

CURRENCY AREAS, EXCHANGE RATE SYSTEMS AND INTERNATIONAL MONETARY REFORM

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I. Introduction

Charles Rist, French economist and central banker, once said that “democracy killed the gold standard.” A nice phrase –he was a very good

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economist. What I think he meant was that democracy results in an increase in social demands and redistribution programs that governments have to supply or else be ejected at the next election. In the effort to finance the new programs governments raise taxes to the limit and then engage in borrowing and deficit financing from the central bank, leading to a breakdown of convertibility and the collapse of the gold standard. The gold standard will no longer act as the “Golden Brake.” Rist’s idea was very prophetic, but I think it does not provide the right clue as to what destroyed the gold standard. We have to look elsewhere.

Strong currencies are the children of empires and great powers. The dollar became the greatest currency of the 20th century because it was comparatively stable and America became the superpower. As the US came to dominate the international monetary system, the dollar elbowed out gold as the principal asset of the system. When General de Gaulle in the 1960s wanted to attack the United States and its “dollar imperialism,” he served up a demand for a return to the gold standard, the only conceivable rival to a dollar-based system. The US, of course, wouldn’t hear of it and after it was taken off gold in 1971 the dollar, instead of sinking into oblivion, had no rivals. What killed the gold standard was the financial supremacy of the United States and its delivery system, the dollar.

Currency power configurations, however, are never static. They evolve along predictable lines with the growth and decline of nations. Looking at the international monetary system as an constantly-evolving oligopoly, it seems inevitable that a countervailing power would develop to challenge the dollar. Now, at the close of the “American century,” the euro has appeared as a potential rival, the countervailing power, to the dollar.

The euro may turn out to be more of an important change in the international monetary system than the breakdown of the Bretton Woods arrangements in 1971. If it fulfils its promise as an alternative to the dollar, the euro can change the power configuration of the system. The breakdown of Bretton Woods changed its veneer but not its fundamentals. Before and after the collapse, the

dollar remained unchallenged as the de facto monarch, the most important currency used in reserves, in denominating values, settling contracts and effecting payments in the international monetary system. The advent of the euro may therefore turn out to be the most important development in international monetary arrangements since the emergence of the dollar as the dominant currency shortly after the creation of the US central bank, the Federal Reserve System, in 1913.

International monetary arrangements make a big difference to the success or failure of the world economy. Bimetallism in the first part and the gold standard in the second part of the 19th century were important catalysts in the “century of peace” under the “pax Britannica,” and the reign of the dollar has been at least a concomitant of the general (and comparative) peace and prosperity of the last part of the 20th century. Globalization has been facilitated by the dollar just as it was facilitated in the 19th century by the pound and the gold standard. The modern trend toward globalization has been accelerated by systematic tariff reductions, free trade areas, enhanced capital mobility and revolutions in transportation, communications and information technology.

It needs to be emphasized, however, that globalization is much less efficient now because of some telling defects in our international monetary system. The inefficiency of our current “system” is reflected in the hundreds of trillions of dollars of waste capital movements that cross international borders every year solely as a consequence of uncertainty over exchange rates. In this respect we should look with more respect at the international monetary system at the beginning of the century when the gold standard provided a highly efficient international monetary system. If we cannot recreate that system, we should at least be able to duplicate it with a more modern alternative.

II. The Pre-Eminence of the Dollar

In my Nobel Prize lecture (Mundell, 1999, 2000b), I argued that the international monetary system of the 20th century had played a fundamental

role as a determinant of political events. Its breakdown in World War I, restoration in the 1920s, and subsequent breakdown in the 1930s, played a major causal role in the Great Depression and World War II, and these great events in turn had a feedback effect on the international monetary system, altering its power configuration. The US economy and the US dollar played a determining role in this story.

The US economy was the star performer of the 19th and 20th centuries. It started the 20th century as the biggest economy in the world. In a speech presented at Cambridge University in 1906, Whitelaw Reid, the US Ambassador to Britain, discussed the subject, "The Greatest Fact in Modern History," which he took to be the rise of the United States!

Bismarck said that the greatest fact of the 19th century was that Britain and the US spoke the same language. That prescient comment acknowledged the growing might and domination of the Anglo-Saxon powers. By 1914, the US economy was three times as large as its British or German counterparts, respectively the second and third largest economies in the world. By the 1920s the United States was five times as large as its next rival. The US had already become the superpower in the 1920s.

At the end of World War II -amidst the wreckage of Europe and much of the Far East- the United States had become the supereconomy. It was at this time that the Bretton Woods agreements set the course of the international monetary system for the next generation. But as the post-war period evolved, the US economy lost some of its luster; it became sluggish and lagged in growth, while the European economies spurted ahead. In the meantime, Sputnik showed that the U.S. had a technological rival.

The seeds of this relative decline had been sown as early as World War I when tax rates soared to punitive levels. It took a decade after the end of the war before marginal tax rates at the highest level were lowered to 25 per cent. What confirmed the slump of 1930-31 as a great depression was the rise in marginal tax rates in June 1932 to 60 per cent, the first manifestation of the spread of the class conflict that had already infected much of Europe and

would penalize production in favor of redistribution. Rist's predictions (mentioned above) were coming true! With World War II, tax rates were pushed up even higher to levels above 90 per cent, and stayed that way after the war. While the economies of Europe and Japan were soaring, the US economy began to stagnate.

Americans looked with envy on the growth rates and low unemployment in Europe and Japan in the 1950s and, to a lesser extent, the 1960s. Then came the breakdown of the international monetary system in the 1970s, which ended the discipline of fixed exchange rates anchored to gold. The result was lax monetary and fiscal discipline all over the world and an outbreak of inflation and stagnation. It will astonish some to learn that the increase in the US price level in the 1970s exceeded the increases in all the American wars since the War of Independence. In 1979-81, the US had three years of back-to-back two-digit inflation, flanking an inflation rate of 13 per cent in 1980. The tide turned only with the advent of supply-side economics during the Reagan administration, which implemented a policy mix of tight money to control the inflation and sweeping tax cuts to expand the economy. After a sharp but short recession, the US economy moved into a long expansion in which employment revived and inflation subsided. In a book entitled *The Seven Fat Years*, Robert Bartley, editor of the *Wall Street Journal*, describes in detail the sequence that led to the creation of no less than 19 million new jobs between 1982 and 1990. Between 1980, the last year of the Carter administration, and 1988, when President Ronald Reagan left office, marginal federal income tax rates at the highest brackets had been lowered from 70 per cent in 1980 to 28 per cent, and corporate tax rates, from 48 per cent to 34 per cent, a supply-side revolution that, in a more limited form, spread to the rest of the world.

Except for a nine-month recession in 1990-91, the US economy has been expanding now for 18 years. The result has been an increase in employment of about two million people per year, 38 million new jobs since 1982, almost as much as the entire labor force of the third largest economy in the world,

Germany. It is fair to say that in the last two decades the US economy has been the mainspring of growth in the world economy.

There was some backsliding on tax rates since Ronald Reagan left office. Top marginal income tax rates were increased to 33 per cent under President George H. W. Bush and to 39.6 per cent under President Bill Clinton. When account is taken of state and local taxes, the aggregate top marginal income tax rate is again well over 50 per cent -despite the fact that the national budget has recently moved into surplus. Nevertheless, the US economy, under the impetus of the IT revolution and the “New Economy” has continued to expand. A new round of supply-side tax cuts will be needed when the economy slows down.

III. The Fate of the Gold Standard

In the 1920s, in his book, *A Tract on Monetary Reform*, John Maynard Keynes had already pointed out that the gold standard after World War I was nothing like the gold standard of earlier years. It was in this context that Keynes made his famous (and much misquoted) remark that “...already the gold standard is a barbarous relic.” Keynes was the first to point out that gold was no longer operating efficiently as a mechanism in the old-fashioned decentralized way, and that the stability of gold now depended increasingly on the policies of a few central banks -mainly the Federal Reserve System, the Bank of England, and the Bank of France. His statement is precocious and correct but it did not go far enough. In understanding the 20th century, it is necessary to understand the overwhelming importance of the Federal Reserve System.

