

# THE DECADE OF INFLATION — A PERSPECTIVE ON RECENT MONETARY DEVELOPMENTS IN SOUTH AFRICA \*

by

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May I say at the outset how proud I am to be delivering an inaugural lecture at the University of Cape Town. My sense of achievement is heightened by the fact that I am very much a Cape Town boy, having spent much of my life and academic life happily and, I believe, loyally in Cape Town at the University of Cape Town. If my appointment represents inbreeding, then I hope my colleagues will come to regard it as appropriately selective!

Part of the benefits of being a home town boy is the joy of having my father and mother and many other members of my wider family and many good old friends here with me tonight.

They know that my path to this chair was a succession of fortunate accidents and not something I or they would ever have predicted when I first came to this campus from SA College High School in 1960. My very good luck included being inspired by the enthusiasm and passion of an outstanding economist of prodigious energy, Professor W H Hutt. I was also most fortunate indeed to be exposed to the dedicated scholarship of Professor H M Robertson. His lectures were quite masterful displays of his own immense knowledge and insight and his powers of concise and profound explanation. Never was a word out of place in a Robbie lecture. It was Professor Robertson who played the crucial role in my career. He recruited me into academic economics when any talent I had for the subject would not have been at all obvious. May I express my gratitude also to Robbie's successor as J W Jagger Professor of Economics, Professor Z S (Ben) Gurzynski, for his constant support as a colleague and friend. Professor Allan Meltzer provided me with an opportunity to spend a most productive year, 1978-1979, with him and his colleagues at Carnegie-Mellon University in Pittsburgh. I hope to justify the confidence of my teachers, my colleagues and the University by doing good economics and by so doing encourage students and colleagues to attempt the same. I shall hope to convince the non-economists here tonight that this is a worthwhile and intellectually challenging assignment.

## SOME GENERAL PRINCIPLES

My early interest in economics was not an accident. It emerged naturally out of much business talk around our dinner table and the furniture factory in Strand Street, Woodstock. I regard good economics as the quintessence of business talk. I make no apologies for hoping that a better understanding of economics will strengthen the vital role played by business, large and small, in South Africa and that firms will receive every encouragement from society to compete with each other, both for the sale and purchase of goods and services. The freer and more intense the competition, the better and the more economic outcomes are determined in the market place rather than the political arena, the better for South Africa.

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This talk is dedicated to my wife, Shirley,  
who has supported me constantly and lovingly  
through the ups and downs of my academic career

It has long been my understanding that freedom for individuals to say or to read or to believe what they wish is not possible without a high degree of freedom for individuals to engage as buyers or sellers in competitive markets for their services or goods. Freedom to trade may not be sufficient but it is vitally necessary for the attainment of individual freedom generally. Free markets also deliver the goods.

The work of economists does not at all stand or fall by the strength of beliefs or the dignity of their aspirations. It stands or falls by the ability of the economic scientists to explain the world around them. What does matter is the consistency of the assumptions made and the ability of the deductions to withstand the evidence. What also matters is the intrinsic importance and interest of the questions the economist poses and the elegance with which the conclusions are reached. The object of the analytical exercise is simple generality. Less is more.

Economic evidence is not gathered in a laboratory. Sometimes the structure of the economy itself changes or is changing in ways which materially influence outcomes. These factors make firm predictions difficult to achieve and agreement among economists about cause and effect hard to establish. There is nevertheless agreement amongst most economists about an appropriate scientific method and with such agreement an improved understanding of economic life will continue to develop.

I have specialised in monetary economics, in the effects and causes of money, monetary history and in the history of thought about money, particularly in a South African context. I shall attempt to provide some of the flavour of my work and present the logic and some of the evidence that has led me to the conclusions drawn about money supply effects and causes in South Africa.

Students and colleagues have played and continue to play an important part in my monetary research programme. In fact to date all the colleagues with whom I have worked closely have been students. I would like to mention them in something like chronological order. Alan Colburn, Henry Kenney, Arnon Hurwitz, Graham Barr, Brian Kahn, Jos Gerson, David Rees, Alan Ruskin, Matthew Nurick and David Solomon have all greatly contributed to my understanding. By doing my job properly, I hope to continue to add more names to this list.

Economic decision-makers, actors as we sometimes call them, are cursed and economists blessed to live in interesting times. The economists may actually have had something to do with making the times interesting. The last 12 years or so have been a particularly interesting period of monetary history.

## PRICES AND THE PRICE OF MONEY

An inflation is a process of continuously rising prices with which all of us are thoroughly and depressingly familiar. One can talk not only of the prices of goods and services but also of the price at which money delivered now is exchanged for money later which is more usually described as the rate of interest. Another price is the price at which domestic money is exchanged for foreign money. The spot rate is the current rate of exchange while the forward rate of exchange is the foreign exchange value of the domestic money (or *vice versa*) for delivery at some future point in time. In many cases the forward rate will be an explicit part of a contract; in other cases the forward rate may be only implicit. If capital is mobile across frontiers then the terms of a borrowing or lending contract, having regard to the costs implicit or explicit of the forward exchange rate, whether expressed in domestic currency or foreign currency, must be expected to be equivalent. This relationship, known as

interest parity, implies that interest rates and exchange rates are determined simultaneously and represent two equivalent methods of expressing the relationship between the current and expected value of a currency. I shall return to interest parity and its implications for money supply developments in South Africa. Other important prices about which little more will be said here are the hiring charges for labour, wages, and for natural resources or fixed property which we called rents or leases.

