

THE U.S.-DOLLARIZATION APPROACH TO REGIONAL CURRENCY CONSOLIDATION: SECOND-BEST IN THE SHORT RUN, DOOMED IN THE LONG RUN

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Free movement of capital and trade in financial services are driving regional currency consolidation. We compare the relative merits of adopting an international currency unilaterally or multilaterally. While EMU is the exemplar of the multilateral approach characterized by assured seigniorage sharing and co-management of the joint monetary asset, unilateral monetary unions are represented by the proposed formal dollarization of some countries in Latin America. This paper finds that while such dollarization could be useful for the period ahead, it carries the seeds of its own destruction because peripheral countries that lose their currency need not support this one-sided arrangement indefinitely.

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EL ENFOQUE ESTADUNIDENSE DE LA DOLARIZACIÓN
 PARA UNA CONSOLIDACIÓN MONETARIA REGIONAL:
 LA SEGUNDA MEJOR OPCIÓN EN EL CORTO PLAZO,
 PERO CONDENADA AL FRACASO EN EL LARGO*

El libre movimiento de capitales y del comercio en los servicios financieros está llevando a una consolidación de las monedas de la región. Hagamos una comparación de los beneficios relativos de adoptar una moneda internacional unilateral o multilateralmente. La UME (Unión Monetaria Europea) es el ejemplo del enfoque multilateral, en el que se comparte y administra conjuntamente una misma moneda, mientras que las uniones monetarias unilaterales se manifiestan en la propuesta formal de dolarización para algunos países de América Latina. En este trabajo se plantea que si bien dicha dolarización podría ser útil en el futuro inmediato, también trae consigo la semilla de su propia destrucción, porque los países periféricos que pierden su moneda nacional no tendrían que apoyar indefinidamente este arreglo unilateral.

L'E APPROCHE AMÉRICAINE DE LA "DOLLARISATION"
 POUR CONSOLIDER LA MONNAIE A L'ÉCHELON RÉGIONAL:
 LE SECOND MEILLEUR CHOIX A COURT TERME,
 VOUÉ CEPENDANT A L'ÉCHEC A LONG TERME**

Le libre mouvement des capitaux et des échanges dans les services financiers est en train de consolider les monnaies de la région. Comparons les bénéfices relatifs apportés par l'adoption unilatérale d'une part et multilatérale d'autre part, d'une monnaie internationale. L'Union monétaire européenne (UME) est l'exemple de l'approche multilatérale : la même monnaie y est partagée et gérée de façon conjointe. En revanche, les unions monétaires unilatérales se manifestent, pour quelques pays d'Amérique latine, dans la proposition officielle de "dollarisation". Les auteurs du présent article montrent que si cette "dollarisation" peut être utile dans un avenir immédiat, elle renferme aussi les semences de sa propre destruction, car les pays de la périphérie, qui perdent leur monnaie nationale, ne seraient pas tenus d'appuyer indéfiniment ces dispositions unilatérales.

Free international movement of capital and free trade and e-trade in financial services have combined to make regional currency consolidation inevitable. Faced with this prospect, advocacy of rapid dollarization, in some cases of this entire hemisphere, has spread beyond the United States. Business and government groups in countries from Argentina to

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Ecuador, El Salvador and Mexico have openly expressed interest in formal dollarization. While complete dollarization may indeed be a useful step for the period immediately ahead, we will argue that it is distinctly second-best in the short run and unsustainable in the long run even in this hemisphere.

Specifically, uncooperative unilateral monetary unions, such as those brought about by formal dollarization, are inferior to the multilateral sharing model of monetary union pioneered in Europe. It may be difficult for the most stability-conscious regional center countries with an international currency, such as Germany, to agree to subscribe to a multilateral monetary union for the region for fear of losing control and hard money. But once they have agreed, there is no going back. By contrast, the problem with unilateral monetary unions is that the peripheral countries that lose their currency to the center country in the region will not support this one-sided arrangement indefinitely.

