

Changing Doctrinal Perspectives on Central Banks  
And Post-Crisis Monetary Policies in Argentina and Korea

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## Changing Doctrinal Perspectives on Central Banks

By

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*The ideas of economists, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed, the world is ruled by little else. Practical men, who imagine themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist.*

John Maynard Keynes

Although economic development was not even a separate academic specialty in Keynes's time, his remarkable insight applies even more strongly to this field than to other branches of economics. Without often realizing it, policy makers in developing countries—particularly central bankers—have been subjected to great shifts in prevailing academic doctrines on how best to implement and sustain economic growth. Nowhere have these shifts in ideas been more pronounced than in the perceived role of the monetary system in domestic finance and in the management of the foreign exchanges.

Often buffeted by events in the international economy, Argentina has suffered more than its share of doctrinal changes on how its central bank should be managed to secure domestic financial stability and foster economic growth. However, to better understand both the problems and conflicting ideas that central banks more generally now face, a time-line of economic events that shaped and re-shaped the doctrinal perspective of economic theorists and “practical” men in authority everywhere will prove helpful.

At the end of this general historical retrospective, I will comment briefly on Argentina's current monetary and exchange rate doctrine for overcoming the great trauma from the currency crisis of 2001-02. The somewhat different monetary cum exchange rate strategy used by Korea, in overcoming its crisis of 1997-98, is then used as standard of comparison.

### **Crisis Management under the Classical Gold Standard**

The first great era of high-growth globalization, which ended in August 1914 with the advent of World War I, was under girded by the international gold standard. But the mores, the “rules of the game”, of the classical gold standard with open international trade and capital flows carried over through the 1920s—even though the gold standard itself was never satisfactorily re-established on a sustainable basis. (Silver remained an important part of the monetary base in China and India.)

Throughout Latin America, Europe, Japan, and most European overseas colonies, domestic monetary policies were subordinated to maintaining fixed exchange rates—either directly with gold parities or through some currency board arrangement that set fixed exchange rates with the “mother” country, which itself was tied to gold. With currency boards, as in much of Africa, the Caribbean, and Malay states, central banks as such did not (need not) exist because the money supply was endogenously determined by foreign exchange accumulation—with private commercial banks being the money changers and financial intermediaries. Even in mature industrial countries such as Britain and France where central banks had long existed, their role was seen as primarily as lenders of last resort for dealing with short-term liquidity squeezes from gold drains (of which there were many) so as to preserve the fixed gold parities.

To mitigate liquidity crises, central banks were increasingly formed on the periphery of the European center of the gold standard. The U.S. Federal Reserve Bank was formed in 1913. Less well known were liquidity crises in South and Central American countries, Turkey, and some Asian countries. Between 1903 and 1934, Edwin Kemmerer of Princeton University—the famous “money doctor”—helped to set up currency regimes or central banks in the Philippines, Colombia, South Africa, Ecuador, Bolivia, China, Poland, Peru, Mexico, Guatemala, and Turkey. Invariably, he advised governments to consolidate their public finances and (re)establish a gold exchange standard. Then with Professor Kemmerer’s blessing, private investment banks such as J.P. Morgan or Rothschild would provide external finance to help overcome the liquidity crisis, stabilize the exchange rate, and restore the country’s external credit.

If they could, central banks subordinated domestic monetary policy to maintaining external gold convertibility while remaining lenders of last resort for domestic commercial banks. Moreover, the rule of the game for domestic lending was the so-called real bills doctrine: a central bank should lend (discount) only when a commercial bank or bill broker presented marketable commercial paper or prime trade bills that were fully collateralized at its discount window. In principle, the central bank had no leeway to initiate lending—let alone unsecured lending—on its own. A central bank’s role in fostering economic growth was only indirect, i.e., to maintain monetary and exchange rate stability.

### **The Implosion of the Gold Standard in the 1930s**

Explanations abound for why the Great Depression of the 1930s was so broad and so deep. With the spread of restrictions on both international trade and capital flows, by 1934, world trade had imploded to about one third of its level in 1929. Putting aside purely U.S. based explanations such as the stock market crash of 1929 and the Smoot-Hawley Tariff of 1930, the most convincing unified explanation for the *international* character of this economic catastrophe was the implosion of the world gold standard.

At the outset of World War I, European belligerent countries suspended their commitments to gold convertibility, imposed exchange controls, and began to inflate at

different rates. Despite this inflation, the British tried to restore the gold standard in 1925 by setting the sterling price of gold at its pre-war parity. The United States had retained its traditional dollar-gold parity throughout the war, as had a number of other countries outside of Europe. The upshot was that the world's monetary gold base shrunk in real terms: its purchasing power over goods and services became too small to support the superstructure of national (currency) note issues and deposit money that were directly or indirectly convertible into gold at the pre-war parities. In most countries, commercial bank deposits grew relative to national incomes. Even in the decades before 1914, growth in deposit money was faster than growth in the (gold) monetary base so that a collapse in the gold standard was probably inevitable. But the inflationary shock from World War I, and the attempt to return to pre-war gold parities, certainly accelerated the process.

Throughout the 1920s, the Bank of England, to protect its unduly slender gold reserves, followed a very tight monetary policy that depressed the British economy. However, Britain was forced off the gold standard in 1930 with a deep devaluation of the pound against other major currencies—which had (temporarily) maintained their gold parities. Although inadvertent, this beggar-thy-neighbor devaluation—which improved the British balance of payments—led to a gold drain from other countries, notably from the United States. To protect its falling gold reserves, the U.S. Federal Reserve Bank maintained a tight money policy and actually raised its discount rate of interest in 1931 thus worsening the Great Depression. In 1933, however, the U.S. was also forced to devalue (raise the dollar price of gold). This reduced the international competitiveness of other countries and caused their balance of payments to deteriorate.

The result was a general flight from deposit money into gold, with banking crises everywhere. Strong deflationary pressure was felt throughout the industrial world but even more so in less developed countries where primary commodity prices turned down sharply. Exchange controls and restrictions on foreign trade proliferated as the gold standard imploded along with world trade. By the end of the 1930s, gold had been largely demonetized for domestic circulation.

