



**Claremont Colleges**  
working paper 2001-05

Economics papers by faculty at Claremont Graduate University, Claremont Institute for Economic Policy Studies, Claremont McKenna College, Drucker School of Management, Harvey Mudd College, Lowe Institute, Pitzer College, Pomona College, and Scripps College.

February 2001

Prepared for the Journal of Policy Modeling

# **Truth in Advertising and The Great Dollarization Scam**

By  
THOMAS D. WILLETT  
Claremont McKenna Colleges  
and  
Claremont Graduate University

## 1. INTRODUCTION

Advice on international currency policies has long been subject to fad and fashion. In the 1970's it was flexible rates. In the 1980's the pendulum swung back to pegging with the use of exchange rates as nominal anchors. In the 1990's the restoration of interest in currency boards was the hot concept, to be replaced at the beginning of the new millennium with dollarization. This should not be the cause of great surprise. Many areas of policy are subject to frequent swings in conventional wisdom.

The complicated nature of the theory of optimal currency policy makes it particularly susceptible to such swings. Relevant considerations include virtually all of the major areas of dispute concerning domestic macroeconomic policies plus a number of additional complications that are purely international. To make matters even more difficult the theory of optimum currency areas (OCA) shows that the best policy will vary from one country to another.<sup>1</sup> Thus it is not surprising that the debate among economists over fixed versus flexible exchange rates shows little sign of coming to a close.

The media and policy markets are rather thin for economists who stress the complicated nature of the issues involved in reaching sound judgments about currency policies. Far more in demand are those one-armed economists who cut through the morass of often conflicting criteria to shout, "here are the one or two that really matter and here's what they imply for policy." This can at times be a highly desirable strategy from the standpoint of promoting public as well as personal interests. A major way that science progresses is for unusually clear thinkers to cut through the mass of detail to help clarify for the rest of us where the key issues lie.

---

\*Helpful comments from Nancy Auerbach, Aida Budiman, James Dean, and Art Denzau are gratefully acknowledged.

<sup>1</sup> OCA theory was pioneered by Robert Mundell although the idea was implicit in some earlier work. For a recent treatment and references to the large literature on this subject see Willett (forthcoming).

All too often in the public arena, however, such simplifications lead to the promotion of preconceived policy strategies rather than to great insight. For example, it is clearly established in the international monetary literature that some types of shocks are usually better handled under fixed exchange rates and some types under flexible. Many empirical studies which have attempted to determine which types of shocks have predominated for various countries over different time periods. In the public policy debates, however, one all too frequently finds advocates of fixed or flexible rates discussing only the types of scenarios where the theoretical literature suggests that that regime is optimal. Thus even in direct debates it is not uncommon to see advocates talking past one another.

Often these one or two factor approaches are almost pure propaganda. Sometimes, however, they make important contributions by emphasizing a new or relatively neglected consideration. Sadly such new considerations are often presented as a complete analysis rather than as an additional factor that should be integrated into the existing literature. It would of course be to deny human nature to expect that someone who develops a new angle would not be likely to overemphasize its importance. It is a normal obligation of fellow researchers to attempt to put such new developments in better perspective as well as to point out cases where policy advocates have overstepped the bounds of appropriate discourse by using faulty logic or ignoring relevant considerations or distorting evidence. This is the purpose of this paper with respect to recent advocacy of dollarization.

Limitations of both space and energy preclude a full survey of the recent literature. Thus I shall focus primarily on the influential papers of Ricardo Hausmann who was until recently the chief economist of the Inter American Development Bank. Along with his colleagues at the IADB and Guillermo Calvo and Carmen Reinhart of the University of Maryland, Hausmann's

research has made important contributions to the analysis of the benefits of dollarization and the costs of flexible exchange rates.<sup>2</sup> However, I will argue that Hausmann's contributions fail the truth in advertising test. His influential paper in *Foreign Policy* (Hausmann, 1999) fits the format of a debater's oratory or a lawyer's brief far more closely than it does the logic of sound policy analysis. Nor do his contributions to the IADB's recent conference volume give a substantially more balanced view. A strong case can be made that dollarization is a desirable option for some countries in Latin America, but the costs and benefits involved would vary greatly across countries.