Dollarization, for instance, involves a very high financial tribute to the United States. Countries will be reluctant to continue paying billions of dollars' worth in forgone seigniorage once they have become accustomed to monetary stability and have internalized the virtues of low inflation. Rather than paying indefinitely for this lesson, they will reclaim co-ownership and co-management of their monetary asset in multilateral monetary union with like-minded countries. By carrying the seeds of its own destruction, unilateral monetary union hence ultimately breeds the very instability that it initially may serve to reduce.

THE BUSINESS OF EXTERNAL DOLLARIZATION

How did we get to the point of adoption of the U.S. dollar by other countries? As the paper dollar was coming into its own by being issued and accepted as a pure fiat money in its home market, it was also beginning to be accepted for transactions and store of value functions in foreign countries. Here is a brief look at history before evaluating the advanced stages of this development that could soon lead to formal dollarization and the unilateral adoption of the U.S. dollar as sole legal tender by other countries in the Western hemisphere. In glancing back, we will ignore the adoption of the U.S. dollar as in effect the sole medium of payment by Panama as far back as 1904 because it is doubtful that the new state had any choice in the matter.

For centuries, countries obtained most of their money by mining or panning for it or importing the precious monetary specie in return for goods or by means of foreign loans at great expense. During the twentieth century, national monetary sovereignty became the norm as links to commodity standards were cut in crisis-driven spurts of reform and replaced by discretionary policy management of the growth of fiat money. In the United States, for instance, the demonetization of gold in 1973, by lifting the requirement that Federal Reserve notes had to be 40% backed by a fixed amount of artificially-valued gold in the U.S. Treasury completed the process of *internal or nation-*

al dollarization by cutting the last ceremonial links to an external or international standard. Henceforth the dollar was a pure fiat money whose "production" was entirely subject to national control and to whatever internal disciplines by which U.S. policymakers cared to abide.

Informal *external* dollarization, with the U.S. dollar circulating side by side with the respective national currency abroad without benefit of legal tender rights, had already become widespread in the aftermath of World War II, particularly in the occupied countries. It then receded as foreign monetary systems were rebuilt in Europe and Japan in the 1950s and the dollar proved weak against some of the other major currencies in the 1960s and 1970s. External dollarization started to advance again after the United States credibly rededicated itself to the virtues of hard money in the early 1980s. Also, post-communist transition economies and economies emerging from other disasters, particularly in Latin America, provided more liberal access to U.S. dollars in the 1990s. By the end of this decade, dollarization had become a hot issue from Mexico to Argentina, with informal, partial dollarization progressing. At the same time, formal or complete dollarization, under which the U.S. dollar would become sole legal tender in the adopting country, is being ever more openly debated in business and government.

National currency, being subject to strictly enforced government "copyright," can be viewed as part of a country's marketable and exportable intellectual property. Foreign use indirectly involves the payment of "royalties" to the United States. Even though paper money costs the U.S. monetary authorities next to nothing to produce physically, foreigners have to pay full value in goods to acquire it, or relinquish interest earnings or make interest payments as long as they hold it. (Of course, U.S. taxpayers do not get the greenbacks for nothing either, but whatever seigniorage profits and interest savings they provide for their own government they get back in lower taxes or additional government services.) So while external dollarization is good business for the United States, the question is whether it is also the best the Americas can do by and for themselves in the long run.

Initial guidance comes from a 276-year-old Scottish economist who wrote about the nature and causes of the wealth of nations. Adam Smith recognized that wealth arises from value-creating activities and not from government fiat or hoards of shiny things. So too with national money: It has value because a country produces goods and services that can usefully be transacted with it under noninflationary conditions. Let the price level explode or production implode and the value of money is destroyed. But just because the value of a national monetary asset can be ruined by mismanagement or calamity does not mean that each nation should not aspire, and lay claim, to its monetary wealth potential either by itself or jointly with others.

Not just their fool's gold of national monetary-policy sovereignty but genuine national income is lost when financially small countries end up importing or renting the money they use. They then pay in goods and services exports and through interest payments on foreign loans for something they could have, by prudent policy and international cooperation, for free. A member of the Board of Governors (Meyer, 1999) of the Federal Reserve System recently rejoiced that "with about \$300 billion of U.S. currency in the hands of foreigners, the United States earns roughly \$15 billion per year in seigniorage." The last figure is twice the current U.S. budget for nonmilitary foreign aid¹ and could soon be triple or quadruple. Foreign aid¹, net, could be flowing the wrong way.

