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EXCHANGE RATE TARGET ZONES AND THE CONDUCT OF MONETARY POLICY

AN AUSTRALIAN PERSPECTIVE

L.I. Hogan and D.T. Nguyen

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SUMMARY

In the present world economic situation, with large trade imbalances between the major economies, rising protectionist pressures and continuing serious payments problems in many developing countries, international policy co-ordination would appear to be most desirable. A system of exchange rate target zones could assist and facilitate a shift toward greater policy harmonisation, by inducing various individual governments to consider the international repercussions of their own actions, and to assess whether such actions are consistent with the overall conditions in the world economy.

Of course, if there were a lack of the political will to co-ordinate, or to implement national policies so as to carry out international agreements, exchange rate target zones by themselves would probably be ineffective, and perhaps even harmful. If, however, governments were serious about policy co-ordination, target zones for exchange rates could be a useful part of a set of indicators which could be monitored easily and would facilitate discussions and agreement on a quantitative basis.

Unilaterally implemented exchange rate target zones can assist policy makers in a given country in reviewing the consistency and sustainability of their proposed policies, just as an internationally co-ordinated system of target zones can help different governments achieve global co-ordination and consistency. In Australia, despite official disclaimers, many market observers have continued to interpret government policy as maintaining some version of target zones, especially for the trade weighted index. It is not obvious, however, that the perceived zones represent formal 'targets' in the sense of estimates by the authorities of the fundamental equilibrium exchange rate, estimates which they would stand ready to defend.

In view of theoretical and empirical evidence that neither monetary nor exchange rate targeting is optimal for all circumstances, an 'indicator list' approach to monetary policy which involves target zones for both the

exchange rate and some indication of monetary conditions is likely to be both practical and effective. Nevertheless, there is a continuing need for recognising that not monetary policy alone but rather the entire package of government policies (in particular, fiscal and wage policies) will require reviewing and adjustment from time to time.

EXCHANGE RATE TARGET ZONES AND THE CONDUCT OF MONETARY POLICY AN AUSTRALIAN PERSPECTIVE*

INTRODUCTION

In recent years, there has been considerable interest in possible reforms in the international monetary system (see, for example, International Monetary Fund 1984b; United Nations 1986). This is attributable to a perception that the promised benefits of the shift to generalised floating since the early 1970s have not been fully realised, and that the new system has brought with it a number of serious problems. For example, there has been a substantial increase in the short term volatility of exchange rates (International Monetary Fund 1984a). More importantly, wide and prolonged swings in real exchange rates have emerged. It has been argued that such large oscillations in competitiveness tend to impose significant economic costs by fuelling protectionist pressures, dampening international trade, generating confusing signals for resource allocation and damaging general economic performance (Williamson 1985; United Nations 1986).

Since 1985, major OECD governments have generally paid more attention to the exchange rate in their conduct of monetary policy than in previous years under the floating regime. Indeed, the Plaza Agreement of September 1985 (between the finance ministers of the major five industrialised countries)

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represented a clear acknowledgment of the potential desirability of co-ordinated intervention in foreign exchange markets, and more generally, of closer policy harmonisation. This message has been repeated in a number of subsequent international forums.

One proposal for the reform of the international monetary system which has generated considerable controversy overseas is the notion of target zones for exchange rates. A target zone is a range of permissible deviations of the exchange rate around a defined long run equilibrium rate. Proponents argue that a system of target zones embodies the best of both the fixed and floating exchange rate systems, in that it is flexible enough to cope with fundamental changes, yet also stable in terms of preventing prolonged deviations in real exchange rates from their long run values (Williamson 1985, 1987). However, sceptics suggest that such a system may actually encompass the worst of both systems; that is, the instability of flexible exchange rates and the unsustainability of fixed rates (Frenkel 1987).

In Australia, there has been a fairly widespread perception in the financial market that the monetary authorities have maintained implicit exchange rate zones for the Australian dollar, particularly since mid-1986 (see, for example, Macquarie Bank 1986; Syntec 1986, 1987). This perception has persisted despite the statements by the Reserve Bank of Australia (1986, 1987) that there has been no formal exchange rate targeting.

The purpose of this paper is to consider the implications of a system of exchange rate target zones for macroeconomic policy, especially monetary policy. Special emphasis is given to the issues relevant to the Australian setting. In the next section, the essential features of the target zone proposal are reviewed. This is followed by a discussion of the advantages

and disadvantages of a target zone system. The experience of the European Monetary System, which has often been cited as a working example (at a regional level) of the exchange rate target zone proposal, is considered briefly in section 4. In section 5, recent developments in Australian financial and foreign exchange markets are reviewed in order to gain some insight into the reasons for the common perception that the monetary authorities have unilaterally maintained certain exchange rate target zones. We also consider the implications of target zones for the conduct of monetary policy. Finally, section 6 contains some concluding comments.

Throughout the paper the discussion will revolve around two main issues: the volatility/stability of exchange rates, and the use of exchange rates to facilitate reviewing (and co-ordinating) economic policies. On the first issue, it will be argued that predetermined exchange rate target zones may not necessarily reduce exchange rate volatility - indeed, it may be undesirable to use them for that purpose. This, however, does not preclude the potential usefulness of monetary policy and (actual or threatened) exchange market intervention in dampening volatile and self-propelling expectations about the exchange rate.

As for the second issue, it will be argued that exchange rates could form a useful component of a list of indicators which facilitate the monitoring and determination of government economic policies, whether in a multilateral or unilateral context.

THE TARGET ZONE PROPOSAL

1. Overview

The central aim of the target zone approach is to compel countries to develop a view about long run equilibrium real exchange rates and to try to achieve the chosen targets, to within predetermined margins. The approach is not exclusively embodied in any single proposal. Rather, there has been a spectrum of target zone proposals. Some of these differ according to the width of the target zone. Narrow bands constitute a 'hard' version of the approach, while wide bands constitute 'soft' target zones. In addition, the target zones may be adjusted frequently ('soft' zones) or rarely and only under strict conditions ('hard' zones). Further, target zones may be confidential ('quiet') or publicly announced ('loud'). Proposals also differ according to the commitment to defend the target zones. Proposed responses to deviations of the exchange rate from the target zone range from consultative meetings to intervention in foreign exchange markets and adjustment of macroeconomic policies.

2. Calculation of the Equilibrium Exchange Rate

In any target zone system, an issue of crucial importance is the calculation of the central exchange rate which the zone surrounds. Two methods which are commonly used to calculate the equilibrium exchange rate are the purchasing power parity method, and the underlying payments disequilibria approach (Artus 1978; Williamson 1985; Frenkel and Goldstein 1986).

