trade between them. Like the bonds of the two countries, the goods are gross substitutes, and thus a price change in one market will lead to quantity adjustment in all others. The degree of intensity of the responses indicates the degree of goods market integration: as the quantity responses increase in proportion to the size of the price changes (i.e. the cross elasticities of demand are increasing), the level of goods market integration is said to be increasing. In perfect, or complete goods market integration there is no scope for price differentials since goods flows and market responses completely offset them. Thus prices and incomes move closer and closer together as goods market integration increases. In Fig. 3.2 the  $Y^2Y^2$  curve was used to depict the Southern goods market response to changes in Northern income, and it was shown that its slope approaches unity as integration increases. The logic behind this is the same as that behind the slope of the  $r^2r^2$  curve: as integration increases the differential between the individually-felt impacts for market specific disturbances declines. Thus at perfect integration both countries experience the same change in income for a disturbance, regardless of which goods market it arises in. An obvious consequence is that, as integration increases, the degree of insulation from the partner country’s policy (or disturbances) declines and offsetting policy becomes necessary. However the magnitude of required offsetting action also increases, until it becomes untenable. It is at this point that co-ordinated policy is called for - and this may lead to the creation of a monetary or fiscal union, especially if asset market integration is also high. The estimated model, which follows in the next section, attempts to establish the  $Y^2Y^2$  relationship so that conclusions can be drawn about these considerations.

The equation for the  $Y^2Y^2$  curve is given by Allen and Kenen (1980, p.433) as:

$$\begin{aligned} \partial Y' = & a_1 \partial Y + a_2 \frac{\partial \pi}{\pi} + a_3 \partial r_1 + a_4 \partial r_2 + a_5 \partial \bar{r}_0 + a_6 \partial W^h + a_7 \partial W^{h'} + a_8 \partial c_{02}^t \\ & + a_9 \partial \bar{G}_1 + a_{10} \partial \bar{G}_2 + a_{11} \partial \bar{G}_1' + a_{12} \partial \bar{G}_2' + a_{13} \partial \bar{D} + a_{14} \partial \bar{D}' \end{aligned} \quad (7.3)$$

Where  $Y'$  is Southern Income,  $Y$  is Northern income,  $W^h$  and  $W^{h'}$  are Northern and Southern wealth, respectively,  $\delta c_{02}^t$  is a total shift from Good 2 to Good 0,  $G_1$  and  $G_2$  are Northern government purchases of Goods 1 and 2 respectively,  $G_1'$  and  $G_2'$  are Southern government purchases of Goods 1 and 2 respectively, and  $D$  and  $D'$  are the Northern and Southern budget deficits, respectively.

All these variables have been encountered before and are also defined in Chapter 3. Again, the coefficients  $a_i$  are combinations of other parameters and are employed to simplify the expression. Their expected signs are as follows:

$$\begin{aligned} a_1 &> 0 & a_2 &> 0 & a_3, a_4 &< 0 & a_5 &> 0 & a_6, a_7 &> 0 & a_8, a_9 &< 0 \\ a_{10} &> 0 & a_{11} &< 0 & a_{12}, a_{13}, a_{14} &> 0 \end{aligned}$$

Signs of interest are:  $a_1$  - this is positive since goods market changes in one market are felt strongly in the other, due to goods market integration;  $a_2$  is positive since a depreciation ( $\pi$  increases) will cause expenditure switching;  $a_3$  and  $a_4$  are negative since an interest rate fall causes a depreciation due to capital outflows and this causes expenditure switching;  $a_5$  is positive because a rise in  $r_0$  results in a capital outflow and the consequent depreciation causes expenditure switching;  $a_8$  is negative since a shift away from Good 2 will have obvious negative effects on Southern income; the signs of the fiscal policy and wealth variables are self explanatory.

#### 7.4.4.2 The Estimated Relationship

As with Equation 7.1, direct estimation of Equation 7.3 is possible due to the special nature of Swaziland's 'integration' with South Africa (as discussed above, Section

7.4.3.1). In addition, all data series have been converted into real terms in keeping with the approach adopted in Section 7.4.3.2.

Since the meaning and interpretation of the three interest rates and the exchange rate (SWINTR, SAINTR, WINTR and RER) have already been given they will not be explained again here. The other variables need to be explained though:

Y' Swaziland real GDP is denoted SWGDPR

Y South African real GDP is denoted SAGDP1. To give meaning to its coefficient, however, it is scaled down to SAGDP2 the ratio of SAGDP1 to the ratio  $SAGDP1_{t=1}/SWGDPR_{t=1}$ . This means that in the regression on SAGDP2, both GDP series have the same initial value. This is done because in the theoretical model, both countries have the same economic size and thus  $a_1$  ranges from 0 (no integration) to 1 (perfect integration). Because South Africa is so much larger than Swaziland, straight regression of SAGDP1 on SWGDPR would yield a minuscule  $a_1$ . However, scaling SAGDP1 down gives a value for  $a_1$  that is meaningful in the context of the model and permits comparison with the value for  $b_1$ .

$W^{h'}$  and  $W^h$

Swaziland wealth, SWWR is defined as the sum of M2, foreign assets and bonds outstanding. This is the closest possible approximation to the definition given by Allen and Kenen (p.304; also Equation 3.5 above). South African wealth,  $W^h$ , is defined similarly for the sake of consistency and symmetry.

$\delta c^t_{02}$  This represents a total (North + South + World) switch of demand from the Southern good to the world good. The best interpretation of it would be to generate a variable that is the sum of Swaziland consumption, the bilateral Swaziland/South Africa balance of trade and the Swaziland/world balance of trade. In the event, both bilateral trade data and Swaziland consumption data

are scant<sup>103</sup> and only Swaziland/world trade data are available in any detail. It was thus decided to use SWBOTR, the real balance of trade, which, although it is not a perfect approximation of  $\delta c'_{02}$ , is still a good one. Any change in exports is a change in  $\delta c'_{02}$ , and any change in imports not associated with a parallel change in income is also a change in  $\delta c'_{02}$ . Thus most of the variation in SWBOTR is also variation in  $\delta c'_{02}$ .

$G_1, G_2, G_1'$  and  $G_2'$  :

Swaziland and South African real government expenditure on goods 1 and 2 respectively. Of these,  $G_2$  is unlikely and probably negligible if it does exist while  $G_1'$  is possibly more likely although difficult to get detailed data for (as with Swaziland/South Africa trade data). Thus only  $G_1$ , SAGOVR and  $G_2'$ , SWGOVR are used in the estimation.

$D, D'$  :

The South African and Swaziland real budget deficits, respectively. Inspection of the definitional equation, Equation 3.31 above, reveals that  $G$  and  $T^h$  are the most important components of the deficit. This fact suggests caution in using either deficit in the estimation, since they will be collinear with SWGOVR and SAGOVR.

The most successful model has the form:

$$\begin{aligned} \text{SWGDPR} = & \alpha_0 C + \alpha_1 \text{SAGDP2} + \alpha_2 \text{RER}_{t-3} + \alpha_3 \text{SAINTR}_{t-3} \\ & + \alpha_4 \text{SWGOVR} + \alpha_5 \text{SWBOTR}_{t-3} \end{aligned} \quad (7.4)$$

Besides SWWR, all omitted variables proved insignificant in the estimation of SWGDPR. SWWR was omitted in order to make room for SAGDP2, with which it is highly correlated, and because it is seen as less important as an explanatory variable, due to suspected endogeneity. This is most likely true of the M2 component of SWWR.

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103. Data are available, but they are yearly data only and incomplete over the decade.

The initial regression of equation 7.4 produced good looking results, but the DW statistic fell into the 'inconclusive' band at the 95% confidence level. Since the  $R^2$  was very high it was decided that a degree of inertia in the quarterly data rather than specification bias was the likely cause. It was assumed that autocorrelation was of the first order type, and the data were transformed using the Durbin two-stage method to estimate the coefficient of autocorrelation.<sup>104</sup> The transformed variables have been prefixed with 'X's to distinguish them from the original variables (thus some 'R' suffixes have had to be dropped). Both sets have been included in the appendix however. Besides raising DW, the generalised least squares method reduced the  $R^2$  and F statistics somewhat, but this was expected.

The econometric results are presented below in Table 7.2.

**Table 7.2 Goods Market Regression Results**

SAMPLE: 1981.3 - 1989.2

32 Observations

Generalised Least Squares // Dependent Variable is XSWGDP

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT	2-TAIL SIG
C	-11.7599870	8.4710092	-1.3882628	0.177
XSWGGOV	4.3976212	0.6097724	7.2119057	0.000
XSAINT(-3)	-0.4924982	0.1132543	-4.3486041	0.000
XSAGDP	0.6317232	0.1494271	4.2276355	0.000
XRER(-3)	-25.6110600	6.4265958	-3.9851673	0.000
XSWBOT(-3)	0.0579992	0.0148954	3.8937698	0.001
R-squared	0.914031	Mean of dependent var	61.89910	
Adjusted R-squared	0.897498	SD of dependent var	5.99188	
SE of regression	1.918353	Sum of squared resid	95.68206	
Durbin-Watson stat	1.903773	F-statistic	55.28680	

104. Although the Cochrane-Orcutt method is generally more widely used, in this case convergence could not be achieved after the requisite number of iterations. The Cochrane-Orcutt two-step and Durbin-Watson techniques were also attempted, but they tended to *overcorrect* the autocorrelation and thus reduce the significance of the regression.



Again the results indicate a good fit. The  $R^2$  and F statistic indicate that the variables explain SWGDPR well, whilst the DW comes out at above 1,81, the relevant upper limit for acceptance. Visual inspection of the residuals and a residual plot (see the Appendix) suggest that heteroscedasticity is not a problem. All variables, with the exception of the constant term, are significant at the 99 per cent confidence level.

As with the asset market estimation, the above results indicate that integration between South Africa and Swaziland is significant. The variable of most interest is obviously SAGDP2, which is the third most significant in the regression.<sup>105</sup> If SWGDPR and SAGDP2 were the GDP data sets for two completely unconnected countries,  $\alpha_1$  might still exist and indeed, may exceed the value generated above. All this would tell us is that one country grew faster, or slower than the other, it would not imply that *integration* existed between the two countries. However, in the present situation it is *known* that integration exists, therefore the decision has been taken to test a model of integration against the data and ascertain the *extent* of this integration. The coefficient of SAGDP2 is thus an important indicator of the extent of integration - it is not a coincidental or spurious value. Since we know with confidence that Swaziland is integrated with South Africa's goods market - facts like its membership of SACU and its high level of trade with South Africa suggest this<sup>106</sup> - we can confidently interpret the coefficient of SAGDP2 as a measure of the integration of the Swaziland goods market with South Africa's. Indeed, this coefficient gives us some idea of the slope of the  $Y^2Y^2$  curve - the curve that, in the Allen-Kenen model, reflects the consequences of integration in goods markets on national incomes. Since  $\alpha_1$  is 0,632 we conclude that, were South Africa and Swaziland of similar size (in this case reality must be altered to suit the model!), every additional rand earned as national income by South Africa would increase Swaziland national income by approximately 63 lisente *as a direct result of the integration of the markets of the two* - both asset and goods. The  $Y^2Y^2$  curve has thus been estimated - it has a slope of approximately 0,63.

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105. For the purposes of the discussion, the original names, rather than the 'X' names will be used. This prevents confusion between for example, SAGDP1 and SAGDP2.

106. Swaziland/South Africa imports were 81 per cent of total in 1985 (*Swaziland Annual Statistical Bulletin*, 1985) while South Africa/Swaziland exports were 38,8 per cent of the total in 1986 (*Swaziland Annual Statistical Bulletin*, 1986).