THE DISAPPEARING SMALL BRANDS OF MONEY

In principle, every country, regardless of size, has a right to its own, homemade, monetary base by virtue of the national product of its citizens that gives transactions value to this base. Yet if the country is small and wide open to international financial flows, it may have great difficulty exercising that right for its national currency if it acts alone. Its currency denomination simply is of little use and ultimately uncompetitive. It may still be needed to pay wages, taxes, and retailers, and local banks may have to keep it on their balance sheet if the government says so. Yet all the big financial transactions and contracts will eschew denomination in an obscure and volatile denomination that has found scant international acceptance, and little liquidity or accounting use. Buffeted and made expensive by country and currency risks even when kept on a strict regimen of internationally prescribed best practices, the small currency loses out to a currency that is in wide international use.

No matter how small countries decide to roll with the punches of open capital markets with their own money and exchange rates, small really is not beautiful in matters of money. Inflation targeting for a small country with flexible exchange rates is a frustrating exercise with frequent misses: Mexico was down to 7% inflation before the crisis that started in December 1994 forced it to crash and float. Five years later, its inflation rate is only just edging back to single digits, having come down painfully and slowly from over 50% during 1995. Currency boards offer good shelter from inflation as long as the exchange parity with their dollar or DM/euro backing can be maintained. But long stretches of sunny weather tend to be punctuated by severe storms requiring costly, and politically risky,

¹ The spending proposed for international development and humanitarian assistance is \$7.6 billion (Budget of the United States Government, *Fiscal Year 2000*, p. 143).

interest-rate defenses. When Argentina's sovereign debt rating was reduced by Moody's in early October 1999, the agency cited the country's fixed exchange rate with the dollar: The deterioration in Argentina's terms of trade, in particular with Brazil that had given up on a less committed dollar peg in January 1999, and then also with Chile, was making the present downturn of its economy "particularly difficult". A peso interest rate surcharge of 500 basis points or more over U.S. dollar claims issued by the same Argentine banks in 1999 showed that the market is far from convinced that the Argentine peso is as good as the U.S. dollar or that the program of "convertibility" at a 1:1 rate is here to stay.

Whether garaged in a currency board or fretting on the curb, small moneys thus no longer can expect to survive in their limited areas of circulation unprotected. Here "small" is financially small with a currency denomination that is not fit for the international capital market, and not necessarily geographically small, like El Salvador. But currency protection itself is up against more and more rules of international finance and investment and trade-in-services liberalization. Even the citizens of a financially small country of issue, not meaning, of course, Switzerland, frequently require extra compensation to voluntarily hold their own money on deposit because they view it as an inferior brand. Loan customers get a correspondingly costly quote in the national money, if they are large and connected enough to get any quote at all, and turn to foreign-currency lenders, mostly foreign-owned institutions, both inside and outside the country if they can. Thus there is creeping eurozation at the eastern and southeastern periphery beyond the eleven current members of Euroland and creeping U.S. dollarization in many other countries, particularly in the Western hemisphere. It is just not fair, but lack of fairness is not an effective defense against natural currency oligopolies on the make.

Not that the oligopolies are particularly customer friendly or the least bit cooperative in public. Federal Reserve Chairman Alan Greenspan intends neither to inhibit nor to facilitate the dollarization of an economy that seeks it. Hence if Argentina were to go from about 60% average dollarization of its bank balances now to 100% formal dollarization in 2000, it will do so by its own resources and initiatives. It would sacrifice an estimated \$750 million dollars in annual interest earnings to start with: Its peso banknotes would have to be taken out of circulation and exchanged for greenbacks purchased by Argentina's central bank with the proceeds from the sale of U.S. Treasury bills or of other interest-bearing securities. When Kosovo recently was declared a DM (future euro) zone, the Deutsche Bundesbank, too, held that to be none of its operational or policy concern. Hence countries that desire to use a strong international currency as their own can do so only through a costly unilateral act unless they are both prepared and allowed to become partners in a multilateral monetary union. .

