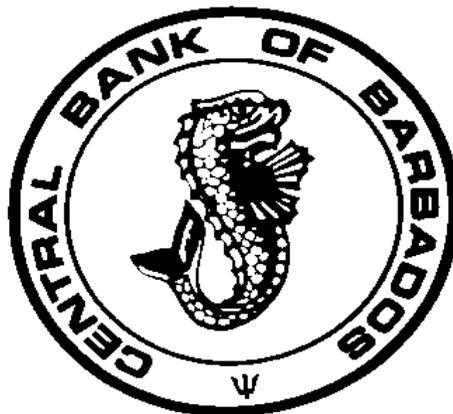


**SMALL STATES ARE DIFFERENT: WHAT THE LITERATURE  
SAYS ABOUT MONETARY AND EXCHANGE POLICIES**

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## Small States are Different: What the Literature says about Monetary and Exchange Policies

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*There is sufficient evidence from the existing literature to support the view that small states are different: they are more open, they are forced by their limited resources to be specialised in a few internationally competitive products and services, and they therefore do not have the option of adopting more of a closed economy strategy in pursuit of economic growth. Small states have outperformed large states, but only when they pursued strategies appropriate to their circumstances. The strategies for stabilisation and growth that work for large economies do not suit the circumstances of small economies, and if applied as in large countries, they invariably result in policy failure. In particular, the record shows that economic growth in the small open economy depends on increasing quality and productivity, and is unaffected by changes in relative prices. This paper surveys the literature with a view to gaining insights into monetary and exchange policies that are best for small economies.*

Small states are very open, and therefore exceptionally vulnerable to the consequences of external shocks. Indices which measure these vulnerabilities have been developed by Briguglio (1995), Atkins, Mazzi and Easter (2000), and the UN Committee on Development Policy (2005), and they all confirm the greater vulnerability of very small open economies. The sources of vulnerability identified in these studies include a high degree of economic openness, limited diversification possibilities, a narrow range of exports, limited applicability of domestic competition policy, an inability to influence international prices, high international transport costs, uncertainties of industrial supplies due to insularity and remoteness in some cases, a limited ability to exploit economies of scale in the private sector and in public administration, a paucity of natural resources in most cases, and a high import content of expenditure, especially food and fuel. Other studies which support these findings include Frankel (2010), who identifies greater exposure to supply shocks and trade volatility in particular as among the characteristics of developing countries, as opposed to large industrial countries, and della Paolera and Taylor (2001), whose economic history of the Argentine currency board concludes that no monetary arrangement may insulate the small open economy from a severe global shock.

Small states produce a limited range of products at internationally competitive prices. Carter (1997) compares countries by size and export concentration (goods and services) and shows that micro states are all specialised in a few commodity exports. A corollary of this is that expenditure switching policies are not available to the very small open economy because there are no domestic substitutes available at competitive prices for the range of import commodities (Worrell 2012). Therefore if adjustment to (rather than financing of) shocks is the appropriate response, expenditure reduction is the only option.

The fact that expenditure switching is not possible means that economic growth is unaffected by changes in relative prices, including the real exchange rate (Worrell 2012). In the standard monetary and exchange rate adjustment model a devaluation of the exchange rate shifts the external balance line outwards through a combination of expenditure switching (import substitution and lower domestic consumption of exportables) and greater profitability of exportable production, leading to increases in export capacity in the medium term (See, for example, Agenor 2004). However, in the very small open economy there can be no expenditure switching because of the limited range of competitive domestic production of tradables, and the profitability of exportable production increases only when devaluation

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causes a loss of real income, which is reflected in a fall in real wages. This is because of the very high import content of consumption and production. In effect, the wage good is imported, and the only way to increase the profitability of exporting is to cut real wages (Worrell 2013).

