

## **Open Economy Minsky-Keynes and Global Financial Crises\***

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### **Introduction: When Theory Matters**

In the 1930s mainstream economists reacted to the deepening crisis by abandoning the policies that derived from their macroeconomic theory, but without abandoning the theory. To quote Minsky:

Keynes' novelty and relative quick acceptance as a guide to policy were not due to his advocacy of debt financed public expenditure and easy money as apt policies to reverse the downward movement and speed recovery during a depression. Such programs were strongly advocated by various economists throughout the world. Part of Keynes' exasperation with his colleagues and contemporaries was that their policies did not follow from their theory [Minsky 1982: p.97].

Did this matter? Yes. As the post-WW II recovery took hold, various aspects of pre-1930s mainstream macroeconomic theory emerged from the closet to provide the theoretical rationale for a progressive whittling away of Keynesian policies. The notion that the self-adjusting properties of capital markets will move capitalist economies back to full employment-full capacity growth paths reappeared in various guises. The Great Depression was reduced to an aberration, the result of a worst case mix of bad policies that was unlikely to be repeated. Keynes had managed to get permanent acceptance of capital controls included in the Bretton Woods Articles of Agreement, a task greatly facilitated by the fact that Article VI legitimized controls already in place in most of the participating countries.<sup>1</sup> But with the post-war recovery the controls and the Bretton

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<sup>1</sup> Article VI is, however, a watered-down version of the original British draft proposal, which called for recipient countries to assist in the repatriation of illicit flight capital. The proposal was favored initially by the U.S. mission, but Wall Street-Treasury opposition forced the U.S. mission to pressure the British to accept a compromise excluding the collaboration requirement. This became Article VI. [Helleiner 1994].

Woods pegged exchange rate system itself came under increasing attack from Chicago for distorting resource allocation rather than correcting market failures.<sup>2</sup> Concurrently, the Neoclassical-Keynesian synthesis had refocused attention from the financial to the labor market as the fundamental source of cyclical instability. When a resurgence of speculative capital flows in the late 1960s threatened the pegged exchange rate system, it was intellectually facile for proponents of the synthesis to buy into the Chicago solution of flexible exchange rates and capital decontrol. By the early 1970s mainstream economists had reassumed most of the basic tenets and policies of their laissez-faire predecessors that Keynes had attacked.

Ironically, what had become the heterodox branch of Keynesian economists, with their perception of capitalist dynamics as crisis prone, won most of the post-war theoretical debates with their neoclassical-synthesis opponents. The capital theory controversy destroyed the validity of marginal productivity as the basic determinant of factor shares in an economy with heterogeneous capital, thereby undermining an essential component of the alleged self-adjusting properties of a capitalist economy. Minsky's financial instability hypothesis (hereinafter the FIH) further undermined the neoclassical claim that full employment was the unique rest point of long-run market dynamics. It emphasized that multi-period financial commitments linked to the construction and exchange of capital assets whose income streams are uncertain, necessarily cause the long-term growth path of laissez-faire capitalism to be path-dependent and crisis prone, in which periods of stable, full employment growth tend to self-destruct.

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<sup>2</sup> The canonical article was, of course, Milton Friedman's "The Case for Flexible Exchange Rates," Essays in Positive Economics [Friedman, 1953].

But the debate took place during the “Golden Age of Capitalism,” an era of unusually rapid and stable growth of output, employment, productivity and real wages. The industrialized countries were behaving as if stable full employment growth was the norm, rather than the exception, and economists had begun asking whether the business cycle was now obsolete. The heterodox may have won the theoretical debates, but factually their victories could be dismissed by the vanquished as small beer. Minsky could write about debt deflation and single out potential post-war crises that had been aborted by timely Fed interventions. But by the end of the 1970s even he was persuaded that “It” would not happen again, because big government and built-in stabilizers were a permanent feature of post-war capitalism that would act as an effective buffer against systemic liquidity crises and debt deflation. [Minsky, 1982].

So mainstream economists lauded the replacement of the Bretton Woods pegged exchange rate system in the 1970s by floating rates, persuaded that rapid rate adjustments would now abort currency speculation, and allow more national autonomy over macroeconomic policies. They hailed the progressive lifting of capital controls and the ensuing explosion of international financial flows in the 1980s as advancing the efficient allocation of global resources. The IMF, with assists from the World Bank, the OECD and regional development banks (collectively, the IFIs), began pressuring developing countries to “get prices right” by liberalizing imports, floating the exchange rate, lifting “financial repression” and capital controls, privatizing state assets, and adopting “sound” monetary-fiscal policies. Article VI, still part of the IMF’s charter, became an embarrassment, since the IMF was honoring it in the breach. It began campaigning in the

1990s to get the article replaced by one requiring all IMF members to commit to full capital decontrol.

Results have fallen well short of expectations. Real as well as nominal exchange rate volatility have kept increasing, as has currency speculation. The incidence of systemic bank and balance of payments crises with serious international repercussions have become more frequent, and most economies have fallen into a prolonged post-Bretton Woods growth slowdown. For a time the proponents comforted themselves that the fault lay in the implementation, not the strategy; governments needed simply to accelerate market liberalization and get the sequencing right. Proponents also took comfort from the volatility of the expanding capital flows. It meant that the financial markets were doing double duty. They were not merely allocating more global resources in efficiency enhancing directions, but were also moving the liberalization process along by rewarding “sound” policies with capital inflows and punishing “unsound” policies with capital flight.

However, long before the current international crisis broke out, “sound” policies began losing substance. In the so-called “first-generation” of crisis models, capital flight occurs because the government is trying to sustain excess aggregate demand that is spilling over into a growing import surplus, by using capital controls to protect an increasingly overvalued exchange rate. Financial capital, recognizing the fragility of the effort, begins exiting the currency through evasive channels. This drains official reserves, which opens the floodgates for an all-out speculative attack [Krugman 1979]. Eliminating excess demand by tighter monetary-fiscal policies and lifting capital controls would allow the exchange rate to settle at a speculation-free equilibrium. These measures

formed the core of the “sound” policy set on which the IMF conditioned its credits. But in the context of open capital markets, floating rates had undesirable feedbacks on the price level and on capital flows. Latin American countries, beset by near hyper-inflation in the aftermath of their 1980s debt crisis, shifted, with IMF acquiescence, to pegging or semi-pegging the nominal exchange rate to anchor the price level, which meant overvaluing the real rate, that is, “getting prices wrong.” Encouraging larger capital inflows—a major desideratum of the IMF—reinforced its acceptance of pegging the nominal exchange rate. The IMF continues to insist on “sound” exchange rate policy, but in the past decade it has been “talking the talk” without being sure which way to “walk.”