UNILATERAL MONETARY UNION:

A MAGIC CURE FOR CREDIBILITY PROBLEMS OF ADOPTING COUNTRIES?

Let us deal with the preparedness of potential joiners first before asking what their options are, once they are prepared. The requirements for gaining membership in a multilateral monetary union are demanding. They inevitably include achieving Maastricht-type norms of fiscal rectitude and low inflation. Candidate countries would have to resolve their internal conflicts over tax effort and incidence and over government spending policy so that they could show that they have learned to live without the option of monetizing fiscal deficits. A country must also maintain fixed exchange rates with the union it seeks to join for long enough to demonstrate the appropriateness of the terms of conversion to a common currency. If its commitment to stability is credible, it will be rewarded with interest rates that are indicative of deep financial integration with the union even before joining, indeed, as a condition for joining.

Given the rigors of preparing for any multilateral monetary union that involves deep integration and confident interlinking of financial systems, some countries might be tempted to opt for a quick fix by choosing unilateral monetary union rather than attempting to qualify for the multilateral kind. For instance, in its current state of disarray, Ecuador could not possibly be admitted to any integrated monetary grouping. If it were to dollarize formally, as a disorderly succession of its Presidents proposed in January 2000, such an act would be the default solution remaining after hyperinflation, and not a reward for having achieved economic stability or fiscal problem resolution and financial development. During the same month, Estonia made noises about adopting the euro unilaterally rather than working to qualify for joining the European Monetary Union some years down the road. Hence some countries may choose unilateral monetary union over the rigors and reform of preparing for a superior alternative. This bypass strategy has not been welcomed in Brussels or Frankfurt, showing that self-respecting multilateral monetary unions do not wish to be surrounded by unilateral monetary unions beyond their fringe.

UNILATERAL MONETARY UNION AND THE EMERGENCE
OF A SUPERIOR ALTERNATIVE

Unilateral monetary union is the distinctly second-best choice that is left for countries who can not do any better than embrace an established dominant currency as their own without formal coordination with its issuer. Such a union is much safer than enduring the stresses of bimonetarism under widespread partial dollarization. When banks have large amounts of both foreign and domestic currency assets and liabilities on their books, the quality of their dollar claims on domestic obligors tends to be severely undermined by contractive exchange crises. So economic vulnerability to

any crisis of confidence in a country is less with formal, complete dollarization than with informal, half-baked dollarization that is never robustly hedged. But formal dollarization itself is not a panacea, as the previous section has shown, and it is worse than being prepared and allowed to accede to a multilateral union in the region. Such a cooperative solution is not on offer in the Western Hemisphere, but was adopted in Europe at the start of this year. Instead of importing a defense against a small country's monetary identity problems that seems more like surrender, it invites countries to hold out for something better by co-producing and co-managing their own pool of megamoney.

One way of explaining the difference between unilateral and multilateral monetary union is to think of what happens when a minor national airline company gets such a bad reputation that almost all air travelers, both foreign and domestic, prefer to fly on other carriers. Eventually that bankrupt airline and all its local airbussing and landing rights are sold to a foreign carrier for a penny or cent, and good riddance.

But what if the small national airline had, in fact, been well run but now was unable to overcome the enormous network and code sharing externalities that it could not enjoy as long as it remained on its own? It would then seek a timely business combination, such as a friendly merger, that did not imply being closed down and declared dead for foreign vultures. Even if the small airline were to lose its national identity through an exchange of shares in the surviving carrier, there would then be full maintenance of value and, indeed, the creation of new value, for both the acquired and acquirer, through an economically efficient merger. By contrast, if the acquirer refused a timely merger, declined to give anything of value, and rather waited until the small national carrier had gone belly-up, then one has a picture of the industrial-relations equivalent of what happens under unilateral monetary union.