The importance of the United States in the international monetary system would have been recognized much earlier had the United States possessed a central bank in the 19th century. Upon its creation in 1913, it was instantly the most powerful central bank in the world -this despite the much-vaunted prestige of the Bank of England, the acknowledged importance of sterling and the

London financial market. The creation of the Federal Reserve System in 1913 was one of the most important events of the 20th century. It was the Federal Reserve System that enabled the paper dollar to become the most important currency in the world. The primacy of the dollar can be said to have begun in 1915, the second year of World War I, when the dollar took over from the pound sterling the role of most important currency in the world.

The whole future of the gold standard came to depend on the policy of the US with regard to gold. During World War I, the value of gold had fallen in half as the US dollar, which remained more or less on the gold standard, experienced a doubling of its price level between 1914 and 1920. In 1921 the Federal Reserve liquidated assets and tightened credit. Prices then fell precipitously, from an index of 200 (1914 = 100) in 1920 to 140 in 1921. The Federal Reserve then shifted to a policy of stabilizing the price level and it remained more or less constant until 1919. Thus, during the 1920s, the US price level was about 40 per cent above the pre-war gold-standard equilibrium.

All other countries gradually got rid of gold from their monetary systems, and then the status of gold became just a question of US economic policy. After World War II came the Bretton Woods arrangements. Gold was still an important part of the international monetary system as the official denominator of currency values in the system, even if it ceased to be a really effective anchor. But the dollar was increasingly filling the functions of a world currency.

IV. Currency Areas and Currency Unions

The growing importance of the dollar was a little-noticed event at the start of the 20th century. The advent of the euro is the big news at the close. It has led to a redrawing of the map of currency areas. When the euro was created it instantly became the second most important currency in the world.

Monetary mass is important. Judging by its monetary mass the euro is more important than the yen, but less important than the dollar. The eleven

countries of the EU that went into monetary union have a GDP of something like seven trillion dollars, which compares to a US GDP of 9 trillion and Japan's GDP of 5 trillion dollars.

These currency areas are of course evolving. The euro area -and possibly the dollar area- are getting bigger. The euro area has eleven countries now, and Greece is already on board. In a few years we can expect the EU-12 to be joined by Britain, Sweden, and Denmark. By the end of the decade, the EU will contain several more of the thirteen countries that have been invited to apply for membership. Though meeting the requirements pose a significant challenge, entry into EU and EMU represents the best chance they have to lift their standards of living toward EU levels and most of the countries are working very hard towards meeting them.¹

In ten years, therefore, there could be as many as 28 member countries in the European Union. In addition, thirteen CFA franc countries in West and Central Africa, since 1946 tied to the French franc, are also tied to this euro area. If, as seems plausible, a few countries in North Africa and the Middle East also choose to fix their currencies to the euro, the euro area could easily contain as many as 50 countries with a population exceeding 500 million and a GDP substantially larger than the United States within a decade.

Turning to Asia, what about the chances of a currency area forming in that burgeoning continent? There has been some discussion of a kind of APEC Monetary Fund, and even a currency area based on the yen. But the European model of single currency would not fit at the present time in Asia. The stumbling block is not economics but politics. The single-currency project of the European Union became possible because Europe became a security area, i.e., an area within which war could be, in all probability, ruled out; the long-standing Franco-German enmity was laid to rest. An Asian currency area would be possible in the future only if a formula could be found for correcting

¹ Just some weeks ago, I had a discussion with President Kwasniewski of Poland. He said they were absolutely setting their sights on 2004 for the entry of Poland into this market.

the political disequilibrium. An Asian Monetary Fund could, however, be a catalyst for constructive political developments and might pave the way eventually to a viable Asian currency area.

We mustn't forget the dollar! The dollar area will also expand over the next ten years. Some countries in Latin America and elsewhere will be inclined to follow the path pioneered by Argentina in 1991. They will be using the dollar as an anchor for their currency, just as countries in Africa and elsewhere will be using the euro as an anchor for their currencies. The dollar area is likely to expand. New currency areas may form. A currency area has been talked about for Brazil, Argentina, Uruguay and Paraguay, the countries that form the Mercosur Free Trade Area. It might even be possible to establish some kind of currency union for all the Americas, a kind of Latin dollar.

There are many models for currency areas. The tightest form is a single currency monetary union. Dollarization represents a hegemonic approach to a single-currency monetary union. The alternative of a new currency created by political agreement (such as the euro, or Herbert Grubel's plan for an "amero" in North America), involves a high degree of political cooperation and sharing of sovereignty. Multiple-currency monetary unions could include currency board arrangements, and a parallel currency system, both of which could be looked at or not as stages toward a more complete single-currency monetary union. The less tight monetary unions depend for their success on credibility.

When one fixes exchange rates to a currency area, there are many ways to buy credibility for the exchange rate commitments. One way is to build up reserves. After nine years with a currency board -an enormously important step toward monetary stability- Argentina still has credibility problems especially in times of crisis. These problems are reflected in high interest rates in dollars. But I doubt Argentina would have any problems with the credibility of its exchange rate if it had the foreign exchange reserves of Taiwan. Taiwan has more than US\$100 billion in foreign exchange reserves. That's very high for a country of 22 million people, and it has to be high partly

because of the political isolation and vulnerability of Taiwan. Nevertheless, larger rather than smaller currency reserves are a big plus, and that's one alternative. By and large, I believe most countries have too few currency reserves.²

Convertibility is a unilateral fix. Another way to achieve credibility is through a bilateral approach. Would a monetary agreement with the US help? The answer is yes, certainly. If the Federal Reserve or Treasury guaranteed the peso rate whenever there was a run on the peso it would be unnecessary for interest rates to rise. There is a problem (or worry), though, about moral hazard. Instead of building up reserves or keeping to the strict requirements of a currency board, the country might rely on the guarantee to do the job! The US might be more willing to give Mexico a guarantee, because Mexico is part of NAFTA and Mexico's problem is thus the US's problem too. There might be more willingness if Mexico had a currency board with the United States. I could well imagine the Federal Reserve being willing to guarantee this in a time of crisis, and to avoid the need for a complete dollarization of the economy with which that was associated.

V. The Importance of Monetary Rules

At the Davos meeting of the World Economic Forum this year, the governor of the Central Bank of a Latin American economy said that one thing we have learnt from the recent currency crises is that fixed exchange rates are no good! I think nothing could be more opposite from the truth. I'm sure that he was thinking of pegged rates.

It is essential to make a distinction between "pegged" and "fixed" rates. The difference lies in the adjustment system. A fixed rate is one where intervention in the exchange market is allowed to affect the money supply. If

² A country may not want, or may not be able, to invest its resources in building up that large currency reserve over the long run. Like everything else, it's costly, but it's not that much of a cost. A country can invest its currency reserves in Treasury Bills that earn 5%.

a country has a surplus the central bank has to intervene to prevent its currency from appreciating; it buys foreign exchange in return for domestic currency. The increased supply of domestic currency increases the reserves of the banking system and increases domestic expenditure, automatically correcting the surplus. Similarly, a deficit requires intervention in the opposite direction. The central bank sells foreign exchange to support the domestic currency and gets back domestic currency, which reduces the reserves of the banking system, the money supply and domestic expenditure, and thereby corrects the deficit. A fixed exchange rate system is a monetary rule that contains a self-adjusting equilibrating mechanism of the balance of payments.

By contrast, a pegged rate is an arrangement whereby the central bank intervenes in the exchange market to peg the exchange rate but still keeps an independent monetary policy. To maintain an independent monetary policy it may offset the monetary effects of intervention in the exchange market by sterilization operations. For example, when a country has a surplus, the central bank must intervene to prevent the pegged rate from appreciating; it buys foreign exchange and supplies in return domestic currency, increasing reserves as before. But now, to neutralize the monetary effects of intervention, the central bank sells an equal quantity of domestic assets (say government bonds) canceling the effects on the money supply. It then makes a separate decision to expand or contract the money supply, increase or lower interest rates. The result is that there is no mechanism of adjustment for ensuring balance of payments equilibrium. This is in fact the automatic practice of the US and British central banks (in the event of intervention in the exchange market), which adhere to flexible rates. A pegged exchange rate may be defended as a temporary expedient in certain situations, but as a general rule, because it matches an international system with a domestic monetary policy, it involves conflicts that lead to crises and breakdowns. Pegged exchange rates sooner or later always collapse.