The South African real interest rate, SAINTR has the correct sign and is highly significant when lagged by three periods. What is most interesting about SAINTR's effect on SWGDPR is that it completely outweighs SWINTR's effect - which is insignificant and thus omitted from the regression. It has already been established that SWINTR is largely determined by the South African capital markets, but this result illustrates pristinely how South African capital markets impinge on real economic activity in Swaziland as well. In conventional macroeconomics, the negative relationship between the interest rate and GDP arises from the investment effects of interest rate changes. Since the Allen-Kenen model does not accommodate capital accumulation, this conclusion does not apply to the theoretical model. Here an interest rate change forces an exchange rate change in the same direction<sup>107</sup>, and the exchange rate change alters income through expenditure switching. This is the 'indirect' channel of influence of the interest rate on absorption. There is also a direct channel though - an interest rate change alters savings in the same direction, and thus there is an *opposite* change in absorption. The true mechanism lying behind the coefficient of SAINTR probably incorporates all three effects, and it is beyond the scope of this essay to attempt to estimate a detailed CMA transmission mechanism. What *has* been proved is that the intra-CMA transmission mechanism is strong, and an obvious consequence of goods and asset market integration.

When RER is lagged by three periods, its negative effect on SWGDPR is strongest, and this effect is consistent with the predictions of the model. As pointed out elsewhere, an exchange rate change causes expenditure switching, which pushes income in the opposite direction to the exchange rate change. The high significance and coefficient value of RER can be attributed to the stimulatory effect the rand/lilangeni depreciation had on SWGDPR. If a greater percentage of Swaziland exports went to South Africa (see Footnote 106 for relevant figures), Swaziland would have likely benefitted less from the depreciation. On the other hand, the high percentage of Swaziland/South Africa imports has meant that Swaziland has not suffered significantly from the depreciation in terms of rising import costs.

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107. Note that a depreciation is understood as an 'exchange rate fall' for the purposes of analysis in this chapter.

Government spending, SWGOVR, has a strongly stimulatory effect on SWGDPR, and this is possibly one of the reasons Swaziland has been able to grow faster than South Africa over the decade. The government expenditure multiplier is given by the value of  $\alpha_4 - 4,4$ . By contrast, the lagged SWBOTR has a small effect on SWGDPR: an improvement in the balance of trade will only increase GDP by 0,06 of the improvement. It would have been interesting, but for the lack of data, to have determined the full effect of  $\delta c'_{02}$ . This latter variable probably accounts for some of the unexplained variation in SWGDPR.

#### 7.4.4.3 *Making Use of the Results*

The model has permitted structural analysis of the Swaziland income function and has revealed that goods market integration - as a result of high trade levels between Swaziland and South Africa - means that South African income changes have an important impact on Swaziland income. In terms of policy evaluation, this suggests that a degree of policy dependence on the part of Swaziland does exist. Specifically, if South Africa was similar in economic size to Swaziland, South African fiscal or monetary policy that changed South African GDP by  $x$  rand would change Swaziland GDP by  $0,63x$  emalangeni and would require offsetting fiscal policy on the part of Swaziland to the extent of  $0,63(1/4,4)x = -0,14x$ . If the South African fiscal multiplier was similar in size to that of Swaziland, the offsetting policy would be approximately 63 per cent of the size of the original South African fiscal operation. Although the actual offsetting policy coefficient depends on the size of the coefficient of SAGDP1, not SAGDP2, the scaled-down version is considerably smaller (about 130 times smaller). Note that it is not the fact of a minuscule coefficient that determines the significance of offsetting policy but the *relative* size of the changes in policy operation and consequent GDP change. For example, if South Africa conducts a fiscal operation of magnitude  $x$  that causes a change in GDP of  $4,4x$ ,<sup>108</sup> the change in Swaziland income is  $0,00485(4,4)x$  and offsetting policy is thus:<sup>109</sup>

$$0,00485(4,4)x/4,4 = 0,00485x$$

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108. We are assuming here that the South African fiscal multiplier is the same as the estimated Swaziland fiscal multiplier.

109. The figure 0,00485 is  $0,63/130$ , the approximate scaled-down coefficient of SAGDP2.

Whilst 0,00485 appears insignificant,  $x$  is a large figure, and thus  $0,00485x$  is still a large change in government spending, *relative to the size of the economy*. In fact it is still 63 per cent of the size of the South African operation, in relative terms.

#### 7.4.5 Conclusion to the Model

At the outset it was pointed out that there were a number of important shortcomings with the model, and particularly with its adaption to the CMA situation. The estimated models appeared successful, although it was pointed out that certain of the theoretical relationships were unlikely to hold in their true sense in the CMA. Nevertheless, the undertaking would have been worthwhile had it only amounted to an attempt to assess the degree of integration between the members of the CMA, since this is the starting point of an analysis of monetary union in Southern Africa. To the extent that this has been achieved, the 'quantitative' hypothesis of the model has been proven. However there was also a 'qualitative hypothesis': that this integration was significant enough to have important bearing on the response of Swaziland to South African policy and disturbances. This has also been achieved in that it has been shown that Swaziland faces both fiscal and monetary policy constraints due to policy dependence on South Africa. Swazi fiscal policy must be large to offset the effect of changes in South Africa economic activity on Swazi economic activity, if this is desired. On the other hand, asset market integration and institutional links have resulted in a very close relationship between South African and Swazi interest rates for the period analysed. The Swazi capital markets are not sophisticated enough to permit open-market operations, and so an absence of these cannot be ascribed to policy interdependence. However, the Swazi central bank *is* capable of administering the interest rate directly, as does the South African Reserve Bank, although failure to take 'market' conditions into account could lead to financial crises, especially in the presence of capital mobility.<sup>110</sup>

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110. Whittaker and Theunissen (1987) have clarified and analysed the nature of monetary policy in South Africa, and have shown that the interest rate is the primary policy instrument of the Reserve Bank. This fact need not affect the results of the model, so long as the Reserve Bank reacts in adjusting the interest rate approximately in the same way as an endogenous interest rate would react to economic events.

For most of the period analysed by the model, SAINT and SWINT diverged minimally, implying a high degree of asset market integration. However, from the first quarter of 1989, the Swazi Central Bank introduced a larger differential by keeping the lending rate as much as six percentage points below that of South Africa. However, a large differential should not be sustainable for any length of time if the asset markets are in fact fairly well integrated. Table 7.3 below presents statistics on Swazi monetary variables that should throw some light on the issue. The variables are given in nominal terms since the last complete year for which Swazi CPI data are available is 1989, but the data set must include 1990 data as well. To get an *idea* of real magnitudes, however, the next best option is to 'read' the Swazi data at some aggregate inflation rate differential. The aggregate inflation rate differential for the second half of the decade was 2,86%, and this must be extrapolated the data in Table 7.3, primarily to gauge the real interest rate differential.<sup>111</sup> To assess the meaning of a 'significant' differential, one must also take into account the impact of the transactions, information and communication costs of transferring investments across borders. If it is assumed that a real differential of two or less is insufficient to justify an intra-CMA transfer, then a 'crucial' differential, in terms of Table 7.3, becomes one which is greater than five percentage points.<sup>112</sup>

The general trend of the differentials in Table 7.3 is towards 'crucial' levels from 1989, and this therefore is the period of interest. The implications of integration are that these differentials should not be sustainable. Rather, a significant differential would be expected to generate equilibrating or partially equilibrating capital flows.

Examining Table 7.3 more closely, it seems clear that the lending and deposit rate differentials of 1989 and 1990 have had important effects. In 1990, private sector claims (CPS) grew massively by 38% whilst total private deposits declined in real terms by at least 10%, reducing the overall liquidity ratio by 19% from 1988. This could be explained by financial integration - as the differential increases, lenders tend to lend across border and borrowers borrow locally, reducing the local availability of loanable funds. This is the

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111. The mean of SAINF2 over quarterly data, 1985 to the first quarter of 1990 is 15,59%; the corresponding mean of SWINF2 is 12,73%; the difference between them is 2,89%.

112. Or less than one, but the differentials in table 7.3 which are less than one are only fractionally thus, therefore they will not be considered.

analog, in the Allen-Kenen model, of portfolio alteration. One problem is that there is no way of gauging intra-CMA funds flows from the available macro data, and it must be assumed that a large reduction in local private deposits, as in 1990, was due to cross-border depositing at higher interest rates. Similarly it is possible that the large increase in CPS was accounted for by cross-border borrowing. As has been pointed out, the provisions of the CMA agreement permit the free flow of funds within the CMA and provide for full convertibility of the currencies.

**Table 7.3: Swazi Monetary Trends: 1984 - 1990**

	1984	1985	1986	1987	1988	1989	1990
Dep. Rate (SW)	16.50	10.19	5.75	4.81	9.23	8.92	8.85
Dep. Rate (SA)	18.29	17.02	10.98	8.70	13.54	18.13	18.86
Dep. Rate Diff.	1.79	6.83	5.23	3.89	4.31	9.21	10.01
Demand Dep. (SW)	48.74	56.55	86.60	94.94	110.42	131.67	146.90
Time + Savings Dep(SW)	161.15	166.84	202.55	240.46	319.26	435.43	430.19
Total Private Dep. <sup>A</sup>	209.89	223.39	289.15	335.40	429.68	567.10	577.09
%Change in Pvt Dep	18.09	6.43	29.44	16.00	28.11	31.98	1.76
Lending Rate (SW)	22.00	17.00	12.50	11.88	15.00	14.50	14.50
Lending Rate (SA)	22.33	21.50	14.33	12.50	15.33	19.83	21.00
Lending Rate Diff.	0.33	4.50	1.83	0.62	0.33	5.33	6.50
Claims on Pvt Sect <sup>B</sup>	152.54	151.94	161.24	202.62	280.87	335.83	465.99
%Change in CPS	6.48	-0.39	6.12	25.66	38.62	19.57	38.76
Domestic Liquidity Ratio <sup>C</sup>	1.38	1.47	1.79	1.66	1.53	1.69	1.24

SOURCE: *International Financial Statistics*, September, 1991

NOTES:

<sup>A</sup> Demand deposits plus time and savings deposits. Entry for 1983 has been omitted.

<sup>B</sup> Entry for 1983 has been omitted.

<sup>C</sup> Ratio of total private deposits to claims on private sector.

The figures for deposits and lending for 1989 are not consistent with those for 1990, despite the large differential, and this must be explained. In 1989, private capital flows to Swaziland increased by approximately 195%, a result of sharply increased direct investment, reinvestment of earnings by foreign countries and new loans (Central Bank of Swaziland, Annual Report 1990, pp.8-9). These capital inflows were therefore of a long

term nature, and not directly connected to interest rate movements. The capital inflow increased the money supply, as evidenced by a sharp rise in total private deposits for that year, and unrelated to the interest rate differential. In fact this permitted the maintenance of the differential in order to reduce liquidity which had risen by 10,5% from 1988. Assuming a more moderate capital inflow in 1990<sup>113</sup>, it is easy to see why the interest rate differential impacted on domestic liquidity as expected in that year. The implication of the events of 1990 is that, in the absence of exogenous capital inflows, Swazi private liquidity is partially dependent on its interest rate differential with South Africa, confirming the existence of asset market integration

**Table 7.4: Swazi Monetary Trends: December 1989 - March 1991**

	89.4	90.1	90.2	90.3	90.4	91.1
Dep. Rate (SW)		8.92	8.92	8.40	8.85	10.25
Dep. Rate (SA)		19.08	19.50	18.62	18.25	17.63
Dep. Rate Diff.		10.16	10.58	10.22	9.40	7.38
Demand Dep. (SW)	131.67	117.09	139.07	124.61	146.90	138.93
Time + Savings Dep(SW)	435.43	454.04	498.18	521.41	430.19	480.65
Total Private Dep. <sup>A</sup>	567.10	571.13	637.25	646.02	577.09	619.58
%Change in Pvt Dep		0.71	11.58	1.38	-10.67	7.36
Lending Rate (SW)		14.50	14.50	14.50	14.50	15.75
Lending Rate (SA)		21.00	21.00	21.00	21.00	20.67
Lending Rate Diff.		6.50	6.50	6.50	6.50	4.92
Claims on Pvt Sect	335.83	410.05	493.11	563.02	465.99	541.63
%Change in CPS		22.10	20.26	14.18	-17.23	16.23
Domestic Liquidity Ratio <sup>B</sup>		1.39	1.29	1.15	1.24	1.14

SOURCE: *International Financial Statistics*, September, 1991

NOTES:

<sup>A</sup> Demand deposits plus time and savings deposits.