Many applaud complete dollarization, the least adaptable and least giving form of monetary union, as more stable and efficient than carrying on with heavily protected, poorly maintained, and ultimately doomed mini-carriers of monetary services particularly in South and Central America and in the Caribbean. Others would say that taking a dangerous toy away from a small country is all to the good without acknowledging that its customer base should be worth something. By definition, Pyrrhic victories do not last, but neither do those that are completely unrestrained. On the European continent, commanders could often lay siege and starve out a free city rather than come to terms with its citizens if theirs was the only army and cavalry in the field. A few far-sighted field marshals chose the latter course, sparing the city, nonetheless, and they tend to be remembered as builders of history.

Multilateral union is much kinder to small countries than joining a monetary union unilaterally, as per unassisted formal dollarization. It does not expropriate their national monetary asset through annihilation

and foreign replacement. Rather it transforms this asset from a national to a multinational form and makes it whole in the process. For even if a country had lost part of the domestic component of its monetary base, and hence part of its national seigniorage, through currency substitution to the dominant international currency in the region, its seigniorage share would be based on estimates of *all* of the common currency circulating within it after monetary union. The DM notes which account for 10 to 20 percent of Poland's currency supply together with U.S. dollars and zloty, now still yield a flow of seigniorage benefits to Germany — via interest saved on the debt which the German government otherwise would have issued. However, this foreign fraction will become part of Poland's own euros and seigniorage share once Poland has joined the European Monetary Union as well may happen in the course of the next decade. In addition, the head of Poland's national bank (NBP) then will have a seat on the European Central Bank (ECB) Council, like every other member, thus acceding through a merger of equals. Financial and banking systems, once cleaned up and properly provisioned and mutually supervised, will start to mesh throughout a wider European monetary region, so that even country risk will drop sharply. Poland, incidentally, has had a per capita GDP that was about the same in 1997 as that of Mexico at the prevailing average exchange rates. Hence monetary union need not be rich-country exclusive.

THE RECKONING

Countries clearly are in a bind if they cannot profitably keep their own small currency and cannot gain accession to a multilateral union either. But those with the dominant currency may want to beware of taking and keeping all: A unilateral monetary union is not anchored in international treaties or binding undertakings but predicated on the convenience of the adopting country. Once the 33 OAS member countries of the Western Hemisphere roughly to the south of the United States have been completely U.S. dollarized long enough to be used to world-standard stable prices, there may be nothing, not even the market, to stop them from eventually seeking to leave the unsettled state of unilateral monetary union with the United States. For seigniorage recapture, they may try to form a multilateral sub-union of their own by creating popular demand for changing legal tender, tax, and unit-of-account rules. They may thus be able to induce U.S. dollars held by the public to be swapped for a freshly minted common currency by a future Latin American and Caribbean System of Central Banks. Alternatively, they may join an existing multilateral monetary union that gives better terms than the United States.

Once having been led on the path of monetary rectitude, why pay royalties to the U.S. dollar forever for a lesson well learned? Forced de-dollarization, of the kind practiced in Mexico during the crisis of 1982 when there was forced conversion at below-market exchange rates of dollar-denomi-

nated bank accounts (Lustig, 1992, p. 25), is unthinkable in open financial markets. Yet those markets may accept Latin American countries' sharing a hard currency other than the U.S. dollar eventually. It appears unrealistic to think that the likes of Brazil, Argentina, and Chile will accept and then stay with U.S. dollarization for much of the century just begun no matter how "American," meaning *Norte Americano*, it will be. Even Mexico, which is showing ever less determination to keep down the dollar portion of its money supply, could eventually come to resent dollarization which would tax it more than 1 billion dollars per year² off the bat, and then more each year as its economy and currency demand keep growing, compared with enjoying the flow of seigniorage from all the currency used inside the country.

Once a superior alternative has been worked out by the Latin American and Caribbean countries among themselves or with an established multilateral union, they will undollarize jointly. They will stop paying rent for the use of foreign currency and turn it in for income-yielding investments and also for U.S. goods and services down the road. Uncooperative unilateral union in which the external currency-customer be damned thus may have an eventual comeuppance: If the dollar should ever come to reign from Seattle to Santiago or from Alaska to Antarctica as famous alliterators have recommended, that reign will be shorter than the half-life of James Monroe. The model of shared control and ownership of the type pioneered in Europe is more sustainable as it contributes to the wealth of a plurality of nations and does not just make the monetary wealth flow *e pluribus ad unum*. It is time for the United States to take a careful look at Europe's multilateral model of monetary union and to develop a variant that would remain beneficial for the Western hemisphere as a whole in the long run. Until then, there is no bridge that leads from European to American monetary union, or from EMU to AMU.

