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Conflict and Interdependence in a Multipolar World

Paper Prepared for a Conference on  
Adjusting to Shocks-A North-South Perspective

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*Bis typographus*

"You shall not press down upon the brow of labor this crown of thorns. You shall not crucify mankind upon a cross of gold."

William Jennings Bryan  
Speech at the National Democratic  
Convention Chicago [1896].

A century ago within the United States the conflict-and the interdependence-between debtors and creditors gave rise to the righteous wrath of Bryan, a great American orator and politician. To Bryan deflation-or even the absence of inflation-was analagous to crucifying debtors. In the 1890's, just as in the 1980's, the conflict centered around the role of banks which, as the proximate creditors and as the merchants of debt, are at the center of every crisis of indebtedness.

The conflict between debtors and creditors continues within our various national states but in addition there is now a major conflict between debtors and creditors, between banks and their customers, that transcends national boundaries. We have just lived through two years of crises dealing with Latin-American debts. To date the apparent victory has gone to the creditors and to the banks, deflation or disinflation, austerity and non repudiation of debt have carried the day. But this victory may well be a transitory and a paper victory, for the measures agreed upon may be insufficient to generate the cash flows that will validate ~~the existing~~ debt structures. Although less is more may be a valid slogan for architects, austerity, which decrees less income, may not be a valid way to achieve a greater ability to meet payment commitments.

To date austerity has not led to an easing of debt burdens. The

agreements to adopt austere domestic policies have led to debt refinancing and the folding of accrued interest into outstanding debts. Bookkeeping tricks have been adopted, not to fool the stock market or the authorities but to satisfy legalistic requirements. The underlying difficulties have been papered over.

If policy is to make things better, as a minimum we need an understanding of how ~~a set of~~ economies with elaborate and large financial linkages interact. A world with large scale and sophisticated capitalist financial links among its units does not necessarily behave like a world in which such links are small and primitive. In a world of sophisticated capitalist financial links among units, debt-deflations can occur.<sup>1</sup>

The ~~potential for~~ interactions between the need for funds to validate debt structures and the way such flows <sup>of funds</sup> depend upon ~~new~~ <sup>signs</sup> credit being extended means that <sup>a</sup> ~~the~~ potential for debt deflations is built into our economy. If policy and institutional reforms are to help make things better, help return the world to a regime of rather tranquil expansion, ~~we need~~ an economic theory that enables us understand how capitalist economies with elaborate, large and evolving financial linkages interact, i.e., what their path through time will be if they were "left alone", <sup>is needed.</sup> Furthermore, if the nonintervention path implies "disaster", we need to know how intervention and institutional structures can lead to a desirable performance.

There are many versions of what "Keynes" really was about: what his contribution to economics was. On a very abstract plane his contribution can be identified as a warning against drawing conclusions for a complex system by

arguments based upon the analysis of a highly simplified abstract system. In particular we recall Keynes' warning that if prices in fact fell sharply whenever excess supply existed the excess supply would get worse, not better. This was so because the analysis that prescribed price deflation as the remedy for unemployment abstracted from asset values and the "loop" through asset

values ~~from price deflation~~ that leads to a ~~decrease in~~ investments. A *feedback that* decrease in investment would tend to increase unemployment and decrease profits, which may overwhelm <sup>whatever</sup> the equalibrating <sup>effects</sup> efforts of price deflation, *may have.*

Another way of interpreting this lesson from Keynes is that a system with important financial linkages is likely to behave quite differently than a system in which such linkages are of minimal importance.<sup>2</sup>

It is in the common interest of debtors and creditors to avoid a debt-deflation and a long lasting depression, <sup>which may follow.</sup> But the balance of trade developments that enable international debts to be validated impose <sup>non-trivial</sup> costs upon the creditor countries, ~~that are not trivial~~. The unemployment and industrial disruption in the United States' rust belt and in ~~heavy industry in~~ Europe are not due solely or even mainly to "industrial" inefficiencies. They largely are due to the exchange rate patterns that have emerged as market mechanisms inefficiently try to attain a balance of trade position <sup>s</sup> which enable <sup>s</sup> debt burdens to be carried. A conflict between as well as within countries emerges out of the way markets respond to the need of debtors to earn funds so as to make payments that ~~become~~ <sup>become</sup> due on debts. There is no guarantee that the multi-market set of responses induced by a need to meet such payment commitments will lead to cash flows that enable the debt contracts to be fulfilled.

In order to understand our system we need to know how complex systems can result in endogenous instability and the impact of the international financial

structures on the path of the economy through time.