A consequence of the openness of the economy is that the stability of the nominal exchange rate becomes very important, as is now widely acknowledged. Ostry, Ghosh & Chamon (2012) recommend exchange rate targetting, alongside inflation targetting, for countries with a high pass-through of devaluation to inflation. Aizenman, Hutchison and Noy (2008) point out that inflation targetters follow a mixed strategy, with both inflation and the exchange rate as important determinants of policy interest rates. Aizenman, Chinn and Ito (2010) observe that open economies prefer to hold “massive” amounts of foreign exchange reserves to support exchange rate stability and maintain financial openness.<sup>1</sup> Blanchard, Dell’Ariccia and Mauro (2010), advise that small open economies should openly recognise that exchange rate stability is part of their objective function. Earlier Gali and Monacelli (2002) demonstrated that if a very open economy targets the consumer price index, it will end up with an exchange rate path that looks very much like a peg. Parrado and Velasco (2002) show that optimal exchange rate policy in a small open economy involves management of the exchange rate. In practice, as Parrado (2004) explains, the Monetary Authority of Singapore uses the exchange rate as an instrument to achieve its inflation target. Schaechter, Stone and Zelmer (2000) explain that the exchange rate is a possible channel through which monetary policy affects the inflation rate. The experience of countries which have given up their own currencies further illustrates the effects of a stable exchange rate: for Ecuador, Tass, Kamil and Togay (2011) report that inflation was lower after dollarisation, the GDP growth rate higher (all other things equal), and the variance of inflation was lower.

Both theory and empirical observation suggest that exchange volatility depresses potential investment in all economies, because it is a source of uncertainty (Pindyck, 1991). Pindyck and Solimano (1993) find, not unexpectedly, that the impact of volatility in the marginal profitability of capital on investment is greatest for developing countries, though it is only moderate for all countries tested. Tests for small open economies tend to confirm these results. For example, Schnabl (2007) reports a negative relationship between exchange rate volatility and growth for 41 small countries in the EU periphery. Boehm and Funke (2001) reported that firms react more cautiously to shocks if the exchange rate is managed, in a study which does not distinguish countries by size.

A successful exchange rate targetting regime lends credibility to stabilisation policies in small open economies. Berg, Jarvis, Stone and Zanello (2003) list hard pegs as apparently successful in countries that have experienced deep crises, though their bias is towards full-fledged inflation targetting and floating rates. They do not discriminate between large countries such as Brazil and small open economies such as Ecuador, however. Small economies in the periphery of reserve currency countries may borrow credibility from the reserve currency country (Buiter, Corsetti and Pesenti, 1998).

In the mid-1990s, exchange rate targets were used more frequently than monetary targets in the formulation of interest rate policy (Cottarelli and Giannini, 1997). The spectacular failure of the interest rate defense of the exchange rate in several countries at the time of the Asian crisis, and in subsequent crises in Russia, Turkey and elsewhere, meant that this strategy for exchange rate management fell out of favour. More recently Asian countries (and others) have piled up massive stocks of foreign exchange

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<sup>1</sup> From a theoretical point of view, the optimal level of foreign reserves is that level which equates the capital formation forgone by holding reserves, with the cost of income volatility from exchange market pressure (Worrell 1976). By this criterion, most countries hold excessive reserves.

reserves with which to maintain the stability of their exchange rates. In my own work I have emphasized that the maintenance of adequate foreign reserves lends credibility to aggregate demand management policies in small open economies. Because of the import dependence and financial openness of very small economies, the achievement of external balance to protect foreign reserves requires the appropriate management of aggregate domestic demand. As a result, a stable exchange rate which is protected by adequate foreign exchange reserves is interpreted by markets as evidence of sound economic policy (Worrell 1992, 2012). Views differ as to how the exchange rate target should be set. Dornbusch (1988) explored the merits of using crawling pegs and currency baskets to avoid overvaluation of the real exchange rate. In fact, a majority of small open economies now use a single currency peg, de facto or de jure, with or without discrete changes from time to time.