## 2. DISCLOSURE OF THE RECOGNIZED BIASES OF YOUR REVIEWER

Before beginning my evaluation, the reader might fairly want to ask what is the basis for my implicit claim to the position of a disinterested observer. The postmodernists remind us that no scholarship can rightly claim complete objectivity, so let me admit my biases openly.<sup>3</sup> I am a big fan of both fixed and flexible exchange rates, but each in its proper place. My strongest bias is a firm belief in the validity of the optimum currency area approach to exchange rate issues. I acknowledge that the list of criteria relevant to OCA analysis has grown to the point that they do not always point to a clear-cut choice. This approach, however, provides important insights that are robust to variations in the details of OCA analysis. A key point is that one size does not fit all. Automatic alarm bells should go off anytime it is argued that the same currency policy is best for all countries or even for all countries in a particular region. For example, currency boards can be quite useful for some countries – typically quite small ones like Estonia and

---

<sup>2</sup> Many of the recent contributions to the analysis of dollarization may be found in two edited volumes Dean, Salvatore, and Willett (forthcoming) and Fernandez Arias and Hausmann (2000). These volumes also contain certain extensive references to the other literature on this subject.

<sup>3</sup> Of course I can only own up to those biases of which I am aware. Recognition that no analysis can be 100 percent objective doesn't imply that we shouldn't try to come as close as possible, nor that we can make useful, albeit not completely precise, evaluations of the degree of objectivity of policy analyses and scientific research.

Lithuania – but to advocate currency boards as a savior for almost any country, as a few economists have done, makes snake oil salesmen look good by comparison.

A second strong advantage of the OCA approach is that, if taken seriously, it is a powerful antidote to the dangers of intellectual hubris that sometimes overwhelm members of our profession. The problem is that those most susceptible to the hubris bug seldom take OCA analysis seriously. We do have some fairly useful tests for the disease, however. Does the advocate consider more than one or two criteria on which the choice of currency policy should be based, and do they acknowledge that there will be some costs as well as benefits to the recommended strategy? Affirmative answers to these questions are not a guarantee of relatively objective analysis, but negative answers provide a virtual guarantee that snake oil is on offer.

### 3. SOME EMPIRICAL CONTRIBUTIONS OF RECENT DOLLARIZATION ANALYSIS

Hausmann et al., and Calvo and Reinhart have contributed a number of interesting empirical findings. Some of these appear to be very solidly based. One example is that even under flexible rate regimes many countries still pay considerable policy attention to exchange rates, often intervening heavily and/or using interest rate to reduce currency fluctuations. This has occurred even for countries such as Chile whose officials have offered strong defenses of the desirability of their flexible rate regime. Such indications of Calvo and Reinhart's "Fear of Floating" should be surprising, however, only to those limited few who have ideological commitments to pure floats. It is a greatly underappreciated implication of OCA theory that most countries should pay at least some attention to their exchange rate in setting domestic macro economic policy. Adopting fixed exchange rates is an extreme where countries must give heavy weight to the foreign exchange market in setting domestic macro policy even in the short run and 100 per cent weight over the longer term. The extreme opposite of virtually ignoring the

exchange rate in setting domestic macro policy should apply only to the largest most closed economies. In between the extremes, the smaller and the more open the economy, and the greater is the degree of currency substitution, the greater is the weight that should be given to foreign exchange market developments in setting domestic macro policy.

The key in all such intermediate situations is that the exchange rate should be neither the overriding constraint over domestic policy nor should it have zero influence. OCA theory gives important clues about the weight that should be given to the exchange rate, but not about the form that such intermediate systems of managed exchange rate flexibility should take.

