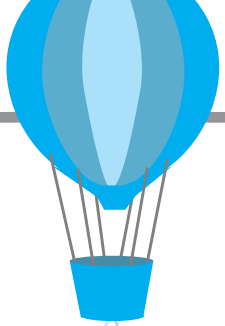


Exchange Rate Regimes as Inflation Anchors

PETER J. QUIRK

Are fixed exchange rate regimes more effective in inflation-fighting programs than flexible regimes? The answer is elusive. The operational differences between the two types of regimes have narrowed, and the relationship between choice of regime and macroeconomic performance has proven hard to assess empirically.

IN ESTABLISHING a comprehensive economic program, policymakers often face a difficult choice of whether to adopt a fixed ("anchor") or flexible exchange rate regime. Recent experiences suggest that the distinction between the two regimes has become blurred because of the usefulness of short-term flexibility within exchange rate margins as a monetary policy indicator and the unavoidability of medium-term adjustments to fixed exchange rates. Moreover, empirical cross-country studies have yielded ambiguous results with respect to the impact of exchange rate regimes on macroeconomic performance—inflation, in particular. In practice, a stable exchange rate has generally been a by-product of other policy choices, rather than of a particular form of exchange rate regime.

If fixed exchange rate regimes benefit from short-term flexibility within margins, as well as scope for longer-term adjustment, the difference between fixed and floating exchange regimes may become largely a matter of announcement. However, the announcement effect of a fixed rate regime has not been based solely on the adoption of the regime itself but has also depended on whether monetary and exchange rate decisions have been assigned separately to more than one official institution; it has therefore varied from country to country, depending on the institutional arrangements.

Background

One important lesson of the 1980s debt crisis is that unrealistic exchange rates cannot be sustained, even for short periods, without serious economic consequences. Before and during the early stages of the debt crisis, official exchange rates in many countries were fixed without regard to market levels; it was assumed that controls on foreign exchange transactions would prop up exchange rates and help to stabilize inflation while adjustment programs were gradually introduced. The controls did not work, however; overvaluation contributed to flight from domestic currency and a breakdown of tax systems as parallel currency markets flourished. Many countries found themselves trapped in a vicious circle. The deterioration in tax collection and, thus, fiscal policy resulted in greater macroeconomic disequilibrium; a shortage of foreign exchange for payment of maturing obligations (let alone new debt) led to growing external arrears, loss of creditworthiness, a worsening of the balance of payments, and an increasingly unrealistic exchange rate.

Delayed rate adjustments leading to large step devaluations began to be seen as ineffective; many observers felt that exchange rates should be adjusted more frequently, in smaller increments, either within a fixed exchange rate regime or by continuous floating. One result has been a blurring of the distinction between fixed and floating rates, as has been noted by institutions such as the IMF whose work, among other things, requires classification of member countries' exchange rate policies (see box). Moreover, if exchange controls are ineffective, as is now generally believed, fixed exchange rate regimes must be validated by monetary and fiscal policies. How much difference is there between a stable floating rate and a stable fixed rate if both are supported by the same domestic policies? In a nutshell, very little.

Credibility. It is often claimed that the main difference between fixed and floating

Peter J. Quirk,
a national of New Zealand, is an Advisor in the IMF's Monetary and Exchange Affairs Department.

regimes is the announcement effect of the former. In effect, by adopting a fixed regime, the government is making two commitments, one to financial policies that sever the link between money creation and government finance, the other, to a fixed exchange rate. In countries where central banks decide monetary policy and governments are responsible for exchange rate policy, the commitments are made by two independent official bodies; if seen as ensuring policy consistency, this could enhance credibility. However, in many countries—particularly developing ones—central banks lack independence, and fiscal deficits are more or less automatically monetized. Even in countries with nominally independent monetary authorities, performance targets may be set either by prior contract or in close coordination with the government. Thus, the institutional setting must be taken into account when assessing whether or not credibility will actually be enhanced by an exchange rate commitment in addition to a monetary policy commitment.