### **After the Debacle: The Changed Mores of Central Banks**

After the Great Depression and World War II, national monetary autonomy became the new mantra. No longer would domestic monetary policy be subordinated to an international monetary standard through a fixed exchange rate. Instead, to avoid beggar-thy-neighbor devaluations, domestic monetary policy would be insulated from the vicissitudes of the balance of payments by exchange controls and internationally managed supporting changes in exchange rates.

The principal intellectual force behind this new view was John Maynard Keynes. His *General Theory of Employment Interest and Money*, published in 1936, outlined how to use monetary and fiscal policy to achieve full employment as if the economy was virtually closed to foreign trade and capital flows. (In contrast, his earlier books had focused on reconciling domestic monetary management with adherence to an

international monetary standard.) As Britain's chief negotiator with the Americans over post-World War II foreign exchange arrangements, Keynes was adamant that national monetary and fiscal authorities should be free from balance of payments constraints. Each nation was to be free to pursue full employment, and if necessary, inflate at a different rate from its neighbors. In the so-called Keynes Plan for an international clearing union presented at Bretton Woods, New Hampshire, in 1944, he proposed keeping wartime controls on international capital movements so that all international payments would be funneled through national central banks in the clearing union. With the agreement of the International Monetary Fund, each national monetary authority would be able to continually adjust its pegged exchange rate to overcome any "fundamental disequilibrium" in the balance of payments *without* having to adjust its national macroeconomic policy unless it wanted to.

The Keynes Plan differed in many respects from the articles of agreement of the International Monetary Fund, ratified in 1945. The Americans insisted on (a gradual) reopening of private foreign exchange markets. Nevertheless, his new philosophy greatly influenced(s) the ideas of economists and policy makers. National macroeconomic autonomy, unconstrained by foreign exchange considerations, became the new mantra among academics and policy makers down to the present day.

But how was this autonomy to be exercised? For almost three decades in the aftermath of World War II, national autonomy became associated with belief in the so-called Phillips Curve: an inverse correlation between the level of unemployment and the rate of inflation—a trade-off that could differ across countries. So national governments with different tastes could choose higher inflation with lower unemployment (say, Britain), or low inflation and higher unemployment (say, Germany). By this reasoning, it was undesirable to bind countries together with a fixed exchange rate.

Ironically, in view of the Keynesian emphasis on national macroeconomic autonomy, by 1950 the Bretton Woods System of dollar parities for exchange rates had become fairly rigidly fixed. Given the postwar inflationary disarray in the monetary systems of Western European countries and Japan, the United States found it a practical necessity to have the dollar become their nominal monetary anchor. Under the Marshall Plan, which financed setting up of the European Payments Union in 1950, exchange rates of 15 European countries were rigidly fixed to the dollar in order to dampen inflation and secure mutual exchange stability. Under the 1949 Dodge Plan (or Dodge Line) for Japan, a fixed exchange rate of 360 yen per dollar was the centerpiece for unifying the currency—eliminating multiple exchange rates—while phasing out a wild inflation.

More by accident than design, therefore, most of the world (apart from the communist bloc) had again backed into a system of fixed exchange rates. As the center country under the Bretton Woods dollar standard, the U.S. alone had some autonomy—although surprisingly constrained—to pursue an independent monetary policy. However, because central banks on the American periphery more or less subordinated their national monetary policies to maintaining their dollar exchange rates, the new regime lasted for 20 years. So, despite the misgivings of academic theorists—whether monetarists or

Keynesians—who favored more flexible exchange rates and national monetary autonomy, a common international monetary standard was re-established. This new monetary order was incredibly successful in achieving the high productivity growth with low inflation that undergirded the Western World’s remarkable economic recovery from the ravages of World War II. But recovery from the postwar monetary disorder only really began after 1949, when exchange rates were more or less securely fixed and controls on foreign exchange contracting were liberalized—but only gradually.

Unfortunately, the absence of a sufficient doctrinal underpinning for how national central banks should behave, and the desire for national macroeconomic autonomy, eventually undermined the ethic of stable exchange rates. From belief in the Phillips Curve, if a country found itself with uncomfortably high inflation, it would be more loathe to disinflate because of the fear of unemployment. In August 1971, the final collapse of the Bretton Woods dollar exchange parities arose from the unwillingness of the United States to disinflate from its inflation arising out of the Vietnam war. Instead of disinflating and thus incidentally preserving the fixed rate dollar standard, President Nixon insisted that the dollar be devalued against the currencies of America’s main industrial competitors. This “Nixon Shock” ushered in the era of high and volatile worldwide inflation, with sharp exchange rate fluctuations, throughout the 1970s into the early 1980s.

This collapse of the 1950s and 1960s system of stable dollar exchange rates was particularly hard on developing countries, many of which had used a fixed exchange rate to the dollar to anchor their own price levels. In most of these countries, from fear of unemployment, central bankers remained philosophically averse to take resolute action on their own to curb domestic inflation. So in the 1970s into the 1980s, inflationary outbreaks with wild fluctuating exchange rates were often amplified on the periphery. Consequently, the great slowdown in productivity growth and rise in unemployment in these two decades was virtually worldwide, and encompassed the industrial as well as most developing countries.

### **A Partial Philosophical Recovery**

Fortunately, even economists learn from experience! The great inflation of the 1970s, where average unemployment rates rose rather than fell, provoked a comprehensive rethinking, led by Milton Friedman, of the Phillips Curve doctrine and the Keynesian rationale for macroeconomic fine tuning. In his 1968 address to the American Economics Association, Friedman demonstrated that if wage earners begin to anticipate inflationary policies by the central bank (and distrust its motives), they will bargain for even higher money wages to keep their real wages from falling, and unemployment persists. Under uncertainty and distrust of the inflationary motives of the central bank, trade unions could even “over bargain” for higher money wages so that real wages remain higher than if the price level were credibly stable—thus leading to even higher unemployment as inflation proceeds.