For this latter issue, questions of the degree of capital mobility, the behavior of speculation, and the ability of government officials to carry out exchange rate policies free of short-term political pressures come to the fore, along with the pattern of shocks that is emphasized in OCA theory. We have clear evidence to support the view, often called the unstable middle or the hollowing out hypothesis in the form that substantial capital mobility makes narrow band adjustable peg regimes highly unstable. The resulting one way speculative option makes them prone to large capital flows which, while stabilizing in the technical economic sense of putting pressure on exchange rates to move toward equilibrium, can be highly disruptive. The stronger versions of this view that capital mobility rules out the stability of all regimes except the extremes of free floating and fixed rates does not fit with the empirical evidence, however. There are many examples of managed floats and crawling bands that have worked well (see, for example, Burdekin, Nelsen and Willett (1999) and Williamson (1996) and (2000)). Thus the accurate observation that many countries have a quite rational fear of free floating does not logically imply that all such countries need to adopt genuinely fixed rates. The reader of Hausmann's [1999] policy paper is not made aware of this. He discusses only floats

and the adoption of an international or supranational currency. An especially careful reader might notice that after dismissing floating Hausmann goes on to consider “an” rather than “the only” alternative to floating. (p. 75). Thus his analysis does not actually commit the logical fallacy of ignoring relevant alternatives. It is surely highly misleading, however, as is the failure to even hint that the case for particular currency regimes is likely to vary from one country to another.

A second seemingly robust finding of the recent literature is that countries with fixed exchange rates tend to have both lower nominal and real interest rates. This is certainly what we would expect theoretically. It must be remembered, however, that this is not a clinching argument for fixed rates, as advocates sometimes seem to suggest. Rather it is one of a number of considerations that should be factored into a comprehensive cost-benefit analysis.

Another point suggested by Calvo and Reinhart (2000) has less supporting evidence to date but seems quite likely to be confirmed by additional evidence. Exchange rate volatility appears to have a much stronger depressing effect on the trade of emerging markets than for industrial countries. The failure of flexible rates to lead to the collapse of trade among the industrial countries as predicted by some of the strongest critics combined with the failure of most empirical studies to find large effects has led to a widespread view that the resource allocation costs of exchange rate fluctuations are minor. While likely closer to the truth than the exaggerated claims of some critics that the widespread adoption of flexible rates would cripple trade, the view that currency fluctuations imposed almost negligible costs has been almost certainly overstated. Defenders of flexible rates correctly point out that for the industrial countries the short run and perhaps even the medium term effects of currency fluctuations can be easily hedged at minimal costs. This route is much less available for most emerging markets.

Thus as Calvo and Reinhart (2000) point out, we should not be surprised that the few studies available so far on the effects of exchange rate fluctuations on trade volumes for emerging markets tend to find them to be much larger than for the industrial countries.<sup>4</sup>

Two other recent research findings for Latin America are particularly intriguing. One is that contrary to the policy prescriptions of OCA theory, countries facing large terms of trade shocks have frequently chosen fixed exchange rates. A second, which is more in line with traditional theory, is that countries with fixed rates have substantially larger financial sectors than those with flexible rates. Both of these findings should stimulate further research to test how robust they are to different specifications and to the inclusion of countries beyond Latin America.

The second is that monetary policy appears to have been more procyclical under flexible than under fixed exchange rates for Latin America. “Hence the empirical record in Latin America does not argue in favor of a more stabilizing monetary policy under flexible regimes, even in periods of low inflation” (Hausmann et al (2000) p. 147). Such evidence provides a useful reminder that discretionary monetary policy is often not used wisely. It does not by itself, however, argue for fixed over flexible exchange rates.

The correct implication is that there is a strong case for limiting the effects of short-run political pressures on monetary policy making. Contrary to the suggestion of some enthusiasts for dollarization, fixed exchange rates are not the only way to provide discipline over domestic policy. Indeed the degree to which fixed rates are the first through nth best way to provide monetary discipline depends largely on the criteria laid out in OCA theory such as the size and openness of the economy, the degree of its wage and price flexibility and factor mobility, and the

---

<sup>4</sup> Note that even if the trade effects of switching from adjustable pegs to flexible rates are small, the effects of going from either to genuinely fixed rates could still be quite large. Recent research suggests that this may be the case.



patterns of shocks.<sup>5</sup> Thus to a substantial extent, the disciplining argument for fixed rates does not present an independent criterion over and above the traditional OCA criteria.