<sup>B</sup> Ratio of total private deposits to claims on private sector.

113. Exact data for Swazi capital inflows for 1990 are not available at time of writing, however the increase in net foreign assets in 1990 was only *half* the size of the 1989 increase, suggesting that, *ceteris paribus*, the 1990 capital inflow was more moderate.

Table 7.4 shows the same monetary variables over the period March 1990 to March 1991. For that period there was only an 8% nominal increase in total private deposits, but a 32% nominal increase in CPS. The fact that the Swazi interest rates increased in 1991 even though South Africa rates decreased, thereby reducing the differential just below the 'crucial' level, is thus not unexpected.

The models, therefore, seem to have told us something about integration in the CMA that was not known before, at least in quantitative terms. In graphical terms, the scatter diagrams for the  $r^2r^2$  and  $Y^2Y^2$  curves are given in the appendix, as well as line graphs indicating the accuracy of the fitted values for SWINTR and SWGDPR (Figs. A.3 and A.6).

## 7.5 CONCLUSION

Despite the limitations of the model it has provided valuable insights into the state of goods and asset market integration between South Africa and Swaziland and the consequences of this integration for policy and disturbance transmission through the CMA. Asset market integration is extremely high, and forbids effective independent monetary policy by Swaziland (and Lesotho by implication). Whilst goods market integration is less intense, it also introduces a degree of policy dependence on the part of Swaziland and means compensatory policy is necessary if that country does not wish to be 'dragged along' with South Africa's fluctuations in economic activity, whether policy-induced or otherwise. South Africa, due to its size, experiences no such effects and can thus not be expected to pay attention to them. It is the responsibility of Lesotho and Swaziland to bring these issues to the attention of the South African authorities so that dialogue can be initiated on the creation of a true monetary union with representation for the Two. Thus it will be that their interests are also taken account of when policy is implemented.

South Africa does not experience integration costs as do the Two, and its motivation for the increased unification is therefore not directly economic. A minority-ruled South Africa was motivated to enter into integration schemes with its neighbours in order to score political mileage from the apparent cooperation with other African states (as with SACU); a majority-ruled, democratic South Africa might be motivated by genuine altruism. It is



not clear at this stage whether a new South Africa would be prepared to step up, or even maintain integration schemes with its neighbours, but if it became part of the PTA and SADCC this would certainly be on the agenda. The integration of South Africa with the BLS countries would then in all likelihood increase, as extant structures are built on in order to facilitate greater Southern African integration.

Having concluded in favour of increased monetary unification, it is necessary to reassess the opposing views that the Two, or at least Swaziland, would be better off in a situation of greater monetary autonomy. This is undertaken in the following penultimate chapter.

## CHAPTER 8

### ***THE DEBATE FOR MORE OR LESS MONETARY UNIFICATION: THE CMA OR FLEXIBILITY?***

#### **8.1 INTRODUCTION**

One of the most compelling arguments for withdrawal from the CMA by the Two is the case of Botswana. Over the last decade, Botswana has consistently experienced lower interest and inflation rates, higher external reserves and a higher external currency value than the members of the CMA, and the question that arises is: could Swaziland or Lesotho benefit similarly if they withdrew from the CMA? Botswana's currency is flexible against the rand and it has imposed exchange control between itself and South Africa; it is therefore as financially independent from South Africa as is Zimbabwe, despite being a member of the SACU. In order to sustain the conclusions reached in the precious chapter, therefore, it is necessary to examine the case of Botswana in detail and investigate the following questions:

- (1) How has Botswana benefitted from monetary autonomy?
- (2) How important is Botswana's flexible exchange rate? And,
- (3) Is the case of Botswana transferable to the Two?

The main task of this chapter will be to address these questions. However, before this is done, an attempt will be made to briefly describe the nature of South Africa's financial crisis - since one of the results of integration has been the forced participation by the Two in this crisis. Secondly, the theoretical case for monetary integration will be briefly restated, and further arguments relating to the choice between fixed and flexible exchange rates for developing countries will be examined. Finally, after the Botswana case has been analysed, the debate for Swaziland's withdrawal will be briefly reassessed, and certain of the possible advantages of continued participation in the CMA will be examined.

## 8.2 SOUTH AFRICA'S FINANCIAL CRISIS

The most important motivating factor for CMA withdrawal by the Two has been their forced participation in the South Africa financial crisis of the 80's. Over this period. The rand lost more than half its value, external debt reached crisis proportions and South Africa became a capital exporter. In addition, interest rates fluctuated wildly as the Reserve Bank vacillated between too strict and too lenient monetary control.

Firstly, the exchange rate depreciation that began at the beginning of 1981 is surely the most 'prominent' of SA's financial woes. In brief, the most important negative effects of the depreciation have been:

- (a) inflation as the cost of imported finished and intermediate goods rose, and,
- (b) a sharp increase in the foreign currency value of external debt, leading to a BOP crisis.

In addition, Kahn (1989) has shown that the depreciation disadvantaged wage earners by redistributing wealth away from them toward owners of capital, and by increasing the profit share in national income relative to the wage share.

Secondly, SA's loss of capital because of political crises and sanctions / disinvestment has strengthened the resolve of the monetary authorities to maintain a low value of the exchange rate and to promote high interest rates. The low value of the exchange rate discourages repatriation of capital by foreigners, due to capital losses, and also promotes export competitiveness which can help alleviate the foreign exchange shortage. High interest rates relative to other investment centres helps slow capital flight and encourages offshore trade financing, protecting the foreign exchange reserves.

By virtue of their membership of the CMA, Swaziland and Lesotho have been subjected to these SA-based financial shocks and therefore the possibility of them having avoided them (and any future shocks) by withdrawing from the CMA seems to be an important

issue for the debate. What is more important, however, is whether these 'shocks' actually impacted negatively on the Two or whether they experienced minimal effects or even benefitted from them. Furthermore, it is possible that these effects were unavoidable merely by altering the exchange rate regime, and this will also be looked into. Finally, there is also the strong possibility that these shocks were 'once-off', at least in terms of degree, and thus would not warrant withdrawal from the CMA by the Two.

### 8.3 THE THEORETICAL CASE FOR FIXITY

Monetary integration arrangements are entered into by nations because such arrangements tend to have the following positive results (discussed in Chapter 2):

- (1) Monetary integration promotes investment in the bloc;
- (2) it enhances allocative efficiency;
- (3) it enhances goods and asset market integration, i.e. it increases the substitutability of candidate nations' assets and goods;
- (4) it permits reserve pooling and thus reduces opportunity costs of external transactions; and
- (5) it is a sensible option between certain nations since the usefulness of national currencies under flexible exchange rates declines the smaller and more open are the countries.

Items (1) - (4) are 'positive' in that they amount to gains that the candidate nations can expect with monetary integration, item (5) is 'negative' in that it amounts to a 'loss' or inefficiency that can be avoided through monetary integration.

In addition to these factors, however, further insights into the issue can be gleaned from the literature on exchange rate regime choice for developing countries. The issue of the *degree* of fixity can also be elucidated by brief reference to this literature.

An important advantage of exchange rate flexibility was given, in the early literature, as the freedom to choose the optimal home inflation rate. In pointing out that, in the absence of money illusion, this freedom will not permit adjustment of the unemployment rate, Wickham (1985, p.262) shows that it is not given that flexibility will always permit greater control over internal balance. This is, in fact, a restatement of point (5) above.

The freedom to choose the home inflation rate may also be desired so that the gains accruing to taxation on money balances are optimised. This suggests that the gains increase with the inflation rate. However, misuse of monetary anatomy for this purpose promises high welfare costs and resource misallocation, whilst the long term benefits are less clear. The possibility of entrenching inflation and accelerating it is strong and thus

“ ... for some developing countries the constraints on internal policies implicit in the maintenance of a fixed link to an external standard may not be unwelcome because they provide a framework within which to organise consistent monetary, fiscal and demand-management policies” (Wickham, 1985, p.262)

Another advantage of pegging to an external standard is the reduction of exchange rate uncertainty and risks. Provided the small country pegs to the currency of the country *with which it undertakes most of its external transactions*, the risk faced by traders in exchange losses can be minimised (Wickham, 1985, pp.275-276). This can only benefit trade between the small country and the outside world. However, it will also benefit investment if the small country also has important financial links with the partner country, and this should be a consideration in the choice of the peg.

In opting for a peg, a country must also decide whether to peg to a single currency or to a basket of currencies (a multi-peg). The single peg stabilises the effective exchange rate less than a multi-peg does, since the multi-peg is an average of foreign exchange rates weighted according to trade volumes. Collier and Joshi (1989, p.102) argue that a multi-peg bestows greater insulation from third currency fluctuation (with a single peg) that would impact on the local economy as macroeconomic shocks. Thus a multi-peg is superior in terms of the attainment and maintenance of internal and external balance. As

far as the attainment of *microeconomic efficiency* (reduction of exchange risk and uncertainty) is concerned, Collier and Joshi (1989) are less certain, although it seems obvious that a single peg would be preferable the greater the volume of trade with the partner country. The same logic applies if financial integration is important. If there is a high degree of financial integration with one country, then a multi-peg would most likely reduce capital mobility since it would introduce exchange risk on investments and distort interest rates between the two countries. Thus a multi-peg is only better if financial integration with a single country is unimportant, and if the single peg consistently frustrates the attainment of internal and external balance.

A fully floating exchange rate is not regarded as a viable option for developing countries because of its effect of reducing anti-inflationary discipline and because of its tendency to instability. The inherent instability of a floating exchange rate is likely to result in consistent misalignment of the equilibrium exchange rate, adversely affecting internal balance and microeconomic efficiency. There are also almost no examples of this regime having been successfully implemented by a developing country (Collier and Joshi, 1989, pp.103-104).

The theoretical case for fixity for developing countries therefore seems strong, and individual circumstances would dictate the form that this takes - whether monetary union, single peg or multi-peg. Collier and Joshi (1989) argue that a *crawling* single or multi-peg is the best option 'on paper', but again, this assumes that the specialised case of monetary union, with its special advantages is not an option. It is argued here that the existence of the advantages of monetary union, which go beyond the facilitation of trade, support the implementation of the single peg as opposed to a multi-peg or a crawling-peg without monetary union.

## 8.4 THE CASE OF BOTSWANA

It becomes clear, even after cursory investigation, that Botswana is unique among sub-Saharan African countries. It is especially unusual in terms of its GDP growth rate,

external financial strength and domestic monetary stability. Table 8.1 below presents some statistics that illustrate these assertions. The table contains data for six low-income African countries (Mozambique, Kenya, Lesotho, Malawi, Zaire and Zambia) and four middle-income countries (Botswana, SA, Angola, Zimbabwe)(World Bank, 1990). Botswana is striking in that its GDP growth rate is at least three times greater than any of the others, its external debt is second lowest (also as a percentage of GDP), its import cover is nearly five times greater than the best of the others and its interest and inflation rates are lowest and second lowest, respectively.