## THE LOGIC OF THE INFLATIONARY PROCESS: INTERDEPENDENCE AND RATIONALITY

The very large number of contracts agreed to by buyers and sellers and their terms, including the prices they strike, are determined simultaneously and inter-dependently. Everything that happens in the economy depends more or less closely on everything else. It is a general equilibrium system of many millions of supply and demand functions.

Demand and supply depend upon both current and expected prices. Furthermore, prices are agreed upon by participants in the economy who quite simply prefer more goods to less and act accordingly. Moreover, the forward looking economic actors are not only rational in their preferences, they are also rational in their use of information. That is: the outcomes of the market places can be explained as if behaviour is consistent with the economists' tautology of maximising behaviour subject to the constraints of scarce resources, income and time. This assumption is an indispensable aid to coherent economic reasoning.

At least three important implications for any analysis of an inflationary process anywhere follow from the presumption of economic interdependence and rationality. Firstly, there is no sense in attempting to explain the rising trend in one set of prices by the behaviour of another set of prices if both are established interdependently. Thus it cannot be argued that wages determine prices or more generally that costs determine prices. Wages and prices will always rise more or less together subject as they are to the interdependent forces of supply and demand for the final product and for the resources to produce them. What are simply the costs of inputs to some are the prices of outputs to others. The distinction between so called cost push and demand pull inflation is meaningless.

There is one set of prices, the prices of imports, that can in certain monetary circumstances be regarded as determined independently of domestic supply and demand forces. More of this below.

While prices will be established to equalise supply and demand or set in anticipation of them, the forces of supply and potential supply, particularly the supply of manufactured goods, are naturally less variable than the forces of demand. The rate of supply depends upon real forces such as the availability of labour and capital and natural resources. It also depends upon the efficiency with which these resources are combined and also on the advancements of knowledge — technology. Such forces acting on supply are clearly not going to change dramatically from one year to the next.

The general level of demand depends directly on the supply and demand for money. The supply of money can change very dramatically. In some recent years in South Africa, as we shall see, the money supply was growing by as much as 40 per cent per annum. In such circumstances, changes in supply of the expected order of magnitude — one or two per cent extra output per annum — are of a very minor

sake, will be almost irrelevant as a method of reducing double digit inflation. Increases in productivity, however devoutly to be wished for, are not easily achieved, even though they remain the constant objective of rational managers.

Inflation is a problem of too much demand, not too little supply. The problem of too little supply is the universal economic problem. Too much demand is a problem of too much money, of an increase in the supply of money, of currency and bank deposits in excess of the demand to hold that money. Excess supplies of money mean more spending. A third important implication is that there is no such thing as structural inflation — if by this it is meant that the causes of inflation are to be found independently of the forces of demand and supply and outside of maximising behaviour. Prices rise and continue to rise to meet actual and expected increases in demand. A monopolist concerned to maximise monopoly profits is as much concerned with the state of demand as is any supermarket. Monopoly power may be used to explain high prices; it cannot explain continuously rising prices. The prices of goods controlled by government-sanctioned monopolies will rise at a slower rate when, and if, the price setting agricultural control boards and their ilk come to expect that the aggregate rate of growth of monetary demands generally and of demands for the products, the prices of which they set, will slow down. These organisations have as much of an interest in accurately predicting the money supply developments which influence aggregate and particular demands as all other participants in the economy.

## THE MONETARY STANDARD AND MONEY SUPPLY: CAUSES AND EFFECTS

The nature of the monetary standard in operation in any country gives the direction of money supply cause and effect. By the selection of a monetary standard, the rules of the monetary policy game are established. The monetary standard applied in South Africa changed in the early seventies. Between roughly 1950 and 1970, South Africa was part of a fixed exchange rate system that held for the great proportion of our international trading and financial arrangements. The South African pound, then the rand, value of the US dollar and the pound sterling and the other major currencies was fixed and expected to remain fixed for most of that period. In 1970 whether South Africa liked it or not these exchange rates became variable. This change in the international monetary system had the most profound implications for monetary causes and effects in South Africa. The importance of this change in structure was not well appreciated by the South African monetary authorities, the public or indeed South African economists.

Rules of thumb for economic action or economic policy suffice perfectly well when the structure is fixed and the rules of the game are well known by the players. It is when the structure changes and the rules break down that the economist, with his concern for general principles, can be most helpful to understanding the changed structure and the need for policy action or inaction.

The break down of the post-war dollar standard was a development welcomed and encouraged by most theoretical economists. Having accepted the Keynesian notion of how governments could and should fine tune the economy through the right combination of government spending, taxing and interest rates, they believed that such potentially stabilising policies were being frustrated by the requirement to fix exchange rates. Stimulating the economy under a fixed exchange rate regime

would mean extra spending on imports, fewer exports and balance of trade deficits; the foreign exchange reserves of the central bank would fall and short term interest rates would rise to protect the foreign exchange reserves. Given the threat to the exchange rate, governments would cut back on spending and raise taxes. Economists argued for and in the early '70s the authorities received the extra degree of freedom from the exchange rate constraint and so-called stop-go policies.

Monetary and fiscal policy conducted without regard to the foreign exchange value of the currency in fact provides only one freedom. It is the freedom to set the domestic rate of inflation higher or lower than the rate of inflation in other countries.