The primary exception to this conclusion is where domestic political instability and the weaknesses of domestic institutions are so great that drastic externally oriented action such as dollarization is the only type of feasible option for imposing discipline. This worst case scenario argument for dollarization seems to fit well the case for Ecuador. For many countries, however, macro economic discipline would be better achieved through domestically oriented institutional reforms such as limitations on the size of budget deficits, central bank independence, and inflation targeting.

Another argument made by Hausmann et al (2000) is that for Latin America , flexible exchange rates instead of generating more monetary independence and making domestic interest rates less sensitive to foreign interest rates domestic interest rates become more sensitive. This may be possible under particular circumstances, but it is hard to see how this would generally be the case and Hausmann et al present no convincing, theoretically argument no convincing theoretical arguments. They present estimates on average for countries in their sample of three, the response of domestic interest rates to changes in U.S. interest rates are the least for the fixed rate country, Argentina, and the most for the flexible rate country, Mexico, with the crawling band country, Venezuela, falling in between. They report, but do not discuss, the size of their estimated coefficients. The actual magnitudes, however, strongly suggest a misspecified equation to which little, if any, policy weight should be given. The case of zero insulation that one would expect from perfect capital mobility under fixed exchange rates would yield a coefficient of 1.0. The estimated coefficient for Argentina, however, is 1.45, while for

---

See, for example, Frankel and Rose (2000).

<sup>5</sup> See Westbrook and Willett (1999)

Venezuela and Mexico they are 2.77 and 5.93 respectively. Correlation need not imply causation. It is totally implausible to think that a 100 basis points increase in U.S. interest rates would normally cause an almost 600 basis point increase in interest rates in Venezuela.

Hausmann et al [2000] also present results for a sample of 11 Latin American countries for the period 1960 to 1968. They again find smaller effects under fixed rates, although the difference is not statistically significant. It is likely true that the adoption of flexible rates does not give countries as much effective domestic interest-rate independence as many advocates of flexible rates initially assumed and of the heavier is official intermediation the less will be the independence of domestic interest rates. Theory suggests that the amount of independence given by flexible rates should vary according to country characteristics and the degree of intervention. Hausmann et al [2000] do not test for such differences across countries or time. Their work does suggest the importance of further research on the insulation effects of alternative currency regimes, but on the basis of the evidence they present, it takes a heroic leap to reach their conclusion that “In fact, floating seems to amplify the domestic effects of external [interest rate] movements” (p. 149).

Hausmann et al [2000] also argue that the formal or de facto indexation of wages to exchange rate changes in Latin America implies that nominal currency depreciation will be highly inflationary and will be relatively ineffective in promoting change in real exchange rates. They conclude, “therefore, flexible regimes face heavy costs when they attempt to improve competitiveness through depreciation” (p. 153). One can certainly cite important episodes in Latin American experience where this has been the case. Again, however, theory would suggest that the inflationary effect of currency depreciation would not be constant across either countries or time. We would expect these effects to vary depending both on the degree of openness of the

economy and the degree of monetary accommodation that the authorities are expected to provide. It is quite interesting to note that neither the Mexican depreciation in 1994-95 nor the Brazilian depreciation in 1999-2000 set off the types of cumulative spurts of wage inflation predicted by critics of flexible rates.

It is just not legitimate for the analysis of currency policy issues to treat Latin America as if it consisted of a group of completely homogeneous economies. Yet that is what the study by Hausmann et al [2000] repeatedly does. Furthermore, excessively strong conclusions are drawn from many of the findings and an even-handed balancing of costs and benefits is absent. The research paper by Hausmann et al [2000] makes a number of valuable contributions to the analysis of currency policies, but it presents a guise of objectivity that is not lived up to. In the introduction the authors describe their paper as asking, "...what the appropriate exchange rate arrangement for Latin American countries should be. It reviews the theoretical classic mode in favor of each regime and checks whether the empirical record is consistent with these claims" (p. 131). This certainly seems to suggest that the analysis to follow will be of the relatively neutral and objective type that one should expect from the Office of the Chief Economist of a major international financial institution. While the marks for some of the research contributions of this paper should be quite high, its truth in advertising score is painfully low.