Under relative purchasing power parity rule, the equilibrium real exchange rate is regarded as constant, and the equilibrium nominal exchange rate in the current period is calculated as the exchange rate in some base period, in which there was external balance, adjusted for relative inflation rates. Of course, purchasing power parity will yield a suitable measure of the equilibrium exchange rate only if all disturbances are monetary in origin (Officer 1976). Real disturbances, such as changes in the terms of trade, influence relative prices and require changes in the real exchange rate to restore equilibrium.

In the underlying balance approach, the long run equilibrium real exchange rate - which Williamson (1985) called the fundamental equilibrium real exchange rate - is obtained as part of a set of conditions which would generate both external and internal balance.[1] Here, external balance means the equality of the current account balance and the 'normal' (that is, sustainable) net capital flow. Internal balance refers to the equality of aggregate demand and aggregate supply, so that there is neither pressure for inflation to accelerate nor any large pool of involuntarily unemployed resources. There is also the presumption that, in this long run equilibrium, the setting of fiscal policy parameters is not a matter of government discretion. Rather, these parameters must be consistent with a sustainable mix of public and private demand (Williamson 1985, pp.32-3).

Under this approach, the fundamental equilibrium real exchange rate is treated explicitly as a variable, the value of which depends on a variety of factors, such as the terms of trade or the relative growth in productivity in different countries. To calculate such an exchange rate, one would need

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[1] Corresponding nominal exchange rate targets can be derived from such a real exchange rate and (actual or expected) inflation rates.

to rely on a fairly complex model. The results are likely to be quite sensitive to the particular parameters of the model, such as the estimates of the normal level of net capital inflows.

3. Currency Membership

Membership in the system of target zones is another important issue. Limiting the number of members tends to facilitate agreement and co-ordination. In most proposals the inclusion of the three major economies (the United States, Japan and the Federal Republic of Germany), and perhaps France and the United Kingdom also, is seen as essential for the system to have a significant impact in foreign exchange markets. In addition, it is suggested that, the more similar the member countries are in terms of a number of characteristics, the more successful the system is likely to be. These characteristics are identified in the literature on optimal currency areas (Heller 1978) and include openness of the economy, the size of the economy, the degree of commodity diversification and the underlying inflation rates. It is interesting to note that if Germany and France were to become members of a global target zone system, their obligations within the European Monetary System would need to be considered and clarified.

4. Width of the Target Zones

A further operational issue is the width of the target zones. Most proposals recognise that the zones must be wide enough to accommodate transitory disturbances and to reflect potential errors in calculating the fundamental equilibrium exchange rate. In many proposals a zone of about 10 per cent on each side of the targeted rate is envisaged. While this may seem a rather wide zone, actual swings in real exchange rates for the major

currencies since 1979 have far exceeded it in many instances (see, for example, Williamson 1985, p.36). The width of the zone may vary between members and over time.

5. Frequency of Adjustment

How often should the target zones be revised? Clearly, the target zones for both the real and nominal exchange rates should be adjusted whenever it is believed that a permanent change in underlying real economic conditions has occurred. In addition, even if no real disturbances occur, the target zones for the nominal exchange rate must be adjusted in line with inflation differentials frequently enough to ensure that the real exchange rate remains within its target zone. The frequency of adjustment of the target zones will be influenced by, among other things, the availability of relevant data and the flexibility of policy settings.

6. Policy Instruments

What policy instruments should be used in the defence of the target zones? Both proponents and critics of target zones agree that monetary policy is likely to bear the major burden of such defence action. Sterilised intervention, an alternative instrument, is unlikely to be effective over the medium to long term, although it may be useful in the short term, provided foreign and domestic assets are not perfect substitutes (Kenen 1987). Similarly, while fiscal policy, wage policy and supply-side microeconomic policies (such as industry regulations) do have an important role to play in determining the level of the real exchange rate, they typically are not very flexible and, therefore, are not suitable for counteracting short term disturbances.

ADVANTAGES AND DISADVANTAGES OF TARGET ZONES

Proponents of the target zone approach usually provide a rationale for their proposal by pointing out that there are several major problems with the current system of exchange rate management. These include the considerable volatility of exchange rates in the short term, large and persistent currency misalignments (that is, deviations of exchange rates from their fundamental equilibrium values) and undisciplined and unco-ordinated macroeconomic policies. There is considerable debate as to whether a target zone system would correct these problems.

1. Volatility and Misalignment

Some advocates of the approach have argued that a system of target zones would reduce short term volatility and persistent misalignments by providing an 'anchor' for medium term expectations about exchange rates. If market participants had confidence in their expectations of the future course of macroeconomic policies, reaction to short term disturbances would be dampened. This would tend to reduce volatility of exchange rates. Further, to the extent that 'bandwagon' effects and speculative bubbles (see, for example, Frankel and Froot 1986) lead to exchange rate misalignments, increased certainty about the medium term outlook, and actual or threatened intervention, could reduce such misalignments.

Opponents of the target zone approach argue that, if the main objective is to inform the market of government policy, direct announcements of the future course of policies may be preferable to publication of exchange rate targets. In addition, governments may not have better information than

markets about the 'true' model and, therefore, of the true equilibrium exchange rate. As for short term volatility, they argue, this may not be reduced if the credibility of the zones is under question - due perhaps to an inability of governments to convince market participants that they would be able to enforce the targets.

There are also credibility risks in determining the width and frequency of adjustment of the target zones. Wide and frequently revised target zones may be necessary given measurement errors and uncertainty about changes in real economic conditions, but they are not likely to provide suitable anchors for expectations. On the other hand, narrow and infrequently revised target zones increase the risk of destabilising one-way speculation of the type frequently experienced under the Bretton Woods system.

2. Discipline, Co-ordination and Surveillance

It is argued that target zones and the associated international surveillance process would provide discipline to macroeconomic policy formation. There would be an incentive for a government to make appropriate policy adjustments when circumstances so require, for if it chose to adjust the target zone, rather than its policies, it would be obliged to negotiate and justify the new zone. Sceptics, however, argue that governments are not likely to adjust policies significantly to achieve external objectives (such as exchange rate targets), and cite as evidence the fact that other measures, such as the Group of Five surveillance meetings (discussed below), have had only limited success in this regard.

It has been suggested that the degree of international policy co-ordination would be enhanced by the adoption of a target zone system, as

discussions between governments would be promoted and policies which may be mutually inconsistent could be identified in advance, with a view to reconciling them. Target zones may also lower the risk of competitive devaluations. Critics argue that target zones would not be effective in enhancing policy co-ordination. They point out that exchange rates are regarded as a measure of a country's competitiveness, making negotiations difficult. This, of course, is an empirical issue. More importantly, critics argue, if governments are committed to macroeconomic policy co-ordination, the target zones are themselves superfluous. This criticism, however, ignores the role of exchange rate targets as devices to facilitate discussions and agreement on a quantitative basis: they could act as intermediate targets, which could be monitored easily and would provide an indication of the anticipated impact of policy settings on each country's trading position.