Balancing the budget, and raising interest rates, other major components of the “sound” policy package, have also been sandbagged by events. The speculative attack which broke up the semi-fixed Exchange Rate Mechanism (ERM) of the European Monetary System in 1992-93 succeeded in forcing devaluation on countries that had neither an unduly large current account nor fiscal deficit [Eichengreen and Wyplosz, 1993]. The event popularized “second generation” multiple equilibria models among academic economists, in which governments give in and reward the currency speculators with a depreciated exchange rate that reduces economic welfare because the economic and political costs of defending the existing rate against the speculative onslaught have become too high.<sup>3</sup>

The IMF, however, persisted resolutely in making monetary-fiscal austerity the centerpiece of its “sound” policy set through the first year of the Asian crisis. Since then,

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<sup>3</sup> Maurice Obstfeld, “Rational and Self-Fulfilling Balance of Payments Crises,” American Economic Review, Vol. 76, (May, 1986), is a prescient precursor of such models.

under attack from a growing segment of mainstream economists for needlessly worsening the Asian crisis, and fearing political upheavals, the persistence has become less resolute. In Thailand, Indonesia, and Korea, the IMF eased up in the second year and allowed substantial fiscal deficits in order to reverse declining aggregate demand, though that reflects a tactical adjustment rather than a doctrinal epiphany.<sup>4</sup> The current bailout packet for Brazil is conditioned on fiscal austerity and higher interest rates.

The essence of the criticism of the IMF, is *echt* Minsky FIH [Kregel, 1998], although most mainstream defectors dare not mention the name. The IMF has been severely worsening matters by applying “first generation” corrective policies—high interest rates and fiscal austerity—to situations where the immediate need was to minimize debt deflation by sustaining liquidity and aggregate demand and getting creditors to roll over loans and extend debt servicing while most of the indebted domestic firms and banks still had positive present value. Instead, the IMF policies produced interest rate spikes, credit crunches, and collapsing aggregate demand that maximized debt deflation, forcing a high proportion of the domestic firms and banks to become Ponzi units, i.e. insolvent.

With the Asian crises worsening Japan’s and spreading to other regions, “there is, in short, a definite whiff of the 1930s in the air.” [Krugman 1999; p.58]. “It” may indeed be happening again. Krugman’s recent essay is especially interesting because his assessment of, and policy prescriptions for, the unfolding crisis, Minskyish in all but name, are at odds, as he candidly admits, with the neo-classical-Keynesian synthesis to

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<sup>4</sup> This is the thrust of IMF-Supported Programs in Indonesia, Korea and Thailand: A Preliminary Assessment, by the IMF’s Policy Development and Review Department, and of the interview with Jack

which he still adheres. It raises again the question, if the policies are appropriate does it matter if the theory is not?

Again the answer is yes. Krugman sees the 1990s “It” as merely another anomaly rather than a systemic phenomenon. Emergency measures are required: developing countries should adopt capital controls; Japan, caught in a liquidity trap, should try harder to inflate; other industrial countries should avoid the liquidity trap and minimize debt deflation by reorienting monetary policy to low inflation rather than price level stability. But the long-run still belongs to the neoclassical-Keynesian synthesis plus the Philips Curve, although with free capital mobility also a long-run desideratum, the “impossible trinity” limits the feasible exchange rate choices to either floating or forming currency unions within optimum currency areas. Thus while Krugman’s prescription for the current crisis is heterodox, his perspective on longer-term reform of the “architecture” of the international financial system in order to minimize the recurrence of future “Its” remains largely shaped by orthodox notions about capital market dynamics that are at odds with the FIH and its policy implications.

A fundamental implication of the FIH is that without restrictions on capital market dynamics neither exchange rate choice is a barrier against crises. Minsky, however, placed his FIH theorizing and policy implications in a closed economy setting. Does free capital mobility reinforce or undermine its insights? I contend that it reinforces the relevance of the FIH, but weakens the relevance of the major policy inferences that Minsky drew from it. Nevertheless, a weaker set of stabilizing policies compatible with the FIH may be technically and politically feasible, despite constraints of national

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Boorman, the head of the department, as reported in the IMF Survey, January 25, 1999.

sovereignty and the heterogeneity of the world economy. The remainder of this paper elaborates on these contentions.

### **The Financial Instability Hypothesis vs. the Efficient Market Hypothesis in a World of Open Capital Accounts**

At first glance, a world of open capital accounts appears to undermine the relevance of the FIH. Unless all countries are simultaneously in the fragile phase of their domestic FIH, those in that phase should by raising interest rates sufficiently be able to abort incipient credit crunches and debt deflation by drawing in capital flows from countries in the more robust phase of the FIH. But the FIH also holds that the fragile phase is the outcome of increasing leveraging by both borrowing firms and lending banks, and ebullient overvaluation of capital assets by the equity markets which deteriorates the quality of loan collateral. The liquidity squeeze that ensues and brings on a financial crisis is due to a sharp upward reassessment of lender risks. An inflow of foreign finance that aborts the crisis therefore implies that foreign lenders disregard this reassessment.

The case for opening capital accounts globally rests on micro-foundations that validate such disregard. The inflows are normal responses because financial markets, absent regulatory distortions, behave efficiently. They are composed of rational wealth-maximizing entities who therefore strive to process correctly all available information about the fundamental factors that determine the yields and risks of loans and of the capital assets that collateralize the loans. Lenders operating in a lower interest rate environment will always be attracted to higher interest borrowers, provided the interest spread is high enough to incorporate the lender's correctly assessed risk premium.



Lifting capital controls merely extends these efficient market dynamics to the global economy. The FIH is inapplicable not only to open economy financial relations but to closed economy ones as well.

Both the FIH and the EMH are simplified approximations intended to highlight the essentials of complex dynamic processes and to inform policy. The EMH, however, has been forced to attach successive ad hoc qualifications, Ptolemaic fashion, to its core premises and associated policies in order to protect them from falsifying events. On the other hand, while the FIH in its current state falls short of adequately explicating open economy financial dynamics, it can be readily improved without abandoning its basic structure.