The gold standard was a good example of fixed rates. Countries defined their currencies in terms of weights of gold and exchange rates represented

the ratios of the weights. When gold left the country (a balance of payments deficit) the money supply shrunk, domestic expenditure (total spending) was cut and the deficit was corrected; when it arrived, the money supply increased, expenditure rose and the surplus was eliminated. The system got into trouble only rarely when, as during war, countries turned to deficit finance. Success of the gold standard depended of course on fiscal prudence.

Panama is a contemporary example of a country that has a fixed exchange rate. Its currency is the balboa, which is a metallic currency equivalent to and freely convertible into the US dollar. Upon its creation as a country, in a treaty with the United States, the government committed itself not to create a paper currency. As consequence, Panama is “dollarized” and the paper dollar circulates freely in Panama and is equivalent as legal tender and unit of account. Panama could of course at any time abrogate this “self-denying ordinance” but has chosen not to because the dollar anchor has given it a degree of monetary stability that is quite unique in Latin America. The balance of payments is kept automatically in equilibrium by the unhindered exports and imports of dollars, shrinking and expanding the money supply in the process, and Panama gets the same core inflation rate as the United States.

A currency board represents a rigorous form of a fixed exchange rate system. A country fixes the exchange rate between its currency and an important foreign currency. Intervention to keep the rate fixed automatically affects the money base of the system. When a central bank buys (say) dollars, it pays for them with national currency and that expands the reserves in the monetary system; similarly, a sale of dollars contracts reserves. A currency board lets this intervention determine monetary policy, and it works automatically to preserve equilibrium in the balance of payments: a deficit, for example, leads to a contraction of the money supply, which lowers expenditure and corrects the deficit. Currency boards were commonly used in small countries or colonies of the great European empires of the twentieth century but they have made a come back in independent and much more important countries today. Several of the transition countries of Central and

Eastern Europe have used currency boards as an anchor for their monetary policy, and Hong Kong's currency board has been in place since 1983. But the outstanding example in the modern world is, of course, Argentina.

It is worth taking time out to reflect on why "currency boards," as a special case of fixed exchange rates, have come back into fashion. It is mostly because of the common confusion between pegged and fixed exchange rates. Largely because of the way international economics has been mis-taught in many of our schools and our international financial institutions, fixed exchange rates have been identified with pegged rates; i.e., a system with a built-in mechanism of re-equilibration has been confused with a system with no adjustment mechanism at all. The practice is reinforced by the absurd classification of exchange rate arrangements in the *IMF International Financial Statistics*, which lumps together (amidst several other confusions) under the same system - "currency pegged to the US dollar" - Panama and Iraq! This misinformation has cast discredit on the phrase "fixed exchange rates" which has become mixed up with "pegged" exchange rates so that, to avoid confusion, some writers now speak of a "currency board" in order to describe a fixed exchange rate system that lets the balance of payments influence the money supply in an equilibrating way.

Argentina, for example, does not have a currency board in the sense that this term was used before World War I. But it has a fixed exchange rate system with an automatic adjustment mechanism, governed by the Convertibility Law that every new peso created is backed by one US dollar. Under convertibility, Argentina by and large gets the US inflation rate, modified according to the differences in the Argentine basket of goods in the price index. Currency boards represent one extreme end of the spectrum of fixed exchange rate systems. Other viable fixed exchange rate systems that differ substantially from currency boards are Austria and the Netherlands, two countries that kept their currencies fixed to the DM.

But let us come back to the question which has been posed in much of the literature: Should countries have fixed or flexible exchange rates? But to me

it is not a good question. First of all it is not clear what “fixed” exchange rates mean in the question, so that economists who debate the issue are often talking about quite different animals. How many times have I heard young (and sometimes old) economists rant on about the superiority of flexible rates over “fixed” exchange rates, proving their case by pronouncing as a theorem that fixed exchange rate systems always break down! The alert student will see this theorem as an oxymoron.

But even if “fixed rates” refers to truly fixed rates, the question is a terrible one. As I defined it, a fixed exchange rate is a monetary rule. It’s a rule that gives the country the monetary policy of the partner country. How can you compare a fixed rate, which is a monetary rule, to a flexible rate, which is a non-committal absence of a monetary rule? Fixed exchange rates imply a precise monetary policy that will give the country the inflation rate of its partner countries. By contrast, a flexible exchange rate is consistent with any monetary policy at all -hyperinflation, hyperdeflation or price stability! You can only legitimately compare a fixed rate, which is a monetary rule, with other monetary rules.

The proper question is, I think, what is the best monetary rule? What variable should be fixed? Should it be a currency fix? A currency fix would fix the domestic currency to a currency, or a basket of currencies. Should it be a commodity fix? A commodity fix would fix anchor the domestic currency to a commodity (e.g., gold) or a basket of commodities (inflation targeting). Should it be a monetary fix? That would stabilize the level or growth rate of some definition of the money supply. Which of these three systems is the best? Just asking the question in this way should caution against glib and dogmatic answers. The choice of monetary rule depends on the size configuration of countries. Some countries don’t have the option of fixing the exchange rate.

Some countries are too small not to fix, but at least one country is too large to fix! The United States cannot have a fixed exchange rate. What currency would it fix to? You can fix the Canadian dollar or the Mexican

peso to the US dollar (not a bad idea!), but you can't fix the US dollar to the Canadian or Mexican currencies. If there were a single world currency, you could never have a currency fix! With a single world currency, the only choice is between inflation targeting or monetary targeting.

The choice between inflation -and monetary- targeting depends on the inflation rate. Monetary targeting comes into its own in cases of hyperinflation and at very high inflation rates, say over 3 per cent a month. Very high inflation rates are typically caused by budget deficits financed by the central bank. Stabilization policy depends on getting the rate of monetary expansion down.

After inflation has been brought down below 3 per cent a month, inflation targeting becomes a superior rule. Monetary targeting is too heavy-handed a weapon for fine-tuning at low rates of inflation and it is completely dominated by inflation targeting. Every country that has tried it has found out sooner or later that the ratio between monetary growth and inflation rate fluctuates too much to be relied on. Some leading countries continue to publish monetary "targets" they have tended to become predictions rather than policy determinants. Quite apart from their use as targets, however, it must always be remembered that monetary aggregates contain important information about the economy.

At low inflation rates the serious choice is between inflation targeting, using a goods-and-services basket, and exchange rate targeting, using a currency basket. With a commodity basket, a country is free to choose its own inflation rate. Its inflation target rate is a matter of national preferences. By and large, however, the major currency areas -the dollar, euro and yen areas- have adopted 0-2 per cent as the inflation target and there are strong arguments for inflation rates to remain within this range. Alternatives outside this range tend to be arbitrary and readily subject to change.

Stability of the inflation rate is an important policy goal and low inflation rate targets produce in general more stable inflation rates. But if a country wanted to maintain a higher inflation rate than that which prevailed in one or

more of the major currency areas, it would have to rule out the possible alternative of a fixed exchange rate.

Argentina's system can be contrasted with Chile's. Argentina gets the inflation rate of the United States by fixing its peso to the dollar, and it has been successful in that respect for nearly a decade. Chile, by contrast, has managed to use inflation targeting with a considerable degree of success, and achieved a good record on growth, but it has nevertheless had to rely on controls over capital movements. It remains to be seen which method will be more successful in the long run.

Capital controls are not necessary if uncertainty over the exchange rate is eliminated. Remember the eleven European members of EMU that will be soon be twelve when Greece comes in. The eleven countries now have an absolute fix of the exchange rate and they have no need for controls over capital movements. It is the fix that gives you market freedom, if you can find an appropriate currency to which to fix!