Today, most central banks target inflation to be low and stable—although they may disagree on how best to do it. Laws have been changed to make national monetary authorities more resistant to political pressure to inflate. Independence for the central bank is now the accepted economic doctrine. And inflation worldwide has indeed come down.

### **Dismantling and Re-mantling Currency Boards (Box Insert)**

In the late 1940s and early 1950s, the American government pressured the British to dismantle the old prewar sterling area—a trading zone free of exchange controls based on the pound sterling as a key currency—in favor of the new “worldwide” Bretton Woods order based on the dollar. An incidental consequence was to undermine the system of fixed-exchange-rate currency boards that the British had set up in East and West Africa, Malaya, some of the Indian subcontinent, and the Caribbean. Wanting to preserve the sterling area, the U.K Treasury and tried to resist this American pressure. But the spirit of nationalism in newly independent former British colonies was too great. Each wanted direct control over its own central bank, and anticolonial advisors from Britain itself, such as Thomas Balogh of Cambridge University, advised a number of African countries to dismantle their passive currency boards and replace them with activist central banks. This led to excessive issues of domestic monies, often associated with corruption from lending to “friends of the government”, so as to further aggravate domestic inflations and hinder inter-regional trade.

Ironically, the French Treasury was much more resistant to American pressure than the British. And the French CFA franc zone still exists in most of the former French colonies. Civil wars aside, the former French colonies have had greater monetary stability than the former British ones.

One further irony is that the currency boards have somewhat come back into favor as a way of taming inflation. Various Latin American countries have experimented with currency boards (as with the initial success in Argentina in the early 1990s), and some have introduced dollarization (as in Ecuador) to replace a discredited domestic currency.

Nevertheless, the tenet of national macroeconomic autonomy remains intact. Only in unusual political circumstances, such as the formation of the European Monetary Union, will governments in industrial countries give up national monetary autonomy in order to better stabilize their exchange rates by harmonizing their monetary policies with neighboring countries. With each industrial country autonomously targeting its own national price level, exchange rates among them fluctuate surprisingly widely. Indeed, economists have likened fluctuations in the U.S. dollar against the euro, yen, pound sterling, Swiss franc, or the Canadian or Australian dollars to random walks. However, industrial countries’ have highly developed domestic bond markets which, in the absence

of exchange controls, encourages fairly robust markets in forward foreign exchange. Thus their exporters and importers find it easier to hedge their foreign exchange risks by forward contracting. But such hedging, while helpful, is only partially effective and residual foreign exchange risk remains substantial.

In contrast, developing countries—now often called “emerging markets”—show a much greater aversion to exchange rate fluctuations. With immature domestic financial markets, their firms find it harder to hedge their exchange risks, and their central banks find it harder to target domestic rates of price inflation independently. Fear of floating is widespread, so central banks intervene continually to smooth exchange rate fluctuations—mainly against the dollar, as in East Asia. China intervened intensively to keep its dollar exchange rate fixed from 1995-2005. (In the transitional economies of eastern Europe, central banks more often intervene to stabilize their currencies against the euro with the prospect of joining it.)

By the advent of the new millennium, the mores of central banks in determining macroeconomic policy for controlling inflation and keeping markets open have again become more conservative—as under the 19<sup>th</sup>-century gold standard. But today’s regime differs from the high gold standard in being more nationalistic: governments are less willing to harmonize national monetary policies with their neighbors. And exchange stability is an important international public good, if now an underprovided one.

## **Financial Repression**

After World War II, belief in the Phillips Curve affected all countries—industrial and developing. This false doctrine eventually had inflationary consequences everywhere, as we have seen. But in developing countries, there was a further shift in banking philosophy away from the fetters of external convertibility, which the gold standard had imposed on central banks. Beginning in the 1940s, in Latin America, Africa, and Asia, central banks were now to be agents of change. Instead of defending the exchange rate regime, they were to use their power as financial intermediaries to actively promote development.

In the immediate postwar, governments in less developed countries and many academics also became convinced that if a country remained specialized in producing primary commodities, the international terms of trade would inevitably turn against it—as had happened in the 1920s and 1930s. Thus, under Article XVIII of the old General Agreement on Tariffs and Trade (GATT), LDCs were exempted from the general obligation to reduce tariff barriers in successive rounds of trade negotiations among the industrial countries. They could maintain import quotas or raise their own tariffs as long as such protectionist policies were represented as necessary for “development”. Even so they could take advantage of tariff reductions negotiated among the industrial countries, i.e., they were accorded “most favored nation” (MFN) status. (Fortunately, with advent in 1995 of the World Trade Organization [WTO], the successor organization to the GATT, this exemption no longer holds.)

From the 1940s into the 1970s, the upshot was forced industrialization through import substitution, as in Jawaharlal Nehru's India or Raul Prebisch's protectionist drive in Latin America. Whether in the Indian subcontinent, Latin America, or Africa, this autarchic approach to development, where more or less centralized decision making aimed to replace foreign manufactures with domestically produced ones was considered to be an acceptable development strategy. Tariffs or quotas on competing foreign imports, mainly of manufactures, provided the main commercial incentive. One consequence was that the internal terms of trade in each protectionist country turned against its exporters. Thus, during the great trade-led economic boom among the industrial economies of the 1950s and 1960s, the foreign trade of most LDCs languished. Apart from the four small high-growth East Asian tigers—Hong Kong, Korea, Singapore, and Taiwan, who followed a more open economic strategy—foreign trade in most LDCs, remained repressed for several decades after World War II.

Although this story of repressed foreign trade is hardly new, less well recognized was (is) the *financial repression* that accompanied it. Central banks, perhaps subordinated to the planning ministry, were to use their money creating authority and their regulatory powers to direct flows of bank credit to favored industries—often to the (newly) protected industries—and support the national plan. In several World Bank missions from the 1950s into the 1960s, Robert Triffin was a leading exponent of using the central banks to mobilize resources for national development goals.