Thus from the EMH perspective the rapid expansion of portfolio and direct capital flows accompanying the decontrol of the OECD capital markets must have represented a major transfer of real resources to more efficient uses. Yet Martin Feldstein and associates have convincingly shown that the high correlation between domestic savings and investment that prevailed in the OECD countries prior to decontrol declined only negligibly after decontrol [Feldstein 1994]. What have declined precipitously from 1960s rates in all the OECD countries have been the growth rates of labor, capital and total factor productivity of the business sector, and somewhat less precipitously, real GDP growth rates [Felix 1997/98, tables 2, 6]. Such trends patently contradict the improved efficiency claims.

Global forex transactions per trading day have risen from \$18 billion in 1977 to \$1.5 trillion in 1998, and from 3.5 times the global export of goods and services in 1977

to 60 times in 1998 [Felix 1997/98, table 1; Economic Report of the President 1999, Box 6-1]. The connection between forex flows and trade financing has obviously been attenuating as has the impact of trade imbalances on exchange rates. For a time EMH adherents lauded these developments as efficiency enhancing, since much of the rising forex flows related to greater hedging against exchange risk, and increased opportunities for beneficial arbitraging of asset prices that the opening of capital markets made possible. But the increased hedging demand has been provoked by the greater exchange rate volatility which the increasing forex flows were producing. The creation of novel hedging instruments by financial houses, moreover, not only spread risks but created new ones by extending the chains of liability commitments linked to the hedging operations. And since risks can only be hedged incompletely, the financial innovations have expanded opportunities for speculative position-taking as well as for profitable arbitraging, all of which have fed exchange volatility, motivating yet more forex trading. A decade ago a London banker summarized the dynamic as follows:

A more controversial feature of the new shape of the financial system is that the bulk of its participants now have a vested interest in instability. This is because the advent of the high-technology dealing room has raised the level of fixed costs. High fixed costs imply a high turnover is required for profitability to be achieved. High turnover tends to occur only when markets are volatile. The analysts at Salomon Brothers...put it clearly. "Logically the most destabilizing environment for an institutional house is a relatively stagnant rate environment" [Walmsley 1988, p.13].

A decade later, a Wall Street risk consultant observes: "When one considers that risk management in the early 1970s consisted almost entirely of the evaluation of credit risk, it is breath-taking to consider the galaxy of risks we track, analyze, and manage today." The observation is supplemented by a "partial listing" of the galaxy containing 45 different categories of risk [Beder 1997, p.347].

Disconcerting also was the rising incidence of banking and currency crises. An IMF survey reports that during 1980-95 thirty-six of its 181 members had one or more systemic banking crises, and 108 others had one or more periods of “significant banking problems,” defined as “extensive unsoundness short of a crisis” [Lindgren et al. 1996, Annex 1]. These numbers have, of course, risen significantly since 1995. A prominent econometric paper found a strong correlation between the liberalizing of domestic financial markets and the incidence of banking and currency crises [Kaminsky and Reinhart 1996]. The IMF also reports that in a sample of 50 recent currency crises, the cumulative loss of output averaged around 15% of GDP [IMF 1998].

Although the IMF survey reported that three-fourths of the OECD countries had also suffered systemic banking crises or “significant banking problems,” proponents of financial liberalization focused on developing country problems, offering contradictory but equally embarrassingly timed advice on how to integrate successfully with the global financial markets. Following the 1995 Mexican crisis and the ensuing *tequila* contagion, the World Bank shifted to an evolutionary approach. Its 1997 research report, Private Capital Flows to Developing Countries: the Road to Financial Integration, arrays developing countries along a continuum. At the low end are countries that were early in the process of absorbing capital flows effectively, because they still lacked “a sound macroeconomic policy framework...a sound domestic banking system with an adequate supervisory and regulatory framework, and a well-functioning market, infrastructure and regulatory framework for capital markets.” Developing countries in the early stages should approach foreign capital cautiously, using capital controls to reinforce defenses against sudden surges and withdrawals. Those who have completed the requisites for full

financial integration, however, should go for it. Accelerating the movement along this evolutionary path is the increasing skill of international financial markets in assessing developing country payoffs and risks. “Contagion effects of the kind seen after the Mexican crisis are not likely to be long-lasting.” Indeed, “aggregate net private capital flows to developing countries are likely to be sustained in the short to medium term because of the continuing decline in creditworthiness risks and other investment risks, the higher expected returns in developing countries, and the fact that these countries are underweighted in the portfolios of institutional investors [World Bank 1997, pp.2-5,78].

To measure movement along the continuum the report constructed a financial integration index. In 1985-87 only Korea and Malaysia ranked as “highly integrated,” but by 1992-94, 13 developing countries were “highly integrated” and 23 were “medium integrated.”<sup>5</sup> However, since three of the highly integrated—Argentina, Mexico and Turkey—had nevertheless suffered major financial crises in the first half of the 1990s, stable financial integration required still other requisites, such as the balanced budgets, high savings rates and export-oriented investment that had enabled the East Asian countries to fend off the “tequila effect” in 1995. Indeed,

The most dynamic emerging [capital] markets, where progress has been particularly intense during the past five years, include most of high-growth Asia (Korea, Malaysia and Thailand, with Indonesia and the Philippines not far behind). The East Asian markets stand out for their depth and liquidity, and because of efforts undertaken in the 1990s, their infrastructures are now equal to those in Latin America [World Bank 1997, p.59].

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<sup>5</sup> The index averages a country risk rating, a capital flow/GDP ranking, and a flow composition ranking which gives greatest weight to portfolio inflows and bank loans [World Bank 1997, Box 1.1].

Unfortunately for the report's evolutionary theory, forecasting skills and market timing, all five highly integrated East Asian economies bit the dust as the report reached the bookstores.<sup>6</sup> It dropped from sight soon after.

The OECD was another victim of mistimed publishing. In contrast to the World Bank, its remedy for the burst of financial crises was to speed up the financial liberalization process. According to its projections, that would elevate per capita GDP of the "non-OECD world" by 270% by year 2020, compared to only a 100% increase, were the pace not accelerated [OECD 1997]. The report's optimism relied heavily on the dynamism of the "emerging non-OECD economies...from Asia and Latin America" led by the "Big Five of Brazil, China, India, Indonesia, and Russia" [OECD 1997; preface]. This report, which also appeared as the Asian meltdown was gathering momentum, also faded quickly from circulation.