### 1. Endogenous Disequilibrium

The general theme of this conference is "Adjusted<sup>in</sup> to Shocks". This way of phrasing the problem may "prejudge" the issues of how financial complexity affects system behavior. Implicit in the 'shock' terminology is the idea that the internal workings of the economy lead to a tranquil expansion and that the disrupted incoherent and crisis laden performance of the economy over the past decade is due to shocks such as the "oilshock," the "Soviet grain shock" or the Federal Reserve "defense of the dollar" shock. If you assume—as for example the new classical rational expectations economists do—that there is an equilibrium position and a strong equilibrating process that leads the economy to full employment and stable relative prices, then the cyclical and incoherent behavior of the economy must be imputed to "surprises" from a monetary system that ~~in the view of~~ the monetarists <sup>perhaps</sup> ~~is~~ <sup>believes to be</sup> in principle controllable. Within this view the failure of the monetary authorities to behave in a predictable or appropriate way is the main cause of business cycles.<sup>3</sup>

The economic theory that has business cycles, incoherence and conflict result from shocks does not integrate banking and finance into the core of the analysis. The pure General Equilibrium Theory derives its results from an essentially nonmonetary analysis, and then introduces a fiat money which facilitates transactions and which also may be a vehicle that enables units to carry command over resources from one period to another. If "bank money" is part of the economy, then the existence of money implies that there exists payment commitments by debtors to banks as well as payment commitments by

banks to its "depositors". The additional complexity that results from borrowing from banks for use in financing profit-seeking production and the ensuing commitments to make payments to banks out of anticipated profits can radically affect the behavior of the system through time.

Much is now known about the behavior of complicated intertemporal mathematical systems that was not known before the age of the computer. The characteristics of the time series that a complex multidimensional, nonlinear and time dependent system of equations generates cannot in general be determined by solving the system. But by means of computer runs the characteristics of the time series that are generated as initial conditions and parameter values are varied can be determined "empirically" if not "analytically".<sup>4</sup>

To illustrate what is at issue let me refer to linear acceleration <sup>OK</sup>~~ion~~ multiplier models that were the ~~V~~ogue about thirty years ago. If a simple linear function, in which consumption depends upon income is combined with an accelerator function in which investment depends upon changes in income, a linear second order difference equation is derived. Such an equation can be solved and the solution equation will tell us - depending upon the initial conditions and the parameter values - the value of the variables in each period. Furthermore knowledge of the value of the roots of the solution equations tell a great deal about the path that will be generated. As is well known, the paths for a simple accelerator multiplier "model" can be either damped or explosive, monotonic or cyclical.

Such a simple model has no place for finance - for money or banking. Some 27 years ago I used monetary factors and a basically monotonically explosive acclerator multiplier model to generate cycles or growth - to

constrain explosive situations and to energize damped situations. The use of constraints to generate an acceptable series from the endogenously unacceptable results is equivalent to stopping the process and starting it off again with new initial conditions.<sup>5</sup>

Richard Day has shown that the "empirically" derived attributes of equation systems that represent processes that are non-linear, multidimensional and time dependent will exhibit behavior analogous to that of an explosive accelerator multiplier system, in that acceptable values of the variables will be generated for a time interval followed by a time interval characterized by unacceptable values. The imposition of new initial conditions by means of interventions and rigidities can lead to a time series the "pieces" together an acceptable time path.

Floors and ceilings, rigidities, conventions and policy interventions that result in the realized values differing from those implicit in the endogenous processes are logically equivalent to "stopping" the endogenous process and "starting" it again with a set of initial conditions in the form of the *actual or* realized values. This "stop and start ~~again~~" approach is a way of achieving apparent coherence even though the endogenous reactions of the system would, *if unconstrained* lead to chaos. The result, in the accelerator multiplier models of the 1950's and in today's non-linear systems, is a system that leads to "bounded variation" rather than equilibrium. Endogenous processes which if left alone would lead to chaos can be channeled by means of constraints, institutional rigidities and policy interventions into generating acceptable paths. *To an unknowing observer the system seems to have an equilibrium, although in truth it does not.*

In the study of endogenously incoherent dynamic processes, *it becomes is* apparent that the more complex the system, the larger the number of dimensions, the greater the number of intertemporal linkages and the more significant the nonlinearities the greater the likelihood that the system's



time path will exhibit initial coherence that breaks down into incoherence -and presumably the greater the likelihood that apparent coherence will <sup>"spontaneously"</sup> emerge for a time out of a period of incoherence. But, ~~it is also true that~~ in a system of institutions, usages and interventions, the internal dynamics of a complex economic system do not determine all of the economic variables that are fed into the process <sup>that</sup> ~~to~~ generate<sup>s</sup>/tomorrow. "Stable" or tranquil expansion within this intellectual framework is not the result of a nice polite system seeking, achieving and sustaining a dynamic equilibrium, but rather results from an apt history and an apt set of institutions and interventions.