What methods of resource mobilization did a typical central bank use? High non-interest-bearing “reserve” requirements, often of the order of 30 to 40 percent, were imposed on deposit-taking commercial and savings banks. Sometimes there were also secondary reserve requirements that could be satisfied by commercial banks holding interest-bearing government bonds. (Private bond issues in open capital markets might be restricted to prevent them from attracting resources from the deposit banks.) Because these mandatory commercial bank reserves had to be deposited in the national central bank, its lending powers were greatly augmented beyond what it could traditionally get by just issuing coin and currency. In addition, the central bank might over issue base money—currency plus commercial bank reserves—beyond what was compatible with price level stability. The resulting price inflation, over a certain range, then further augmented the lending capacity of the central bank. In effect, it could use the inflation tax to further mobilize resources available to the government or its designees.

What were the institutional mechanisms for directing the flow of central bank credit? Government development banks or finance bureaus, which did not take deposits from the general public, proliferated. These state-sponsored lending agencies would discount their loans with, i.e., simply borrow from, the central bank. They appeared in a wide variety of formats. For example, in Colombia in the 1970s, there were an export promotion agency, an agency to encourage the distribution of fertilizer, a longer term industrial development bank, a special mortgage bank, one for coffee marketing, and so on. In addition to directing the flow of credit through various state-sponsored entities,

commercial banks could be further commandeered to direct their credit flows to specific “priority” sectors—possibly designated by a government planning commission.

Part and parcel of directing the *flow* of credit in the economy was further detailed official intervention to set the *price* of credit. Often the central bank played a dual role as the regulatory authority. First was the traditional concern with the safety and soundness of commercial banks, and willingness to act as a lender of last resort to stave off banking crises. But secondly, the central bank, usually under orders from the government, was often the arbiter for setting below-market interest rates for different classes of borrowers—both from the different state development banks and directed credit from the commercial banks. The spread between most-favored borrowers paying very low interest rates market rates to the increasingly narrow tranche of borrowers paying market interest rates could be enormous—as much as 20 to 30 percentage points. The overall result of ceilings on lending rates, and costly administrative complexity, was to depress returns to depositors at the bottom of the pyramid. Unsurprisingly, the deposit base shrank, and so did the distorted flow of loanable funds based on it. The result was what Edward Shaw and I called (in books published in 1973) *financial repression*.

With differentiated ceilings on nominal interest lending rates in the developing countries, financial repression was then deepened by the worldwide inflations of the 1970s. The result was further fragmentation in the structure of real interest rates. Favored borrowers from the state-owned development banks, where nominal interest rates for different classes of loans were more or less fixed, often found themselves borrowing at highly negative real interest rates. Whereas, unsubsidized borrowers in the narrow open part of the bank-based capital markets would have to pay exceedingly high rates—often more than 30 percent in real terms. At the bottom of the financial pyramid, returns to depositors turned strongly negative and ordinary holders of coin and currency were completely unprotected from the inflation tax. This led to a disintermediation: a squeeze in the flow of real bank lending and further fragmentation in the structure of real interest rates. The upshot was a steep fall in productivity growth and the efficiency of investment throughout most of the developing world in the 1970s through the 1980s.

Financial repression also led to a much stronger interaction between politics and central banking. Because favored recipients of low interest credits in industry or agriculture were so heavily subsidized, political pressure to direct such credits one way or another was naturally intense. The institutional makeup of the board of governors of the central bank often reflected this pressure. For example, in Colombia in the 1970s, members of the cabinet dominated the board of governors. The board could include the minister for highways and public works, the minister for agriculture, the head of the export promotion agency, along with the ministers of finance and commerce, and so on. The head of the central bank then had very little autonomy, and became little more than a recording secretary for how his political masters wanted subsidized credits to be directed—directions that often changed from one week to the next.

Unsurprisingly, in such a politically charged atmosphere, macroeconomic control was easily lost. The state-owned development banks and special credit agencies made too

many low-interest loans that were automatically eligible to be discounted with the central bank. The resulting undue growth in the monetary base often led to high and variable inflation. With low ceilings on nominal interest rates and negative real rates, the commercial banks' deposit base and the superstructure of loanable funds based on it would shrink as a proportion of GDP. In this way, good (and bad) domestic investment projects would often go unfinanced: a credit squeeze.

Domestic financial repression generated a sometimes fatal attraction to borrow from foreigners. If domestic firms could not bid for funds from the constipated domestic financial system, those who could might well borrow abroad. They often used domestic banks, which were relatively untaxed in their foreign borrowing, as international financial intermediaries. But this induced a risky buildup of foreign exchange liabilities that, in the presence of undeveloped or repressed domestic financial markets, could not be hedged. The problem was aggravated by moral hazard in the banks themselves. Because deposit insurance led to lower capital-to-asset ratios in commercial and savings banks, they were sometimes induced to take on too much risk—particularly foreign exchange risk. The whole banking system could be in jeopardy if there was a major exchange rate devaluation. The cost of servicing the banks' foreign exchange liabilities would then rise relative the earning on its domestic currency assets. In Latin America, East Asia, Russia and other transitional economies in Eastern Europe, such currency cum banking crises were commonplace from the 1970s through the 1990s.

### **Central Bank Independence in the New Millennium**

Fortunately, by the end of the 1990s, this dismal financial picture began to change. In emerging markets, inflation in consumer prices on average fell from more than 50 percent in the 1990s to less than 8 percent from 2000 to 2004. Despite (because of?) a buoyant world economy, declining average inflation rates continue into 2006-07.

This remarkable downturn in average inflation rates in LDCs is not easy to explain. Apparently, most have recoiled from their earlier unfortunate experiences with fiscal expansiveness and directing the flow of credit to private entities—both of which led to financial repression and inflation. Their post-World War II enthusiasm for having the central bank be an active financial intermediary for financing both the government's direct fiscal deficit (by buying government bonds) and its off-budget directed credits through the banking system, has waned. The new mantra for World Bank and IMF advising has been to secure more independence for each national central bank, with its mission as a national financial intermediary to be more limited so it can better focus on keeping domestic inflation low.