A fixed exchange rate system means that roughly the same rate of inflation will prevail in all the markets linked via fixed exchange rates. There is a fixed exchange rate link, for example, between Johannesburg and Cape Town. The rate of inflation in both cities is kept very much the same through the efforts of sellers and buyers to sell high and buy low. If one market should import more than it exports, then the supply of money will grow at a slower rate there while in the market with the export surplus the money supply would grow faster. Slower monetary growth depresses demand while faster growth stimulates it. Prices in both markets remain the same and are expected to remain the same. The system adjusts to excess demands or supplies through movements in short term interest rates and fluctuations in money supply growth rates. This mechanism is described and analysed within the framework of the 'monetary approach to the balance of payments'.<sup>1</sup>

In the seventies the average rate of world inflation turned out to be much higher than in the fifties and sixties. Average rates of growth turned out to be lower and unemployment rates increased. The expected sacrifice, the trade off, of price stability for more employment and output proved illusory.

It was the arguments of the rational expectations school that convinced the bulk of the economists that the presuppositions of Keynesian theory were not consistent with maximising behaviour.<sup>2</sup> If economic actors formed expectations rationally then the intended impact of government policy interventions became part of the relevant information upon which the plans of firms and trade unions and suppliers generally are based.

The parameters of the economic structure thus do not remain invariant to the policy interventions. The economy is a moving target capable of avoiding and firing back at the missiles directed at it. Therefore the authorities can only affect the real economy if they surprise the decision-makers who always do their best to avoid being surprised. Only unexpectedly high or low inflation, not inflation itself, has effects on output in a world of rational expectations. If inflation is unexpectedly high output growth will be temporarily high and if unexpectedly low, output will be temporarily depressed. Inflationary uncertainties will also affect the permanent rate of output growth by depressing the rate of investment. The evidence is that more inflation is associated with more variable real prices.

All prices do not increase at the same rate over time. The relationship between the rate of inflation and nominal interest rates becomes more variable as does the relationship between the domestic and the foreign exchange value of currencies, the so-called real exchange rate. This variability means more risk, less investment, and so less growth.

## THE COLLAPSE OF THE DOLLAR STANDARD AND ITS IMPLICATIONS FOR SOUTH AFRICA

Economists had perhaps contributed towards weakening the public's regard for a system of fixed exchange rates. The collapse of the dollar standard and of the failure of the US Treasury to continue to convert dollars into gold at a fixed price was the largely unintended outcome of an excess supply of dollars. These dollars had emerged out of the desire of the US administration to finance both the Vietnam War and the Great Society with interest rates kept temporarily low, by unexpected money creation.

The collapse of the dollar standard in the early seventies had most important implications for monetary policy in all other countries. Fixing the value of the domestic currency to the declining dollar no longer guaranteed low inflation. Moreover, continuing to fix to the dollar meant inevitably that the other currency values of the domestic currency would vary. Thus, for a country like South Africa, with well diversified trading relationships, fixing the value of the rand was no longer feasible. There would be no fixed exchange rate to depend on and, more important, to command the concern of the voters and the politicians.

The South African Reserve Bank chose in the new circumstances to manage the rand exchange rate rather than delegate the determination of the foreign exchange value of the rand to any foreign exchange market. As indicated previously, managing exchange rates means to manage interest rates. Thus, throughout the period 1971 to the present, the Reserve Bank has maintained a close concern for the level of its foreign exchange and gold holdings or more generally, its net reserve of short term foreign bank credits or debits. As part of its exchange rate and interest rate management, the bank more or less continuously received and repaid short-term loans from foreign banks.

One implication of exchange rate management and of central bank concern for its foreign exchange holdings is that the money supply, as in the case of fixed managed exchange rates, remains dependent on the balance of payments. The monetary approach to the balance of payments remains relevant. Domestic prices remain dependent on the world rate of inflation adjusted for by the managed rate of exchange. Changes in import prices measured in rands are thus a good predictor of the rate of inflation in South Africa while changes in the money supply do not help at all to explain changes in domestic prices. An increase in money supply means an increase in spending which brings more imports and fewer exports. The price of imports and exports and therefore all prices depends upon the world prices of imports and exports and the value of the rand.<sup>3</sup>

The monetary approach to the balance of payments demonstrates the impossibility of managing exchange and interest rates through the use by a central bank of a buffer stock of foreign exchange reserves and at the same time, controlling the money supply. It is, however, at least logically consistent to wish to control interest and exchange rates, not for their own sake, or for the sake of the reserves, but as instruments of money supply control. The logic of such a policy may be defensible — the practical difficulties are so formidable as to make such a policy not feasible.

As much may be proved by solving a simple model of the money supply process.<sup>4</sup> In order to control the supply of money using interest and exchange rates as instruments for such control the authorities would have to be able to estimate the following:

- the elasticity of the demand for money with respect to income and interest rates;
- the elasticity of the banks' demands for free reserves with respect to interest rates on bank lending and the discount rate;
- the elasticity of the demand for government securities with respect to the government rate of interest;
- the elasticity of capital flows with respect to the effective cost of borrowing abroad and with respect to domestic interest rates;
- the level of exports, imports, factor payments and capital that flows independently of interest rates;
- the demand for currency and the composition of deposits; and
- government expenditure, taxation and loan conversions.

We shall return to the role of capital flows in the money supply process.

## A BRIEF MONETARY HISTORY

Let us now turn to the management record. As may be seen, the record is a very poor one. Clearly the monetary history of the two periods corresponding to 11 years before and after the breakdown of fixed exchange rates is very different. In the later period inflation and interest rates are all much higher and more variable. It should be noticed that money supply growth in the earlier period is also rapid and highly variable though the variability and the rate of growth of money in the later period is faster and more variable still. Notice the huge surge in money supply growth between '72 and '75, the sharp fall off in growth rates between mid '76 and mid '79 and the quite spectacular acceleration in growth from '79 and mid '80. (Figures 1, 2, 3 and 4.)