A potential problem with exchange rate targets is that the exchange rate alone may be an inadequate indicator of inconsistent macroeconomic policies. In particular, if fiscal policies are misaligned, the use of monetary policy to validate exchange rate targets may 'exacerbate the departures from the optimal mix of fiscal and monetary policies and may be very costly in terms of the overall economic system' (Frenkel 1987, p.208). Consider, for example, the recent US experience: since early 1985 the US dollar has depreciated substantially, while fiscal policy has remained more expansionary in the United States than in other major economies, with stances on monetary policy being broadly similar. By February 1987, the authorities had apparently come to the conclusion that the dollar had depreciated far enough for the time being and initiated attempts to prevent further falls in its value. These mainly involved intervention in the foreign exchange market and negotiations to enhance policy harmonisation.

If, however, US monetary policy had been tightened for this purpose, this would have exacerbated the fundamental problem of an inappropriate monetary and fiscal policy mix. Another important issue is that it is not always clear which country would be required to adjust if more than one member's exchange rate deviated from the target zone.

In short, if governments are unwilling to co-ordinate their policies, target zones may not be very useful, or even workable. If, however, governments wish to co-ordinate, exchange rate target zones may have a role, especially if used in conjunction with a broad set of indicators which would provide a comprehensive framework for assessing the need for adjustment and the appropriate policy response. In 1986, both the IMF Interim Committee and participants at the Tokyo Summit expressed interest in using such 'indicators' to enhance policy co-ordination (Williamson 1987). In this context, soft target zones are likely to be more effective in promoting discussion and checking the consistency of policies than a blind commitment to defend a hard target zone.

In the current international environment, policy co-ordination between the major industrialised countries would appear to be highly desirable. (For further discussions of this, see Marris 1985; McKibbin, Roubini and Sachs 1987.) Note that co-ordination need not imply that national sovereignty must be forgone: temporary divergences in policy could still occur to reflect different emphases in different countries. This would still be consistent with the objective of checking for the overall consistency of policies, including their mixes, in the medium term.

THE EUROPEAN MONETARY SYSTEM EXPERIENCE

The European Monetary System (EMS) is often cited as an example of a system of target zones which has operated successfully for a number of years on a regional level, thus lending support for the global proposal. However, the EMS is not the first attempt to create a regional currency bloc in Western Europe. In 1969, arrangements for economic and monetary union (EMU) were announced. These comprised a series of stages whereby a complete EMU would be achieved by 1980 (Tsoukalis 1982).

The EMU plan failed for several reasons, including the impact of the first oil price shock. By 1974, all that remained of the EMU plan were the 'snake' arrangements which linked most EC currencies (and two Scandinavian currencies). The European snake was defended mainly by direct intervention by central banks. EC currencies were particularly volatile in 1976 (Thygesen 1978). France withdrew from the snake arrangement leaving a realigned and improvised 'mini-snake'. (Also, in the same year, the pound sterling and the lira, which were not part of the snake, depreciated sharply.) Subsequently, over a period of several years, the Commission of the European Communities explored several possible initiatives in monetary and exchange rate co-operation. The EMS was finally formed in March 1979.

The purpose of the EMS was to create a zone of monetary stability in Europe in order to promote intra-European trade and enhance economic growth prospects. The EMS is comprised of the currencies of the Federal Republic of Germany, France, Italy, Belgium, the Netherlands, Luxembourg, Denmark and Ireland. Each participating member agrees to maintain the value of its currency within a prescribed band around a central exchange rate expressed

in terms of the European Currency Unit (ECU). The establishment of the exchange rate system was initially regarded as the first phase of the EMS.

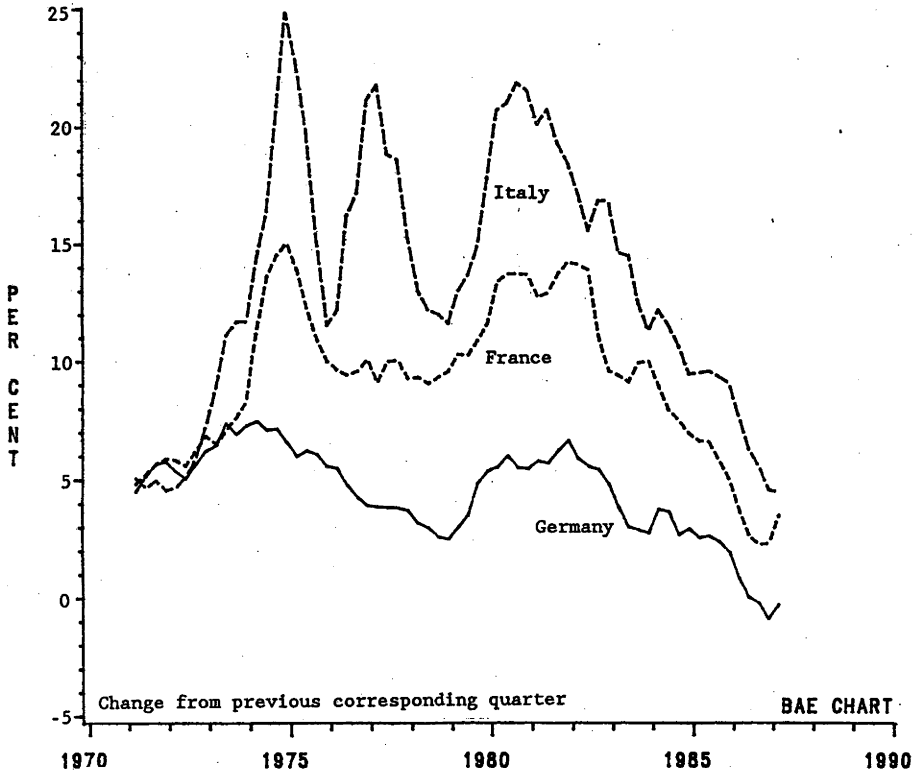
In the second phase, the European Monetary Fund (EMF) was to have been created to administer the Community's foreign reserves and the common currency, the ECU. The latter phase was to have reflected a switch in emphasis from policy co-ordination to a strengthening of common institutions and creation of regional policy instruments. Although the EMF phase has not developed as originally envisaged, the ECU has become a major feature of the international financial market. European central banks now hold about 20 per cent of their official reserves in the form of ECUs, and settle their intervention accounts in ECUs. And, more importantly, the ECU has become a widely used currency in the private international capital market (Pennant-Rea 1985).