There are many studies of the relationship between real exchange rates and growth in very small countries, and some have purported to show that changes in the real exchange rate influence growth. Clearly, however, these are conceptually or methodologically flawed. There may indeed be a relationship between the real exchange rate and growth, but it cannot be that the rate exchange rate change is causing an acceleration (or deceleration) of growth, because, as we saw earlier, the expenditure switching channels through which this would take place do not exist in small open economies. Therefore, the studies that find a relationship (for example, McIntyre, 1995, and Aslund, 2011) are uncovering simultaneous effects caused by other factors, such as intersectoral changes in productivity acceleration of wages or other domestic costs relative to international prices, or the discovery and exploitation of natural resources.<sup>2</sup> Moreover, it has been shown that in small open economies nominal exchange rate adjustment will probably not succeed if its objective is to affect the real exchange rate, because the mere existence of such a rule generates self-fulfilling revisions in expectations (Uribe 2002).

Studies of exchange rate changes and price competitiveness are a subset of the literature on devaluation and growth, and suffer from similar conceptual problems. A fundamental tenet of microeconomic theory is that the atomistic producer has no influence on his selling price, and he cannot increase revenues by lowering his price. If he is more productive than his competitors, he will be rewarded with higher returns. It would make no sense to gift those productivity gains to his consumers, in the form of lower prices. However, that is precisely what is advocated by those who purport to find a positive relationship between devaluation and growth in the small open economy. Economic growth must be secured by increased productivity, as is widely recognised. It is of no benefit to gift productivity gains to foreigners, by way of an exchange rate devaluation.

Most studies of real exchange rate effects use a trade or transactions weighted combination of nominal exchange rates and domestic and foreign price indices as the measure of the real exchange rate, but this is known to be an inaccurate measure (Harberger, 2004; Marsh and Tokarick, 1994; Worrell, Greenidge and Lowe, 2013). These three studies are among those that suggest more appropriate measures of real exchange rates and price competitiveness which may be compiled from available data. However, the use of inaccurate trade weighted indices remains commonplace.

We have evidence from the literature of the interconnectedness of monetary and exchange rate policies, and the implications for monetary policy effectiveness. Worrell (2000) argues that because of

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<sup>2</sup> Most studies are also flawed empirically, because they employ a trade weighted combination of consumer prices and exchange rates, which does not measure the true relationship between the relative prices of domestic and foreign production.

information asymmetries, uncertain expectations and changeable preferences, the central bank and the treasury must work together on the design, implementation, monitoring and, when necessary, the revision of macroeconomic policy, and on providing the public with information on ongoing economic developments and interpretation of the macroeconomic strategy. That paper shows how the effectiveness of monetary policy in small open economies is limited because of capital flows, even when exchange rates are flexible, because of information asymmetries. International financial markets are slow to impose domestic fiscal discipline, and in the absence of such discipline, a lack of coordination with monetary policy often undermines the credibility of fiscal policy. As a result, monetary transmission channels are too uncertain to allow of credible monetary policy. What is more, central banks usually cannot be indifferent about growth or systemic bank failure, even if that means abandoning an inflation target. Finally, the central bank has privileged information, and with it, a responsibility in an oligopolistic market to guide private market agents, none of whom has an equally comprehensive macroeconomic overview. Worrell (1997) shows that the typical structure of banking systems in small open economies, with high levels of bank concentration, means that optimising behaviour on the part of the banks may lead to perverse interest rate movements, from the point of view of intended monetary policy outcomes. Worrell, Craigwell and Mitchell (2006) confirm empirically that uncovered interest rate parity appears to hold in Barbados, an indicator of the openness of the financial market to international flows.