The performance of the two types of regimes can also be examined from an operational perspective. As a result of rapid financial innovation in the 1980s and early 1990s, credit and money aggregates have lost some value as indicators of the monetary policy stance. This is particularly true in industrial countries, but a similar process is under way in developing countries. Financial asset prices have begun to play a bigger role both as intermediate targets and indicators of monetary policy. However, when inflation is significant, interest rates are difficult to interpret because real interest rates are not directly observable. Yield curves or forward interest rates can provide additional information, but only in countries with deep financial markets. If flexibility is allowed—even within margins—the exchange rate may therefore serve as the primary indicator of short-term variations in monetary conditions.

Alternatively, the amount of intervention required in the foreign exchange markets to sustain a fixed exchange rate could be envisaged as serving as an indicator for monetary policy in the short run. However, there are several drawbacks to this approach. First, movements of international reserves cannot be interpreted simply as signs of excess demand; they reflect not only market pressures but also regular and semi-regular fluctuations in foreign exchange availability that would normally be discounted by markets. To correct for such fluctuations, monetary authorities would need to be able to assess the market's views on seasonality and other patterns in foreign exchange flows. Second, the market may view intervention as effective only to the extent that market participants do not know that the intervention is temporary. The authorities would need to know the market's views on their intervention because the intervention is not a direct reading of the market but of the authorities' reaction to the market and the market's reaction to the authorities' reaction. Third, many developing countries use international reserves for official transactions that, by their very nature, may be reversible—for example, purchases and sales of foreign exchange carried out to affect the exchange rate, to rebuild reserves, or to meet the needs of state enterprises. If this reversibility is known to the authorities but not to the market, it will be difficult for the authorities to use intervention as an indicator of excess foreign exchange demand.

Volatility. The greater variability of exchange rates under floating regimes is another argument often advanced in favor of fixed regimes. But this does not necessarily indicate that a fixed rate regime is superior to a floating regime. Variability is not always a bad thing; in many cases, it represents desirable adjustments. Moreover, the particular regimes whose performances are being compared may have been badly executed; failures may have more to do with poor implementation than with the inherent properties of a given type of regime.

"Variability is not always a bad thing; in many cases, it represents desirable adjustments."

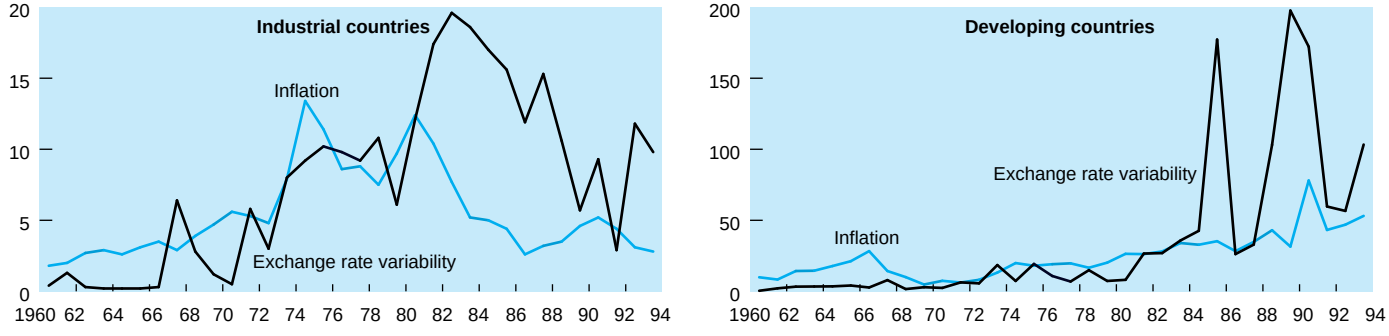
Empirical evidence

These ambiguities contribute to the difficulty of measuring and comparing the effects of fixed and flexible exchange rate regimes on inflation performance. The various studies and approaches summarized below do not suggest definitive conclusions on the overall strengths of the two forms of regimes.