In a system where endogenous processes can lead to incoherence, the imposition of externally determined values may be responsible for the apparent coherence that rules. In such a world laissez-faire, deregulation and non-intervention may be policy rules that accepts disasters, that are in fact avoidable, ~~as~~ unavoidable. ~~The~~ <sup>A</sup> role of economic theory is to investigate and invent systems of intervention that offset incoherence breeding endogenous processes.

But once it is recognized that an apt institutional structure and apt interventions are needed if ~~in~~ coherence is to rule, then all the conflicts that center around what kind and for whom questions can arise. ▷ Typo Although all parties may agree that it is in their interest to avoid a debt-deflation and a deep depression, there still may be a variety of ways to achieve the agreed upon objectives, each way having a different distribution of costs and benefits. Once outcomes depend upon policies, the potential for conflict increases even as the interdependence of results increases.

The current international financial structure with~~in~~ its intertemporal linkages, ~~its~~ multicurrency structure, ~~its~~ inherited debt burdens, complex trade relations, and financing flows is a system that ~~apparently~~ conforms to

the conditions for a ~~system that~~<sup>the</sup> endogenously generates ~~chaos~~<sup>is of</sup>. We can even identify intermarket relations that ~~are~~<sup>lead to</sup> endogenously destabilizing<sup>interactions</sup>. Thus we ~~we~~<sup>economists</sup> have to know how to examine and analyse ~~our~~ systems of financial and current output ~~related~~<sup>funds</sup> flows of ~~finance~~<sup>they</sup> if we are to be helpful in designing institutions, structures and ~~interactions~~<sup>ventions</sup> that ~~might be~~<sup>will</sup> of help.

### International Financial Relations

*Start here*

Financial interrelations among units do not stop at national frontiers. Both the ownership of capital assets and operating divisions - mainly, but not exclusively, in the form of multinational corporations - and financial relations-in the form of both direct debt and debts to banking institutions- cross borders. Both capital asset ownership and financial interrelations mean that cash payments need to be made because of financial links from one national economy to another: There are payment commitments and financial assets. These commitments may be fixed or contingent and ~~when two or more countries are involved~~, they may be denominated in the currency of either the creditor, the debtor, or some third country. Typically, but not exclusively, the currency of denomination of international debts is either in the currency of the lender or in the currency of the financing center for the international economy.

Today, and throughout the years since World War II, the largest source of funds for financing activity is the New York money market and for much of the time the largest source of international loans and investments has been the United States. As a result, international financial linkages largely, but not exclusively, take the form of dollar denominated indebtedness. This is so even if the loans are on the books of a non-United States financial institution and if the borrowers from the institutions and the lenders to or

depositors in the institution are not United States nationals. For the analysis of international financial relations we can make a practical assumption that there is a vast network of dollar denominated debt and this debt leads to a large cash flow to the United States, and to the ~~banks, etc.~~ <sup>non-U.S. banks</sup> of ~~non-U.S.~~ <sup>and</sup> nationals that own dollar denominated assets.

As far as financial flows are concerned, the United States ~~can be~~ <sup>is</sup> ~~considered as~~ analogous to a bank and the rest of the world as analogous to a debtor; the rest of the world has to come up with sufficient dollars over each period to meet the financial commitments on their debt. In international financial relations it appears that "the more things change, the more they remain the same", for the international monetary and financial system that rules in the 1980's is like, but not identical with, the pre-World War I structure of international monetary and financial relations. The positions taken and the operations of the Federal Reserve in the recent past -- say since the late 1970's -- are analogous to the operations of the Bank of England in the ~~years leading up~~ <sup>decades prior</sup> to World War I.<sup>6</sup> The current international monetary and financial system is a fluctuating exchange rate system with the Federal Reserve as the key operating organization. Some seventy years ago a thin reserve gold standard system with the Bank of England as the key operator ruled.

### Significance of International Financial Interrelations

The reason for the equivalence between the two apparently different systems is that in the Pre-World War I era the Bank of England was the essential operator in a system characterized by a vast structure of indebtedness denominated in pounds or, given the way the Bank of England operated, its equivalent, gold. Today the Federal Reserve is the essential

operator in a system characterized by a vast structure of indebtedness denominated in dollars. The fact that today there is a flexible exchange rate regime in which gold plays no overt role is of secondary importance compared with impact that the structure of international indebtedness, that is denominated in the dollars, has upon the performance of and the constraints on the various national banking institutions and economies.