**Table 8.1: KEY ECONOMIC VARIABLES FOR 10 AFRICAN COUNTRIES: 1988 (\$Million or %p.a.)**

	GNP/ CAP	GDP GRWTH	EXT DEBT	CURRNT ACC <sup>a</sup>	IMP COVER <sup>b</sup>	NET K FLOW	INFLA- TION	LEND RATE
Botswana	1010	11.4	499	309	17.7	40	10	7.83
South Africa	2290	1.3		1207	1.1	4	13.9	15.33
Angola				367				
Kenya	370	4.2	5888	-711	1.3	7	9.6	15
Lesotho	420	2.9	281	-130	1.2	21	12.2	13.67
Malawi	170	2.6	1349	-134	3.7	0	12.6	22.25
Mozambique	100	-2.8	4406	-733		0	33.6	
Zaire	170	1.9	8475	-888	1.4	11	56.1	
Zambia	290	0.7	6498	-234	1.2	0	33.5	18.39
Zimbabwe	650	2.7	2659	-56	2.2	4	12.1	13
Averages	607.8	2.8	3757	-100.3	3.7	9.7	21.5	15.1

SOURCE: *World Bank Development Report 1990*, World Bank

NOTES:

Growth rates and inflation rates are aggregates for the period 1980-1988

<sup>a</sup> Current account before official transfers.

<sup>b</sup> Import cover in number of months.

What is important in terms of this thesis is whether Botswana's *absence* from the CMA contributed in any way towards its strong economic situation. If so, then the question

arises as to whether Lesotho or Swaziland can benefit from a scaling down of their participation in the CMA. If this is the case then the recommendations of Chapter 7 - that monetary unification be enhanced or at least not scaled down - will appear substantially less credible. Thus the current section of this chapter has to evaluate the degree of Botswana's monetary independence and draw conclusions as to the implications for Swaziland's and Lesotho's participation in the CMA.

#### **8.4.1 The Nature & Implications of Botswana's Economy**

Botswana's economy is extremely undiversified. In 1989, mining and quarrying output comprised 51% of GDP, and diamond sales alone comprised 77% of total exports. From 1980 to 1989, the average annual increase in exports was 27%, reflecting the opening of a new diamond mine in 1982 (EIU, 1990). Besides being undiversified in output and export production, Botswana is also undiversified in its import sources - 79% of which came from South Africa in 1987. By contrast, only 4% of its exports went to South Africa in 1987, since diamond exports are sold via the Central Selling Organisation in Switzerland (Botswana Central Statistical Office, 1987).

The income generated by diamond sales has accounted for BOP surpluses since 1985, permitting Botswana to build up massive foreign exchange and foreign asset reserves. Botswana's external financial surplus distinguishes it markedly from other sub-Saharan African countries, and is the most important reason behind the relative success of its attempts to gain monetary autonomy from South Africa. Specifically, there have been two primary effects of the external financial surplus. One is the expansion of the local money supply and consequent excess liquidity in the banking sector (banks are the most important financial intermediaries). The other is the virtual absence of a BOP constraint to importation and foreign borrowing, since foreign assets exist in abundance. The financial surplus has thus permitted Botswana to adopt relatively lenient exchange control measures, and this is another distinguishing characteristic of Botswana's financial structure.

In 1986 a package was introduced which considerably relaxed exchange controls, placed ceilings on commercial bank interest rates and lowered central bank lending rates. The justification for the package was given as the excess liquidity in the banking system (Bank



of Botswana, 1989, p.24). However, as far back as 1976, the Botswana authorities had made clear the fact that they did not intend to use exchange controls as an important tool of economic policy (Harvey and Lewis, 1990, p.201). They had to wait, however, until conditions permitted the liberalisation of the exchange controls - Botswana's diamond sales increased substantially from the early eighties.

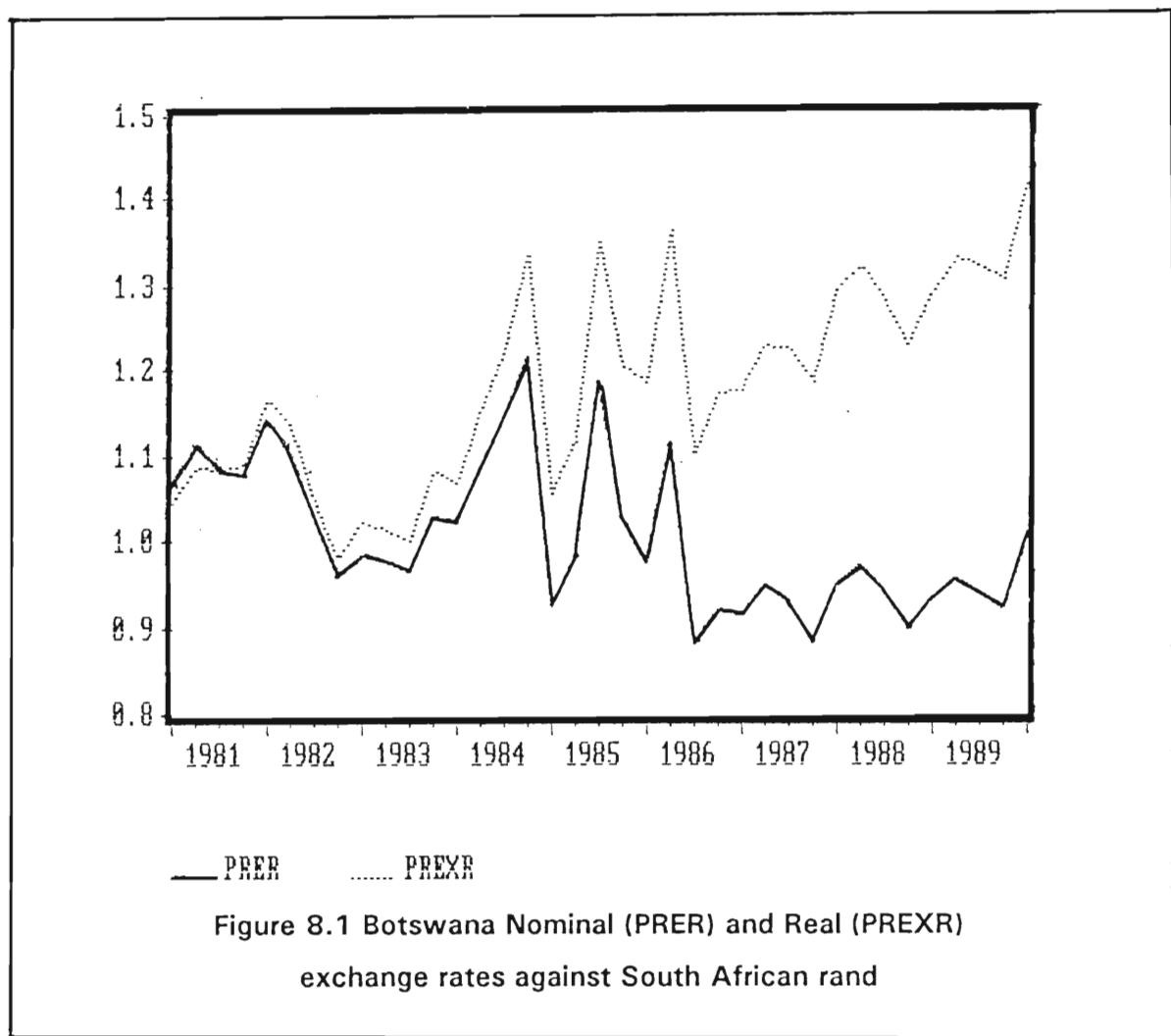
Partly because of the lenient exchange controls, Botswana was able to attract private investment when other countries could not. However, it also achieved remarkable success in attracting foreign aid, and in 1984 it had succeeded in securing the largest aid package for a sub-Saharan country (Lavrencic, 1986; World Bank, 1984). Thus for a number of reasons Botswana benefitted from an extremely favourable external financial position for most of the 80's. The conditions which led to this surplus are, however, unique to Botswana, and hence the degree of monetary autonomy from South Africa which it did attain would be far more difficult for the Two to attain given the differences in economic structure and trade composition.

#### **8.4.2 The Realities of Botswana's Flexible Exchange Rate**

On the 23rd of August 1976 the Bank of Botswana introduced the pula as the national currency of Botswana, and the rand ceased to be legal tender. Initially the pula was pegged to the dollar at  $R1,00 = \$1,11$  which created a unitary parity with the rand, but in April 1977 it was revalued by 5% to offset inflationary pressure on imports from SA, terminating parity. Collings argues that Botswana was more capable of withdrawal from the RMA than either of the Two because a large portion of its investment was into export industries directed at world markets (1978, p.110). This amounts to a lower degree of goods market integration.

In June 1980 the pula was de-linked from the dollar and pegged to a trade-weighted basket of currencies in which the rand is dominant, reflecting South Africa's importance in Botswana's trade. It was not enough, however, to have the rand weighted at 65% in the basket for most of the decade, and a series of devaluations were necessary to keep the pula

in line with the rand.<sup>114</sup> Fig. 8.1 below illustrates the paths of the real and nominal pula/rand exchange rates for most of the decade. By the end of the decade, real unitary parity existed again between the rand and the pula, and it is evident that the amount of real deviation from unitary parity over the decade was minimal. Thus almost all of the nominal pula's appreciation over the decade can be explained by Botswana's preference for a lower inflation rate and this, therefore, was the primary advantage of the pula's flexibility as against the rand.



There were costs too, however, the most important being the loss of competitiveness of Botswana's exports when the pula *did* appreciate. Harvey and Lewis point out that the major real appreciation of the pula that could have occurred as a result of the BOP

114. The weighting of the rand was increased to 75% in 1985 but later reduced to 65% (EIU, 1990, p.9)

surpluses was averted by successive devaluations, in order to spare the export-sector and the import-substituting industries (1990, pp.218-219). However, the net effect was to keep the pula fairly close, in real terms, to the rand, suggesting that the real path of the rand over the decade has not been that severe, and that parity with it could not have been entirely harmful for the Two.<sup>115</sup>

The initial emphasis of exchange rate policy was on offsetting inflationary pressure from SA, and the first revaluation in 1977 was intended to have this effect. However, whilst after the initial revaluation importers did appear to pass savings on to consumers, this was apparently not the case after two subsequent revaluations, and the emphasis of exchange rate policy was thus changed to that of export protection (Harvey and Lewis, 1990, pp.221-222). This meant that the authorities were more inclined to allow downward pressure on the pula to take its course, and in fact the most important revisions in the value of the exchange rate since 1982 have been *devaluations*. The largest appreciation of the pula against the rand - 20% in 1989 - was followed by the largest devaluation of the bilateral exchange rate - by 15% - and the real rate has actually been slightly *below* parity since 1986.

A further issue of importance is the *weighting* of the rand in the pula basket. If 65% is regarded as the 'optimal' weighting given South Africa's volume of trade with Botswana, then the weighting of the rand in a lilangeni or Maloti basket will be considerably higher. In 1987 Botswana conducted a total of 41,5% of its external trade with SA, while the figure for Swaziland was 66,5% (EIU, 1990, p.31). Swaziland thus conducts approximately 60% more external trade with South Africa than does Botswana. However, if the rand had a 60% greater weighting in a lilangeni basket than in a pula basket, it would be 100% dominant in the lilangeni basket, implying that unitary parity with South Africa would be optimal as long as trade volumes remained approximately the same. Given that there are unlikely to be any major changes in these trade volumes for the foreseeable future, exchange rate parity on the basis of goods market integration between South Africa and the Two thus seems entirely reasonable.

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115. In the final section of this chapter it is shown that Swaziland in fact benefitted from the rand's depreciation. This was also pointed out in the previous chapter where it was shown that the rand's depreciation had a strongly stimulatory effect on Swazi GDP.

The reality of Botswana's flexible exchange rate is thus that little flexibility actually seems to be necessary, at least in the real rate. Thus it is doubtful whether Lesotho and Swaziland would benefit from any degree of flexibility *viz-a-viz* the rand. Although de-linking would permit them to reduce their inflation rates by allowing their currencies to appreciate, their goods would become more expensive in South Africa, and they export far more to South Africa than does Botswana.