The EMS has clearly been successful in stabilising exchange rates. Since 1979, intra-EMS exchange rates have tended to be substantially less variable than the major exchange rates outside the system (Bewley and Kearney 1987; de Grauwe 1987). The system may also have assisted in bringing about some convergence of national economic policies (International Monetary Fund 1986). In the early 1980s, France pursued expansionary economic policies in contrast to the anti-inflationary policy stance of Germany and many other European countries. As a result, France experienced a significantly higher rate of inflation than did other EMS countries, an increasing external account imbalance and substantial downward pressure on the value of its currency. In early 1983, France reoriented its economic policies by adopting a series of austerity measures. Italy went through a similar experience at the same time. Since that time, there have been greater consistency in fiscal policy and less frequent currency realignments. The rates of

inflation in France and Italy have declined significantly, although they have remained above the rate in Germany (figure 1).

Despite greater exchange rate stability, macroeconomic performance (in terms of employment and output growth) in Europe has been generally less successful than in the other major industrialised economies - the United States and Japan. De Grauwe (1987), however, argued that the greater exchange rate stability provided by the EMS has been a source of growth of intra-EMS trade, but this positive effect has been more than offset by other

Figure 1: INFLATION RATES IN SELECTED EMS COUNTRIES



factors. For example, he suggested that, since 1982, EMS countries have tended to follow more restrictive fiscal policies than non-EMS countries, resulting in relatively lower growth in Europe. Part of the reason for this asymmetry in fiscal policies is that budget deficits tended to be significantly higher in EMS countries at the beginning of the period. In addition, the striking divergence between the US and the European experience in reducing unemployment may partly be a reflection of substantial labour market rigidities in Europe in contrast with a more flexible labour market in the United States (Marris 1985).

The relative success of the EMS has been attributed to several special circumstances (United Nations 1986). First, there is a high degree of political commitment to the system by member countries. The EMS is only part of a system which includes trade and economic policy consultations. Second, EMS countries have relatively homogeneous structural characteristics, indicating an optimal currency area (or close to it). Finally, capital is relatively immobile internationally for EMS member countries (Rogoff 1985; De Grauwe 1987), due to a number of restrictions and regulations over foreign investment, thus making it easier for EMS governments to defend exchange rate targets.

AN AUSTRALIAN PERSPECTIVE

It is by no means certain that the international monetary system will be reformed in accordance with a target zone proposal. Nor is it likely that Australia will participate in a major regional currency bloc in the near future. Nevertheless, recent experience has demonstrated that some aspects of the target zone debate are directly relevant to Australia.

1. Historical Background

Following the economic recession in 1982-83, the Australian Government adopted a more expansionary fiscal policy in 1983-84 and 1984-85 in order to promote economic growth and increase employment. This is in direct contrast to the economic policies adopted in most other industrialised countries at this time, which were generally more oriented toward reducing inflation and structural budget deficits. (This is not to suggest that the Australian authorities neglected the inflation issue: their strategy on this front was to rely on incomes policy to restrain inflation.) OECD (1986a,b) estimates of structural budget balances indicate that, in the period 1983-85, Australia recorded successive deficits, while the average for the major six OECD countries (excluding the United States) was either a surplus or close to zero.

This divergence in the stance of fiscal policies contributed to Australia's increasing external imbalance which has been evident during the past four years. Strong growth in domestic demand resulted in a substantial increase in import demand, while relatively slow economic growth overseas led to subdued demand for Australia's exports. In addition, there had been a cumulative loss of international competitiveness since 1980, due to Australia's relatively high rate of inflation and an exchange rate buoyed by capital inflows in anticipation of the benefits of a resource boom. Thus, in 1984, when the terms of trade deteriorated sharply (by 12.3 per cent between the March quarter 1984 and the March quarter 1985), Australia was not well placed to meet this challenge, and the current account deficit worsened alarmingly. The current account deficit as a proportion of gross domestic product increased from 3.8 per cent in 1983-84 to 6.0 per cent in 1985-86, compared with an historical (1959-60 to 1979-80) average of 2.4 per cent.

In the meantime, interpretation of the monetary aggregates and hence monetary policy had become increasingly difficult as a result of the effects of the deregulation of the financial markets. This led to the decision by the Government, in February 1985, to abandon monetary targeting. The resultant increase in uncertainty about the stance of monetary policy and about the outlook for inflation coincided with nervousness about the overall state of the external account, and triggered a 'free fall' in the value of the Australian dollar. Between early February and late April 1985, it fell from US81c to US63c, or by 22 per cent (see figure 2). On a trade weighted basis, the fall was 24 per cent (figure 3). The Australian dollar then recovered somewhat over the next few months, before falling markedly again (especially in trade weighted terms).

In response to the increasing external imbalance and the associated depreciation of the Australian dollar, the emphasis of economic policy shifted and fiscal policy was tightened significantly. A less expansionary fiscal policy was indicated by government expenditure cuts in May 1985, the outcome of the Premiers Conference and Loan Council meeting in the same month and the 1985-86 Budget in August. In addition, monetary policy was tightened (Reserve Bank of Australia 1986, p.11). By the end of 1985, short term interest rates had increased to record high levels (see figure 4).

In view of these policy responses, some market commentators formed a perception that the Government had embarked at that time on a defence of the Australian dollar in order to put a floor of around US70c under the currency (Syntec 1986). Note, however, that even if such a floor did in fact exist, it still need not imply a belief by the authorities that the Australian dollar had depreciated far enough to ensure a correction of the external