#### 4. THEORETICAL CONTRIBUTIONS: LIABILITY DOLLARIZATION

For some time, monetary economists have understood that the degree of international currency substitution is an important factor that must be added to the list of important OCA criteria. With high degrees of currency substitution, the liquidity value of the domestic currency is sharply diminished. In these circumstances, the ability of an independent currency to insulate the domestic economy from shocks is undermined and flexible rates could be highly unstable.

Recently writers such as Calvo and Reinhart and Hausmann have stressed the importance of liability dollarization as well. Many emerging markets have very limited or non-existent long-term markets for financial instruments denominated in domestic currency and most foreign borrowing is denominated in foreign currency (liability dollarization). If dollar-denominated borrowing is not hedged then currency depreciation can wreak havoc with the solvency of major segments of the economy. There can be little question that the severity of the Asian crisis of the late 1990's was affected by this factor. However, the use of pegged exchange rate regimes was a major stimulant to unhedged foreign borrowing by the Asian countries. The adoption of flexible exchange rates would help diminish, although not completely nullify, this problem.

The older OCA literature considered the role of high capital mobility and concluded that while it clearly pushed optimal currency regimes away from the middle ground of narrow band adjustable pegs, the effects on the desirability of fixed versus flexible rates was ambiguous. The new literature suggests that to the older criteria of degree of openness in trade and currency use, we must also add openness in financial markets in terms of the patterns of currency denomination, both with respect to trade financing and longer term lending and borrowing. This has of course been at least implicitly understood by policymakers for some time and helps account why countries like Hong Kong and Lithuania who do not have strong trade ties with the U.S. still decided to fix to the dollar and why Thailand put a much heavier weight on the dollar in its currency basket peg than could be accounted for by trade linkages to the U.S. Still it is an important point which deserves greater attention now being given to it.

There can be little question that such financial market issues deserve a prominent place in the list of important OCA criteria. At present, however, we know fairly little about their quantitative importance in relation to other criteria. The magnitude of the insolvencies generated

by the Asian currency depreciation is likely to give an exaggerated impression of how far this consideration should tip the balance in favor of dollarization or some other form of genuinely fixed exchange rates, since the size of currency mismatches was likely due in considerable part to the adoption of pegged, not flexible rates. The comparative effects of flexible exchange rates on the magnitude of currency mismatches is an important area for research.

Perhaps more important for forward-looking policy issues is the degree to which private hedging facilities could be used without drastically curtailing international capital flows and what the effects would be on the composition of capital flows and overall economic efficiency. Certainly the moral hazard generated by beliefs that governments would not allow large changes in exchange rates lead to excessive unhedged short term borrowing by many of the Asian countries. Thus to many observers today, side effects of policies that would lead to reduction in the magnitude of financial flows to emerging markets would be counted as benefits rather than costs. Hausmann [2000] presents a healthy corrective to those who would be too quickly inclined to adopt such a view. He argues that there are many reasons to believe that the magnitude of capital flows to emerging markets tends to be sub rather than supra-optimal. He fails to consider, however, the mounting evidence that the composition of capital flows can be quite important. It is perfectly possible that the total volume of capital flows to emerging markets has been too low from the standpoint of economic efficiency, but that some types of capital flows have been excessive.

Large short-term unhedged foreign borrowing played a key role in the Asian currency and financial crises. There are strong arguments that at least in underdeveloped financial markets, foreign short-term borrowing is likely to generate pareto relevant negative externalities that call for some form of correction by government policies via prudential supervision and

regulation and/or various forms of corrective taxes on reserve requirements. [See, for example, Eichengreen (1999) and Furman and Stiglitz (1998)]. Instead, in Asia many government policies such as implicit exchange-rate guarantees tended to further encourage rather than discourage unhedged short-term foreign borrowing. In Korea, liberalization of short-term before long-term capital flows, and in Thailand, tax incentives through the Bangkok International Banking Facility added to this problem.