VI. Monetary Arrangements in Free Trade Areas and Customs Unions

What is the relation between free trade areas or customs unions and the exchange rate system? Put somewhat differently, is it possible to achieve the full benefits of a free trade area and at the same time have exchange rates that fluctuate? I will make the argument that free trade areas and currency areas (zones of fixed exchange rates) reinforce one another.

In the post-war world, a great deal of effort was devoted to tariff reduction through the numerous negotiating rounds in GATT. Part of the gains in real incomes in the modern world can be attributed to this effort. But the post-war era needs to be divided into two parts. In the first two and a half decades there was an international monetary system that produced fixed exchange rates. This system was destroyed in the early 1970s. Some of the gains made in an open system were wiped out by fluctuating exchange rates.

Uncertainty over exchange rates affects trade directly because it affects profit margins and indirectly because it misdirects investment. Small changes in exchange rates can completely wipe out expected profits. This is no doubt why trade between areas sharing a common currency is several times higher than trade between areas with different currencies. Some empirical studies have demonstrated -subject to all sorts of qualifications, of course- that the trade among or between Canadian provinces is several times greater than trade with the American states south of the border, which use a different currency. This is despite the existence of the free trade area. A very recent study further demonstrated that Britain's trade with the continent would triple if she joined the European Monetary Union.

Europe has many impediments to trade that keep it from the ideal of a complete free trade area. Uncertainty over exchange rates was one of the problems. After the 1992 Exchange Rate Mechanism (ERM) crisis, there were all kinds of problems associated with Italy's departure from the exchange rate mechanism. After Italy left the ERM, the lira depreciated by 25 per cent as the DM rose from 800 to almost 1000 lire. Germans and other non-residents poured into Italy to buy German cars, the prices of which had been fixed in lire. To prevent this, the parent companies threatened to revoke those franchises in Italy that sold cars to non-residents. This was of course illegal under EU rules and the parent companies were eventually required to rescind their threats. The episode nevertheless illustrates the problems of exchange rate changes in free trade areas.

Argentina has experienced the problem of devaluation by a partner country in a free trade area. Brazil's devaluation threatened for a time to break Mercosur apart. Fortunately, the effects, harmful and damaging as they may be in the short run, do not persist indefinitely. But the incident, which probably affected Argentina's real income in one year more than the tariff reductions, demonstrates the advantages that would be gained by a fixed exchange rate zone among the Mercosur countries and even a common currency. Even the former would be a good instrument for achieving economic convergence.

The next question is: What kind of fixed exchange rate zone would be

desirable? There is a wide spectrum of possibilities, ranging from the deep monetary integration of a single-currency zone to a looser union of separate currencies connected by fixed exchange rates. Provided there is a common and low inflation rate, all the options would be superior to pegged rates or fluctuating rates. But a single currency monetary union possesses advantages: transparency, saving in information and transactions costs, and sense of permanence that does not exist with separate currencies connected by fixed exchange rates. Is there a chance of creating a single Mercosur currency?

The answer to this question depends on a number of factors which form the basis of strong currency areas. One issue to consider is monetary mass. It is important for a currency area to be large. Think of currencies as ships on a stormy ocean. The most stable ship would be the largest. That is why the dollar today best meets the requirements of a world currency. The monetary mass of the four countries of the Mercosur area would not at the present time rank very high among currency areas in the world economy.

Another issue concerns the potential stability of its monetary policy. The Mercosur countries have recently been approaching monetary stability. In Argentina, stability is approaching its tenth anniversary. Brazil's stability is more recent, but there seems to be a real commitment to maintain the gains already made and bring the inflation down further, to 4 per cent as next year's target. These are very encouraging signs, but it is not completely clear how the national commitment to stability would carry over to a multinational enterprise such as a Mercosur Central Bank.

The European model does not exactly fit Mercosur. No single country in the European Monetary Union is dominant in the way Brazil is dominant in Mercosur. It is hard to think of a monetary union of one country with 160 million people, another country of 35 million, and two tiny countries of 3 or 4 million people, that would not be dominated by the larger country or at best the two largest countries. An hegemonic pattern seems unavoidable. If this were politically acceptable, it might be possible to go the extra step and build the monetary union around the Brazilian currency, suitably internationalized, controlled by a Mercosur Central Bank including all four countries. An

alternative approach would be to converge toward an outside currency -either the dollar or the euro or a basket of the three main currencies. Argentina has already achieved this convergence, though not perfectly, with respect to the dollar. If this approach were adopted, Brazil would need to bring its inflation close to the US level and then fix its real to the dollar. Paraguay and Uruguay would then follow suit. All four countries would have then converged to the dollar and therefore to each other. Given convergence, it would then be comparatively easy to develop a separate Mercosur currency.

What should be said about the choice between the dollar, the euro or a basket of those currencies and possibly the yen? In a speech I made in Seoul, South Korea at an APEC Forum, I suggested that if APEC was thinking of having a kind of monetary fund, they needed a unit of account. One possibility would be a basket of the three currencies, with weights of 45% dollar, 20% yen, and 35% in euros. That would be a pretty good basket for the whole world economy for the next few years. It wouldn't be all that different from the Special Drawing Rights (SDR). The SDR is now based on the euro plus the dollar, the yen, and the pound, because the franc and the mark have been submerged together in the euro. That three-currency basket could be a good unit of account. However, a problem with using a currency basket is that it is usually not a transparent target for monetary policy. In countries that used one in the past, the authorities kept saying yes, we have a basket, but we are not going to tell you what the proportions of currencies in the basket are. This is the opposite of transparency. Clever econometricians working on this topic tried to determine what the basket was. They could figure it out for some time, but they usually caught the authorities changing the basket. As implemented in the past, it's not been a stable basket.

A more basic problem with a multiple-currency basket is that you don't get capital market integration. If a currency is absolutely fixed to the dollar or the euro, then you will get the interest rate of that area. If you have a mechanism that convinces people that you're not going to end up with a budget deficit that will lead to relax the convertibility law or the automatic system, then you can get exactly the same interest rate as in the partner currency. That kind of

integration is not as straightforward or as transparent with a multiple-currency basket. On the other hand, a multiple-currency basket does not suffer from the possible defect of a single-currency basket, namely, that the currency appreciates (or depreciates) significantly against other currencies.

The only strong argument against a single-currency basket is that the country that produces the currency to which the national currency is fixed might become unstable. Is the United States (or the euro area) likely to be unstable? There were periods in the twentieth century when the US economy was unstable. The most glaring example was in the 1930s, when the United States let itself be dragged into deflation and depression by the gold standard. Forty years later, in the 1970s, the United States let itself in for inflation after it cut the link between the dollar and gold. In both these situations, the United States economy was unstable. Gradually, however, the United States learned from its earlier experiences and reacquired stability. The countries that fixed to the dollar in the 1990s, including Argentina, did very well. Both the dollar and the euro areas can be counted on in the future to have a high degree of stability or at any rate more stability than most other areas in the world.

One argument sometimes made against fixed exchange rates is that a “one-size-fits-all” monetary policy is no good. (This is a popular argument made by euro-skeptics opposed to Britain’s joining the euro area). One example often pointed out is the situation of fast-growing countries. Are differential growth rates an argument for flexible, rather than fixed, exchange rates? One must ask, first of all, about the implications of differential growth rates on the real exchange rate. If productivity growth is biased toward domestic goods, the real exchange rate must depreciate; if it is biased toward traded goods, it must appreciate; and if it is neutral the real exchange rate remains unchanged. But none of these instances is a convincing case for flexible exchange rates. Relative prices can change without difficulty under differential growth rates and the faster increase in money and real wage rates, which is bound to raise the prices of labor-intensive goods is not a problem.