Figure 2: US$/$A EXCHANGE RATE

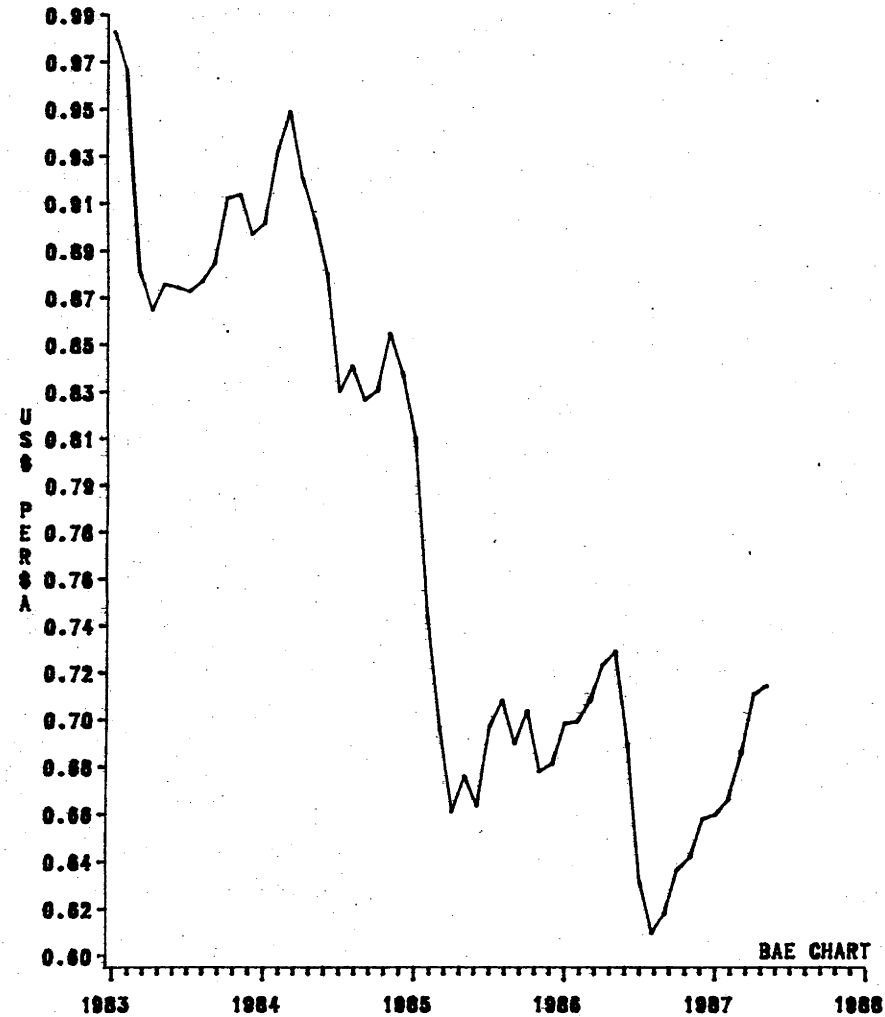
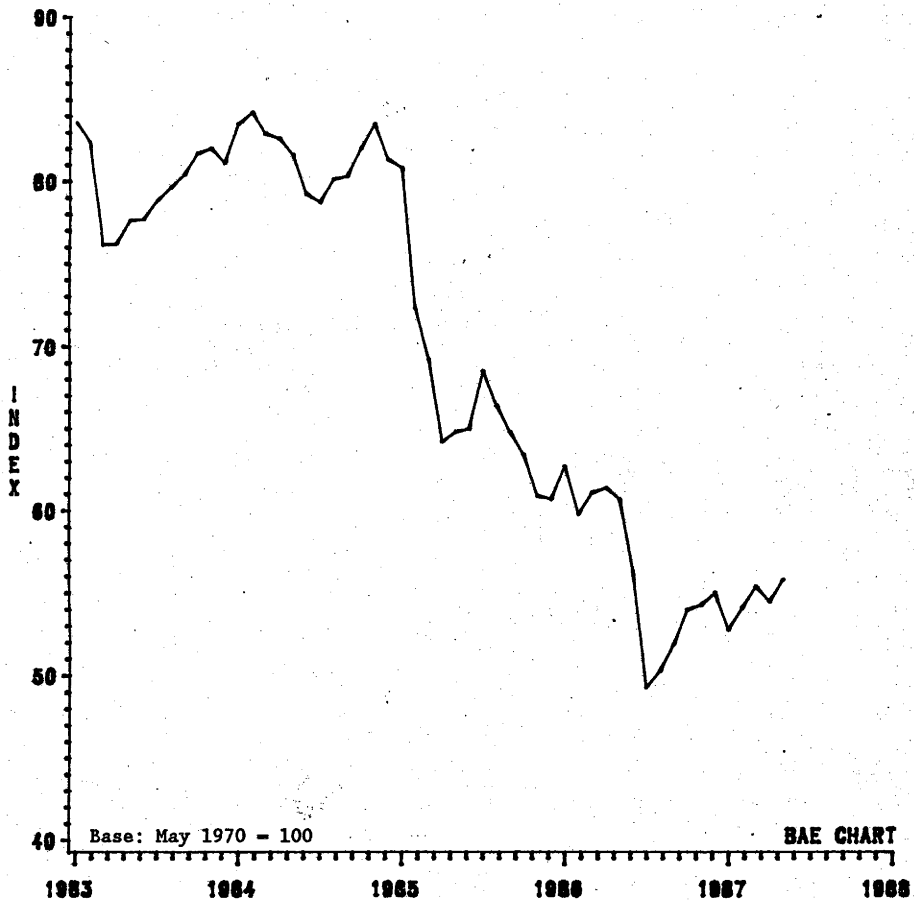
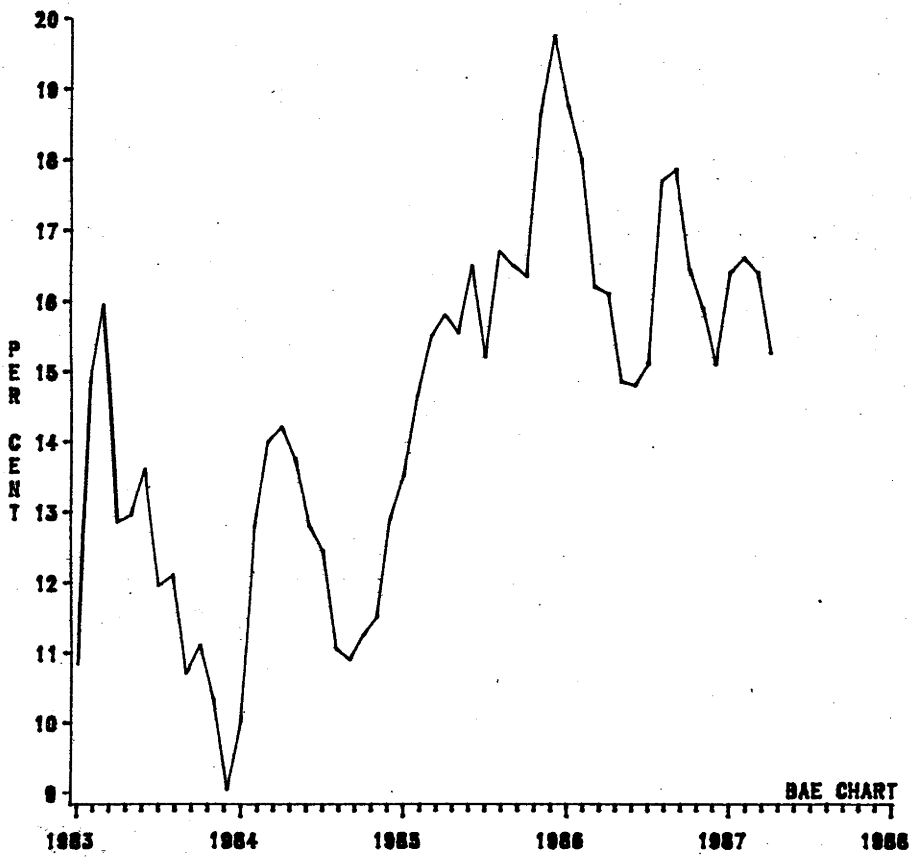


Figure 3: AUSTRALIAN TRADE WEIGHTED INDEX



imbalance. Rather, it may have simply reflected a desire to dampen a possible buildup of 'bandwagon' speculative pressures and to promote exchange rate stability. Such restored stability would then give the authorities more time to assess the effects of both the change in policy stance and the depreciation on the current account balance. In any case, the sharp fall in the value of the Australian dollar appeared to have been arrested by the end of 1985 (figures 2 and 3).