A recurring obligato accompanying the crisis-strewn path of financial globalization has been mistaken optimism that improved transparency of information, the successive Basle Accords to tighten prudential bank regulations, and learning-by-doing improvement of lending skills by the lending institutions would stabilize the financial flows. At the 1979 conference on "Financial Crises and the Lender of Last Resort" (papers published as Financial Crises: Theory, History and Policy, Charles P. Kindleberger and Jean-Pierre Laffargue editors, Cambridge U, Press 1982) the paper dealing with rising developing country indebtedness observed optimistically:

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<sup>6</sup> It appears to have been intended for broad circulation as a didactic sequel to the World Bank's East Asian Miracle.

Fortunately, the data published by international organizations (BIS, World Bank, IMF), by various national monetary authorities, and by some international banks have been considerably improved in recent years, as part of a deliberate move toward better coverage and understanding of international banking transactions, to help the bankers themselves in decision processes for lending abroad, in particular, in assessing country credit risks....no country has yet been forced into default, and it remains doubtful that this could occur [Metais 1982, pp. 223-225, 232, footnote 11].

Two years later the Third World debt crisis required a concerted bailout to stanch an international banking crisis.

Greater transparency was also the centerpiece of the G-7 response to the 1995 Mexican crisis, which authorized the IMF to establish a Special Data Dissemination Standard that,

“offers countries having, or seeking, access to international capital markets, a voluntary means of providing regular, timely and comprehensive economic data. A key feature of the implementation...will be an electronic bulletin board maintained by the IMF at a World Wide Web site on the Internet” [IMF Survey September 9, 1996, p.290].

Two years later, the Asian crisis led the BIS to observe exasperatedly that “in spite of the ready availability of BIS data showing increasing vulnerability of some of the countries to a sudden withdrawal of short-term international loans, the volume of these loans simply kept on rising” [BIS 1998].

Similarly, each successive Basle Accord to tighten prudential supervision has been a reaction to near global financial crises that exposed deficiencies of the previous accords. The deficiencies reflect the dark side of the skill-enhancing learning process. It has enabled the supervised banks to devise evasive innovations that keep the Basle Committee on Banking Supervision behind the curve.

In reacting to these “anomalies” academic economists have followed two contrary paths. The new open macroeconomics of the 1980s extends the prevailing mainstream obsession with the need to anchor macroeconomics on firm neoclassical “microfoundations” to international trade and finance. The “law” of one price, purchasing power parity and the EMH should prevail in the medium-term, because with the world economy moving ever more closely to free trade and free capital mobility, rational maximizing agents were offered increasing scope for taking positions based on “sound fundamentals.” This implies that relatively stable real exchange rates should prevail. The other path has been to test these premises and conclusions empirically. These tests, conducted mostly on data from the industrialized countries, roundly reject the conclusions and most of the premises. In a recent survey of the tests, Charles Engel summarizes the results as follows [NBER Reporter Winter 1998/99]:

1. “The failure of the law of one price accounts for over 90 percent of real exchange rate variations. In many cases it accounts for 98 to 99 percent of the variation.”<sup>7</sup> [p.15]
2. Purchasing power parity can be teased from very long-term data sets (100 years or more), but for shorter intervals within this span, the effects of different monetary regimes dominate real exchange rate volatility. “Generally, when nominal exchange rates are floating, the transitory component of the real exchange rate is highly volatile; when the exchange rate is fixed, the transitory component is very quiescent.” [p.15]
3. Short and intermediate-term exchange and interest rate dynamics currently are best explained by the Frankel-Froot model [J. Frankel and K. Froot 1990], in which forex trading is dominated by “chartist speculators who do not evaluate investment opportunities rationally, but instead chase trends.” [p.17].

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<sup>7</sup> The tests compare the variance of prices of the same goods between countries with the variance of prices between different goods within countries. For a large array of data sets, the between country variance dominates the within country variance.

Yet Engel, who has contributed importantly to this critical testing, is still intimidated enough by the neoclassical microfoundations's restrictive concept of rational behavior to add this cautionary conclusion:

From the modern (1990s) perspective, the shortcoming of the Frankel-Froot model is that it allows irrational herding behavior by economic agents. Additional serious research is needed to understand whether nonfundamental speculation can really drive short-run behavior of exchange rates [p.17].

An essential step toward developing an alternative Minsky-Keynes open economy macroeconomics is, therefore, to anchor it to a view of rational behavior that's more appropriate to the behavior of the agents who dominate trading in asset markets. This requires disaggregating position-taking in the organized capital asset markets beyond Minsky's tripartite hedge, speculative and Ponzi behavior, by elaborating Keynes' beauty contest metaphor of Chapter 12 of his General Theory. Such markets are dominated by market-timing agents, whose short-term trading, financed by bank credit, provides most of the market liquidity. Position-taking by a rational trader must necessarily be based on assessing short as well as long-term determinants of the movement of asset prices within his trading horizon. It would also be irrational for him to assume that his assessment of each determinant, and his trading horizon, are identical to those of other traders. His trading response to news affecting fundamental determinants requires, therefore, that he also assess the likely response of other traders, in the knowledge that those responses also include an assessment of how he will respond.

Since *a priori* deductions of the state of other traders' expectations involves an infinite regress into subjectivity, rational traders must resort primarily to inductive reasoning. There is no way for them to validate their expectational hypotheses other than



by applying them and observing the results. Inductive reasoning is a rational decision process that precludes maximizing decision making. Heterogeneous traders inductively arriving at a common set of expectations would be a special case, based not on reaching general consensus on the “true model” of how fundamentals determine equilibrium prices, but on a confluence of judgments about likely reactions of traders to news about variables that impact short and long-term expectations. Such equilibria are likely to be unstable, producing asset price bubbles and crashes.

The conditions for an expectational equilibrium to emerge among heterogeneous traders is being explored through non-linear dynamic (chaos theory) modeling. Mimicking markets made up of heterogeneous traders with varying beliefs and feedbacks requires models that are too complex for determinate solutions, but allow numerical experimentation. Brian Arthur and his Santa Fe Institute colleagues report the following results of their experiments [Arthur et al 1997]:<sup>8</sup>

We find that if our agents very slowly adapt their forecast to new observations of the market’s behavior, the market converges on a rational expectations regime. Here ‘mutant’ expectations cannot get a profitable footing....Trading volume remains low. The efficient market theory prevails.