Hong Kong and Japan in the 1980s were good examples of two very rapid growing economies that were both probably having very rapid growth in their

international traded goods sectors. Hong Kong had a fixed exchange rate currency board with the US since 1983, while Japan left its exchange rate flexible. Both countries had to have an appreciation of the real exchange rate. Japan took its real appreciation through an appreciation of the nominal exchange rate, as the dollar went from 250 yen down toward 100. Hong Kong took its real appreciation through an increase in the rate of inflation as measured by their national price index. People kept asking, “Oh, Hong Kong’s inflation rate is of 6 or 7%. America’s inflation is 2 or 3%. Does it mean that Hong Kong’s currency is getting overvalued?” No, it just meant that Hong Kong’s domestic factors of production (e.g., barber services) were getting richer, and that land and rents were rising. This reflected the appreciation of the real exchange rate, which every country in a common monetary area would have. A similar example in the 1990s would be the case of Ireland, the fastest growing country in Europe, and one that has benefitted by becoming a member of the euro area.³

Under fixed exchange rates, most of the time nobody bothers about the adjustment process between two areas of a common currency area because there are no problems. The adjustment is effortless. Of course, the problems

³ Ireland has overtaken Canada in per capita income -an amazing feat for a country that was always one of the poorest in Europe-. People kept saying Ireland shouldn’t join the monetary union of Europe because it is growing rapidly and countries growing rapidly have to have a higher interest rate than other countries. Of course, that is not true. Ireland now is part of the Union, it has the same nominal interest rate as in the rest of Europe, and it’s the same real interest rate in terms of the common basket of goods of the European Union. I think the people say the same about the Spanish economy, a very rapid growing economy. According to its national inflation basket, Spain has an inflation rate that is a couple of percentage points above the European average. This is a natural consequence when countries that are poorer than others start to grow rapidly: wage rates rise and the prices of services and labor intensive goods have to rise. It may also be partly attributed, as Larry Sjaastad has suggested, to the more rapid pass-through effect of the euro’s depreciation against the dollar.

of slow-growing and poor countries are greater than the problems of fast-growing and rich countries. The slow-growing country lacks the prospect of improving itself as rapidly as the rapidly growing country. Rapid growth is good and slow growth or negative growth is bad. Why add salt to the wound by imposing an unstable monetary or fiscal system?

VII. Central Banks, Dollarization and the Maastricht Conditions

While the Europeans are completing their transition to a currency union, recent discussion in the Americas has been about the benefits of dollarizing. Dollarization, and its alternatives, is an option open not only to Latin America but to other countries with substantial trade and connections to the United States, such as Canada. The same arguments have been applied to Canada and thus our examination of the merits and costs of dollarization in Canada will generally apply to most nations in Latin America.

The interest in dollarization stems at root from the belief that the central bank movement has been a failure. People need to be reminded that central banks are in most countries a comparatively recent phenomenon, a product of the 1920s or 1930s. It is true that the Riksbank in Sweden and the Bank of England were created as early as the late seventeenth century. But most central banks in the world were creatures of the twentieth century and, specifically, the period after World War I when the international gold standard had broken down. Even the largest economy (by far) in the world did not have a central bank until the Federal Reserve System was created in 1913. Most colonial countries had currency boards or allowed their commercial banks to manage the gold standard.

Central banks were introduced to fulfill a deeply-felt need. Even under the gold standard, periodic crises had created a demand for a more “elastic” monetary system, and the central bank became an instrument of that elasticity. In time of crisis, when gold was flowing out, the central bank could mitigate the harsh effects of contraction by the provision of domestic credit, sterilizing

the effects of gold outflows. There was of course a danger: if carried too far, sterilization would undermine the adjustment process and confidence in the gold parity. The Federal Reserve System was created to eliminate defects in the US banking system but during the process, the “solution” created new problems with which the System was ill-prepared to cope.

With the instability of gold during World War I and its aftermath, new arguments appeared for central banks. Rather than submit to imported price fluctuations under the gold standard, a country could set up its own central bank and use it to create a managed currency. In an age where colonialism was beginning to be unpopular, a central bank as well as a national currency could be looked upon as a badge and confirmation of sovereignty. It was not realized until much later that these central banks would become instruments of inflationary finance under the thumb of the ministry of finance or treasury.

The Bank of Canada was a comparatively young central bank, created only in 1935. A quick glance at its subsequent history will set the stage for a discussion of dollarization. During World War II, the Bank of Canada served as a handmaiden of the Ministry of Finance, assisting in the war effort by providing credit to the government that doubled the price level. (In this respect the Bank was no better and no worse than its peer group, the Federal Reserve and the Bank of England.) The traditional parity of the Canadian dollar with the American dollar was maintained by exchange controls and “austerity” in the post-war period. After September 1949, following the great 30 per cent devaluation of sterling, Canada devalued by 10 per cent. However, after the opening of hostilities in Korea, capital inflows swamped the monetary authorities and they reacted, not by returning to parity (it would have focused attention on what could be called the mistake of 1949), but by moving on to floating exchange rates. This was in violation of the IMF charter, but Canada was given permission to float pending its determination of a new parity. By accident, therefore, Canada pioneered in the development -for what would become a G-7 country- of floating exchange rates.

The Canadian dollar was kept strong, at a premium over the US dollar, by

the Bank of Canada's tight monetary policy, but it proved to be at the expense of growth and caused excess unemployment. In the early 1960s, the Canadian authorities came to believe that the Canadian dollar was overvalued and the Minister of Finance announced its determination to use the resources of the Bank of Canada to depreciate the rate. This action proved to be a mistake as the bottom fell out of the market. In a panic, the authorities reacted by supporting the rate at US\$ 0.92, fixing the rate at that level and drawing on the International Monetary Fund. The Canadian dollar was then kept fixed throughout the rest of the decade, and during this period Canada experienced the US inflation rate and the great growth boom of the United States. In 1970, however, in the midst of the US recession of 1970-71, the Canadian dollar was again set loose, and it promptly appreciated. Since that time Canada has had a floating exchange rate. The experience from 1970 until the present therefore constitutes a useful test case of the efficiency and effectiveness of flexible rates. In fourteen of the twenty years between 1972 and 1991, Canada had a higher inflation rate than the United States, but in the 1990s, the Canadian inflation rate has been in general lower than the American. The Canadian dollar, however, which had once in the 1970s been as high as US\$ 1.07, fell to a (so far!) all-time low of US\$ 0.62 in 1998. A fixed exchange rate would obviously have given Canada a lower rate of inflation over the period. At the same time Canada's unemployment rate and growth rate were in general significantly lower than those in the United States and Canada, contrary to the long-term pattern, did not participate in the magnificent boom that got its start in the early 1980s. The prima facie evidence is that Canada has paid a price for its flexible exchange rate in the form of a poorer economy.

Now let us consider dollarization. One quick and brutal way to accomplish it would be to abolish the Bank of Canada. If you abolished the Bank of Canada, and destroyed all the Canadian dollars in existence, what would Canadians do? First of all, they would have suffered a capital loss and would feel poorer. They would need a new money and it would be natural for them to turn to import the currency south of the border, the most important currency in the world. Of course Canadians would have to earn US dollars by generating

an export surplus or by going into debt. This would involve a real cost, which is a factor that on balance must be taken into account. Putting that issue aside for the moment, Canada would have the same money as the United States, the same price level and inflation rate, and the same interest rates. Trade between Canada and the United States would soar and Canada's standard of living would converge toward that of the United States. The two countries would become much more closely integrated economically. Instead of having a purely local currency, Canadians would now participate in the benefits of a world currency.

The case for dollarization rests not just on the gains from monetary integration but also on the fact that American monetary policy is better than Canada's. In the early 1970s, the 1974 the Canadian dollar was as high as US\$ 1.07, but it fell in 1998 to a low of US\$0.62 cents. In this respect the Canadian currency was more like the Australian dollar, which depreciated from US\$ 1.5 in 1974, to around US\$ 0.65. Both central banks arrogantly thought they could improve upon US performance when the United States inflation rate increased, but both subsequently did much worse.

The gains from dollarization are substantial if, as can generally be assumed, it implies a better monetary policy in addition to a gain of world class currency. But what about the costs, which have to be balanced against the benefits. There are three costs. One is the loss of seigniorage. The second is the loss of a national symbol. The third is the loss of sovereignty arising partly from the fact that the United States would not adjust its inflation rate to take into account the policy interests of Canada. The importance of these costs are likely to differ between countries, but would have to be weighed against the advantages of a monetary policy that, I am assuming, would be superior as well as the benefits from using in a world-class currency.