### **8.4.3 Botswana's Monetary Independence: Qualifications**

The 'trappings' of monetary independence which Botswana enjoys are in many respects illusory. Exchange control liberalisation has been permitted by the returns to a unique resource endowment, whilst exchange rate flexibility has not led to any major revision in the external value of the currency. Internal financial liberalisation has also borne little fruit, with Botswana facing the same long term financing constraints as many other developing countries, with the possible exception of Lesotho and Swaziland which have free access to the South Africa financial markets. Harvey (1980, pp.40-41) has shown that, prior to withdrawal from the RMA, Botswana experienced few financial problems and in fact enjoyed many benefits from membership of the RMA. Specifically, it was able to freely attract investment from South Africa due to the absence of exchange risk and exchange control constraints, and thus experienced no shortage of long term capital as it does now. Secondly, tourism from South Africa was encouraged by the common currency and the absence of exchange control. Thirdly, commercial banks grew rapidly, and there was no shortage of loanable funds or government finance in Botswana, despite the inability of the Botswana government to issue short term paper. Finally, membership of the RMA imposed discipline on spending and money creation by the Botswana authorities, something which other developing countries have gone without to their detriment.

After withdrawal, exchange rate and exchange control policy were tailored to meet the needs of the country, and the nature and success of these changes have been examined above. However, the liberalisation of the internal financial sector was also attempted, specifically in the promotion of financial deepening and the implementation of controls on lending and borrowing. These are examined next.

The objectives of interest rate policy were to:

- (1) stimulate commercial bank lending;
- (2) to encourage external capital movements complementary to the state of the BOP;
- (3) to encourage long term saving and financial intermediation;
- (4) to provide cheap finance for parastatals; and
- (5) to avoid negative real interest rates (Harvey and Lewis, 1990, pp.237-238).

To achieve these objectives, the authorities implemented various policy measures over the decade, among them interest rate ceilings and restrictions on foreign investments by the banks, but despite their efforts, they were only successful in achieving objectives (2) and (4). Objective (1) was partially successful, but was achieved only as regards short term lending, and only at cost to the commercial banking sector. The Bank of Botswana placed restrictions on foreign investment by the banks, thereby forcing up domestic liquidity and forcing down interest rates. Consequently, for most of the decade, excess liquidity in the banking sector was high, but the commercial banks were unwilling to lend long term according to the desires of the Bank of Botswana. Long term lending is not traditionally part of commercial bank business, and they were reluctant to play a role normally assigned to other types of financial intermediaries. However, when the Bank of Botswana implemented contractionary monetary policy in 1982, it worked very successfully, bringing about a sharp decrease in the rate of growth of private borrowing. Thus there appeared to be a policy asymmetry - successful contractionary policy but unsuccessful expansionary policy (Harvey and Lewis, 1990, pp.223-227). The financial sector was just not developed enough to play the role assigned to it by the authorities.

Attempts to increase longer-term private savings (objective (4)) by adjusting interest rates were unsuccessful, and so it appears as if the authorities decided to keep interest rates down, hoping to promote lending and knowing that savings would continue at their usual slow rate. Unfortunately, the negative interest rates that dominated the decade constituted “a *de facto* tax on a significant portion of the population” (Harvey and Lewis, 1990, p.239).

Thus objective (5) was forgone in favour of attempts to increase lending, attempts which were for the most part unsuccessful. Besides the harmful effects of the negative real interest rates on the saving population, there appears to be wide opinion that they are generally harmful to the developing economy. Fry (1982) has shown that higher interest rates increase the resources available for capital formation and improve the efficiency of investment, while negative interest rates and other forms of financial repression actually destabilise the economy and reduce growth. Harvey (1991) and Killick (1991) confirm that interest rate ceilings discourage savings in *financial* asset form, and thereby prevent financial deepening, and Harvey (1991, pp.3-4) points to three other drawbacks of such policy. Firstly, they tend to favour certain groups at the expense of others, since cheap loans are allocated to the less remote and the better off. Secondly, they increase borrowing for trade financing and crowd out smaller borrowers and thirdly, and most importantly, they tend to encourage substitution of cheap capital for more expensive labour, something which is anathema in the developing world. Between 1976 and 1986, Botswana's real interest rate was positive for only a year and a half (between September 1982 and March 1984), indicating a high degree of financial repression.

Financial repression was also one of the reasons for the slow rate of financial deepening (the growth of financial assets relative to GDP), a process which it is believed is necessary for successful development. Further reasons were the slow rate of borrowing by government and parastatals and the absence of a stock exchange. It is also alleged that the available long term savings were misdirected, being channelled into urban property rather than the investment sectors that really needed them (Harvey and Lewis, 1990, pp.235-237).

Thus although departure from the RMA permitted Botswana greater monetary autonomy, this autonomy did not give rise to successful financial deepening, and the policy to reduce interest rates below those in the CMA was in all likelihood counterproductive. It was shown that Botswana enjoyed many benefits from membership of the RMA and thus one must conclude that the decision to leave was more political than economic. In the absence of political barriers to further cooperation, and in the knowledge that Botswana's case is unique and not transferable to the Two, it seems reasonable to suggest that they remain

in the CMA and work on its improvement rather than consider scaling it down at this late stage.

## 8.5 THE CASE OF SWAZILAND

Chapter 7 presented a case, based on estimated integration functions, for the maintenance and improvement of the CMA, but the view that monetary unification be increased is at odds with those of Guma and others who argue for greater autonomy for Swaziland. It has been argued above that the case of Botswana does not provide much of a case for withdrawal by either of the Two, but it is still necessary to briefly address the arguments concerning Swaziland's withdrawal. This is undertaken next, and a final section describing the possible benefits to Swaziland of remaining in the CMA follows on.

### 8.5.1 The Case for Withdrawal

Guma (1981) argues that Swaziland should de-link its currency from the rand and implement exchange controls in order to permit it greater monetary policy autonomy. He suggests that South African monetary conditions are irrelevant to Swaziland and that it should therefore attempt to insulate itself from them in this way. However, three out of the four reasons he gives for Swaziland's 'exogenous' interest rate simply reflect the lack of sophistication of Swaziland's asset market and its high integration with South Africa's. These characteristics would remain even if a flexible interest rate was introduced. They are:

- (1) the fact that Swaziland marketable assets are a small proportion of CMA marketable assets;
- (2) the fact that Swaziland is characterised by a high proportion of foreign holdings of domestic assets to domestic holdings of foreign assets; and
- (3) the fact that Swaziland domestic demand for assets is a small proportion of total CMA demand.

A flexible exchange rate would not help Swaziland improve its position because its asset market would remain highly integrated with South Africa's. However, a flexible rate could *do it harm*, since it would increase the risk in foreign investment and limit Swaziland's access to South African capital markets, something which Swaziland, without a proper domestic capital market, cannot afford to let happen. If anything therefore, the above reasons support the case for maintaining monetary unification. A fourth point given by Guma - that of there being no exchange control between South Africa and Swaziland, is incorrect - special provisions relating to the discretionary use of exchange controls by a member of the CMA are provided for in the agreement. This was outlined in Section 4.3.3.4 above.

A second set of arguments for de-linking centre around the purported negative impact on Swaziland of South African exchange rate and inflation rate movements. Guma (1985) holds that South African exchange rate fluctuations are irrelevant to goods market conditions in Swaziland, and that a flexible exchange rate would offer Swaziland insulation from this. This is in doubt however; firstly, so long as Swaziland conducts such a high proportion of its trade with South Africa it is *part* of South Africa's goods market, for better or for worse. This consequence of high goods market integration is one of the lessons of the Allen-Kenen model. Besides, the appreciation that would supposedly follow the de-linking would almost certainly worsen Swaziland's trade balance as imports from South Africa rise and exports to South Africa and the rest of the world fall.

Gargano (1986) suggests that Swaziland diversify its import sources as a remedy for inherited South African inflation and exchange rate fluctuations. However, this is easier said than done. This would involve a scaling down of Swaziland's participation in SACU but alternative sources of reliable and easily accessed imports would not be easy to find. Arguments in favour of BLS continued participation in SACU were presented in Chapter 6.

Finally, the negative effects for Swaziland of the mid 1980 depreciation of the rand have not been proven. In contrast, the results of the goods market regressions presented in Chapter 7 suggest the opposite: that the depreciation had a *stimulatory* effect on the Swaziland economy. This is confirmed by comments in the Swaziland Central Bank *Annual*



*Report* (1990), which attribute a marked improvement in the BOP to the depreciation. In addition, it was shown above that Botswana's pula had depreciated part of the way with the rand, and that the depreciation was even *aided* by Botswana authorities.

Doubtless there *are* negative effects for Lesotho and Swaziland due to their integration with South Africa, but it is unrealistic to suggest that these can be avoided by de-linking. Instead, other problems would soon appear. The 1986 amendments to the CMA agreement provided for the de-linking of the lilangeni should the Swaziland authorities believe this to be necessary. However, four years later it remains at par, suggesting that the Swaziland authorities themselves believe this to be the more advisable option.

### 8.5.2 The Advantages of Remaining within the CMA

There are a number of advantages to continued participation in the CMA by Swaziland<sup>116</sup>; the most important ones will be briefly discussed.

Firstly, membership of the CMA permits Swaziland free access to the South African capital markets, an advantage which seems to far outweigh the limited autonomy over interest rates that it entails. It was shown above that Botswana had failed to benefit from this 'advantage'; freedom to choose an optimal local interest rate had led to harmful negative real interest rates being adopted, and the lack of preparedness of the monetary system for the assumed degree of autonomy was shown up in a shortage of long term finance. There is increasing consensus in the literature as to the harmful effects of financial repression and the necessity of maintaining 'market' rates of interest.

Secondly, membership of the CMA, through its constraining effect on monetary expansion in Swaziland, has placed limits on Swaziland spending and inflation, thereby promoting macroeconomic stability. This specific result is confirmed and supported by Oliver (1991, pp.11-12), who suggests that those who see the CMA as an obstacle to Swazi monetary policy may in fact desire the removal of an obstacle to 'undue monetary expansion' (p.11). Killick (1991) has shown just how much of a misnomer 'monetary autonomy' is in a

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116. For the remainder of this chapter read 'Lesotho and Swaziland' for 'Swaziland'.

developing country due to the lack of sophistication of instruments and institutions and the instability and unpredictability of the money demand functions. Thus, by linking to an external, more sophisticated monetary system, a developing country loses the freedom of ‘retarded’ monetary policy and gains spending discipline and macroeconomic stability.

Thirdly, and surprisingly, the CMA has promoted exchange rate stability for Swaziland and Lesotho. This is the finding of a PTA technical study group which concluded:

“ ... the analysis indicates that only two Member States have managed to escape from the costs of protracted overvaluation. These are Lesotho and Swaziland, whose continued membership of the CMA appears not to have permitted those macroeconomic policies that induce exchange rate instability” (PTA, 1990, p.3).

The critics of Swaziland’s membership of the CMA bemoaned the supposed ill effects of the rand’s depreciation on that country, but in fact it appears as if *overvaluation* would have been the alternative. This problem does seem to be almost endemic among developing countries, and various authors feel that nominal depreciation plus appropriate macroeconomic policy remedies is the best solution (Edwards, 1989). Pfefferman (1985, p.17) suggests that a common starting point of an overvalued currency is domestic monetary expansion, inflation and a lack of willingness to let the nominal rate depreciate. This is less likely to happen to individual countries in a larger monetary union, with or without a union central bank.

## 8.6 CONCLUSION

Thus there appear to be significant benefits to continued participation in the CMA by the Two, and the fact of Botswana’s non-participation does not seem to affect this conclusion. Botswana withdrew from the RMA more for political than economic reasons and was able to sustain certain aspects of its monetary autonomy through its unique massive external financial surplus. The single benefit of its flexible exchange rate was the freedom to run

a moderately lower inflation rate than SA, and it showed a preference for a relatively stable real exchange rate with the rand. On the other hand, its nascent financial system was unable to meet the demands placed on it by the monetary authorities, and it was also unprepared for expansionary monetary policy. Thus monetary *autonomy* did not necessarily entail monetary *policy* effectiveness. Finally, lack of access to a larger more sophisticated financial market meant a shortage of long term finance, since the financial intermediaries in Botswana were unable to fill the gap left by the South African securities and money markets. Thus the Botswana case does not provide a demonstration effect to the Two for withdrawal from the CMA, and it must be concluded that they have more to gain by continued participation than otherwise.