If, on the other hand, we allow the traders to adapt to new market observations at a more realistic rate, heterogeneous beliefs persist, and the market self-organizes into a complex regime. A rich ‘market psychology’—a rich set of expectations—becomes observable. Technical trading emerges as a profitable activity, and temporary bubbles and crashes occur from time to time. Trading volume is high, with times of quiescence alternating with times of intense market activity. The price time series shows persistence in volatility...and in trading volume....individual behavior evolves continually and does not settle down [p.301].

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<sup>8</sup> The experiments consisted of varying parameters of a non-linear model that allows feedbacks to modify trading strategies, and applying it to the Santa Fe’s computerized Artificial Stock Market to generate alternative numerical runs. Embedded in the non-linear model is an expectational equilibrium. But whether the traders converge on it depends on the nature and speed of their reactions to the changing sets of prices, volume, yields, etc., generated by the computer runs.

An expectational equilibrium, it must be emphasized, merely means a convergence of trader expectations about asset prices. The inference that they are guides to the optimal allocation of resources in the real economy would be unwarranted. George Soros' concept of reflexivity similarly stresses the self-referential formation of financial market expectations in his critique of the EMH [Soros 1994]. The inference that is warranted is that the neoclassical microfoundations are a poor basis on which to erect macroeconomic theory, whether open or closed.

The FIH gives direction to the above taxonomy. Financial markets become progressively more active during self-reinforcing runs of optimistic expectations, sustained by the increasing willingness of banks to fund leveraged position-taking by speculating traders. But the effect on new investment and credit risk according to the closed economy FIH has to be broadened in an open economy version to incorporate exchange rate and other risks generated by free capital mobility, because these impact not merely the level but also the composition of investment. That is, the increasing volatility of interest and exchange rates raises the hurdle rate, which tilts investible funds toward projects with faster expected payoffs.<sup>9</sup> Perceptions of credit risk may continue to decline, but a rising hurdle rate will concurrently steer investible funds toward shorter gestation projects: toward mergers and acquisitions rather than greenfield construction, and toward increasing "stockholder value" via share buybacks, and speculative financial forays. The declining growth rates of productivity and real GDP in the OECD countries that have

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<sup>9</sup> The hurdle rate is the minimum expected return that induces investment in projects involving front-end outlays—that is, fixed costs—and delayed revenue flow. Since information about the time-shape of future costs and revenues become more uncertain the longer the life of the project, delaying the project may reduce risk by allowing more information to be gathered. The hurdle rate of return adds a premium for "waiting" to the cost of capital in investment calculations. The premium is the present value of the

accompanied the shift to floating exchange rates and the lifting of capital controls appear to reflect this dynamic.

Thus an increasing share of resources has been drawn to activities that supply liquidity and transfer ownership and risk. From the mid-1950s on, the share of GDP in each of the G-7 countries devoted to Finance, Insurance, and Real Estate (FIRE) has risen almost monotonically. Until the mid-1970s, the rising FIRE/GDP ratios were paralleled by rising real growth rates of non-financial goods and services, supporting the conventional view that financial deepening promotes real growth. Since then, however, the real growth of the non-financial sectors of each of the G-7 has fallen off even more than has real GDP growth, suggesting that the post-Bretton Woods rise of FIRE/GDP has been crowding out non-financial growth [Felix 1996; Charts 1-7]. Other data show that the share of the OECD labor force employed in finance proper rose 21% higher and the share of OECD investment in finance rose 104% higher in 1980-93 over their 1970-79 averages [Edey and Hviding 1995; Table 2]. Since 1975 financial services has been the fastest growing component of international trade, rising at 13% per annum, while FDI in financial facilities led the overall growth of FDI in services during the 1980s [OECD 1994, pp.38-40].

In sum, the claim that major welfare gains have ensued for both the industrial and developing countries from decontrolling capital markets has been, in Bhagwati's trenchant phrase, "banner waving." [Bhagwati 1998]. Instead of citing empirical support

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expected income stream from postponing the project divided by the expected PV of starting the project now. Greater expected volatility raises the hurdle rate, as in option pricing[Dixit 1992].

that such gains have ensued, the claimants have been tautologically trumpeting their theoretical claims as *a posteriori* proof.<sup>10</sup>

The most vulnerable participants in the globalizing financial system, the developing countries with their thin financial markets and more limited technological and managerial flexibility, have tried to strengthen defenses against currency runs by building up forex reserves. In 1997 they held 55% of global official reserves while doing less than 25% of global trade. With the dollar as the chief vehicle currency for trade and capital flight, a complex but unstable symbiosis has emerged between the U.S., the developing countries, and the rest of the OECD. Thus far it has benefited the U.S. economy at the expense of the others, but its dynamics include adverse feedbacks that are likely over time to erode the U.S. gains.

The U.S. benefits to date extend well beyond seignorage gains, which most estimates put at between 0.5 and 1.0 percent of U.S. GDP.<sup>11</sup> The collective response of developing countries to their contagious currency crises has been to increase their desired reserve levels and to try to reach these levels by intensifying their exporting to the

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<sup>10</sup> Two recent OECD studies are illustrative. One study, on estimating that half the rise of real long-term interest rates between the 1970s and 1980s was due to financial market liberalization, concludes that the large increase is a measure of the prior “distortion” that liberalization eliminated [Orr et al. 1995]. The second study acknowledges that whether the declining cost of financial transacting and the increased size and diversity of financial services resulting from financial liberalization has produced welfare gains, “depends on judgments about the value of the financial services being provided, in particular, the extent to which the increased financial activity is viewed as being of economic benefit rather than representing excessive or unnecessary financial churning.” But then without citing any supporting real economy data, the study concludes that the benefits were indeed substantial. The lifting of interest rate controls and “regulation-driven credit rationing” must have improved allocative efficiency by “opening up opportunities for international portfolio diversification” and by removing a distortion, whose importance is indicated by the substantial increase of the margin between interbank and bank-customer lending rates in the OECD countries after 1980 [Edy and Hviding 1995].