In the industrial countries, the move to central bank independence with strict inflation targeting began in the 1990s. The Bank of England, the European Central Bank, and the Bank of Canada all have legislated or otherwise formalized inflation targets of about two percent per year. The United States had already used a form of inflation targeting, sometimes described as "Taylor's rule", but the precise rate of inflation has not

been formalized or legislated as in Europe. However, inflation control in these industrial countries is fairly straightforward. The central bank can limit national money growth by targeting some key short-term interest rate, such as the federal funds rate in the U.S., through open-market operations. Government fiscal deficits can be financed separately from the banking system because national markets in government bonds are broad and deep. Thus, these central banks were (are) not forced to lend to their governments—and can more easily control national money supplies. Nor do they intervene to direct the flow of private-sector domestic credit in one direction or another.

However, establishing the independence of a central bank in a typical emerging market is more difficult. First, is the need to undo the repression of the domestic banking system and secure fiscal control. Second, the question of what are the best monetary instrument(s) for targeting the domestic price level is unresolved. Consider each in turn.

When low interest ceilings with special credit allocations remain in place, the size of the (consolidated) banking system remains small—and inflation aggravates the problem. Moreover, the rate of inflation itself will be more sensitive to the size of the fiscal deficit, which, in the absence of large open markets in government bonds, also must be largely financed through the shrunken (repressed) banking system. Thus the key to stabilizing the price level in an emerging market is to reduce the size of the fiscal deficit relative to the size of the banking system. To increase the deposit (lending) base of banking system, a reforming government needs to improve the state of the public finances while reducing the flow of off-budget subsidized bank credits.

The International Monetary Fund in its *World Economic Outlook* May 2001, has provided just such evidence (pages 124-25). For a sample of 23 emerging market economies for the period 1970-99, the IMF noted the strong statistical correlation between inflation and the ratio of the fiscal deficit to the narrowly defined money stock. To explain the sharp fall in inflation from the late 1990s into the new millennium, emerging markets appear to have reduced their fiscal deficits on the one hand while alleviating financial repression on the other. On average, their fiscal deficits have become smaller relative to the size of their banking systems.

In addition, the success of the industrial countries in taming inflation starting in the 1990s makes it easier for any developing country on the periphery to follow suit—perhaps by pegging their exchange rates to a major currency as a “nominal anchor” (see below). In its new *World Economic Outlook* (September 2005, p162 ), the IMF lists a group of 13 emerging markets that are using inflation targeting—with more likely to follow as their fiscal conditions improve and financial repression is relaxed.

### **Currency Asymmetry and Inflation Targeting**

What are the monetary instruments best suited for stabilizing inflation at some low, but positive, level in an emerging market? The term “inflation targeting” is sometimes used to exclude, or to be the antithesis of, “exchange rate targeting”. Indeed,

the self-styled new mission of the International Monetary Fund has been to wean developing countries away from exchange rate targeting toward inflation targeting. The IMF's presumption is that inflation targeting is best done by relying exclusively on domestic monetary instruments—such as short-term interest rates or direct controls over bank credit. In this view, targeting the exchange rate is a potential distraction from what should be an independent's central bank's primary mission of keeping domestic inflation low and stable. The IMF's view is superficially consistent with the general move toward national macroeconomic autonomy after the implosion of the international gold standard in the 1930s—as discussed above.

However, once one takes asymmetries across countries—and most particularly asymmetries across currencies due to the operation of the world dollar standard—into account, then a peripheral country's dollar exchange rate sometimes surfaces as a potentially useful instrumental variable for anchoring its inflation. To simplify the issues involved, let us ignore Western Europe and the small economies to its east that more or less peg to the euro. Instead, suppose the world consists of the United States at the monetary center with a group of Asian and Latin American countries on its periphery. In these peripheral regions, the U.S. dollar is the dominant form of international money. It is the clearing or vehicle currency that private banks use to make cross-country payments, and it is the dominant intervention currency for governments wanting to accumulate or decumulate official exchange reserves—which they then hold largely in dollars.

Most importantly, the dollar is the invoice currency for most intra- and inter-regional trade—as well as for flows of financial capital. Indeed, exporters of manufactures, say from Korea or China, will try to keep their dollar prices fairly stable through time for the convenience of potential buyers in other countries in Asia and elsewhere. And primary commodity prices, which fluctuate from one day (hour) to the next, are universally quoted in dollar terms.

For this dollar-based order of international exchange to work well, only the center country can and should follow an independent monetary policy—where it ignores what is going on in the foreign exchanges (except in very major crises) and does not try to target the dollar's exchange rate against other currencies. The reasons for this monetary asymmetry are twofold.

First, in a world of “N” currencies, only N–1 can have independent exchange rate policies without causing conflict. If there are only two countries in the world, only one of them can target its exchange rate against the other—and so on up to a world of N currencies. Since the beginning in the Bretton Woods era of the 1950s and 1960s, this “N–1” problem of potential conflict has been largely resolved by each peripheral country officially or implicitly agreeing to intervene, if it does intervene at all, only against the dollar—and, if necessary, to adjust its domestic monetary policy to support the intervention. In contrast, as custodian of the Nth or center currency, the U.S. Federal Reserve Bank typically does not intervene in the foreign exchange market. It uses only domestic monetary instruments, as per Taylor's Rule, to stabilize its own price level. At the base of the dollar standard, the Fed thus provides an independent monetary

benchmark—a stable domestic price level—that peripheral countries may or may not want to use to stabilize their own price levels.

Secondly, in a world where exchange rates sometimes do fluctuate, the center country can most easily afford to ignore the exchange rate risk. Under the dollar standard, both the liquid liabilities and assets of American financial institutions are denominated in dollars. For example, in the heavy American borrowing from foreigners to support its huge current account of recent years, the liabilities are largely dollar denominated U.S. Treasury bonds and a build up of foreign owned dollar deposits in American banks and similar institutions. Because bank assets are also denominated in dollars, there is no risk of a major institutional bankruptcy should the dollar depreciate or appreciate.