Let us first consider the effects of money. Notice first the close association between money supply and nominal gross domestic expenditure (GDE), (i.e. the levels of both, Figures 5 and 6). This indicates very little change in the demand for money over the period as a whole. Notice then the strikingly close association between changes in GDE and money (Figure 7). Notice also the huge and violent fluctuations in nominal GDE. It should be appreciated just how variable the economy has become.<sup>5</sup> In another study, Graham Barr and I reported that between 50 and 60 per cent of any quarter's change in GDE could be explained by the change in the money supply during the same and four previous quarters with most of the impact occurring the same quarter. Moreover, using different definitions of money made very little difference to the measured effects.<sup>6</sup> In an explicitly rational expectations approach to this issue, Barr and I demonstrated the consistent impact of unexpected money on output. (Unexpected money being defined as the deviations from the trend in money supply.) The trend was established using a Box-Jenkins time series procedure.<sup>7</sup>

My struggle to explain satisfactorily the causes of the fluctuation of money supply in South Africa has been a long one. My earlier focus was on the proximate sources of changes in high-powered money, the foreign and domestic assets held by the Reserve Bank. It was apparent that the sources of base money, the balance of

Figure 1

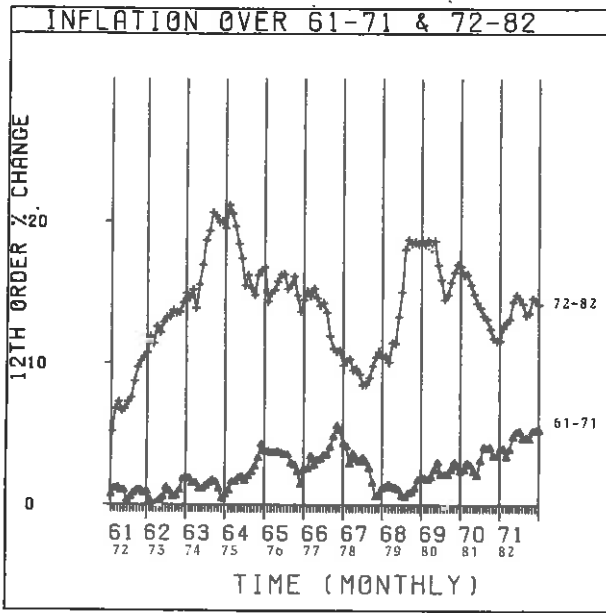


Figure 3

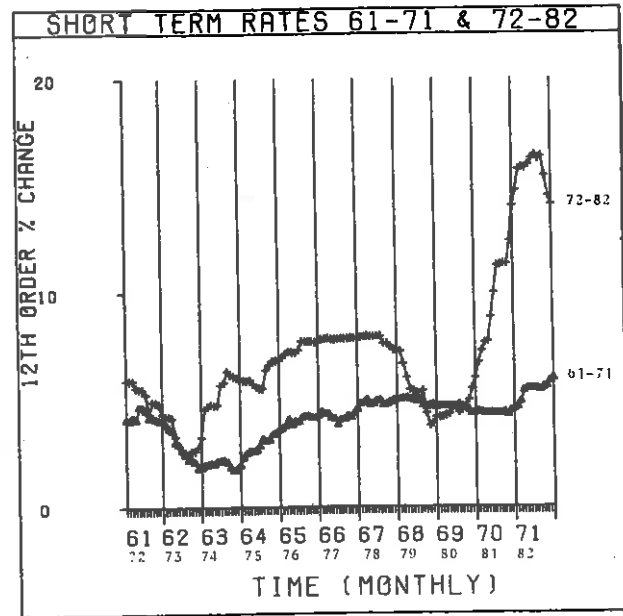


Figure 2

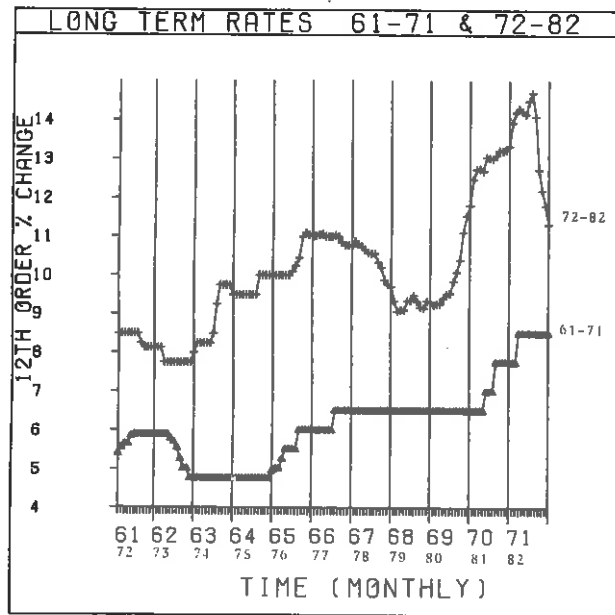


Figure 4

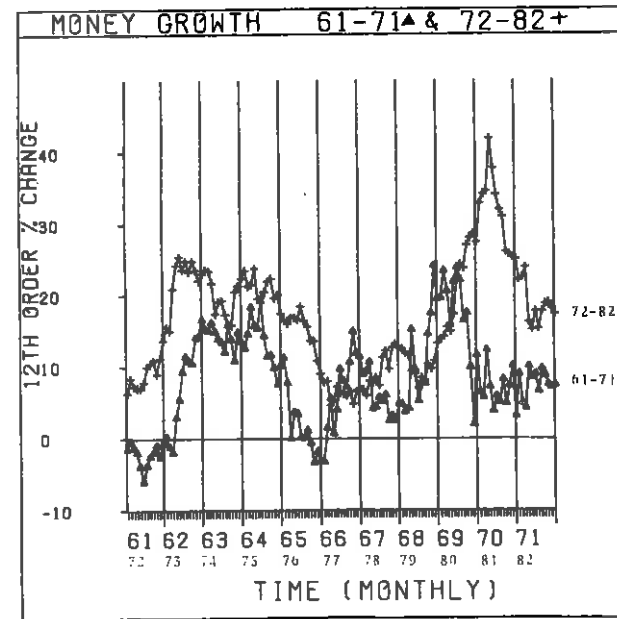


Figure 5

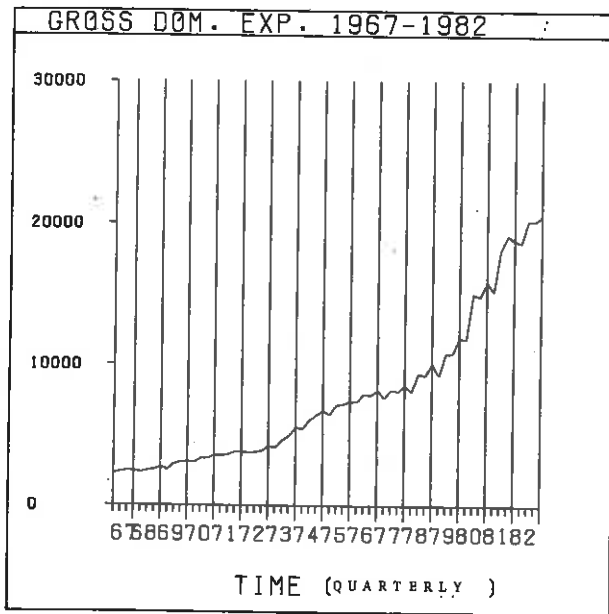


Figure 6

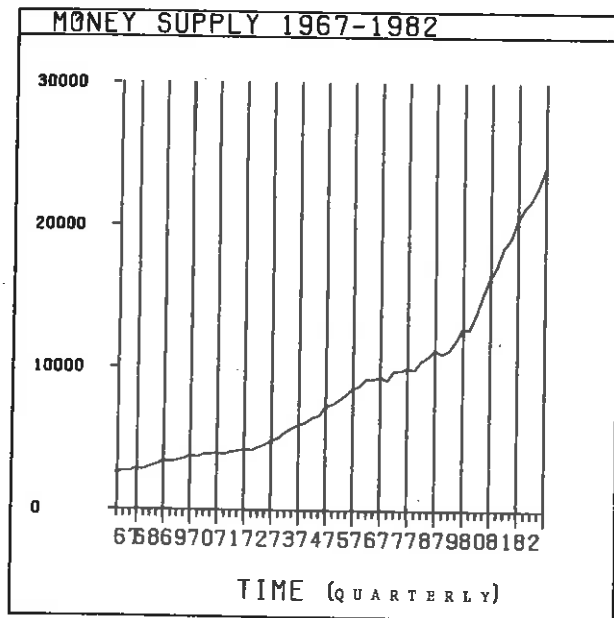


Figure 7

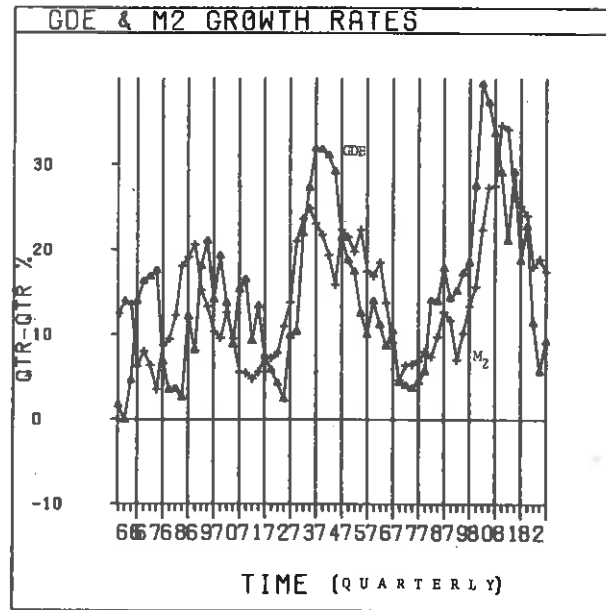
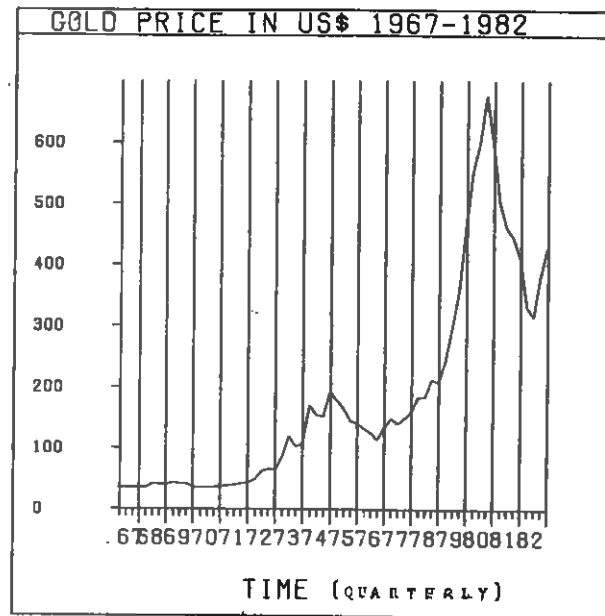


Figure 8



payments and government finance, were interdependently determined and attempts to extract cause and effect through the policy reactions of the authorities were not productive.<sup>8</sup> A breakthrough in this struggle has now, I believe, been made. The break followed work Barr, Matthew Nurick and I did on the determination of the financial rand discount. This work involved deriving the interest parity condition for a dual exchange rate system and brought recognition of the role played in the determination of the financial rand discount of expectations of the commercial rand. Later work traced the link between the value of the financial rand and domestic interest rates.