Variability and inflation. As shown in the chart, in the industrial countries, greater variability of exchange rates has almost always been preceded by rising inflation (both series are measured as average annual changes—absolute in the case of variability). For example, the average variability of industrial countries' exchange rates increased sharply with the pound sterling's devaluation and associated adjustments in 1967, but average inflation was rising before that

Industrial and developing countries: relationship between exchange rate variability and inflation

(percent)



Sources: IMF, *International Financial Statistics* and *World Economic Outlook,* various issues.

Classifying exchange rates

The IMF's system for classifying exchange rates, introduced in 1982, distinguishes between five categories: fixed to a single currency, fixed to a currency basket, limited flexibility (the European Monetary System's exchange rate mechanism (ERM) and quasi-peggers), managed flexibility, and independently floating. However, unless the entire international system is fixed, individual countries cannot be said to have unambiguously fixed exchange rate regimes. And, even if exchange rate policy is carried out as planned, there are intermediate shadings of flexibility that make it difficult to divide the world into two camps—fixed versus floating exchange rate regimes. Regimes resist easy classification for a number of reasons:

- The central bank may manage the exchange rate with considerable flexibility but set it daily or weekly on the basis of certain indicators—for example, inflation differentials, the balance of payments, or estimated supply and demand conditions in the market. In this case, however, the exchange rate cannot be considered market-determined or free-floating.
- Currencies of ERM members are, at least in principle, fixed against each other within margins but float against all other currencies (except those currencies pegged to ERM currencies, such as the CFA franc (French franc) and Estonia's kroon (deutsche mark)).
- Real fixity implies nominal movement, so does an inflation-adjusted peg qualify as a form of fixed exchange rate, or is it a form of indicator arrangement whereby the exchange rate is flexibly managed?
- How much foreign exchange market intervention is merely smoothing consistent with the category of "independently" floating?

date—from about 2 percent in the early 1960s to 3 percent by the mid-1960s. However, while inflation continued to rise until 1970, exchange rate variability actually fell. Increases in variability caused by the 1973–74 oil shocks were simultaneous with, but smaller than, increases in inflation. Similarly, after a lag, a downturn in inflation in 1975–76 was reflected in decreased variability, while rising inflation from 1978 through 1980 was reflected in more rapid exchange rate adjustments from 1979 to 1982, when exchange rate variability peaked. Broadly, exchange rate variability, measured on an annual basis, fell sharply in the industrial countries throughout the 1980s, returning to its 1972 level by 1991. Gradually rising inflation during 1986–90 appears to have triggered an increase in exchange rate variability, but not until 1992–93.

The picture for developing countries is simpler. For most of the period between the 1960s and the early 1980s, exchange rate variability was lower than inflation because of the prevalence of fixed exchange rate regimes and delayed rate adjustments. Since 1984, exchange rate variability has increased sharply (usually in one direction), although inflation has continued its steady upward trend. Inflation does not appear, therefore, to have been very responsive to the large exchange rate adjustments of the 1980s. The reasons are probably to be found in the pent-up disequilibria that market-led devaluations and regime changes released in a number of developing countries.

Overall, the series for both groups of countries suggest that exchange rate variability shows a lagged response to inflation—and that exchange rate regimes do not cause inflation.

Anchor policies. Step devaluations against a major currency are the least ambiguous examples of fixed exchange rate policies. A study by José Fajgenbaum and Peter Quirk (see references below) examined medium-term inflation and changes in balance of payments in 15 developing countries in Latin America and the Caribbean whose step devaluations, undertaken between 1960 and 1990, resulted in a constant exchange rate for at least 18 months. The study concluded that, on the whole, anchor exchange rate policies were not successful in the region, at least until 1990, and tended to favor improving inflation performance at the cost of continuing balance of payments problems.