## CHAPTER 9

### *CONCLUSION*

#### 9.1 SUMMARY OF THE STUDY

To summarise, Chapter 2 established that the theory of monetary integration is concerned with generating a set of principles against which a monetary integration arrangement can be judged. The two most important principles that can be drawn from this body of knowledge is that, firstly, the desirability of monetary integration depends on the degree of economic 'closeness' that exists between countries and secondly, the desirability of monetary integration depends further on the costs and benefits that can be expected from the arrangement, and their relative weighting. For developing countries, the hierarchy of goals of monetary integration (and sensitivity to costs) is altered, not the goals themselves. Further considerations pertain to the degree of monetary integration entailed. A number of authorities show, for a variety of reasons, that a full monetary union will always be preferable to less intense forms of monetary integration, and Allen and Kenen, whose model is used extensively in this thesis, are among them.

In Chapter 3, the Allen-Kenen model served as a useful theoretical tool for analysing the workings of various degrees of monetary integration under different market conditions. After analysing in detail the effects of monetary and fiscal policy and internal and external disturbances it was concluded that the degree of asset and goods market integration extant between countries has a profound effect on their ability to conduct independent economic policy and to enjoy insulation from outside shocks. Beyond a certain level, independent policy becomes impractical and some form of monetary unification - involving at least policy co-ordination - is seen to be necessary. This includes fiscal policy, since integration of goods markets, though often not as intense as asset market integration, can lead to high costs of offsetting policy.

It was pointed out in Chapter 4 that the CMA was never a result of a conscious decision for or against monetary unification, instead it evolved from a *de facto* arrangement which existed as the natural result of the close origins of its members. The *de facto* union was formalised, though, in order to provide for more equitable treatment of its smaller members. With the development and sophistication of the smaller members' economies, however, came the desire for more control over national policy and central banks were established. This led in turn to a further revision of the agreement, and one which provided Swaziland with greater autonomy and the choice to de-link its currency from the rand. The issue at stake seems to be the lack of control of the Two over their economies, but the solution is not necessarily the attempted sundering of links, for that path is shown, in later chapters to be difficult and ill-advised.

It was shown in Chapter 2 that the OCA approach suffered from various problems, among them its qualitative nature and vagueness. Chapter 5 provided a review and critique of an application of OCA theory to the CMA and concluded that more must be done to usefully address empirically the issue of the optimality of the CMA. However, doubt was also expressed about the usefulness of this approach *per se*.

After analysing the regional roles of SACU and SADCC, it was determined that the degree of economic co-operation between South Africa and the Two improves the case, if anything, for continued monetary co-operation. It was shown in Chapter 6 that SADCC, despite apparently presenting a threat to links between South Africa and the Two, is unable to carry through its rhetoric of reduced dependence and thus is of minor importance to the CMA. The monetary agreement is facilitative to goods market integration and thus supports the SACU, which, it was shown, has benefitted the two far more than it has compromised them. The apparent exception to this - the case of Botswana - was analysed in a later chapter.

By applying the 'integration functions' of the Allen-Kenen model to the CMA it was possible to assess the degree and implications of goods and asset market integration for its members. The results of this endeavour, undertaken in Chapter 7, show that high levels of asset and goods market integration do exist and that this has the effect of reducing significantly the policy autonomy of the smaller countries. The use of Swaziland in the

study - which is less highly integrated with South Africa than Lesotho - adds credibility to these results.

Finally, Chapter 8 addressed the question of Botswana's non-participation in the CMA, specifically the nature and implications of its monetary autonomy from South Africa. It was argued here that the Botswana case is not a sufficient reason to motivate for the withdrawal by the Two from the CMA because this 'autonomy' is neither of major degree nor has it permitted Botswana to follow a significantly different path of financial development to that of the Two (or to that it might have followed had it remained in the CMA). What *has* permitted Botswana some degree of greater autonomy (and insulation from South African based disturbances) has been its unique, massive external financial surplus. On the other hand, there have been disadvantages to Botswana of not participating in the CMA and there are important advantages to Swaziland (and Lesotho) of staying in. The findings of Chapter 8 do thus not affect the credibility of the recommendations of Chapter 7.

## 9.2 GENERAL CONCLUSIONS AND RECOMMENDATIONS

The title of this thesis suggests that the question of the *viability* of the CMA is central to the study, if 'viability' is understood to imply a preferable solution to attempted monetary independence. Thus it is that the final conclusion must address this question primarily. What has been determined with satisfactory accuracy is that the CMA appears still to be a viable arrangement - provided some flexibility concerning joint decision-making is incorporated into it. This must be such as to permit the smaller members more say in policy decisions taken at the union level, thus the Reserve Bank must come to resemble more closely the Union Central Bank analysed by Allen and Kenen. In addition, the currency of the union must approach a true *common* currency if the monetary union is to be made properly functional. Any other less intense form of integration will be sub-optimal, except if it is merely part of the *transition* to full monetary union. Transition is important - even the European Monetary Union is being reached by stages.

Namibia, which was excluded from the study because for most of the duration it was not an independent country, has now joined the CMA but its future within it is uncertain as

it has indicated that it intends to float its own currency and establish its own central bank by 1992. Should it remain, however, the case for a revision of the agreement to increase joint decision-making would be strengthened.

The CMA must thus change to become more like a true co-operative monetary union, with the needs of the Two taken into account at union central bank level. South Africa itself can not be expected to initiate these changes, however, and it is up to the smaller members to push for them (just as is the case with SACU). Nevertheless, South Africa has a duty to pay attention to the grievances of the smaller countries, and to deal with them as best possible. If this is not the case, then the spirit of the preamble to the CMA agreement is meaningless.

### 9.3 THE FUTURE

On November 24th and 25th, 1990, the ninth summit of the PTA signified its intention to become a common market by the end of the decade, and to proceed with monetary harmonisation with a view to eventually establishing a monetary union between its members (*Daily Dispatch*, 1990, p.2). The member states expressed their willingness that South Africa be included in these arrangements, provided it was a changed South Africa. That South Africa is changing is now clear, however, whether even a changed South Africa will find a permanent home in a large African common market is less clear. This thesis has shown that part of the reason that monetary unions stay together is because they *have to* - they are highly integrated and thus cannot, without great cost, go it alone. If a common market and monetary union of the scale of the present PTA comes about it will be a shaky arrangement because the countries are not highly integrated and will have to proceed with deliberate policies to make them more so. This will involve loss of national policy autonomy which was seen to be the most important cost of monetary integration.

The members of the CMA, however, have little to lose from furthering their links with each other. With South African internal political turbulence and all its negative side effects hopefully soon over, the smaller members of the CMA can look forward to close development alongside the economic giant of Africa; they will have to learn, however, to use this relationship more to their advantage in future.

## APPENDIX

**Table A.1 Goods Market Data for the Regression Sample (Original)**

obs	SWGDP	SAGDP1	SAGDP2	SWGVR	SWBOTR
81.2	98.4000	61925.06	103.2084	16.52500	-30.262
81.3	98.4000	61764.65	102.9411	16.52500	-23.241
81.4	98.4000	61330.59	102.2177	16.52500	-47.971
82.1	101.0250	59148.68	98.5811	17.87500	-55.201
82.2	101.0250	59194.79	98.6579	17.87500	-31.545
82.3	101.0250	61480.27	102.4671	17.87500	-35.671
82.4	101.0250	61373.92	102.2899	17.87500	-59.221
83.1	100.7250	59007.00	98.3450	17.45000	-67.577
83.2	100.7250	60279.97	100.4666	17.45000	-86.009
83.3	100.7250	60448.00	100.7467	17.45000	-6.354
83.4	100.7250	60610.28	101.0171	17.45000	-41.971
84.1	103.9750	63349.20	105.5820	18.95000	-62.307
84.2	103.9750	63001.22	105.0020	18.95000	-31.293
84.3	103.9750	62963.16	104.9386	18.95000	-27.293
84.4	103.9750	63579.16	105.9653	18.95000	-46.395
85.1	106.4250	62716.89	104.5282	19.72500	-60.892
85.2	106.4250	61264.77	102.1079	19.72500	-5.104
85.3	106.4250	61584.57	102.6410	19.72500	-31.504
85.4	106.4250	62609.81	104.3497	19.72500	-70.305
86.1	115.8250	60251.39	100.4190	19.95000	-69.651
86.2	115.8250	60354.84	100.5914	19.95000	-33.727
86.3	115.8250	61355.98	102.2600	19.95000	0.747
86.4	115.8250	62432.29	104.0538	19.95000	-9.830
87.1	115.5750	62747.51	104.5792	18.52500	-53.315
87.2	115.5750	62993.10	104.9885	18.52500	4.600
87.3	115.5750	64965.02	108.2750	18.52500	6.558
87.4	115.5750	64682.88	107.8048	18.52500	-39.677
88.1	124.9500	64161.67	106.9361	19.97500	-27.860
88.2	124.9500	65681.16	109.4686	19.97500	-30.091
88.3	124.9500	68274.56	113.7909	19.97500	-12.491
88.4	124.9500	67525.50	112.5425	19.97500	NA
89.1	130.0750	66248.53	110.4142	20.82500	NA
89.2	130.0750	66907.25	111.5121	20.82500	NA

SOURCES: *South African Reserve Bank Quarterly Bulletin*, Various issues 1982-90  
*Central Bank of Swaziland Quarterly Review*, Various issues 1983-1990  
*Central Bank of Swaziland Annual Report*, Various issues 1988-1990  
*International Financial Statistics (Monthly)*, Various issues 1983-1989



**Table A.2 Goods Market Data for the Regression Sample (Transformed)**

obs	XSWGDP	XSWGGOV	XSAINT	XSAGDP	XRER	XSWBOT
80.1	.NA	.NA	.NA	.NA	.NA	.NA
80.2	.NA	.NA	.NA	.NA	0.283593	19.04160
80.3	.NA	.NA	.NA	57.13217	0.315825	-8.708614
80.4	.NA	.NA	-4.016856	55.52542	0.329508	-46.79503
81.1	.NA	.NA	-1.931650	53.84410	0.320078	-44.90341
81.2	54.80880	9.204425	0.852295	59.51108	0.329177	0.462756
81.3	54.80880	9.204425	0.751383	57.21978	0.345194	-9.834520
81.4	54.80880	9.204425	2.595810	56.61479	0.305889	-37.67618
82.1	57.43380	10.55443	4.446570	53.29869	0.310323	-33.95015
82.2	56.27093	9.956375	1.172782	54.98654	0.288469	-7.090999
82.3	56.27093	9.956375	4.268187	58.76162	0.322998	-21.69701
82.4	56.27093	9.956375	1.243181	56.89698	0.398528	-43.41868
83.1	55.97092	9.531376	-2.016430	53.03058	0.425927	-41.34282
83.2	56.10383	9.719650	3.559998	56.89977	0.378112	-56.07286
83.3	56.10383	9.719650	4.793234	56.23999	0.402157	31.74785
83.4	56.10383	9.719650	6.469906	56.38631	0.354448	-39.15599
84.1	59.35383	11.21965	6.755687	60.83143	0.381075	-43.71452
84.2	57.91407	10.55515	4.949178	58.22918	0.369304	-3.691104
84.3	57.91407	10.55515	8.476223	58.42271	0.305398	-13.43073
84.4	57.91407	10.55515	6.317240	59.47751	0.290359	-34.30485
85.1	60.36408	11.33015	4.641856	57.58557	0.309439	-40.33890
85.2	59.27873	10.98683	1.485767	55.80191	0.276235	21.87082
85.3	59.27873	10.98683	0.108210	57.40720	0.150727	-29.24288
85.4	59.27873	10.98683	-2.148631	58.87974	0.215733	-56.34957
86.1	68.67872	11.21183	-3.287164	54.19208	0.307455	-38.50619
86.2	64.51453	11.11215	-1.580063	56.10579	0.191494	-2.871378
86.3	64.51453	11.11215	-3.428271	57.69801	0.313881	15.68888
86.4	64.51453	11.11215	-3.074549	58.75263	0.288756	-10.16169
87.1	64.26453	9.687149	-1.620288	58.48337	0.291838	-48.96061
87.2	64.37528	10.31843	-2.647395	58.65992	0.290969	28.21944
87.3	64.37528	10.31843	-1.609180	61.76510	0.291624	4.520219
87.4	64.37528	10.31843	-1.118737	59.83898	0.268803	-42.58263
88.1	73.75028	11.76843	1.424849	59.17857	0.239588	-10.28369
88.2	69.59715	11.12608	1.978593	62.09591	0.260838	-17.74969
88.3	69.59715	11.12608	2.729686	65.29631	0.240719	0.838951
88.4	69.59715	11.12608	4.020436	62.13314	0.244801	.NA
89.1	74.72215	11.97608	2.966969	60.55787	0.252594	.NA
89.2	72.45178	11.59953	2.732846	62.59861	0.258034	.NA
89.3	72.45178	11.59953	2.405596	.NA	0.258842	.NA
89.4	72.45178	11.59953	4.355975	.NA	0.285648	.NA
90.1	.NA	.NA	4.275525	.NA	0.264930	.NA