The process of implementing monetary union in Europe has revealed that the country with the most internationally respected currency in the group, Germany, transplants its proven culture of monetary stability to

² Mexico's monetary base, consisting almost entirely of peso currency, has been equal to about 3.5 percent of Mexico's GDP in recent years (Banco de Mexico, 1999, p. 237). Adding U.S. dollar bills held or circulating in Mexico could raise this percentage to around 5. At an average interest rate of 5.5 percent otherwise earned on U.S. government securities, the annual cost of complete dollarization would be equal to 0.275 percent of Mexico's GDP. With that GDP estimated at \$460 billion for 2000, the annual loss of seigniorage would start at \$1-1/4 billion. This figure would rise every year at the same rate as currency demand and hence approximately at the same rate as GDP so that the discounted present value of all the seigniorage flows lost under just three decades of dollarization could easily be over 20 times as large, or in excess of \$25 billion. This is the present value of the grant which Mexico's decision formally to dollarize, and to maintain the arrangement for about 30 years, would confer on the United States compared with multilateral monetary union.

the entire group. The regional center country's reluctance to give up its own currency and monetary management can be overcome only if it has reason to feel confident that this transplant will not be rejected by its new host anytime soon. Yet it "pays" for inculcating its core principles by yielding on many peripheral matters, such as banking and fiscal structure, and personnel appointments, to its partners in Euroland. Hence there is a complex partnership of give and take around a common good.

FIRST STEPS TO MAKING DOLLARIZATION MORE ATTRACTIVE

Since multilateral monetary union is the capstone of economic integration and of all the joint arrangements in a region, it can not be pushed beyond that region. This would prevent EMU, for instance, from reaching into Latin America or the Caribbean even though (unilateral) eurozation of a few countries in the region, while impractical, would not be categorically excluded. Realistically it appears therefore that the United States must either evolve a U.S. dollar-based monetary union whose features are increasingly multilateral, or the countries of South America, led by Brazil and Argentina, will eventually be tempted to sponsor a separate multilateral monetary union for their mutual benefit. At least one scattered, and possibly stillborn, element of the former strategy has already come into view.

Recently, there has been thought of even the United States giving a little to support formal dollarization of reformed countries in the Western Hemisphere. The International Monetary Stability Act of 1999, S. 1879, introduced November 8, 1999 and referred to the Senate Committee on Banking, Housing, and Urban Affairs, for the first time indicates that the U.S. Congress could be willing to actively encourage dollarization. The Act recognizes that official dollarization of the Western Hemisphere is not easily attained or subsequently sustained without some financial consideration to the dollarizing countries. It is emphatic about the Federal Reserve System having no obligation to act as lender of last resort or to consider the economic conditions of dollarized countries when formulating or implementing U.S. monetary policy. But it offers partial conditional compensation for the loss of seigniorage by the dollarizing country.

Compensation is to be given for 85 percent of the interest forgone by a country that exchanges its own holdings of U.S. Treasury securities for Federal Reserve notes (currency) for the purpose of official dollarization and obtains consols (perpetuities) in return. In other words, no compensation is to be granted for seigniorage lost by pre-existing informal dollarization of a country, and the compensation to be offered for going all the way with dollarization is fractional. Compensation is also inadequately to be adjusted over time for the especially rapid growth of currency holdings expected in dollarized *developing* countries. Furthermore, the spirit of unilateralism prevails in some other respects on the U.S. side, as the consols to be

issued to the dollarizing country may be declared null and void under certain conditions. These conditions are unlikely to remain fixed at the hands of the U.S. Congress and the Administration when penalizing or pressuring an officially dollarized country becomes politically attractive for any reason. For instance, when Panama became a target of U.S. official wrath in 1988-1989, it was clamped into financial stranglehold by the United States using its control of dollar flows and of assets with U.S. banks. Interest on the consols may also be attached under what could be a broadening list of conditions.