I have argued elsewhere (Willett and Denzau (1999) that as a complement to appropriate corrective policies toward some types of international financial flows, countries should also make such capital flow developments an important part of their management of international reserves. In their contribution to the IADB volume, Calvo and Fernandez-Arias (2000) express skepticism about the usefulness of reserve management in this context and suggest that the greater are reserve levels, the greater will be capital outflows in a crisis. This is clearly an important area for further research, but a number of recent empirical studies have found that low levels of international reserves in relation to either the domestic money supply or short term foreign debt are highly correlated with the severity of contagion and that high levels of reserves appear to offer a good deal of protection.<sup>6</sup> This suggests that there is a good deal that can be done with respect to the better management of both asset and liability dollarization short of adopting official currency dollarization. Such considerations clearly do not tilt the balance of OCA criteria toward dollarization or other forms of fixed exchange rates. The key question, however is how far is the shift? Surely Hausmann [2000] goes too far when he argues that “in a floating economy that receives many real shocks, there is no incentive to save in national currency.” (p. 4) This is certainly true for very small, highly open economies, but not for larger ones. Again, not all Latin American economies are the same.

## 5. CONCLUDING EVALUATION OF THE POLICY ANALYSIS: BEYOND MORAL HAZARD VERSUS ORIGINAL SIN

For a largely uninformed audience, Hausmann chooses a very clear way to set up his article in *Foreign Policy* [1999]. The same tack is taken in his introduction to the IADB's conference volume. He sets up two contrasting views of the causes of the recent international financial crisis. The first, the moral hazard view, sees pegged exchange rates as part of the problem and flexible rates as the solution. The second, termed "original sin," sees financial problems as stemming from underdeveloped financial markets and looks to the adoption of a supernational currency as the answer.

In comparing the moral hazard and original sin hypotheses, Hausmann (2000) concludes that "the latter does a better job of explaining the facts" (p. 4). Hausmann's analysis is highly misleading, however. First, the presentation of evidence is highly slanted. Virtually all of the evidence presented is against the moral hazard view and in favor of the original sin hypothesis. I have little quarrel with the evidence presented. Indeed, my own research has also found considerable evidence against the hypothesis that moral hazard explains everything. (See Willett (1998) and Willett et al (2001). This extreme view, while not completely a strawman, has in fact been expounded by only a few. Its refutation clearly demonstrates that moral hazard was not the whole story, but this doesn't imply that moral hazard may not be an important part of the story. Hausmann seems to suggest that moral hazard has virtually no explanatory power. He states that "the problem with the moral hazard thesis is that it fails to explain the facts" (p. 6). This is true with respect to some of the facts, but far from all of them. Even those who agree with Hausmann's view that moral hazard did not play a significant role in generating the currency

---

<sup>6</sup> See the analysis and references in Nitithanprapas and Willett (2000).

crises would find it hard to support the view that financial systems were not “distorted by moral hazard” (p. 6).<sup>7</sup>

There is overwhelming evidence to conclude that both moral hazard and original sin played nontrivial roles in the recent crises and also that neither is anywhere close to a complete explanation. While Hausmann may well be right that original sin was more important than moral hazard, he does not present sufficient evidence for us to reach this conclusion.

More importantly, even if conclusive evidence were found that original sin does have more explanatory power than moral hazard, Hausmann’s policy recommendation for dollarization for all of Latin America would not logically follow since other factors are also important. He appropriately notes that dollarization is not a panacea and indicates that some costs would likely be involved, but his analysis excludes consideration of most of the traditional OCA criteria. His emphasis on original sin is an important addition to the OCA criteria, but it is hard to believe that it is such an important consideration that it makes all of the others irrelevant. Thus while Hausmann deserves nines or tens for debating cleverness and for emphasizing important considerations, his score for balance must be very low.