It can be shown that the existence of a dual exchange rate did not insulate the South African economy from foreign capital markets. Foreign interest rates and the financial rand discount both affected domestic interest rates.

We discovered, somewhat to our surprise, that interest parity, when calculated using the Reserve Bank's quoted forward exchange rates just did not hold. We tested equations of the following sort:

$$i = a + b_1 i^* + b_2 \frac{S^{*c} - S^*}{S^*} \quad (1)$$

where  $i$  represents domestic short term interest rates,  $i^*$  foreign interest rates,  $S^{*c}$  the forward rate of exchange, that is dollar value of the rand in three months' time, and  $S^*$  the spot rate of exchange, that is the dollar value of rands today, and obtained results that did not support the presumption of interest parity. Clearly something else was at work.

What was at work here was the financial rand discount and the fact that the quoted forward exchange rates did not necessarily represent the best estimate of the spot exchange rate at some future point in time.

Interest parity for a dual exchange rate system is written as follows:

$$i^* - \frac{i S^{*c}}{FR} = \frac{FR^c - FR}{FR} 100 \quad (2)$$

where  $FR$  represents the spot dollar value of the financial currency e.g. the financial rand and  $FR^c$  the expected forward value of the financial currency.

We then tested the following regression equation:

$$i = a + b \frac{i^* FR}{S^{*c}}$$

and found the coefficient  $b$  to have the sign predicted by theory and to be insignificantly different from (1). That is, other things being equal, domestic short term rates would change in proportion to changes in foreign rates; the other things being as indicated, the expected value of the commercial currency and the spot value of the financial currency. The remaining component of dual exchange rate interest parity is the expected appreciation of the financial currency itself which, in the absence of a market in the financial currency, could not be observed. However it is possible to relate closely differences in interest rates abroad and the effective rate of return on South African assets, i.e.

$$i^* - \frac{i S^{*c}}{FR}$$

to movements in the gold price. When the gold price rises or falls, the expected value of the commercial and the financial currency rises and falls accordingly.<sup>9</sup>

Should, therefore, the managed exchange rates, spot and forward, lag behind the rates expected by the market when the gold price rises and balance of payments prospects improve, domestic interest rates tend to fall as capital tends to flow towards South Africa. Money supply growth simultaneously tends to increase. It clearly can pay maximising economic actors with access to either domestic or foreign sources of finance to ignore the quoted forward exchange rates, should they be regarded, quite rationally, as underestimates of the expected value of the rand. The money supply accordingly increases.

The Reserve Bank itself may welcome the inflow of foreign exchange with which to repay foreign credits incurred previously when the exchange rate was overvalued. But as indicated, such a preference is inconsistent with money supply control.

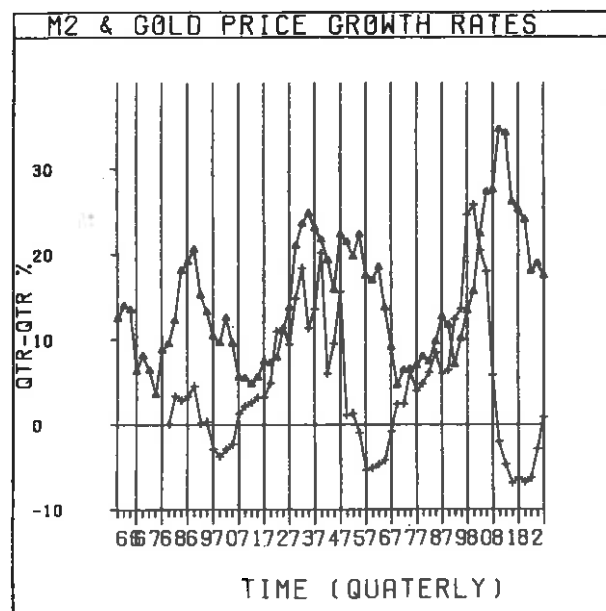
Should the Reserve Bank set the forward exchange rate artificially high, there would be no reluctance by borrowers to borrow abroad and take out cheap forward cover. In this way the Reserve Bank would be able temporarily to protect its foreign exchange reserves and control exchange and interest rates. But if the balance of payments fundamentals continued to press down on the exchange rate, South Africa's foreign borrowing capacity would reach its limit. The exchange rate would then have to adjust and the Reserve Bank accept large losses on its forward exchange book.

South Africa's borrowing capacity is not in fact known. Indeed in 1981, the Reserve Bank showed no particular willingness to defend the rand and by mid 1982 the rand was conspicuously undervalued. Upward pressure on the exchange rate and the money supply and downward pressure on domestic interest had resumed by the third quarter of 1982. The impact of the gold price on money supply growth is demonstrated in Figure 9 (see also Figure 8).

What went wrong with South African monetary policy in the seventies was partly a failure to properly understand the money supply process in the new world of flexible exchange rates. This, I should add, notwithstanding all the efforts I made from the early seventies onwards essentially to make some of the points I have made tonight. My arguments have become, I believe, much more refined but the broad thrust has been a consistent one throughout. That is to explain why it is impossible to control both exchange rates, exchange reserves and the money supply and why the best South Africa could hope to do in the circumstances, potentially highly beneficial to us, of a generally rising but highly variable real price of gold, was to control the money supply and leave exchange and rates to the determination of market forces.