SOURCES: *South African Reserve Bank Quarterly Bulletin*, Various issues 1982-90  
*Central Bank of Swaziland Quarterly Review*, Various issues 1983-1990  
*Central Bank of Swaziland Annual Report*, Various issues 1988-1990  
*International Financial Statistics (Monthly)*, Various issues 1983-1989

**Table A.3 Asset Market Data for the Regression Sample**

obs	SWINTR	SAINTR	WINTR	SWBNDR	SWSAVR	RER
80.1	.NA	.NA	-3.037619	.NA	77.78982	0.569270
80.2	.NA	.NA	-5.483000	.NA	75.12846	0.535779
80.3	-1.743250	-3.458430	-1.794910	11.68513	82.60447	0.553175
80.4	-10.63423	-5.548940	-1.489229	11.19553	76.25698	0.574565
81.1	-12.57692	-4.389830	-0.326780	10.58451	62.32395	0.574611
81.2	-12.21325	-1.092400	0.064930	10.07035	67.50419	0.583730
81.3	-7.839161	0.267450	2.537320	9.791531	64.33225	0.603786
81.4	0.743950	2.714290	3.137020	9.928985	72.41949	0.573366
82.1	0.911970	5.649000	2.175270	9.401094	64.03440	0.564324
82.2	5.201001	3.675289	3.242644	9.171624	72.46377	0.538465
82.3	6.436490	5.896340	2.585310	8.776643	71.89781	0.561538
82.4	5.613540	3.855260	3.133782	8.834680	73.18148	0.647290
83.1	-1.559030	-0.308550	5.673060	8.135318	64.27605	0.712676
83.2	6.609459	3.423310	5.866417	8.461647	69.88036	0.693828
83.3	8.875913	6.309760	4.636941	8.377257	86.62207	0.709522
83.4	1.321091	9.265130	3.825686	7.886650	84.06801	0.668766
84.1	7.174560	10.86014	3.558715	7.645910	77.96092	0.677338
84.2	2.477131	9.760220	3.472604	7.391617	84.55090	0.669365
84.3	9.080260	12.80000	5.719812	7.122908	95.55684	0.601927
84.4	6.360210	11.98764	4.528898	6.552017	85.50956	0.557013
85.1	5.952379	9.952380	6.538518	6.330256	77.07693	0.556196
85.2	4.640720	5.894671	5.007906	6.141294	83.43283	0.522629
85.3	1.227350	2.719549	4.806171	7.762861	94.21852	0.382252
85.4	4.208060	-0.943870	5.581236	7.456000	78.49412	0.385071
86.1	3.902570	-3.705299	6.655470	7.261229	78.27681	0.478041
86.2	5.295022	-3.221510	6.859037	7.231401	86.49018	0.403266
86.3	2.269970	-4.855400	6.887150	9.223009	97.43362	0.492527
86.4	1.488240	-5.225491	7.153249	8.835947	85.84146	0.506945
87.1	1.901283	-3.935181	6.105365	8.692280	86.90611	0.516414
87.2	-1.592150	-4.390680	4.596061	8.389879	96.76295	0.519741
87.3	-0.264729	-3.554251	5.007144	11.02200	90.69505	0.521869
87.4	-2.207930	-2.693270	4.615265	10.37946	89.38641	0.499991
88.1	-2.249820	0.231731	5.191267	10.18908	92.74741	0.461084
88.2	-0.006789	2.081250	3.648920	9.933987	104.4821	0.465099
88.3	0.780950	3.651680	5.379652	10.18981	111.4905	0.446758
88.4	7.750369	5.638130	5.543879	10.07620	110.6634	0.442715
89.1	3.708449	5.464660	4.664511	9.584638	131.1471	0.448717
89.2	4.085700	5.153690	4.677613	9.326994	142.1660	0.456816
89.3	2.994920	4.688680	4.717119	9.090568	135.9770	0.461212
89.4	0.214270	6.433060	6.718066	8.746899	.NA	0.489965
90.1	2.282220	7.125370	6.680016	8.488115	.NA	0.481984

SOURCES: *South African Reserve Bank Quarterly Bulletin*, Various issues 1982-90  
*Central Bank of Swaziland Quarterly Review*, Various issues 1983-1990  
*Central Bank of Swaziland Annual Report*, Various issues 1988-1990  
*International Financial Statistics (Monthly)*, Various issues 1983-1989

**Table A.4      Miscellaneous Data: Price Indices and Inflation Rates**

obs	SAINF	SWINF	SAPRIC	SWPRIC	UKPRIC
80.1	13.67178	.NA	94.40000	92.30000	94.50000
80.2	14.05099	.NA	97.40000	97.30000	99.97752
80.3	12.95843	11.24325	101.7000	102.9000	102.1505
80.4	15.04894	20.13423	106.4000	107.4000	104.0445
81.1	15.88983	23.07692	109.4000	113.6000	106.3000
81.2	15.09240	22.71325	112.1000	119.4000	111.5000
81.3	15.73255	19.33916	117.7000	122.8000	113.4000
81.4	14.28571	12.75605	121.6000	121.1000	116.2000
82.1	14.35100	12.58803	125.1000	127.9000	118.2000
82.2	16.32471	9.798999	130.4000	131.1000	121.9000
82.3	14.10366	11.56351	134.3000	137.0000	122.5000
82.4	14.14474	12.38646	138.8000	136.1000	123.4000
83.1	14.30855	15.55903	143.0000	147.8000	124.0000
83.2	12.57669	8.390541	146.8000	142.1000	126.5000
83.3	11.69024	9.124087	150.0000	149.5000	128.2000
83.4	10.73487	16.67891	153.7000	158.8000	129.6000
84.1	10.13986	10.82544	157.5000	163.8000	130.4000
84.2	11.23978	17.52287	163.3000	167.0000	133.1000
84.3	12.20000	15.91974	168.3000	173.3000	134.2000
84.4	13.01236	18.63979	173.7000	188.4000	135.9000
85.1	15.04762	19.04762	181.2000	195.0000	137.6000
85.2	16.10533	20.35928	189.6000	201.0000	142.3000
85.3	16.28045	17.77265	195.7000	204.1000	142.7000
85.4	17.44387	12.79194	204.0000	212.5000	143.4000
86.1	19.20530	11.89743	216.0000	218.2000	144.5000
86.2	17.72151	9.004978	223.2000	219.1000	146.3000
86.3	18.85540	10.73003	232.6000	226.0000	146.4000
86.4	18.72549	11.01176	242.2000	235.9000	148.4000
87.1	16.43518	9.898717	251.5000	239.7990	150.2000
87.2	16.89068	13.39215	260.9000	248.4422	152.4650
87.3	16.05425	12.06473	269.9422	253.2663	152.8897
87.4	15.19327	14.00793	278.9981	268.9447	154.4469
88.1	13.76827	14.24982	286.1272	273.9699	155.1547
88.2	12.91875	13.10679	294.6050	281.0050	158.9769
88.3	12.34832	12.61905	303.2755	285.2261	161.1004
88.4	12.36187	7.249631	313.4875	288.4422	164.3564
89.1	13.53534	10.49155	324.8555	302.7136	167.1877
89.2	14.84631	10.01430	338.3430	309.1457	172.0009
89.3	15.31132	11.20508	349.7110	317.1859	173.5581
89.4	14.56694	14.28573	359.1530	329.6483	177.0972
90.1	13.87463	12.21778	369.9280	339.6985	180.2116

SOURCES: *South African Reserve Bank Quarterly Bulletin*, Various issues 1982-90  
*Central Bank of Swaziland Quarterly Review*, Various issues 1983-1990  
*Central Bank of Swaziland Annual Report*, Various issues 1988-1990  
*International Financial Statistics (Monthly)*, Various issues 1983-1989