---

<sup>7</sup> For strong evidence that moral hazard affected risk premia on Korean banks, see Dooley and Shin (2000).



## References

- Burdekin, Richard, Heidi Nelson and Thomas D. Willett. 1999. "Central European Exchange Rate Policy and Inflation", in Richard Sweeney, Clas Wihlborg, and T.D. Willett, eds., *Exchange Rate Policies for Emerging Market Economies*, Westview Press.
- Calvo, Guillermo. 2000. "Capital Market Contagion and Recession: An Explanation of the Russian Virus", in Eduardo Fernando-Arias and Ricardo Hausmann, eds., *Wanted: World Financial Stability*. Washington, D.C.: Inter-American Development Bank.
- and Eduardo Fernandez-Arias. 2000. "The New Features of Financial Crises in Emerging Markets", in Eduardo Fernando-Arias and Ricardo Hausmann, eds., *Wanted: World Financial Stability*. Washington, D.C.: Inter-American Development Bank.
- and Carmen M. Reinhart. 2000. "Fear of Floating". NBER Working Paper No. 7993. Washington, D.C.: National Bureau of Economic Research.
- Dean, W James, Dominick Salvatore, and T.D. Willett, eds.. Forthcoming. *Dollarization in the Americas?*, Westview Press.
- Denzau, Arthur T. and Thomas D. Willett. 1999. "A Chile Plus Approach to Managing International Financial Flows". Claremont, Claremont Policy Briefs No. 3. (<http://www.lowe.research.mckenna.edu/publications.asp>)
- Dooley, Michael P. and Inseok Shin. 2000. "Private Inflows When Crises are Anticipated: A Case Study of Korea". Paper presented at Claremont Conference on The Political Economy of International Financial Crisis, December 1-2, 2000. (<http://www.spe.cgu.edu/econ/peifconference/papers/index.htm>)
- Eichengreen, Barry. 1999. "Toward a New International Financial Architecture: A Practical Post-Asia Agenda". Washington, D.C.: Institute for International Economics.
- Fernandez-Arias, Eduardo and Ricardo Hausmann, eds., 2000. *Wanted: World Financial Stability*. Washington, D.C.: Inter-American Development Bank.
- Frankel, Jeffrey A. and Andrew K. Rose. 2000. "Estimating The Effect of Currency Unions on Trade and Output". NBER Working Paper No. 7857. Washington, D.C.: National Bureau of Economic Research.
- Hausmann, Ricardo, Michael Gavin, Carmen Pages-Serra, and Ernesto Stein. 2000. "Financial Turmoil and the Choice of Exchange Rate Regime", in Eduardo Fernando-Arias and Ricardo Hausmann, eds., *Wanted: World Financial Stability*. Washington, D.C.: Inter-American Development Bank.
- Hausmann, Ricardo. 1999. "Should There Be Five Currencies or One Hundred and Five?". Foreign Policy Article, Fall 1999, p65-78.

- Martin, Pamela, Jilleen Westbrook, and Thomas D. Willett. 1999. "Exchange Rate Based Stabilization in Latin America" in Richard Sweeney, Clas Wihlborg, and T.D. Willett, eds., *Exchange Rate Policies for Emerging Market Economies*, Westview Press.
- Nitithanprapas, Ekniti and Thomas D. Willett. 2000. "A Currency Crises Model That Works: A Payments Disequilibrium Approach". Claremont, Claremont Working Paper 2000-25. (<http://www.spe.cgu.edu/econ/papers/index.htm>)
- Williamson, John. 2000. "Exchange Rate Regimes for Emerging Markets: Reviving the Intermediate Option". Washington D.C.: Institute for International Economics.
- . 1996. "The Crawling Band as an Exchange Rate Regime". Washington D.C.: Institute for International Economics.
- Willett, Thomas D. Forthcoming. "The OCA Approach to Exchange Rate Regimes", in James W. Dean, Dominick Salvatore, and T.D. Willett, eds., *Dollarization in the Americas?*, Westview Press.