Out of a total of 28 step devaluations, only 5, in combination with other economic programs, succeeded in reducing external deficits and stabilizing prices. In four of these—Bolivia (1972–78), Ecuador (1961–67), Peru (1967–70), and Trinidad and Tobago (1989–90)—inflation rates were already low at the time of devaluation. Moreover, after devaluation, all of these countries except Ecuador suffered an initial sharp rise in inflation requiring a deflationary monetary and fiscal response that dampened growth. In other cases, countries reduced inflation but their success was undercut by continuing balance of payments difficulties or unsustained economic policies. Eleven step devaluations—including three by Argentina—achieved neither inflation nor balance of payments objectives.

Most of the countries in the study appear to have lacked the supporting policies needed to sustain a devaluation through the medium term and to turn the balance of payments around. The success of fixed exchange rate regimes in countries with low inflation at the time of devaluation suggests that such regimes may be useful at a later stage of stabilization, after inflation has been reduced to broadly satisfactory levels.

A caveat is in order, however—the study covers a time when step devaluations were not necessarily complete (a sizable parallel market continued to exist in most countries). It also predates recent experience with currency boards.

Currency boards. Fixed rate regimes backed by currency-board-type arrangements were adopted by Argentina in 1992, Estonia in 1993, and Lithuania in early 1994. Estonia, prevented by currency-board arrangements from sterilizing a rapid turnaround in its balance of payments brought about by capital inflows, experienced a brief increase in inflation, but this was brought under control. Lithuania's move to a currency board followed an appreciation of the market exchange rate and early signs of success under the previous conventional central banking arrangements. Argentina's arrangements have been sustained and accompanied by lower inflation.

Floating rates. Experiences with floating exchange rates in developing countries in the 1980s and early 1990s are examined in several studies. These studies focus on countries with market-determined flexible rate systems and exclude managed floaters, where the central bank sets the rate in accordance with certain indicators. (However, some independently floating countries have retained exchange controls and conduct sterilized intervention.)

The study by Fajgenbaum and Quirk referred to above also examined countries that adopted independently floating regimes—Bolivia, the Dominican Republic, El Salvador, Jamaica, Paraguay, Uruguay, and Venezuela. With the exception of the Dominican Republic, these countries had achieved unambiguous success with their stabilization programs, improving both inflation and balance of payments performance, although the performance in Venezuela was not sustained.

A study by W. Max Corden, "Exchange Rate Policies for Developing Countries," examines average inflation rates for 10 countries between two periods in which there was a regime switch. In three countries, the average inflation rate was markedly higher in the second period, suggesting a loss of discipline along with the switch to a flexible regime. But there was no loss of discipline in the other seven countries. The study notes that, in the shift to flexible rate regimes, most countries tended to liberalize trade restrictions. Liberalization may have provided additional room for import absorption and helped to improve inflation performance.

A number of countries appear to have maintained floating systems until they resolved their balance of payments problem. They then moved from a floating to a pegged exchange rate, but only after international reserves had been restored to an acceptable level.

Many countries, when they introduced floating arrangements, were continuing a process of real effective depreciation already under way to increase competitiveness: Guyana, Nigeria, the Philippines, South Africa, Uruguay, Venezuela, and Zaïre (see "Recent Experiences with Floating Exchange Rates in Developing Countries" by the author). The exceptions were Brazil and Peru, where inflation was particularly rapid; El Salvador and Guatemala, where a small appreciation in the one or two years following floating reflected strengthening of economic policies; and Paraguay, where the real effective exchange rate appreciated owing to large depreciations in neighboring countries. Bolivia's shift to a floating rate reversed the deterioration of competitiveness. Growth performance was surprising—6 of the 11 countries surveyed experienced faster GDP growth after floating. Growth was virtually unchanged in three; only two experienced a deterioration of growth. The results are similar for inflation, which declined in half of the countries following the float and accelerated only in Nigeria.

Mixed policies. One reason it is so difficult to assess regime performance accurately is that countries often make a switch from one regime to another during their stabilization programs. A number of developing countries often described as having anchor policies had floating or mixed exchange rate regimes first—for example, Argentina, Egypt, Honduras, Mexico, and Trinidad and Tobago.