However, it should be understood that it is not economists but politicians who decide economic policy. In the circumstances of the seventies, in the absence of a politically significant fixed exchange rate, the politicians and the political process had a much greater degree of freedom to intervene with exchange and interest rates and financial markets generally. Both exchange and interest rates are politically highly sensitive prices. The fortunes of important constituencies, homeowners, exporters, farmers, miners and import replacers, are very much dependent upon the relationship between prices and foreign prices, and interest rates and prices. It is perfectly natural for exporters and import replacers to argue for lower exchange rates and higher rand prices today even if they are well aware that a lower exchange

Figure 9



*In this diagram the gold price changes have been divided by 5 in order to better illustrate their relationship with money supply changes.*

rate today will mean higher costs of production tomorrow. Higher prices today are the bird in the hand. Lower costs tomorrow are the bird in the bush which will only be caught if the gold price is not adversely affected between today and tomorrow. An undervalued exchange rate also means lower interest rates which are politically desirable.

What went wrong in South Africa is that the pressures for undervalued exchange rates and lower interest rates became difficult to resist in the circumstances of managed but flexible exchange rates. The substantial change in the real price of gold as it occurred in 1973 and again in 1980, if immediately translated into exchange rate changes, would have meant significantly lower real prices for imports and non-gold exports. The political forces resisting such changes were sufficient to delay the appreciation of the rand and by so doing stimulated money supply growth, domestic expenditure and expenditure on imports. As a result of this increased expenditure, within the very same year — 1980 in fact — imports had caught up with exports. By the end of the year the exchange rate, despite a doubling in the dollar price of gold, could no longer be regarded as undervalued. The subsequent fall in the price of gold in 1981 reversed the pressure on the exchange rate.

The real effects of a permanently higher real price of gold cannot be gainsaid. That is to say when the dollar price of gold rises, South Africa will export more dollars worth (not more ounces) of gold, import more goods valued in dollars and so produce less of other goods. These are the real effects of a higher real gold price and they may be realised with higher or lower inflation, that is, with much higher or

less high rand prices of gold and other goods and services. Attempting to keep the exchange rate down brings, as we have seen, an increase in the money supply.

The gold market is surely an efficient market. That is to say the current price of gold plus the relevant interest rates is the best available estimate of the future price of gold, even though it is a poor estimate. Or to put the point in another way, the current gold price has statistically about as much chance of falling as rising. The Reserve Bank is no more able to accurately predict the future price of gold than any of us. When the Reserve Bank manages the exchange rate, it has to take a position on the future gold price. If the gold price should subsequently fall, then delaying any appreciation of the rand may bring an increase in the supply of money but it will help to stabilise the real exchange rate. That is the difference between the change in the exchange rate and the difference between inflation in South Africa and the United States. If the gold price should continue to rise and the rand reluctantly follow, then by delaying the exchange rate rise, the real exchange will still have varied and the money supply will also have grown much faster. If again later, the gold price falls away, then the nominal exchange rate must fall away with it. Any reluctance to allow the exchange rate to fall will bring sharp downward pressure on the money supply with depressing effects on money supply growth.

Thus the Reserve Bank can only stabilise the real exchange rate if it is able to distinguish between permanent and temporary changes in the price of gold. There is absolutely no reason for believing that the Reserve Bank has such an ability. Therefore a managed exchange rate system for South Africa is quite incapable of stabilising real exchange rates, real interest rates, real output growth paths or the money supply. So much is apparent from our recent monetary history.

What should be done about monetary management in South Africa under current international monetary circumstances is surely obvious. That is, to deny opportunities to gain by borrowing or lending foreign currency in the fully rational expectation of a movement up or down in the value of the rand. In other words, the market in rands must become an efficient market, that is one where the best estimate of the future value of the rand is reflected in the rate for rands or dollars or other currencies delivered forward. Only a well developed market in foreign exchange spot and forward will maintain continuously the equilibrium between actual and expected exchange rates and hence interest parity. Money will neither flow in or out of this market, additional supply will always be equal to additional demand, at a market-determined price. A well developed market in foreign exchange operates in exactly the same way as any stock market. Prices adjust to equalise the value of buying and selling orders.

Market determined exchange rates, which mean market determined interest rates, give the monetary authorities the ability to control closely the supply of money. The balance of payments or exchange rate threat to money supply control is removed. However, the threat from spendthrift government reluctance to tax or to pay higher rates of interest remains. Spendthrift government has not been the money supply problem in South Africa. We have had in the last nine years a parsimonious central government with a growing reluctance to borrow.

Steps towards the establishment of a well developed exchange market are well under way. Very soon, participants in the market will then have to think more fundamentally than simply to decide whether to buy or sell dollars today on the basis of a pretty good idea of what the Reserve Bank will do tomorrow. The removal of exchange control applied to non-residents and the demise of the financial rand have widened and deepened the market for rands. This exchange control reform



also brought with it a new and improved rating for South African assets on world markets. The financial rand on Friday 4 February was worth 77 US cents. On Monday 7th it was immediately worth 88 cents and began to appreciate. Such were the immediate tangible benefits to holders of South African assets of a better market and the self-confidence to realise these benefits.