Although representing progress toward a concept of making formal dollarization less costly to the adopting countries in certain respects, the Act would thus still leave dollarization a distinctly second-best form of currency consolidation. Europe has shown that there is a more other-respecting, multilateral model of achieving such needed consolidation by right of treaty, rather than by staying on the right side of Uncle Sam.

REFERENCES AND FURTHER READING

- Alexander, V. and Anker, P. (1997), "Fiscal Discipline and the Question of the Convergence of National Interest Rates in the European Union," *Open Economies Review*, October, 8(4), 335-352.
- Banco de México, *The Mexican Economy 1999*.
- Barro, R.J. (1999), "Let the Dollar Reign from Seattle to Santiago", *Wall Street Journal*, Midwest edition, March 8, A18.
- Beddoes, Z. M. (1999), "From EMU to AMU?", *Foreign Affairs*, July/August, 8-13.
- Buitter, W. (1997), "The Economic Case for Monetary Union in the European Union", *Review of International Economics, Spec. Supplem.*, 5(4), 10-35.
- Courchene, T.J. and Harris, R.G. (1999), "From Fixing to Monetary Union: Options for North American Currency Integration", C.D. Howe Institute Commentary 19, Toronto.
- Dornbusch, R. (2000), "When Funny Money is No Joke", *Financial Times*, January 3, 13.
- Frankel, J.A. (1999), 2-6 in IMF Econ. Forum, "Dollarization: Fad or Future for Latin America?":
<http://www.imf.org/external/np/tr/1999/TR990624.HTM>
- Giron, A. (1991) *Cincuenta Años de Deuda Externa*, Instituto de Investigaciones Economicas, UNAM, Mexico City.
- Hausmann, R. (1999), "Exchange Rate Debate" and other short articles, Inter-American Development Bank, *Latin American Economic Policies*, 7, (Second Quarter), 1-2, 6-8.

- Hausmann, R. (1999), "Should There be Five Currencies or One Hundred and Five?", *Foreign Policy*, (116), Fall 1999, 65-79.
- Holle, P. (1999), "Canadians Wonder Whether the Loonie is for the Birds", *Wall Street Journal*, August 6, A11.
- Ize, A. and Levy-Yeyati, E. (1998), "Dollarization of Financial Intermediation: Causes and Policy Implications", International Monetary Fund Working Paper, WP/98/28.
- Laidler, D. (1999), "Canada's Exchange Rate Options", *Canadian Public Policy*, 25(3), September, 324-332.
- Lustig, N. (1992), *Mexico: The Remaking of an Economy*, Brookings Institution, Washington.
- Mack, C. (1999), "Time to Reap the Dollar's Reward", *Financial Times*, December 16, 15.
- Meyer, L.H. (1999), "The Euro in the International Financial System", Federal Reserve Bank of Minneapolis *The Region*, 13(2), June, 25-27, cont. 58.
- OECD (1999), *EMU Facts, Challenges and Policies*, Organisation for Economic Co-Operation and Development, Paris.
- Ortiz, G. (1999), 6-10 in IMF Economic Forum, "Dollarization: Fad or Future for Latin America?": <http://www.imf.org/external/np/tr/1999/TR990624.HTM>
- Sachs, J. and Larrain, F. (1999), "Why Dollarization is More Straitjacket Than Salvation", *Foreign Policy* (116), Fall 1999, 80-92.
- Stein, E. (1999), "Financial Systems and Exchange Rates: Losing Interest in Flexibility", Inter-American Development Bank *Latin American Economic Policies*, 7, (Second Quarter), 2, 8.
- Stiglitz, J.E. (1999), "Lessons from the Global Financial Crisis," paper presented at the Federal Reserve Bank of Chicago Conference on Lessons from Recent Global Financial Crises, September 30.
- U.S. Senate Banking Committee, *Citizens' Guide to Dollarization*, Committee Documents Online B 106th Congress. This online publication contains two additional pages of references: <http://www.senate.gov/~banking/docs/reports/dollar.htm>.