The adoption of an exchange rate anchor may actually mean more, not less, inflation for countries experiencing strong pressure to appreciate their currencies. For example, Egypt, which has experienced strong capital inflows, in part from debt restructuring and foreign aid received following the Gulf War, has kept its currency from appreciating. The result has been continued inflation, because tightening domestic monetary policy would have raised interest rates and perpetuated capital inflows. Egypt initially switched to a floating arrangement and unified the exchange rate in 1991; a considerable market-based rate adjustment thus preceded the subsequent period of exchange rate stability.

Mexico is another country whose ambiguous exchange rate policies make it difficult to assess regime performance. Following a period of rapid exchange rate adjustments, depreciation of the peso settled down to a more or less constant rate in the late 1980s. The predictability of exchange rate movements in this period was seen by some as setting a floor for inflation. However, the constant crawl may not have been as close to optimal as a float, which would have quickly taken the exchange rate to its equilibrium level without generating persistent inflation expectations.

". . . an exchange rate regime flexible enough to permit market-driven appreciation can contribute to lower inflation."

Choosing a regime

In today's economic climate, characterized by sizable capital inflows to developing countries in response to better economic policies, exchange rate policy is important even for developing countries with strong payments balances. It is precisely in these circumstances that the traditional link thought to exist between exchange rate anchor and low inflation is broken; an exchange rate regime flexible enough to permit market-driven appreciation can contribute to lower inflation.

In the context of a comprehensive economic program, choosing a floating exchange rate regime would allow policymakers to reconcile the internal inconsistencies of a demand management program—exchange rate adjustments could act as a safety valve. But, from this perspective, use of the floating rate could be viewed as an admission of failure in advance—it would imply that the program was not tight enough to eliminate excess demand at the projected level of inflation. Alternatively, adoption of a floating rate might be interpreted as a signal that other indicators were too difficult to assess during a period of rapid structural and institutional change. The adoption of a fixed exchange rate might also be seen as based on uncertainty regarding program targets for money and credit aggregates, thus signaling the need for another nominal anchor.

A stable exchange rate is the common objective of both types of regime. However, what may be lost with the adoption of an absolutely fixed exchange rate regime is the ability to read short-term supply-demand pressures. This loss could complicate the operation of monetary policy if it is difficult to assess real interest rates, as is often the case when prices are changing rapidly or financial markets are shallow. Adoption of exchange rate margins around the fixed exchange rate may be helpful, although it does not fully resolve this problem. When the exchange rate is at or near the margin—which occurs more often the narrower the margins are—the resulting intense foreign exchange market intervention tends to confuse signals from exchange rates and interest rates. Although industrial countries (for example, members of the European Monetary System's exchange rate mechanism (ERM)) may use margins to achieve short-term flexibility, most developing countries with fixed exchange rates do not employ margins and thus lack the alternative of being able to assess monetary conditions through short-term variations in foreign exchange markets. For many countries in the initial stages of stabilization, a floating exchange rate may be inevitable. However, even as inflation settles down, such continued recourse to a market-determined exchange rate, within margins, can be of considerable value. F&D

This article is based on a paper prepared by the author for "The Quest for Monetary Stability," a seminar held at the Getulio Vargas Foundation in Rio de Janeiro, Brazil, on September 1, 1994. The paper will be published in 1996 by the Institute of Brazilian Business and Public Management Issues, George Washington University, Washington.

References:

W. Max Corden, 1993, "Exchange Rate Policies for Developing Countries," Economic Journal, *Vol. 103 (January).*

José Fajgenbaum and Peter J. Quirk, 1991, "Experiences in Western Hemisphere Developing Countries with Exchange Rate Anchors" (unpublished; Washington: International Monetary Fund).

Peter J. Quirk, 1994, "Recent Experience with Floating Exchange Rates in Developing Countries," in Approaches to Exchange Rate Policy: Choices for Developing and Transition Economies, *ed. by Richard C. Barth and Chorng-Huey Wong (Washington: International Monetary Fund).*