As always economic reforms are decided by the political process. The technical case for money supply control through market forces will never be decisive. Political support for further reforms of the exchange market will have been gained by the ease with which the stock market coped with the removal of the financial rand system and the highly favourable publicity South Africa received. The patent inability of the authorities closely to contain money supply over the past nine months, despite their every intention of doing so, must surely have further damaged the case for exchange rate management. The major industrial countries are currently setting South Africa a much better anti-inflationary example. Moreover the fact that world inflation rates are so much lower now than they were in 1980 makes it much easier politically for South Africa to follow suit. Given low rates of inflation abroad, the South African inflation rate will come down substantially if we merely maintain the current dollar value of the rand. At present and as long as inflation in the United States remains below 5 per cent, low inflation in South Africa will not require any substantial change in the dollar value of the rand.

Under the current managed rand, the authorities have merely to resist the pressure for a depreciation of the rand value of the dollar. This pressure is always there but probably less than is the strength of the resistance to an appreciating rand. The South African rate of inflation is currently much higher than the rate of inflation of our trading partners because the rand fell away so badly between January 1981 and June 1982. The fact that the rand was stabilised in mid 1982 and began to appreciate in November 1982 means that difference in inflation rates between South Africa and abroad must narrow. Such a narrowing is very obvious in the prices of imports and I believe also in the recent behaviour of the wholesale price index.

The exporters who, on every occasion they have, refer to the difference in South African and overseas inflation and their growing non-competitiveness patently choose to ignore how their rand receipts had benefited from the earlier depreciation of the rand. Higher South African inflation has, of course, partly caught up with them but to follow the implication that they should now be helped by a fall in the value of the rand would be to sustain the difference between South African and world inflation. The immediate pleasures to producers of the bird in the hand have to be denied. The consolation of the bird in the bush of lower inflation later must be sufficient.

The only sure method of achieving permanently lower inflation in South Africa is the depoliticisation of exchange rates and interest rates. The determination of these and other prices must be left to the market place. Much progress to this end has been achieved and I don't believe that it is wildly optimistic to anticipate in the near future a well developed exchange market with or without further fundamental exchange control reforms in South Africa. A market, that is, in which the Reserve Bank becomes a very occasional and minor participant.

The economy is currently in the trough of a business cycle — it is probably already on the way out of it. Recovery is highly possible without further monetary stimulation. South Africa will thus be able to enjoy higher growth and less inflation

if the growth in the money supply can be contained over the next twelve months. Reforms of the exchange market are essential for the purpose. The Reserve Bank may, right at the moment, be calling the tune in the money market. A 15 dollar increase in the price of gold as a 1 percentage fall in US short term interest rates, will leave the Reserve Bank whistling after a further deluge of money from off shore borrowing. South Africa may be in a uniquely favourable position to achieve these reforms with low world inflation, recovery abroad and above all a Minister of Finance who loathes spending and, *mirabile dictu*, a Governor of the Reserve Bank who genuinely appreciates the power and usefulness of market forces. Let us hope they seize the moment to direct South Africa away from debilitating double digit inflation.

## FOOTNOTES

1. My own earlier attempts to explain the monetary approach to the balance of payments and its significance for South Africa can be found in:  
Brian Kantor:  
The Gold Agreement and the Future of Gold, *The South African Bankers' Journal*, vol. 67, no. 1, Feb. 1970, pp. 31-40.  
The Rixdollar and the Foreign Exchange, *SA Journal of Economics*, vol. 39, no. 1, March 1971, pp. 42-72.  
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The Franszen Commission on Monetary Policy, *The South African Bankers' Journal*, vol. 68, no. 3, August 1971, pp. 259-283.  
The South African Financial Structure, *The Standard Bank Review*, September 1972, pp. 23-31. Reprinted in *Essays on the South African Financial Structure*, edited by A Hamersma and N Czypionka, Standard Bank, 1975.
2. Brian Kantor:  
Is there a Rationale for Stabilization Policy? *Studies in Economics and Econometrics*, University of Stellenbosch, no. 5, June 1979, pp. 40-53.  
Rational Expectations and Economic Thought, *Journal of Economic Literature*, vol. XVII, Dec. 1979, pp. 1422-1441. (Translated into Japanese: *Mainichi Economist*, June 5, 1980).
3. For evidence and a fuller discussion, see Brian Kantor and David Rees, *South African Economic Issues*, Juta & Co., 1982, Chapters 5 & 6.
4. A money supply model for South Africa is discussed in Kantor and Rees, *op.cit.* Chapter 5. The particular model used to generate these results added a money demand equation and allowed separately for capital inflows in response to interest parity conditions and deviations from them.
5. In 1974, as a whole nominal GDE increased by 27,8 per cent and real GDE by 15,5. In 1980, nominal GDE increased by 26,2 and real GDE by 13,2 per cent. See *South African Reserve Bank Quarterly Bulletins*.
6. See GDI Barr and BS Kantor, Money and Economic Activity: Some Alternative Results. *SA Journal of Economics*, vol. 50, no. 4, December 1982, pp. 375-377.
7. GDI Barr and BS Kantor, A Rational Expectations Analysis of the South African Business Cycles. *Studies in Economics and Econometrics*, Bureau for Economic Research, University of Stellenbosch, no. 16, April 1983, pp. 5-16.  
BS Kantor and A Ruskin, Testing Rational Expectations: Comment. *SA Journal of Economics, Quarterly Journal*, vol. 50(1), 1982.
8. BS Kantor, The Demand for and Supply of High-powered Money, Money and Bank Credit. *Studies in Economics and Econometrics*, University of Stellenbosch, no. 4, March 1979, pp. 70-90.
9. See GDI Barr and BS Kantor, A theory of the financial rand discount. *The Investment Analysts Journal*, no. 21, June 1983. See also MS Nurick, *Interest and Exchange Rate Behaviour in South Africa: Theory and Evidence*, MA thesis, 1982.