What would happen if suddenly the whole hemisphere became dollarized? It would surely result in a great increase in the gains from trade and investment and probably economic growth. The gains would be greater the more countries participated. Whatever gains Argentina might capture due to dollarization would be much enhanced if Chile and Brazil and other countries joined.

Similarly, Brazil would gain additionally if Argentina and Chile were dollarized. Dollarization of the hemisphere would represent a considerable gain to all the countries in the hemisphere, including the United States.

Of course it is necessary to anticipate objections. A clever economist might say: "We don't need complete dollarization. Why not create a central bank and create some of our own money and have 50% dollarization. Every country could have its national dollar, convertible into US dollars, saving both seigniorage and national face!" A Latin American dollar freely convertible into US dollars would give Latin America the best of both worlds.

Theoretically, this alternative is an attractive one. The problem arises from the vicissitudes of human nature, always hoping to get something for nothing. Back in the 1920s, when Edwin W. Kemmerer, Professor of International Finance at Princeton University, was helping to create central banks all over Latin America, no one anticipated that they would be transmogrified into instruments of inflation, handmaidens of the fiscal authorities. If central banks were created to produce national dollars, what would prevent them from exceeding the limits of prudence and rendering the national currency inconvertible. How can we prevent history from repeating itself? It would be necessary to impose some statutory limit on the fiduciary component of the backing for domestic money.

If there existed a single world currency (say gold, for example, as in the past), countries would always have an incentive to economize on the expense of gold payments by bank money or national currencies, the pattern historically since the seventeenth century. Even if countries agreed to prohibit national currencies they would take steps to economize on the use of foreign currency and find money substitutes at home, creating an inflationary bias in the world economy. You would get a gradual decline -or more exactly a slower rate of growth- in the demand for money that would, if not taken into account, create more inflation than otherwise.⁴

⁴ I have warned elsewhere (Mundell 2000a) that the money multiplier in Europe might increase because of this phenomenon.

If dollarization were good for Latin America, would it not be even better for the entire world? Let us suppose that the whole world were dollarized! Essentially, then, the world would have a common currency and a world central bank called the Federal Reserve System. As long as the Federal Reserve kept to its policy of stabilizing the American basket of goods -representing between a fifth to a quarter of world output- it would have the merit of being a very stable currency, more stable even than the gold standard or its bimetallic predecessors.

There is, of course, always a danger that Federal Reserve policy might lapse into the inflationary pattern of the 1970s or (much less likely) the deflationary pattern of the 1930s. But these historical episodes have produced their lessons and are not likely to be repeated. In the discussion below, I shall assume that US monetary policy continues to be as exemplary as it has in the recent past.

The benefits from a world currency would be enormous. Prices all over the world would be denominated in the same unit and would be kept equal in different parts of the world to the extent that the law of one price was allowed to work itself out. Apart from tariffs and controls, trade between countries would be as easy as it is between states of the United States. It would lead to an enormous increase in the gains from trade and real incomes of all countries including the United States.

Another dimension of the benefits from a world currency would be a great improvement in the monetary policies of perhaps two-thirds of the countries of the world. The benefits to each country from a stable currency that is also a universal currency would be enormous. If the whole world were dollarized, there would be a common inflation rate and similar interest rates, a considerable increase in trade, productivity and financial integration, all of which would produce a considerable increase in economic growth and well-being.

Two arguments against dollarization relate to the transfer of seigniorage and the political barrier or "cost". Global dollarization would involve a transfer of seigniorage to the United States, greater than the already substantial

seigniorage gained from the use of the dollar as an international reserve asset and money. The seigniorage transfer could be substantial, perhaps amounting to more than \$100 billion per year.⁵ But the seigniorage issue is not insuperable. The bill proposed in the US Senate by Senator Connie Mack represents one way the seigniorage issue could be handled.⁶ An alternative approach would be to set aside the seigniorage profits for international public uses.

The political issue or cost is more difficult to quantify. Countries would have transferred monetary sovereignty to the United States in return for a better money and (probably) monetary policy without receiving any share of a global sovereignty. Unlike members of the euro area, which have a share in the ownership and control of the central bank, members of the dollarized world simply transfer sovereignty to another country.

An analogy may help to make this issue clear. Many countries in the world are poorly managed. By contrast, the United States is well-managed. Why not turn over the tasks of government to the United States? By internalizing the problem of foreign relations, military conflict would be eliminated and the gains from disarmament put toward an improvement in welfare. The US government as the world government would be a force for stability and peace! But whatever the potential gains, how much of the rest of the world would be willing to scrap their sovereignty for membership in an American Empire?

The costs and benefits of dollarization are not independent of the number of countries that participate. With economies of size the gains are larger when more countries participate, and thus economic gains would be greatest if the entire world were dollarized. But in the other direction consider costs that

⁵ Suppose, for example, that reserve money in the world economy amounts to \$4 trillion and is held in paper dollars. Something less than one-quarter of this would be held in the United States. Interest on the remainder at 5% would be \$150 billion.

⁶ The short title of the bill (S.2101), introduced into the US Senate of February 24, 2000, is the "International Monetary Stability Act of 2000" and its purpose is stated to be "to promote international monetary stability and to share seigniorage with officially dollarized countries."

arise when only a part of the world is dollarized. If major countries stay outside the dollarized zone, exchange rate volatility appears as a new problem. When there are two or more blocs, as in the present, dollar, euro and yen currency areas, getting locked into a dollar area that is appreciating (or depreciating) strongly against the other currencies would impose substantial adjustment problems.

Taken from the starting point of a barter economy, dollarizing is easy. In the absence of an existing currency, people would be quite willing to import a foreign currency to fill its monetary requirements. History is replete with examples of countries that have used a foreign currency. Most of the colonies in the Americas used Spanish, Portuguese, English, or French currencies -in some cases all of them- over that period. There is no need for Maastricht-type conditions in a barter economy, because if you have a barter economy the government has no means of creating an unbalanced budget or an erring monetary policy. Once the economy is dollarized, and people start to use dollars, the new monetary economy makes it possible for the government to make mistakes. But because the government can't print any money, it can't have an unbalanced budget. It can borrow and run a deficit, but it can't run an inflationary deficit. It can run deficits up to the limit of its borrowing capacity, but discipline is assured without any Maastricht type conditions.

But in our actual economies, the problem is different. The experience of Europe is instructive. Monetary union would have been easy immediately after the Hague summit in December 1969 because the European currencies were fixed to the dollar and had converged to dollar variables and therefore one another's; under the Bretton Woods arrangements countries knew that it was dangerous to run budget deficits that would threaten convertibility. But monetary union was not politically possible in the first years and by the time the international monetary system had broken down, in two steps in 1971 and 1973, countries lost their convergence around the dollar. As a consequence of flexible exchange rates, the European countries went their own way and coordinated policy became much more difficult. The Maastricht condition

were imposed as a result of the undisciplined policies of the 1970s and 1980s and the commendably stern insistence of the Bundesbank on fiscal and monetary rectitude. Gradually, they worked their way back to monetary stability. Take the case of Italy. Italy had a fixed exchange rate from the post war period until 1971, and throughout this period recognized that it had to maintain fiscal balance as well as pursue a monetary policy that would keep the balance of payments in equilibrium. The exchange rate was 620 lire to the dollar and Italy had one of the fastest growing economies in the world, with a stable price level and a low level of unemployment. Flexible exchange rates, however, led to the breakdown of discipline. Monetary inflation was the result. By the end of the decade, Italy decided it had enough inflation, so it joined the Exchange Rate Mechanism (ERM). Its monetary stability was improved, but Italy then succumbed to fiscal instability, running up its Debt/GDP ratio to over 100 per cent of GDP.

The Maastricht conditions were needed to strap down ministers of finance. Like naughty children, they kept running deficits and forcing the central banks to buy government bonds when the market no longer wanted them.