Contrast this with the position of emerging markets, with less developed domestic capital markets, on the dollar standard's periphery. If their commercial banks borrow abroad, they typically build up net dollar liabilities even though the banks' assets are largely denominated in the domestic currency. Thus they are vulnerable to bankruptcy should the domestic currency depreciate. Conversely, suppose, by running current account surpluses, an emerging market becomes a net creditor. Then it cannot lend abroad in its own currency: the Chinese do not lend abroad in renminbi nor the Koreans in won, and so on across all developing countries—including oil rich sheikdoms. Instead, these international creditor countries build up liquid dollar claims which are held either as official exchange reserves or internally by domestic financial institutions such as banks or insurance companies. These latter institutions are then vulnerable to an appreciation of the domestic currency against the dollar, which would then devalue their dollar assets relative to their domestic-currency liabilities.

Because financial institutions in the United States are virtually invulnerable to exchange risk, American monetary economists advise the Fed to ignore exchange rate fluctuations when it targets domestic inflation. And this is all well and good for the center country. However, rather myopically, they then try to transfer the American (or European) guidelines for targeting inflation to emerging markets where exchange rate fluctuations pose more serious financial risks and where direct pass through effects into the domestic price level can be more pronounced. (Because international exporters tend to price to market in dollar terms, fluctuation in the dollar's exchange rate against other currencies have relatively limited pass-through effects on the American price level.) In effect, the new mantra that exchange rate fluctuations should be ignored in targeting domestic inflation fails to take the great currency asymmetry across countries, and the spill over effects of exchange rate changes from one country to another, into account.

### **The Exchange Rate as a Monetary Anchor**

So how should a central banker in an emerging market interpret the sometimes conflicting foreign advice on how best to target inflation at some low and stable level? Short of trying to reestablish an international gold standard, under what circumstances

would targeting, or even fixing, an exchange rate against the center country's currency be useful for helping to anchor its domestic price level?

First, the center country's currency, i.e., the dollar in our example, must itself be have stable purchasing power over a broad range of tradable goods and services. This was manifestly not true in the 1970s, but has held reasonably well since the mid 1980s..

Second, the emerging market in question should be highly open to foreign trade although not necessarily to capital flows.

Third, important trading partners should themselves have fairly stable dollar exchange rates. This condition is better satisfied in East Asia where most countries (with the possible exception of Japan) can softly peg to the dollar without major breakdowns (aside from the crisis of 1997-98). So the effective dollar zone in East Asia is much broader than what just bilateral trade with the U.S. would suggest. Because the region has become so highly integrated in foreign trade, mutually stable exchange rates are an important regional public good. That is, if any one Asian country pegs to the dollar such as China has done, this reduces exchange risk in neighboring countries, which also peg to the dollar. Also, in a broader dollar area, if one any one East Asian country pegs steadfastly to the dollar, the anchoring effect on the domestic price level is more pronounced. Starting from high inflation in 1993-96 but a fixed exchange rate after 1994, China's domestic inflation came down and converged down to close to that in the United States by 2005—as per the principle of relative purchasing power parity.

Although in desperate monetary circumstances, Latin American countries sometimes adopt hard currency boards or even dollarize completely to gain credibility and overcome a bad financial history, this strategy is risky. When Argentina was pegged to the dollar in the 1990s, major devaluations in the neighboring country of Brazil were an upsetting influence. In contrast, the most economically successful South American country has been Chile: a highly open economy with good internal fiscal control but with a flexible exchange rate that enables it to better offset shocks from its less stable neighbors.

In conclusion, pegging the exchange rate has two facets.

On the one hand, the exchange rate can be a useful *instrument* for monetary control when domestic financial markets are underdeveloped (or even repressed) so that setting some short term rate of interest cannot be used to control base-money growth or the economy—unlike what Taylor's Rule would require. Then, having the central bank buy or sell foreign exchange at a fixed dollar exchange rate, and altering the domestic monetary base accordingly, is an alternative (but not necessarily an exclusive) method of exercising monetary control. In order to allow the clearing of international payments to devolve from the central bank to the commercial banks, the market exchange rate can still be left free to vary within some narrow band, say 2 percent, around the central parity.

On the other hand, a stable exchange rate can be a useful *target* in of itself—particularly when one takes regional neighborhood effects—cross country spillover effects of exchange rate changes—into account. And this target has the advantage of being very transparent. Everyone knows when the central bank succeeds in maintaining its central dollar parity, but judging the course of domestic inflation and projecting it into the future is more fraught with ambiguity.

### **Argentina's Current Monetary Regime: A Comparison with Korea**

Because Argentina's monetary system is still in transition from the great crisis and deep devaluation of 2002, the principles behind its current monetary regime cannot be compared to other emerging markets or industrial economies which are more or less in steady states. Instead, it is necessary to look at the monetary options available to the Central Bank of Argentina (BCRA) after the 2002 currency depreciation and the restructuring of external debts. In this respect, an insightful alternative scenario is to compare Korea's management of its exchange rate after its great crisis and depreciation in late 1997.

Argentina's initial massive depreciation, as measured from the third quarter of 2001 to the second quarter of 2002, was 275 percent—as shown in figure 1. Then by mid 2003, the nominal exchange rate had bounced back somewhat to a depreciation of just 200 percent (from 3Q 2001) and has subsequently remained remarkably stable. Since 2002, the nominal exchange rate has remained at 3 pesos per U.S. dollar,  $\pm$  3 percent.

Because the crisis induced a collapse in domestic spending including for imports, Argentina's foreign trade balance turned sharply positive in 2002—and has remained positive as exports have picked up. From the surplus in the balance of payments, exchange rate stabilization has required heavy official intervention and a large buildup of dollar reserves. The monetary base in 2006-07 is increasing more than 30 percent per year—and, after partial sterilization, growth in M2 is now about 20 percent. But the velocity of M2 has pretty well stabilized: nominal GDP is growing at 19 percent while real growth is 8 to 9 percent. However, the banking system remains shrunken in real terms: M2 is less than 20 percent of GDP, and bank credit outstanding to the private sector is only about 10 percent of GDP.