Figure 4: AUSTRALIAN 90-DAY BANK BILL RATE



Indeed, by mid-May 1986, the Australian dollar had strengthened to nearly US75c (in trade weighted terms it also increased slightly). Possibly as a result of this, the Reserve Bank allowed interest rates to decline steadily during the first half of 1986. The 90-day bank bill rate fell from a record 19.75 per cent in December 1985 to 14.80 per cent in June 1986.

The reduction in interest rates, together with the inflationary and valuation effects of the earlier exchange rate depreciation and nervousness over the outcome of the 1986-87 Budget, contributed to a buildup in pressure

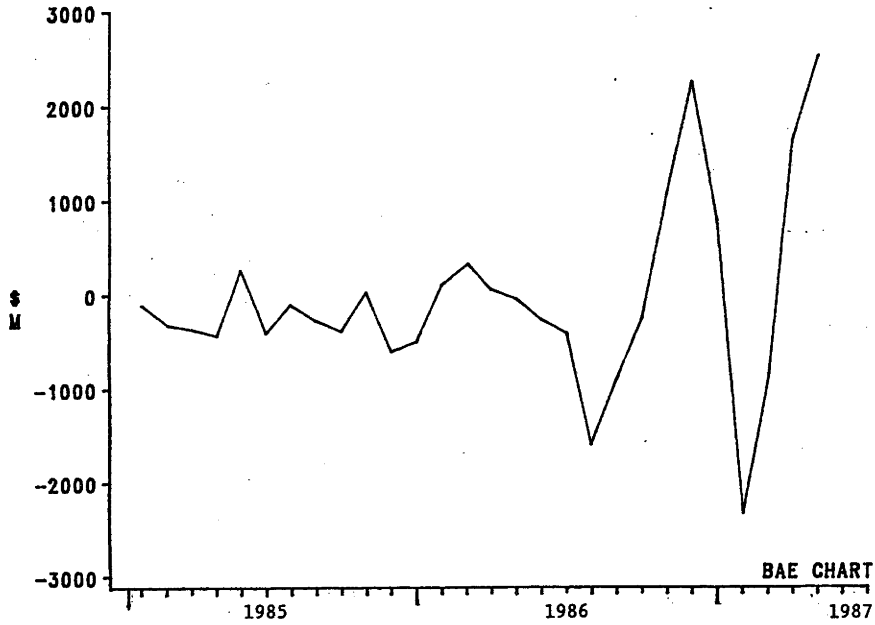
for a depreciation. Between mid-June 1986 and the end of July 1986, the trade weighted value of the Australian dollar declined by 15 per cent to a record low level. Against the US dollar, the Australian dollar fell from US69c to US60c. (In fact, it reached US57c briefly in extremely volatile trading on 28 July.)

At this time, the Reserve Bank intervened directly and substantially in the foreign exchange market, thus effectively establishing a floor of US60c under the Australian dollar (see figures 2 and 5). In addition, monetary policy was again tightened and short term interest rates increased sharply, although not to their former levels. These policies were effective in stabilising the exchange rate and returning confidence to the Australian dollar.

Following these episodes, it has been suggested that there has been a reorientation of Reserve Bank policy toward a de facto exchange rate target zone: 'The Reserve Bank has now clearly moved to embrace the idea of exchange rate "targeting" - that is, putting both a "floor" and a "ceiling" on the desired exchange rate' (Macquarie Bank 1986, p.1). The 'target zone' was widely believed to be between US60c and US67c in late 1986.

The Australian dollar strengthened in the final months of 1986 and in December began to test the ceiling of the perceived zone. Meanwhile, there was considerable intervention by the Reserve Bank, which took this opportunity to rebuild international reserves. During the first half of January 1987, the US dollar fell sharply against other major currencies, such as the Deutschmark and the yen. The expectation of continued stability in the US$/$A rate (at US65c to US67c), which, given expectations of a further weakening in the US dollar, would imply further falls in the Y/$A

Figure 5: CHANGES IN AUSTRALIA'S OFFICIAL RESERVE ASSETS(a)

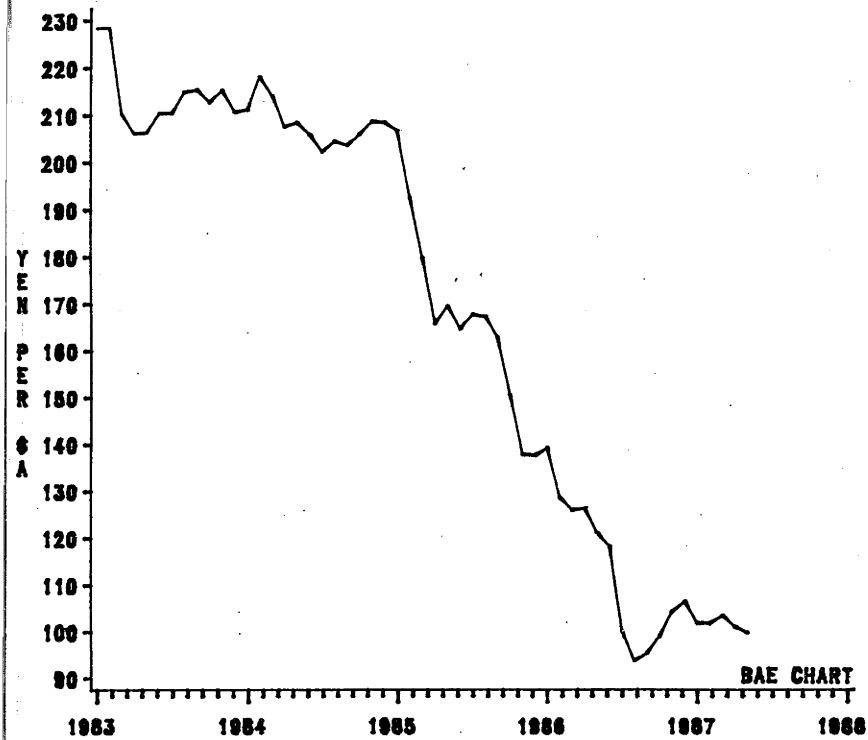


(a) Changes included in balance of payments.

rate, triggered a large scale selling of Australian assets by Japanese investors. The Y/$A rate fell briefly below Y100 (see figure 6). Again, the Reserve Bank intervened heavily in defence of the Australian dollar, and interest rates increased.