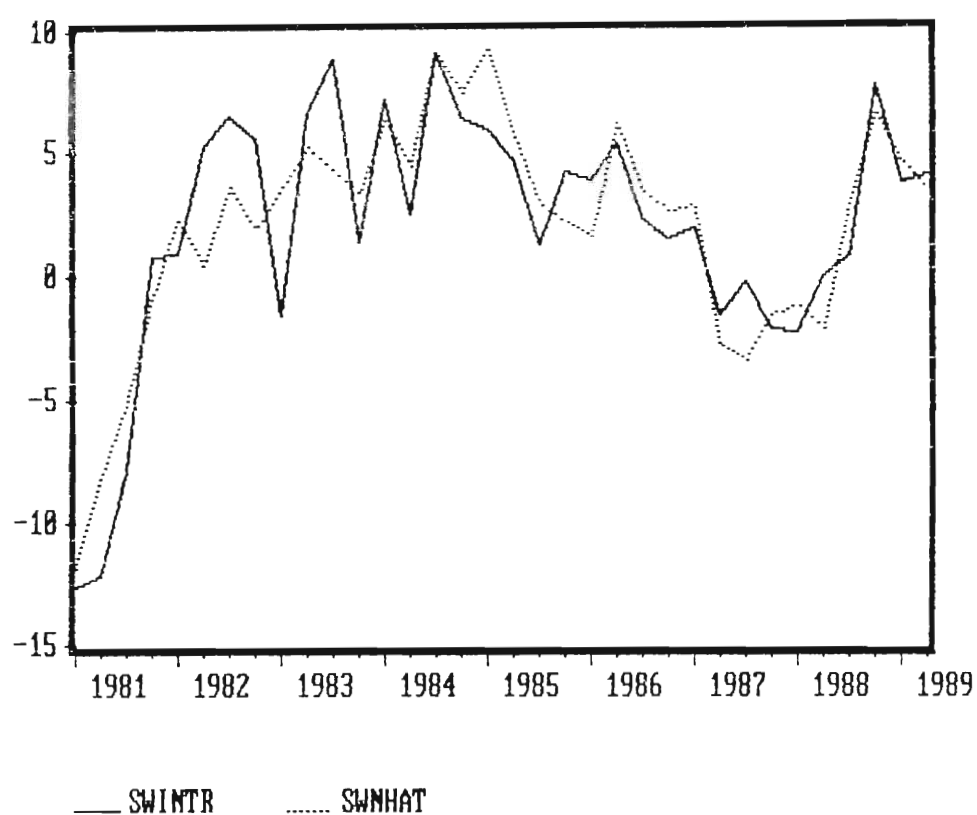


Figure A.1 Actual versus fitted Swaziland interest rate

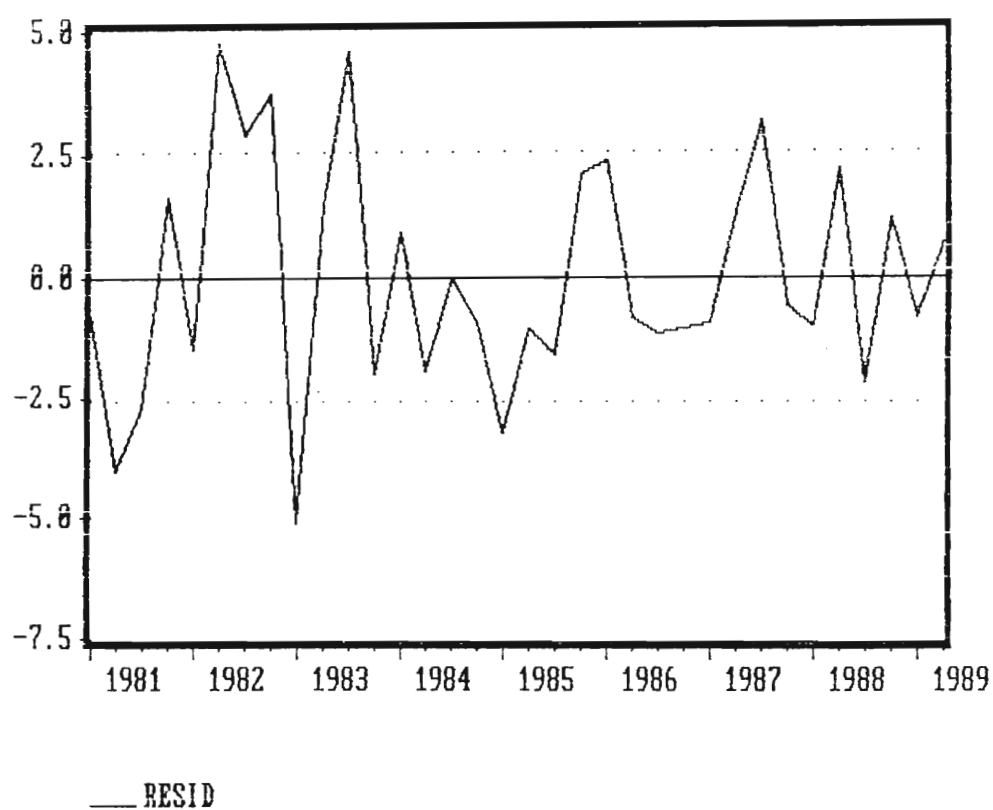


Figure A.2 Residual plot of SWINT2 regression

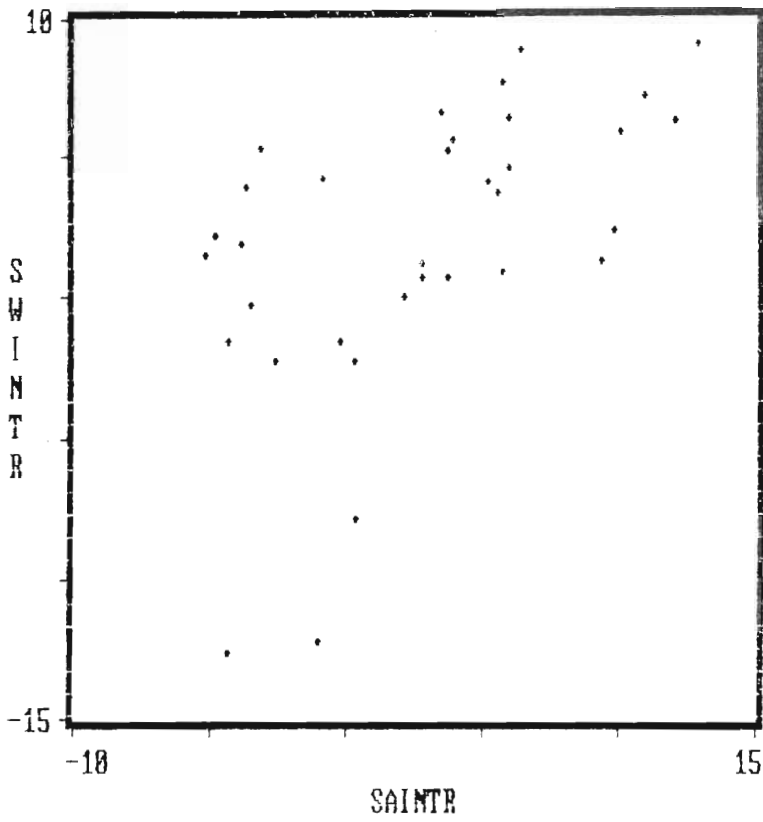


Figure A.3 The  $r^2r^2$  scatter

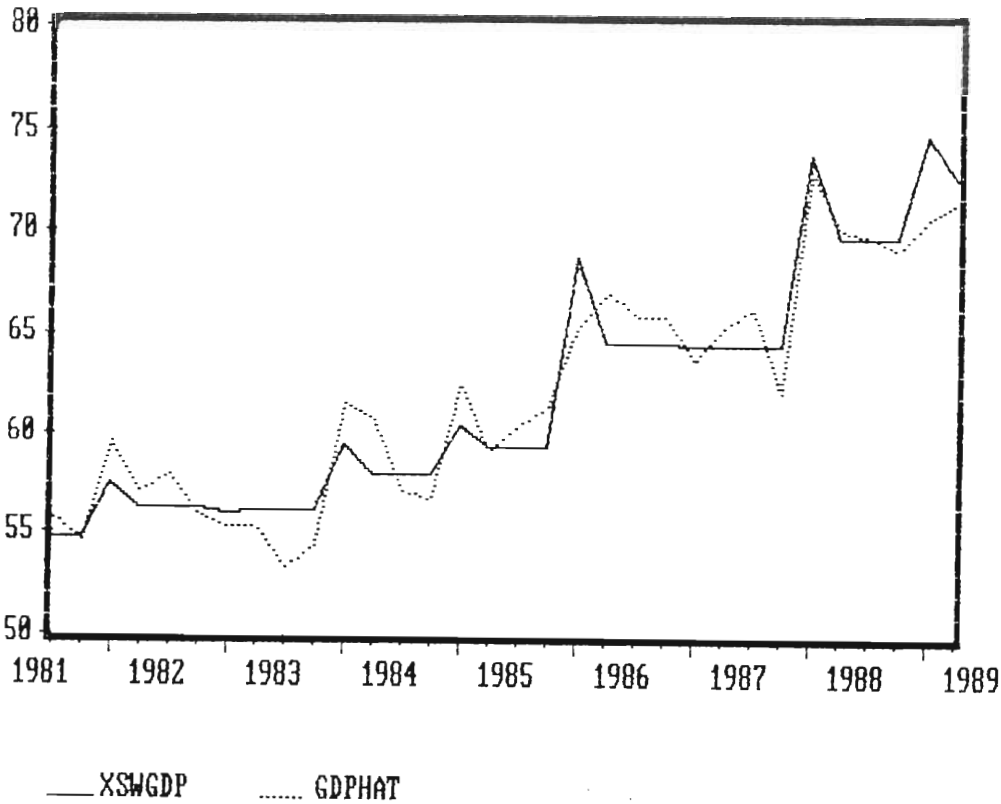


Figure A.4 Actual versus fitted Swaziland real GDP

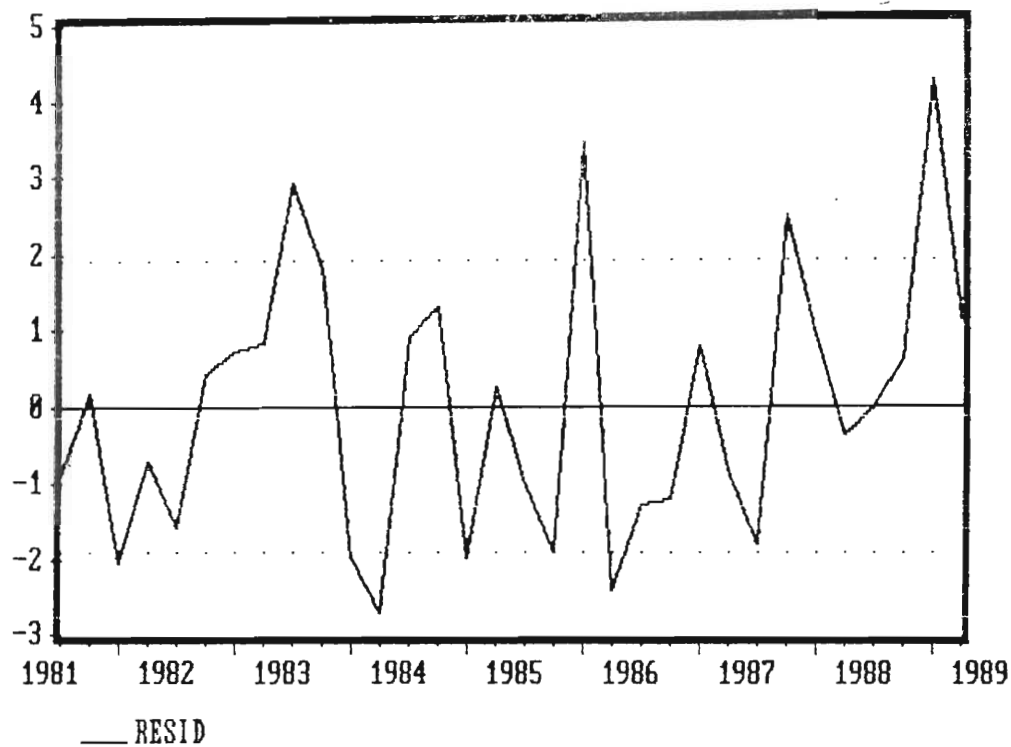


Figure A.5 Residual plot of SWGDPR regression

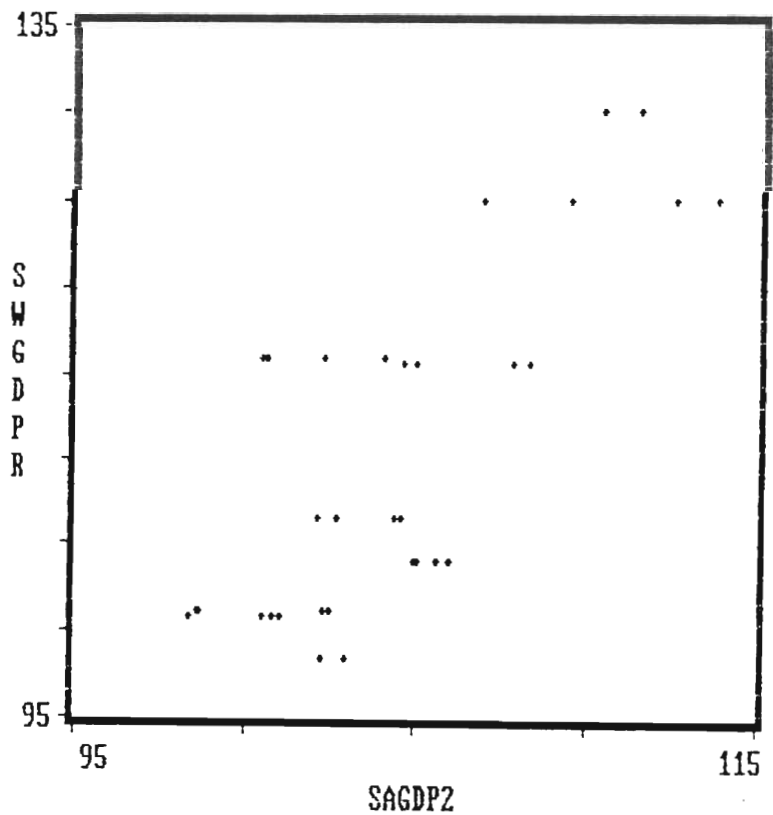


Figure A.6 The  $Y^2Y^2$  scatter

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