In a test for a small open economy (Norway) where interest rates and the exchange rate are both flexible, Bjornland (2008) finds considerable interdependence between monetary policy and the exchange rate. Calvo and Vegh (1995) show that in an open economy with flexible exchange rates, efforts to fight inflation with high interest rates may be frustrated by exchange rate volatility, with an exchange rate that appreciates initially, but then depreciates beyond its starting point, inducing even higher inflation than before the policy was implemented. Guender (2006) uses a “simple New Keynesian open economy model” to show that the conduct of monetary policy in an open economy differs considerably from the closed economy framework. If inflation is the target, monetary policy will fail to fully stabilise on the target because of exchange rate movement; if the consumer price index is the target, monetary policy is frustrated even if the exchange rate does not react to a demand shock. This link between monetary policy and the exchange rate may be used to advantage, in the case of stabilisation efforts following a financial crisis, where monetary policy alone does not stabilise (Berg, Jarvis, Stone and Zanello, 2003).

The main tool in the small economy's armoury is fiscal policy. Worrell (2003) explains how fiscal policy may be employed to balance demand and supply in the foreign exchange market. Lindbeck, Arestis and Sawyer (1998) see “limited scope for monetary policy given constraints on controlling money stock ...and small open economy constraints on interest rate manipulation...they see very considerable potential for active fiscal policy ..[in] ensuring an adequate level of aggregate demand over the medium term..” (page 166).

In their analysis of the Argentinian currency board between 1880 and 1935, della Paolera and Taylor conclude that monetary policy cannot completely insulate the open economy from severe external shocks, and no monetary arrangement can paper over fiscal profligacy. Leiderman (1999), Worrell (2000) and others stress the importance of coordination of the fiscal and policy stances. Leiderman points out that pressure from the treasury to make the central bank finance a large part of the budget can undermine the success of any monetary regime. One may also infer the importance of fiscal tools from Dornbusch's (2001) skepticism about monetary and exchange rate policy effectiveness in small open economies. He points out that interest parity constrains local rates; discretionary monetary and exchange rate policy cannot improve a bad fiscal situation; temporary shocks should be financed, not

adjusted to; and exchange rate adjustment will not suffice to make an adequate response to permanent shocks. Farhi, Gopinath and Itskhoki (2011) recognise that fiscal policy may be used to achieve desirable resource reallocations, in circumstances where nominal exchange rate changes are not indicated.

The literature focusses on the impact of fiscal policy on the real exchange rate, for example Aloy, Moreno-Dodson and Nancy (2008), Aslund (2011, 2012), and Galstyan and Lane (2008). However, the aggregate expenditure effects of fiscal policy matter more for the small open economy, because, unlike for large economies which are not price takers, changes in the real exchange rate do not spur output increases in small states. The contractionary effects of devaluation are recognised as being "far more important for developing countries" and this is especially so when there is a currency mismatch (Frankel 2010). The slow adjustment of the price of nontradables in the wake of large devaluations, analysed in Burstein, Eichenbaum and Rebelo (2004) is equivalent to a worsening of the terms of trade, and a decline in real income in the small open economy.

### *Concluding observations*

The burden of this literature is that exchange rate targetting is highly recommended for small open economies: it promotes fixed investment and thereby enhances growth potential, it helps to contain inflation, and it lends credibility to the overall economic policy stance. There are no downsides to exchange rate targetting: it does not preclude adjustment of the rate, though exchange rate adjustment in search of competitive advantage is a futile strategy for small open economies; and the exchange rate target may be a peg, a crawling rate or a link to a basket of currencies.

If the value of an exchange rate target is so pellucid, why are so few countries willing to commit to an exchange rate anchor, or willing to admit that they do have an exchange rate target? The answer, I believe, is that country authorities fear that they may not be able to sustain an announced target. Up until the mid-1990s the popular view was that the targetting policy could be sustained by closing the capital and financial account, and there are still economists who believe that to be the case. However, the events of the past decade and a half should by now have put paid to the notion of a closed financial account (see Worrell, Craigwell and Mitchell, 2006), and all recent efforts to sustain the exchange rate by this route have failed, except in the very short run. The only effective way to equilibrate the external accounts of a small open economy is through the management of aggregate demand, using fiscal policy, and (in the medium and longer term) the supply of foreign exchange through investment to increase productivity.

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