In recent months, there has been a shift in emphasis in both government and business circles from the US$/$A rate to the trade weighted index and the Y/$A rate. It has been suggested (see, for example, Ord Minnett 1987) that in mid-1987, the Reserve Bank appeared to be targeting the trade weighted index with a ceiling of around 56. This type of interpretation has persisted despite repeated formal announcements (for example, Reserve Bank of Australia 1986, 1987) that no exchange rate targeting was in operation.

Figure 6: YEN/$A EXCHANGE RATE



In summary, it is apparent that the operations of the monetary authorities have, at times, amounted to the maintenance of zones of stability for the exchange rate. These zones have been maintained through the use of monetary policy (specifically interest rates), direct intervention and, to some extent, changes in fiscal policy. They have served two major purposes. First, they have promoted stability in foreign exchange markets. Second, they form part of a 'checklist' (Reserve Bank of Australia 1986) which provides a guide to the appropriateness of monetary policy.

However, it is not clear that these zones are 'target zones' in the sense envisaged by overseas proposals, and outlined in section 2. To be target zones in that sense, these exchange rate intervals must reflect the

authorities' predictions about both the fundamental equilibrium real exchange rate and the inflation rate. There is no clear evidence that they do so. Rather, their emergence has appeared quite consistent with a desire by the authorities both to allow very strong (and probably fundamental) pressures for exchange rate changes to proceed, and to prevent potential speculative bubbles from developing once a new, possibly sustainable level has been reached.

2. Target Zones and Monetary Policy

If a government should decide to adopt strict exchange rate targets, in the 'fundamental' sense outlined above, the most obvious implication of this for the conduct of monetary policy would be the probable abandonment of monetary targets, if any such targets had been operative. In the theoretical literature, exchange rate targeting and monetary targeting have often been presented as the two extremes of the spectrum of alternative exchange rate regimes under a general floating exchange rate system. Under a 'clean' float, the value of the exchange rate is a residual, to be determined by the market on the basis of actual or expected government decisions regarding all policy variables, including the money supply. Under the opposite regime, the money supply is varied so as to achieve predetermined exchange rate targets.

Of course, these are not the only possible regimes. For example, intervention in the foreign exchange market, which is 'sterilised' by corresponding open market operations, may allow the authorities to pursue both exchange rate and monetary targets at the same time in the short run, provided domestic and foreign bonds are not perfect substitutes (Kenen 1987). However, some authors, such as Obstfeld (1983), would argue that sterilised intervention is unlikely to be powerful enough to be effective.

Moreover, few (if any) governments possess adequate reserves to defend, over prolonged periods of time, exchange rates which are out of line with policy settings.

As another alternative, the authorities may wish to assign monetary policy to the task of achieving certain monetary growth targets (with a view, say, to controlling the inflation rate in the medium to long term) and some other policy weapon (such as fiscal policy) to exchange rate targets. However, fiscal policy is unlikely to be flexible enough to preserve exchange rate stability in the face of short term random shocks, so that the real choice is essentially between employing monetary policy for exchange rate or monetary targeting.

The relative strengths and weaknesses of alternative exchange rate regimes have been the subject of considerable discussion during the past thirty years or so. Early advocates of flexible exchange rates (for example, Friedman 1953; Johnson 1969) were enthusiastic about the ability of their proposed system to insulate the economy from external influences, thus allowing individual countries to follow independent courses of action - in particular, independent monetary policies. Subsequent authors have argued that, while monetary targeting is the best strategy to follow in the face of certain types of unanticipated shocks on the economy, it is not optimal in many other cases (Blundell-Wignall and Chouraqui 1983; OECD 1985).

In the Australian context, Murphy (1986) has recently reanalysed this policy choice, using the AMPS model of the Australian economy. His simulation results suggest that the authorities should target the exchange rate if the shock involves a change in the domestic demand for money, or in the foreign level of interest rates. They also indicate, however, that

monetary targeting would probably provide better insulation for output and other real variables against a shift in the foreign demand for the home country's exports, or an increase in the foreign inflation rate. Thus, the choice appears to depend on the particular shock which impinges on the economy at the time. This implies that the rigid adherence to either a monetary or an exchange rate target is likely to be inferior to a strategy which involves emphasising one or the other of the targets on the basis of an assessment of where the major shocks are coming from.

If it is not immediately clear what are the sources of these shocks, predetermined bands (or 'zones') around both the exchange rate and monetary targets may allow the authorities time to better assess the situation. At the same time, the upper and lower bands can act as useful benchmarks: the faster the gap between the actual variable and the relevant limit dwindles, the more urgent is the need to determine the appropriate policy response.

In fact, according to official documents (Reserve Bank of Australia 1986; Commonwealth of Australia 1986, pp.51-2) recent Australian monetary policy has been pursued with due consideration of a 'checklist' which consists of not only the exchange rate and various definitions of the money supply, but also interest rates, the external accounts, economic activity and inflation. It is interesting to note that this is very much in line with an emerging trend overseas toward an 'indicator list' approach to monetary policy, both in the context of international policy co-ordination (Williamson 1985) and in terms of individual governments' policies (Monetary Policy Report to the Congress 1986).

Whilst the discussion above does support the need for flexibility in assigning monetary policy to different targets, it is important to keep in

mind that no single instrument can simultaneously achieve a multitude of targets. Instead, to the extent that the items in the indicator list define some desired outcomes or targets, the number of policy instruments employed to achieve them must be adequate for the task. This implies that the overall policy settings must incorporate an appropriate and consistent mix of monetary as well as other policy weapons, such as fiscal or wage policies.

Suppose that, of all items in the checklist, the authorities decided to focus on the money supply and to pursue, on a longer term basis, a monetary target. Would there be any role left for exchange rate target zones? We believe that the answer is a qualified yes: the role of soft exchange rate target zones in this unilateral perspective would be analogous to that considered earlier for the internationally co-ordinated zones, namely to assist in the monitoring, consistency checking, and reviewing of domestic economic policies. Although the nominal exchange rate would be treated as a residual, its expected time path, and an accompanying zone of margins, could be traced out using the government's own model. If the actual exchange rate then deviated substantially and persistently from this zone, this would indicate that either the market or the government might be using an incorrect model. In either case, some remedial action might be required.