What monetary rule is Argentina now following? BCRA is targeting the exchange rate as a nominal anchor for its monetary policy; and, as Governor Retrado emphasizes (quite correctly), it is not targeting any particular real exchange rate—and certainly no real interest rate. Although the nominal exchange rate is the target, it is not by itself a *sufficient* instrument to stabilize the rate of inflation—at least not for many years after the large devaluation. In addition, heavy intervention to sell central bank bonds and raise reserve requirements have been necessary to prevent an explosion in money growth that would have led to even higher inflation than the present 9 to 10 percent increase in the CPI (figure 2).

If one presumed that the pre-crisis exchange rate in early 2001 was roughly at purchasing power parity, then a sustained 200 percent devaluation (the value of the dollar rises from 1 to 3 pesos) will eventually show up as a 200 percent increase in the domestic price level. Producer prices, which are more directly affected by the exchange rate, will react faster than consumer prices. And by early 2007, producer prices have already risen more than 180 percent while consumer prices rose by just 90 percent. Thus, at 3 pesos to the dollar, Argentina faces several more years of substantial inflation in its CPI before the fixed nominal exchange rate eventually ends it.

How fast Argentina's economy should inflate before this new equilibrium is achieved is something of an arbitrary choice. But the government has apparently settled on allowing nominal GNP to grow 19 percent per year, which is partitioned between approximately 9 percent real growth and 10 percent inflation. So, under the current monetary regime, six or more years will elapse before the CPI stabilizes at the "international", i.e., U.S., level. Nevertheless, the fixed nominal exchange-rate, with supporting interventions to control the excess money growth, is a consistent monetary strategy. Whether it is sustainable remains to be seen.

Korea followed a somewhat different monetary cum exchange rate policy following its great crisis of late of 1997-98. To be sure, Korea's crisis was less intense than what Argentina experienced four years later—at least as measured by the initial depreciation, where the won per dollar rate rose "just" 85 percent (figure 3). However, Korea also had a huge debt restructuring problem—and domestic aggregate demand also fell, leading to a sharp fall in imports and a quick turnaround in the trade balance from deficit to surplus. The government then intervened heavily to prevent the won from appreciating "too fast" and quickly rebuilt its official dollar reserves; this led to the need to sterilize some of the impact on the monetary base—as in Argentina.

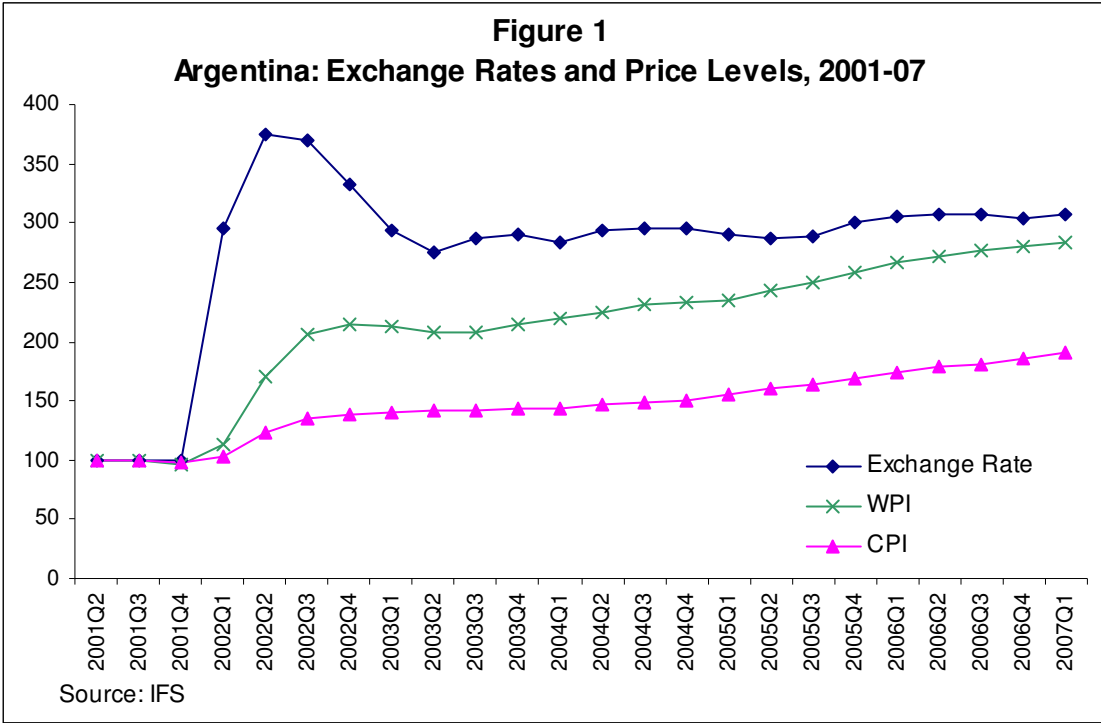
However, the big difference between the two countries in their post-crisis experiences is that Korea opted not to stabilize the nominal value of the won at a highly depreciated level, as Argentina did. Rather the Bank of Korea opted to let the won continue appreciating, albeit somewhat erratically, as shown in figure 3. Today, the nominal won/dollar rate has returned (within 4 percent) of its pre-crisis level. True, in making this Argentina-Korea comparison in figures 1 and 3, we are considering a 10-year recovery period for Korea (1997-2007) versus just 6 years (2001-2007) for Argentina. Nevertheless, Argentina does not seem to be about to abandon its dollar peg—and it is reasonable to project that its inflationary trajectory will continue.

Because of the won's greater nominal appreciation, post-crisis inflation in Korea has been much less than in Argentina (figure 2). And Korea's wholesale and consumer price indexes, measuring inflation, move closely together (figure 3). In Argentina, by contrast, the CPI still has a lot of catching up to do (figure 1). Finally, the real size of Korea's banking system recovered faster and is being sustained at a higher level. Without much inflation tax being levied on won bank deposits, Korea's M2/GDP ratio stabilized at about 70 percent of GDP four years after the crisis (figure 4). In Argentina, four years after the crisis, this ratio, measuring the size and potential lending capacity of the banking system, has stabilized at less than 20 percent.