In my Nobel Lecture (Mundell, 1999), delivered in Stockholm on December 6, 1999, I called the first and last decades of the twentieth century as “bookends” of the century, in the sense that they were decades of monetary stability separated by a long period of instability. In both decades there was monetary and fiscal discipline. The gold standard imposed it automatically in the first decade of the 20th century. In the last decade, when almost all the OECD countries had inflation rates below 3-4% a year, many of the countries achieved stability not automatically but by self discipline or, in the case of Europe, the Maastricht conditions. The creation of the euro zone in fact prepared countries for the kind of gold standard mechanism that would be automatically imposed on them when their currencies were locked to the euro. It was a kind of replay -an automatic programming of the conditions that existed under the gold standard. The eleven countries of Europe are now following a gold standard type mechanism that gives these countries automaticity.

VIII. Exchange Rate Volatility and Internal vs. External Stability

The dollar, euro and yen areas make up nearly sixty per cent of the world economy. Because there is a high degree of price stability in each area they can be seen as three islands of stability. Despite the stability, however, exchange rates are very volatile. The dollar-yen rate has in the past been very unstable. The dollar-euro rate may be in the future, equally unstable -we do not know yet.

If we judge the future of the dollar-euro rate by the history of the mark (the backbone of the ecu, which became the euro), we'd have to be pessimistic about volatility. As for the DM-dollar rate, in 1975 the dollar was about 3.5 DM. Five years later, in 1980, the dollar was worth half that, 1.7 DM. Five years later, by February 1985, the dollar had doubled to 3.4 DM. By 1992, the dollar had plummeted below 1.4 DM -a fall to 40% of its value-, and now the dollar is up around 2 DM. It is hard to believe this extreme volatility isn't a very serious problem. Think of the problems at the time of the 1992 ERM crisis in Europe. A doubling or halving of the rate would be devastating for Europe. If the euro went down to 50 cents that would be awful for inflation, and if it doubled to US\$ 2 that would be terrible for unemployment.

How much flexibility is good? How much can a country stand? Well, flexibility of the kind that existed between the dollar and the mark rate over the past 25 years would crack euro-land apart. And when the dollar-euro rate changes, it creates hard problems for the countries on the periphery of Europe that are doing business with both currency areas. It's disturbing to third countries and to the rest of the world.⁷

⁷ Too much flexibility creates problems for third countries. For instance, one of Argentina's problems has been that although the dollar has gone down against the yen, the dollar has been appreciating against the euro for the past few years. That means that the Argentine peso appreciates against the euro. Should Argentina think of shifting from a dollar fix to an euro fix? When you start a policy, it is a bad idea to change it if it's been a successful policy. If you do make a permanent shift, you should have very good reasons, and make

The same difficulty exists for Asia. Look at the volatility of the dollar-yen rate: in 1985 the dollar was 250 yen. Ten years later, in April 1995, it was 79 yen (one third the value). In June 1998, the dollar had soared from 79 yen to 148 yen, and speculators were saying it was going to go up to 200 yen. Instead it came down to about 105 yen. This volatility is terrible for countries that are closely involved with the Japanese and American markets. This volatility played a big role in the so-called Asian crisis.

Why “so-called”? Because the crisis hit only a few countries in Asia.⁸ It was a crisis for four countries: Thailand, Malaysia, Indonesia and Korea. Their currencies were pegged, not very efficiently, to the dollar, which was strongly appreciating against the yen and currencies that stayed pegged had also to appreciate. They lost markets in Japan.⁹ Many had debts fixed in dollars, which exacerbated their debt burdens. To understand the crisis better, however, one must also look at the countries that did not have a crisis, to see why Singapore, China, Hong Kong, Taiwan, and Japan were able to avoid it. What were these economies doing differently from the others? The differences were remarkable. Each of these countries had a very explicit target for their monetary policy. Their targets were transparent and automatic, and everybody knew they were. Singapore, Taiwan and Japan had commodity basket targets (inflation targeting), China had a fixed exchange rate with the dollar with capital controls, and Hong Kong had a currency board fix against the dollar. They had a successful track record in following that policy, and everybody knew what they were going to do when important things were happening such as changes in the exchange rate elsewhere. They also had huge amounts of international reserves, so they didn’t have to draw on the IMF or listen to

sure you don’t shift into a currency that’s going to be appreciating more than you would like. If you shifted over to the euro in what may be the bottom of its cycle, you might shift into a currency that would be further appreciating, making matters worse.

⁸ Less known, some call it the “Asian-IMF crisis”. I think this denomination is more appropriate than to stamp a whole area with a crisis.

⁹ A related problem was the devaluation of the Chinese yuan on January 1, 1994.

advice, whether bad or good. They could follow their own policies, which in the past had been successful.

Keynes, in his book “A Tract on Monetary Reform” (Keynes, 1923), made the crucial distinction between “internal stability” and “external stability”. Internal stability refers to a stable price level. External stability refers to a stable exchange rate and equilibrium in the balance of payments. He said it was good to have both. But if you had to make a choice, choose internal stability first and make external stability only a secondary choice.

When Keynes wrote that book, he was looking at the world economy in the economic crisis after the war -and one important event especially: the fluctuation in the US price level and (because the dollar was tied to gold) gold. The price level in the US had soared from 100 in 1914 to 200 in 1920. At this point, belatedly, the Federal Reserve System shifted to tight money and the US economy went into a nosedive. The price level came from an index of 200 down to an index of 140. This fall in the dollar price level (and consequent appreciation of gold) posed a great problem for the pound and other currencies.

Keynes clearly recognized the consequences for Britain. If Britain kept the exchange rate stable, it would suffer deflation too. On the other hand, if she kept the price level stable, Britain would have to allow the pound to appreciate against the dollar and gold. Because the dollar, now the dominant currency, was unstable against commodities, Britain could not have both internal and external stability; she would have to choose between them.

Keynes’ distinction between internal and external stability, and his preference for internal stability is well known. What is often ignored is the importance he attached to external stability, even though it was secondary to internal stability. He was quite explicit in saying it was better to have both, if it were possible. If the United States and gold are stable against commodities, Britain could have both internal and external stability. There is a contemporary lesson for our three islands of stability eight decades later.

If there is price stability within each of the dollar, euro and yen areas, why

should there be exchange rate fluctuations between them? Volatility of the exchange rates aggravates instability of the financial markets, disrupts trade and the efficiency of capital flows. Exchange rate uncertainty is an immediate cause of gross, excessive volatility in financial markets and the massive shifts in cross-border funds today. Capital market transactions in foreign exchange currently amount to something like two trillion dollars a day! It's largely capital that is going in and out, in and out, every five or ten minutes. People with their computers are pushing the funds back and forth, and it's nearly all pure waste. Only a tiny part of these shifts represent legitimate and beneficial capital movements.

IX. Towards a World Currency

Earlier, we discussed the possibility -and the costs and benefits- of dollarizing the world economy. That would be the quickest and most effective way to produce a world currency. The political limitations of that solution, however, would make it difficult if not impossible to negotiate. It would greatly increase the power of the United States and leave the world at the mercy of potentially aggressive unilateralism. The temptation to exploit its monopolistic position and raise the inflation rate to maximize off-shore seigniorage would be too tempting.¹⁰ The power of nationalism continues to rule emotions and sovereignty¹¹ is the last asset to be pawned. The idea was in the air at the 1944 Bretton Woods meeting but it was dropped at the insistence of the United States. A world currency could only have legitimacy within the framework of a new Bretton Woods type international agreement.¹²

¹⁰ I have discussed the "optimum inflation rate" in the context of maximizing off-shore seigniorage in Mundell (1971).

¹¹ I have discussed the problem of monetary sovereignty in Mundell (2000c).

¹² See Mundell (1995) for a discussion of the Bretton Woods agreement and why the world currency idea, which was contained in both the White and Keynes plans, was dropped.