If the market's model were wrong, for example, in not taking full account of all the 'fundamental' factors and the government's true intentions, this could result in a significant overvaluation or undervaluation of the domestic currency. That is, the nominal exchange rate could be far above or below the value which would be warranted by the full set of information. In turn, such deviations would imply a divergence of the actual level of international competitiveness from the warranted level, the

latter being part of (and consistent with) the government's overall economic scenario.

In that case, the government might wish to engage in sterilised intervention to make its views clearer to the market, and to induce market participants to revise their calculations and expectations. The Plaza Agreement is an example, on an international level, of this type of governmental attempt to influence market expectations. Scope may exist for similar government action, even on a unilateral basis, where market expectations have diverged significantly from the true fundamentals (due to, for example, the development of a speculative bubble). In general, however, it is not clear that government's models are always better than those employed by the market. Thus, it is probably unwise for the authorities to engage in this type of action more than occasionally.[2]

Indeed, the government might conclude, after due consideration, that its own model had been wrong in the first place, perhaps because of unanticipated changes in circumstances (or some other reasons). It might then wish simply to revise its exchange rate projections. More importantly, the reassessment process might prompt the government to review its overall policy package, and either to adjust some policies so as to achieve the original objectives (including a desired mix of public and private demand), or to alter the objectives themselves. It would appear that the general shift, during the past several years, toward a more restrictive stance in fiscal policy in Australia fits this description reasonably well.

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[2] By the same reasoning, it is not clear whether it is always desirable for the government to publicly announce the details of its model, or its projections.

The calculation of the exchange rate as a residual could be useful even if the government's model were always correct and the market always correctly perceived this. In response to unanticipated shocks to the economy, competitiveness often has to overshoot its long run level. This arises because sometimes the nominal exchange rate must overadjust in order to compensate for the sluggish adjustment in some markets, particularly on the 'real' side of the economy. If the government's model predicted that the deviations in competitiveness from its long run equilibrium value would be large and protracted, the government might wish to implement some monetary action which would reduce these temporary deviations, but would still leave competitiveness and other real variables unaffected in the long run. This, of course, presupposes that the monetary action would be unanticipated by the market.

As has been argued above, under a system of monetary targets, projections of the exchange rate would provide a useful reference and check on the appropriateness of economic policies. Conversely, if the primary focus of monetary policy were on exchange rate targets, or target zones, it would probably be desirable to include projections of the monetary aggregates in a 'checklist' of indicators to review policy formation from time to time.

If the government should wish to adopt some form of exchange rate targets, the practical difficulty of calculating the appropriate level of the fundamental equilibrium exchange rate should not be underestimated. The current widely divergent views (see, for example, O'Mara, Wallace and Meshios 1987; Economic Planning Advisory Council 1987; Dixon and Parmenter 1987) regarding the equilibrium real exchange rate for the Australian dollar highlight this problem and point to the need for more work in this area.

CONCLUSION

In the present world economic situation, with large trade imbalances between the major economies, rising protectionist pressures and continuing serious payments problems in many developing countries, international macroeconomic policy co-ordination would appear to be most desirable. Looking toward the future, and discounting the possibility of a return to some system of fixed exchange rates, one could see that episodes of ad hoc co-ordination, such as the Plaza Agreement or recent economic negotiations within the group of five, are likely to be repeated, perhaps with greater frequency and possibly evolving into a more systematic form. A system of exchange rate target zones could assist and facilitate such a shift toward greater harmonisation, by inducing various individual governments to consider the international repercussions of their own actions, and to assess whether such actions are consistent with the overall conditions in the world economy.

Exchange rate misalignments are often symptomatic of policy imbalances. Policy responses, of course, should deal with the underlying causes, rather than merely attempting to eliminate the symptoms. In particular, exchange rate target zones are not intended to be used as a substitute for international co-ordination, and should never be used as such. Indeed, if fiscal policies in different countries were seriously misaligned, attempts to preserve 'hard' exchange rate target zones through the use of monetary policy could at times aggravate, rather than lessen, any divergences of the actual fiscal-monetary policy mix from the optimal one.

In short, if there were a lack of the political will to co-ordinate, or to implement national policies so as to carry out international agreements,

exchange rate target zones by themselves would probably be ineffective, and perhaps even harmful. If, however, governments were serious about policy co-ordination, target zones for exchange rates could be a useful part of the list of 'indicators' to be monitored and discussed in the co-ordination process.

In Australia, the authorities have stated categorically on several occasions that they have not maintained any exchange rate target zones for the Australian dollar. Despite these disclaimers, many market observers have continued to interpret official policy as maintaining some version of target zones, especially for the trade weighted index. To the extent that the exchange rate is part of the Reserve Bank's 'checklist' of indicators, this would suggest that the above perception is not entirely wrong, especially if one interprets target zones in a 'soft' sense - that is, the 'target' itself is reviewed and revised frequently. Nevertheless, it is not obvious that the perceived zones represent formal 'targets' in the sense of estimates by the authorities of the fundamental equilibrium exchange rate, estimates which they would stand ready to defend.

In practice, whether soft or hard, exchange rate target zones imply that monetary policy must be conducted with an eye on the exchange rate. Under a strict monetary targeting regime, the exchange rate is completely a residual. Its expected value, as predicted by the policy maker's model, may be calculated as a matter of interest, but any divergences between the actual value and this would hold no special significance. Under any regime which incorporated exchange rate target zones, such divergences (if sufficiently large) would signal the need for a reassessment of the situation, and possibly some policy response. Such response may take the form of intervention in the foreign exchange market, monetary actions, or

adjustments in fiscal and wages policies. Thus, unilaterally implemented exchange rate target zones can assist policy makers in a given country in reviewing the consistency and sustainability of their proposed policies, just as an internationally co-ordinated system of target zones can help different governments achieve global co-ordination and consistency.

In view of theoretical and empirical evidence that neither monetary nor exchange rate targeting is optimal for all circumstances, an 'indicator list' approach to monetary policy which involves target zones for both the exchange rate and some indication of monetary conditions is likely to be both practical and effective. The main question, then, is what weight should be given to the exchange rate target, and what weight to the monetary target, for each given shock to the economy? Although some research (Murphy 1986; Stemp 1987) has been carried out on this question, much remains to be done. In addition, there is a continuing need for recognising that not monetary policy alone but rather the entire package of government policies (in particular, fiscal and wage policies) will require reviewing and adjustment from time to time.

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