<sup>11</sup> The following points have benefited greatly from a personal communique from Dr. Srinivas Thiruvadanthai.

industrial countries, which has been deflating prices for imported consumer goods and industrial materials. However, because of the premier position of its currency, the U.S. has been able to export the dollar at will in exchange for these imports, i.e., run increasing trade deficits without being forced to raise its short-term interest rate to deter capital flight. Were more developing countries to shift in desperation to currency boards or, as in the case of Argentina, from currency board to complete dollarization, they would be further increasing the capacity of the U.S. to fund rising trade deficits. That is, the incessant demand for more dollar reserves by developing countries to protect against currency crises keeps overriding the corrective mechanism of conventional analysis, in which increasing foreign liabilities should limit the size of U.S. trade deficits, because foreign holders become unwilling to hold more dollars except at higher dollar interest rates. The other industrial countries, on the other hand, while benefiting from the improved terms of trade, have had to pay for their cheapened imports with exports and higher short term real interest rates.<sup>12</sup>

The dark side for the U.S. is that its dollar exporting is deepening a “Dutch disease” dilemma. U.S. residents whose income and wealth comes from ownership of financial assets, or who are employed in skilled positions in the non-traded goods sector, have garnered the lion’s share of the benefits. Those in the traded goods sector, on the other hand, have suffered losses of high productivity manufacturing and primary sector positions and an out-migration of labor to low wage service sector jobs. The result is a resurgence of Wall Street-Main Street tensions over monetary and trade policy with

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interesting implications for the current debates over reforming the “architecture” of the global financial system.

Also threatening the favorable U.S. dynamics is the emergence of the *euro* as a potentially major alternative vehicle currency, and the diverging positions between the U.S. and most of the other G-7 on financial crisis management. Washington is encountering increased difficulty getting the other G-7 countries to keep contributing to the IMF bailouts and to acquiesce to its hands-off position on floating exchange rates and free capital mobility.

Finally, the industrialized countries, most of all the U.S., have been basking in asset price trends that, as per the FIH, appear unsustainable. Since 1982 real interest rates on 10-year government bonds of each of the G-7 have averaged around twice their Bretton Woods averages [Felix 1997/98: Table 7]. Capital decontrol appears to account for most of the difference. That is, in the Bretton Woods era, when capital controls were in place in most of the G-7, the only easy options open to holders of long bonds anticipating inflation from a credit-easing policy, were to shift to shorter-term bonds or to equities. Both moves tended to reinforce the policy goal of bringing output and employment closer to capacity. But with the capital decontrol of the 1980s, quick, easy movements by institutional investors between domestic and foreign bonds and equities, and covered and uncovered interest arbitraging by banks and hedge funds, countered efforts to lower real interest rates, short and long. The U.S. has been only a partial exception. The reserve currency dominance of the dollar has allowed the Fed greater

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<sup>12</sup>The real short-term interest rates of all the G-7 except the U.S. and Japan have risen since the mid 1980s to far above their 1960s averages [Felix 1997/98; Table 8]. The Japanese exception is associated with its

scope for lowering short-term real interest rates than has been permitted other G-7 central banks, but that advantage has not extended to long-term real rates.

The high long-term real rates presage a deepening of the current globalizing crisis. From the early 1980s on, they have been exceeding GDP growth rates by a rising percentage in each of the G-7. In the past decade, interest rates on 10-year governments have averaged more than double the GDP growth rates. The only historic parallel for this is the inter-war era, with the depressed 1930s accounting for most of the GDP growth shortfall. By contrast, during the pre-WWI Gold Standard era real interest and real GDP growth rates were equivalent [Felix 1997/98: Table 9]. With debt expanding faster than GDP since the early 1980s, the rentier share of G-7 income has been rising persistently. High real interest rates should deter investment, but they have merely held back real not financial investment, as is evidenced by the explosive growth of M & A and equity prices. Capital's overall share of national income has thus been rising, and since bonds and equities are mostly held by the top income decile, household income and wealth concentration has also been rising. Capital's share can't reach 100%. But stabilizing speculation seems far less likely to bring about a smooth asymptotic leveling of the share than are collapsing asset bubbles and political backlashes to terminate this open economy manifestation of the FIH in a hard landing, approximating--hopefully not too closely--that which terminated the 1920s asset price boom.

### **Reforming the “Architecture” of the Global Financial System**

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prolonged depression; whereas the U.S. exception coincides with its relatively prosperity..

So is it *adios* EMH and *bienvenido* FIH? Not quite. The need to reform the “architecture” is now generally acknowledged, as is the need to reduce the volatility of short-term capital flows and the excessive reliance of developing countries on short-term external financing. But EMH thinking still imbues mainstream reform proposals, while Minsky’s closed economy policy advice for thwarting financial crises needs adaptation to open economy conditions.

Washington and the IMF now include proposals to improve risk assessing by the major financial markets and to improve bank supervision, along with a litany of reforms directed at developing country financial management [Cf. Group of 22 Reports 1998]. They have also quietly suspended their twin crusades to universalize the adoption of capital decontrol and the Mutual Agreement on Investment (MAI). However, the premise that the freedom of capital to move globally is a major public good remains intact. The intent is to resume the two campaigns when the current crisis has subsided. The proposals for improving risk assessing and bank regulation single out the same targets—inadequate information and transparency, better value-at-risk bank procedures—that successive architectural reforms since the first Basle Accord have aimed at. That this time they’ll finally get it right presumes that the EMH can finally be validated.

The proposals, however, bring to mind the old vaudeville interchange between two drunks fighting off imaginary leprechauns. “Close the door! They’re comin’ through the window! Close the window! They’re comin’ through the door!” That is, proposals to reduce excessive risk-taking by banks and institutional investors would increase contagion, while those that might reduce contagion would increase bank and investor risk.



The value-at-risk (VAR) models used by banks to lessen the riskiness of their proprietary trading, hedge fund financing, and customized derivative mongering, are charged with not only encouraging excessive risk-taking by the banks, but also with intensifying contagion effects [Cf. Folkerts-Landau and Garber 1998]. By relying on backward-looking variance-covariance matrices and normal risk distributions they tended to underestimate the probability of large losses from taking long and short asset positions (the flaw that bankrupted the Long Term Asset Management hedge fund). Contagion was intensified because a volatility event in one country automatically generated an upward re-estimate of credit and market risk in a correlated country, which triggered automatic margin calls and tightening of credit lines in both countries. Such risk control methods help explain why Malaysia's capital controls and Russia's default produced a widespread cutoff of lending to developing countries. Tightening VAR methodology to lower risk-taking by banks is likely to strengthen contagious reactions.

Bond rating agencies are also caught between conflicting goals. They have been criticized for down-grading Asian bonds too late to alert investors pre-crisis, and then for "reactive downgrading of Asian sovereign ratings from investment grade to 'junk status,' [which] reinforced the region's crisis...by forcing institutional investors who are required to maintain investment-grade portfolios to offload Asian assets. In response the rating agencies, having begun downgrading Latin American assets because of contagion risks rather than solely because of deteriorating fundamentals, are being accused of thereby reinforcing global crisis contagion" [Reisen 1998, p.19].