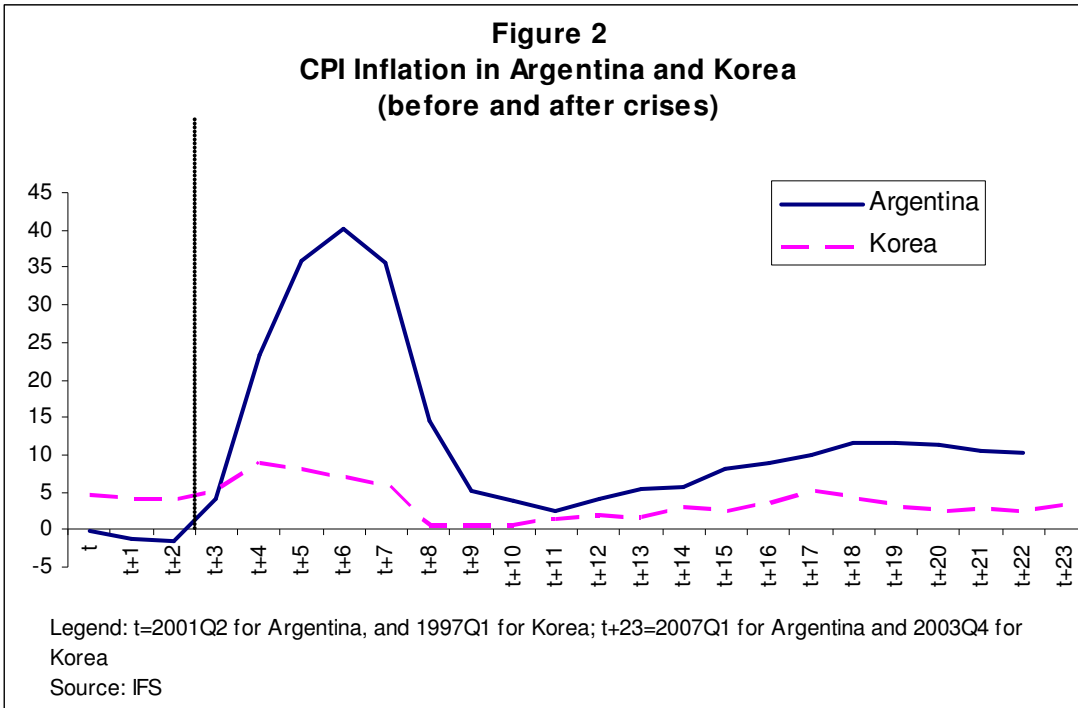
However, Argentina's current monetary cum exchange rate regime has been remarkably successful in overcoming the great trauma of the 2001-02 crisis. Exchange reserves have been replenished, exports are growing, and confidence in the financial system is partially restored. Nevertheless pent up inflation is the greatest threat to the sustainability of the current regime.

With the benefit of hindsight, should Argentina have allowed its nominal exchange rate to appreciate more and sooner in the Korean mode? The answer is still not clear because of mitigating circumstances beyond what can be included in this short note. For example, Argentina's default crisis and impasse with the IMF impaired its external credit more than what Korea experienced. Thus Korea could rebuild its exchange reserves faster as foreign capital swiftly flowed back into the economy—and could better risk having its currency appreciate. Against this, the boom in primary commodity prices since 2003 has helped Argentina and hurt Korea. If this boom continues, Argentina could better risk having its nominal exchange rate appreciate.

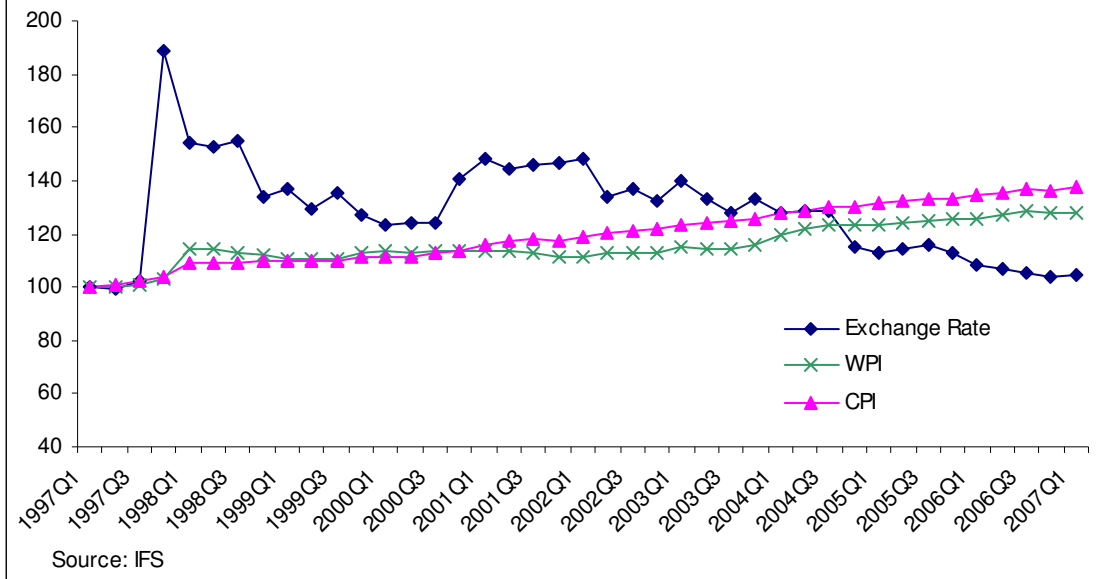
That said, however, the current stable exchange rate of 3 pesos per dollar has gained credibility in the market. One wouldn't want to replace it with a predictably appreciating currency, as is currently happening in China. Because foreign exchange speculators have a one-way bet on the direction of change in the renminbi, China now faces huge inflows of "hot" money that threaten to destabilize its financial system. Clearly, BCRA has to think very carefully before making any major changes in its current monetary cum exchange rate regime.



**Figure 2**  
**CPI Inflation in Argentina and Korea**  
**(before and after crises)**



**Figure 3**  
**Korea: Exchange Rates and Prices Levels, 1997-2007**



**Figure 4**  
**M2/GDP in Argentina and Korea**  
**(before and after crises)**