The advent of the euro, however, invites a reconsideration of the need for and possibility of a world currency. Historically, the superpower has been an obstacle to monetary reform¹³ because it has the most sovereignty to lose. England, the producer of the dominant currency in the 19th century, rejected the efforts of France and the United States to establish a world currency in that century. In the 20th century, the United States has been the obstacle. The creation of the euro, however, diminishes the monopolistic position of the dollar and in this respect US power in the international arena will increasingly have to be shared. The United States may therefore find it in its interest to become less of an obstacle to international monetary reform in the future than it has in the past. At the very least, the need for some guidelines in conflict situations over management of the dollar-euro-yen exchange rates will become increasingly apparent.

It is entirely possible that in the future the United States may adopt a sympathetic approach to international currency management and even a genuine international currency. Let us experiment with some possibilities. Imagine an agreement for the world economy modeled after the monetary union forged by the eleven countries of the euro area. Instead of doing it for 11, do it for 200 countries. If everyone used the same currency, wouldn't that make a great improvement in the way in which prices are compared, transactions are effected, and payments are made? There would be no currency crises and the two trillion dollars worth of cross-border transactions that exist only because of uncertainty over exchange rates would disappear.¹⁴ Good riddance!

¹³ Mundell (1995).

¹⁴ A single currency monetary union would eliminate speculative capital movements. Capital never moves in the wrong direction from New York to California, or Illinois, or Louisiana. It always moves to where it is more profitably employed, because there is no speculation about exchange rates. The same holds for securely-fixed exchange rates. Panama and the United States have had a monetary union since 1904 with the passive Panamanian balboa coins maintained at par; Scotland and England have had a monetary union for centuries with the passive Scottish pound still in existence; Luxembourg and Belgium have a monetary

Of course there would be problems of management. A Governing Council modeled on that of the ESCB, with more than two hundred members, would be much too unwieldy. It would be necessary for the Board of Governors to designate a few leading countries to manage the new system and the new currency.

Is it realistic to think of international monetary reform along the lines, pioneered by EMU, of a single currency for the world? I myself doubt it. The single-currency option adopted by the European Union was a gamble that happened to pay dividends at a time when members of the European Union were and still are considering closer political integration. But in the absence of closer political integration, a single-currency monetary union, requiring that national currencies be given up, would probably not be successful on the world stage. Quite apart from the preferences of smaller countries, the United States is not likely to be willing to give up the most successful currency of the 20th century, and the rest of the world is not going to be content with the dollar as its world currency. Nor would the countries of the euro area be willing to scrap their new currency after decades of negotiations to bring it into being, which in any case they want partly for political reasons. And if Americans and Europeans keep their currencies, the Japanese will not be willing to give up the yen. A single currency monetary union is not feasible in the present world and could not be negotiated in the absence of greater political integration.

Let's be more modest and consider a multiple-currency monetary union for two or three of our three islands of stability, the dollar, euro and yen areas, and then consider how this union might be generalized to accommodate the interests of the rest of the world. There are no technical obstacles to a three-currency monetary union among the G-3. It could be patterned on the EMU

union since the 1920s, with the passive Luxembourg franc still in existence. Nor have the locked exchange rates of the euro area produced any speculative capital movements. There are no bad capital movements; there are only bad exchange systems.

construction, stopping short of replacing the three currencies by a single currency. Europe has locked its currencies. There is no speculation whatever for or against the franc, lira, mark, peseta and all the other currencies in the euro area. Even before the new currency has been introduced in tangible form, there is a fixed exchange rate multiple-currency monetary union.

The same approach could work with two or three of the three main currency areas. Given convergence of inflation rates, it would be possible to lock exchange rates and bring interest rates into line with one another.¹⁵ The mechanism for locking exchange rates could be simplified by assigning different tasks to the three central banks. One of the three currencies could be chosen as the pivot currency. It is best to choose the currency with the largest monetary mass, at the moment, the dollar. The other countries could be assigned the task of fixing exchange rates. Japan could fix the yen to the dollar at a rate of 100 (to make use of round numbers), $100Y=\$1$, so that 1 yen equals 1 cent. The Bank of Japan would stand ready to buy and sell dollars at that rate for all spot and forward offers and cease open market operations in domestic assets. Similarly, the ECB would stand ready to buy and sell dollars at (say) $1 = \$1$.

The assignment for the Bank of Japan and ECB would be to keep exchange rates fixed while that for the expanded Federal Reserve would be to stabilize the price level. The Policy Committee of the Federal Reserve (now the Open Market Committee) would incorporate Japanese and European as well as American experts. A nine-member Committee might include four Americans, three Europeans and two Japanese. Members of the Committee should be independent of their governments (as are, theoretically, members of the Governing Council of the ESCB).

The expanded Fed would make the decisions about tightening or loosening

¹⁵ Interest differentials arise because of expectations of exchange rate changes. Locking the dollar and the yen would equalize interest rates, mainly through a rise in Japanese rates, which have been traditionally low because of bullish expectations about the future of the yen.

credit. There would be a common target for monetary policy. The price index would incorporate goods representative of all areas, much like the harmonized index of consumer prices in Europe (Eurostat's HICP). The next step would be to agree on a common target for inflation. Members would then cast votes for tightening or loosening credit just as the three central banks do today.¹⁶ There would also be a formula for redistributing seigniorage, just as in the ESCB. The system would be very similar to a single currency monetary union, but it would preserve the individual currencies. The system would work in much the same way as in a single-currency monetary union.¹⁷

The arrangement would work best if all three areas participated. But it would also be possible with any two of the three areas. Any two of the three areas would become the dominant currency force, the mainstream of the world economy. The costs of being left out might be substantial, however, and an exchange rate fix of the three currencies would be superior to a currency fix of only two.

In the example given, the numbers accidentally work out neatly, with the yen being a cent and the euro and dollar at parity, the currencies are like different denominations and the need for a parallel currency is not so apparent. In general, however, it would be useful to introduce a common numeraire for denominating prices. All members would quote prices in this numeraire currency in addition to local currencies.

Let us now see how the exchange rate stability of the three major currency areas could be used to create a multiple-currency monetary union for the

¹⁶ There is still a role for gold in the international monetary system. In the development of the three-currency monetary union among the G-3 countries, one of the uses of gold would be as an index of inflation. Almost everyone thinks that if the price of gold suddenly shoots way up, that is an index of inflationary expectations, because people think that in the event of an increase in inflation, the expectations of people will shift into gold and gold will rise in price.

¹⁷ A multiple-currency monetary union may not, however, impart the same sense of permanence as a single-currency monetary union, and to the extent this was so, interest rates would not fully become equalized.

world as a whole. The International Monetary Fund could be turned into a world central bank and granted the authority to produce a world currency. The three largest currency areas could be designated as agents of the Board of Governors of the IMF. The numeraire currency might be equated to a dollar or an euro or 100 yen. We might call this new currency “intor” or “unor.” Each participating member in the union would fix its local currency to the world currency, following the adjustment principles of a currency board, and denominate prices in the world currency as well as the local currency. The world currency itself would be backed by the currencies of the three largest central banks. The WCB would stand ready to buy and sell the world currency on demand so that it would not add to or subtract from the world money supply. Some provision could be made for redistributing seigniorage on a global rather than tripartite basis, perhaps with the three designated leaders setting up a special fund that could be used to finance agreed international projects.

Think of the great benefit to the rest of the world, including Latin America, if it never had to worry about changes in the dollar-euro, the dollar-yen, or the euro-yen exchange rates and could link its currencies to a true international currency in the production of which they participate. There would be no currency crises in participating countries as long as they adhered to the rules for fixed exchange rates. A world currency would provide a universal unit of account for transmitting values and be a source of a substantial increase in the gains from trade.

The link between language and currency has often been noted. Language is a medium of communication and currency is a medium of exchange. National, ethnic and liturgical languages are here to stay, but a common world language, understood as a second language everywhere, would obviously facilitate international understanding. By the same token, national or regional currencies will be with us for a long time in the next centuries, but a common world currency, understood as the second most important currency in every country, in which values could be communicated and payments made

everywhere, would be a magnificent step toward increased prosperity and improved international organization.

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