Conversely, a recent OECD policy brief [Reisen 1998] offers two proposals to reduce contagion that would surely increase investor risk. One is to remove investment-

grade requirements for pension funds and other bond-holding institutions and force them “to rely on their own judgment, rather than moving like herds on rating signals.” The other attacks the 1988 Basle Accords for assigning only a 20% risk-weight to bank loans of less than a year, and a 100% risk-weight to longer-term loans. This biases banks to lend short-term to developing countries and to engage in excessive inter-bank lending. The policy brief proposes removing the “distortion” by equalizing the risk-weights. But the weights were designed to correct the excessive maturity mismatching between their short-term liabilities and the medium-term loans to developing countries that had brought major international banks to near insolvency in the early 1980s debt crisis; which proves that in finance one man’s “distortion” is another’s “correction.”

Improving risk assessment by requiring more timely and accurate data about foreign borrowers is another proposal that’s unlikely to prevent herd behavior by lenders. Prior to the Asian crisis, “in spite of the ready availability of BIS data showing increasing vulnerability of some of the countries to a sudden withdrawal of short-term international bank loans, the volume of these loans simply kept rising” [BIS 1998]. This was in part because banks were securitizing their loans and then marketing the securitized bonds, shifting the credit risk to the bondholders. Securitizing also removed loans from bank balance sheets, enabling them to evade the risk-equity requirements of the 1988 Basle Accords and leverage a larger volume of loans from their equity. But diverse bondholders are more prone to herd behavior than are large banks. As Wall Street economist John Lipsky observes, “in a world of mobile, securitized capital, there is little likelihood that the IMF staff will be able to construct a credible stabilization program, including the needed structural reforms under crisis conditions in a matter of days”

[Lipsky 1998]. Thus when market nervousness sets in, the timely publicizing of negative information is likely to exacerbate panicky withdrawal and contagion. Fear of such a reaction dissuaded the U.S. Treasury and the Fed from publicizing their adverse assessments of Mexico's financial health until after the crisis broke out [Wessel et al. 1995].

All this fits the FIH view that financial market dynamics are inherently too unstable to be left alone after a one-time fix. Minsky, however, couched his stabilization advice in a closed economy setting. He assumed a single central bank that could effectively intervene as lender of last resort (LOLR) and a large public sector with a progressive tax structure and expenditure commitments that would allow automatic fiscal stabilizers to set a high floor under aggregate demand. His “anti-laissez-faire theorem,” an in-your-face rejection of the EMH's contention that “policy surprises” are the main destabilizers of market behavior, also requires an activist government able to impose timely new “thwarting mechanisms.” [Ferri and Minsky 1992].<sup>13</sup> Adapting these *aperçus* to a global setting of decontrolled financial markets with no global LOLR, and national economies with varying policy goals, is, however, a complex exercise in political economy. Barry Eichengreen splits the current spate of architectural reform proposals in two groups: those that are “singularly unrealistic” and those that are “singularly unambitious.” In the first group he places—justifiably in my view—proposals for an international central bank to act as global prudential overseer and LOLR, an international

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<sup>13</sup> “Where the internal dynamics imply instability, a semblance of stability can be achieved or sustained by introducing conventions, constraints, and interventions into the environment. The conventions imply that variables take on values other than those which market forces would have generated: the constraints and interventions impose new initial conditions or affect parameters so that individual and market behavior change” [Ferri and Minsky 1992, pp. 20-21].

bankruptcy court to settle debt conflicts, and other visionary schemes that demand massive institutional and political transformations to become feasible. In the second group he puts mainstream proposals, such as cited above.

Escaping this depressing taxonomy, however, may be collective action shaped by the FIH, for a minimalist reprise of Bretton Woods. Recall that the Bretton Woods system was able to reconcile national and global stability needs fairly well for a quarter-century, facilitating, by most welfare criteria, “the Golden Age of Capitalism.” The conditions that accounted for its success—capital controls, a United States with the capacity to act as LOLR to the capitalist world, and Cold War anti-Communism as a motivating ideology—have since dissipated. But a modest approximation of Bretton Woods compatible with today’s changed conditions is technically, and may be becoming politically, feasible. The approximation requires implementing two interrelated reforms of the global financial architecture. One is a Big Three agreement to reduce exchange rate volatility by bounding the cross-rates between the dollar, euro and yen within a target zone, with the other economies left free to tie their currencies tightly or loosely as they see fit to one of the three reserve currencies. The second, directed at weakening the capacity of financial markets to break up band arrangements, is a collective agreement to tax global forex transactions along the lines of the Tobin tax proposal.

Bounding the Big Three currency fluctuations provides a looser equivalent of the fixed dollar-gold price that had anchored the Bretton Woods adjustable peg system. To be effective, the Big Three would have to intervene jointly in the forex market to keep exchange rate fluctuations within the target zone. With open capital markets they would also have to subordinate other monetary-fiscal policy goals to the task. But the ease with

which rampaging capital flows broke up the 1987 Louvre target zone agreement and the ERM makes clear that protecting a Big Three target zone from such rampages is essential. A global Tobin tax could not only perform this task, but could also substantially reduce the collective coordination of monetary-fiscal policies required to sustain the target zone.

Tobin's proposal for an international agreement to tax forex transactions at a small, uniform rate offers a "market friendly" way of deterring capital market rampages. Instead of pointy or round-headed bureaucrats trying to screen out hot money flows under a direct capital controls system, the tax leaves the screening to the markets. Around 80% of the \$1.5 trillion global forex transactions per trading day are legs of round trips of a week or less. Most relate to arbitraging and open speculating by currency dealing banks, investment houses, hedge funds and multinational corporations, seeking to profit by taking large short-term positions to exploit small, transitory margins. A small tax on all forex transactions would cut heavily into these margins and return on capital. It would impact negligibly the return on capital from international trade and FDI, since these involve much longer round trips and much higher profit margins per round trip. Moreover, the tax on trade and FDI forex transacting would be compensated by reduced exchange risk and hedging needs attendant on more stable Big Three cross-rates.

The tax would help stabilize exchange rates in two additional ways. The tax revenue would substantially increase the resources available to the monetary authorities to counter-speculate in the forex markets. And reducing currency arbitraging would lessen the macro-policy coordination needed to sustain the target zone arrangement. The last is because the tax widens the interest rate differentials across currencies required to

make arbitraging profitable. Indeed, the increased scope that the tax would provide national economies to implement full employment and other welfare goals without being immediately sandbagged by anticipatory capital flight is what originally motivated Tobin to propose the tax. By slowing the reaction speed of the globalized financial markets, the tax would allow welfare oriented policies more time to manifest results.

The tax effects vary non-linearly with the size of the tax, the response elasticities, and enforcement leakages. A recent set of conference papers sponsored by the United Nations Development Programme (UNDP) produced some converging of views concerning each of these three effects [Ul Haque et al. eds.1996]

1. A tax of 0.1% on global forex transactions applied to the 1998 volume would produce between \$180 and \$220 billion revenue per annum, and a one-time drop of forex volume of from 13% to 49%, the variation reflecting different assumptions about pre-tax transaction costs and response elasticities.<sup>14</sup> Almost all would impact short-term trading. For arbitraging strategies involving round trips each trading day the annualized tax would be 48%, while for international trade involving a 90 day financial trip, the annualized tax would be 0.8%
2. Universal agreement would not be necessary to implement the tax. The U.K., the U.S., Euroland and Japan account for around 80% of global forex turnover. Bringing in Switzerland, Singapore and Hong Kong would raise the coverage to 91%. The remaining countries could be brought on board in one fell swoop by making joining a prerequisite for IMF loans.
3. The tax should be levied on forwards and swaps as well as spot transactions, but how to tax customized derivatives effectively remains to be answered.
4. To minimize offshore evasion, the tax should be levied at dealing rather than booking or settlement sites. Global forex dealing is dominated by a few dozen large financial houses, most of them headquartered in London and the Big Three. Their dealing rooms employ expensive equipment and talent. Moving dealing rooms as distinct from booking or settlement offices to tax free sites would be very costly. Doubling

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<sup>14</sup> The ranges are from estimates by Ranjit Sau and me, and are based on applying a simple model to 1995 forex data, using different transaction costs and elasticity assumptions [Felix and Sau 1996]. Jeffrey Frankel's point estimate, using a different methodology obtained \$176 billion revenue and a 45% reduction of volume from a 0.1% tax [Frankel 1996]. The original ranges, computed from 1995 forex data, are increased by 22% in this paper to take account of the higher forex volume in 1998..

the tax when one of the counterparty is domiciled in a tax free location would be an effective deterrent. At least two financial houses would then have to move their expensive dealing operations concurrently to tax-free sites for evasion through relocation to work [Cf. Kenen 1996].

5. Applying the tax to all instruments that have liquid, high volume markets, such as cross-currency treasury bill swaps, would minimize the payoff from shifting to non-taxed instruments. But since “financial engineers” would doubtless try to devise synthetic instruments to fit the bill, the tax agreement would need a supervisory body to oversee tax implementation and to recommend new “thwarting” changes as needed [Garber 1996; Kenen 1996]. However, gaming between financial authorities and financial innovators also plague the conventional proposals to improve the “architecture” of the global financial system, so is no basis for *a priori* dismissal of the Tobin tax.
6. Because the tax would be collected by national tax authorities, the size of the tax revenue collected by the participating nations would differ enormously. The collective agreement to tax would also have to include an understanding on the allocation of the revenue. How much should be centralized? How much of the central fund should be devoted to a global LOLR function, and how much for projects in the developing countries, are distributive issues that the negotiators of the agreement would have to address.
7. Finally, while the tax is primarily a crisis deterring device, allowing member countries individually or in concert to raise the tax rate above the uniform rate when under siege, could ameliorate crises by impeding capital flight and contagion, and with less reliance on interest rate spiking and demand-depressing measures to allay the currency runs.

Opposition from Washington renders nil the immediate prospects that reforms along the lines of this minimalist reprise of Bretton Woods will be taken up at the IMF, the G-7, or other official policy forums. The attempt by France, Germany and Japan to put a Big Three target zone proposal on the agenda of the recent G-7 ministerial meeting in Bonn was slapped down peremptorily by the U.S. delegation. The Tobin tax hovers like Banquo’s ghost over the G-7 and IMF conference tables. Indeed, Washington even suppressed the attempt by the UNDP to promote its aforementioned volume of conference papers on the tax [Le Monde Diplomatique, February 1997, “Le projet de taxe Tobin, bete noire”].

Political dynamics could, however, improve the medium-term prospects for the two proposals. The heightened priority that Euroland governments are giving to job creation while protecting the welfare state, will require protecting the euro against currency runs. Despite Washington's opposition, European pressure for collective action to bound the Big Three cross rates is therefore likely to persist. While still off the table at the governmental level the Tobin tax is, surprisingly, picking up grass roots support. A coalition of NGOs, academics and unions have succeeded in getting the Canadian House of Commons on March 23 to pass a bill by a 2 to 1 majority stating "That in the opinion of the House, the government should enact a tax on financial transactions in concert with the international community." ATTAC, a movement of similar composition, has been gathering considerable support in France, and is spawning sister movements in other Euroland countries.

Economic logic, if not grass roots pressure, is pushing in a like direction in Japan. With its short-term interest rate locked in a liquidity trap, the government has been attempting to revive aggregate demand by monetizing a very sizeable increase of its fiscal deficit. The effort is threatened, however, by a flight from longer-term bonds that's pushing up longer rates and increasing exchange rate volatility. The higher long rates depress aggregate demand directly and further weaken the fragile balance sheets of Japanese banks, while volatile exchange rate movements could heighten trade tension with the U.S. and even force Asian countries into another round of devaluation. Hence Japan's support for bounding the Big Three cross rates remains strong, with Finance Minister Miyazawa almost dropping the second shoe by announcing his support for "market friendly" regulation of capital flows. [Reuters dispatch, March 1, 1999].



No comparable grass roots Tobin tax movement is yet evident in the U.S. But the persisting global crisis and the U.S. role of global consumer of last resort is reviving Main Street-Wall Street tensions. A widening array of import-competing activities with political clout is demanding import protection. Washington's attempt to ride both its high horses—free trade and free capital mobility—is becoming politically precarious. Concern that the momentum is with Main Street is evoking fearful memories of Smoot-Hawley among academic and media pundits. Will this persuade Washington to accept constraints on Wall Street in order to save free trade, or will it fall between the two steeds trying to accommodate both? Given the current level of Washington statesmanship, the odds favor the second. They could, however, shift to the first, were more mainstream economists to give up their addiction to the EMH, thereby depriving the case for free capital mobility of its intellectual cover.

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