The vast set of financial links among economies, as shown by the massive international debts now mainly dominated in dollars, means that Federal Reserve policies and operations are often related to the need to maintain the viability of the dollarcentric international financial structure. In an analagous manner significant changes in the Bank of England operations in the era just before World War I were reactions to developments in international financial markets.<sup>7</sup> In discussing the operations of the Bank of England in the hey day of both the international gold standard and London's power as the financial center of the capitalist (at that time, the entire) world R. S. Sayers remarked that "It is the duty of every bank and most of all of a central bank, to be rich".<sup>8</sup> ~~By being rich Sayers meant~~ <sup>S</sup> that a bank or a central bank ~~must have~~ <sup>has</sup> the power to force a "cash flow" in its favor, (i.e., to make its liabilities scarce,) without imposing costs that are too high on itself and in truth, on its debtors.

A country whose money is the principal currency of denominations for international indebtedness and whose national money market is the international money market is like a banker. Its currency and financial center can continue to function as the world's currency and financial center as long as two criteria are satisfied; the rest of the world can almost always come into possession of sufficient amounts of its currency so that the payment

commitments can be fulfilled and the central bank and national policy organs of the key currency country can make its currency scarce without extracting too high a price in performance from either the home or foreign countries.

Recent experience shows the importance of international financial relations in determining "big" changes in <sup>United States</sup> monetary policy. The Federal Reserve shifted towards monetarism in 1979 largely because the dollar denominated debt structure was under pressure as foreign and domestic holders fled from the dollar, and it abandoned "monetarism" in mid-year 1982 in part as a response to the flight to the dollar that peaked with the Mexican and Penn-Square crises. A "constraining money supply orientation" was the Federal Reserves reaction to a falling dollar and an accomodating money supply stance was the reaction to a rising dollar. ~~on the international exchanges.~~ There is now a "flexible band" within which the exchange value of the dollar fluctuates; the boundries <sup>are</sup> ~~being~~ given by market flights either to or from the dollar. The autonomy of the Federal Reserve to operate with domestic money supply, interest rates or even "economic" conditions, such as prices or employment, as targets is limited because the Federal Reserve has an overriding responsibility for the maintenance of orderly conditions <sup>in financial markets</sup> and to abort incipient financial crises and panics in the United States money markets. Because of the linkages that exist between the United States money market and the offshore money markets and the offshore operations of United States banks, this implies that the Federal Reserve must function as a lender of last resort to the international financial system; therefore its freedom to act is constrained.

To understand today's international financial system and the effects, sometimes peculiarly perverse, of monetary policy actions, we have to start with each "day's" initial position: a structure of inherited international

financial linkages that takes the form of debts, in good part to banks which in turn have "depositors".<sup>9</sup> This is different than usual entry point for the study of international financial relations: the usual entry point is the balance of imports and exports. The in place international financial structure leads to flows of payments, in the currency of denomination of the debts, from debtors to banks and from banks to "depositors" in banks. The normal functioning of this structure of financial linkages also requires that there be a flow of credits from depositors to "banks" and from "banks" to "borrowers".

To an overwhelming extent international debts are now denominated in dollars, even though the debtors, the intermediating banks, and the owners of bank deposit are not necessarily of United States origin. The non United States domicile of leading agents in dollar denominated international financial transactions is a vital special property of today's structure. While the responsibility for maintaining the viability of the international financial structure falls largely on the United States, the proximate beneficiaries from the viable financial structures include banks, firms, and households which are not United States entities. Such a concentration of responsibility (and costs) and dispersal of benefits interposes political obstacles to actions needed to assure the viability of today's financial structure: United States workers in heavy industry may pay a price so that Argentine debts to Swiss bankers that manage accounts for Arab interests can be validated.

#### Elementary Characteristics of Banks and Banking

The following states some elementary and basic characteristics of banks

and banking systems that are especially relevant for understanding international financial relations.

Banks can run a book in any unit -- dollars, marks, cigarettes or fur-pelts. A risk averter bank, especially in a regime of fluctuating exchanges (no gold standard), will try to keep a balanced or closed book: dollar deposits will be offset by dollar assets, etc. An "open book" is when assets and liabilities (deposits), denominated in various currencies, are not equal. Fixed exchanges -- a gold standard -- can be interpreted as a device by the central authorities that limits the private losses and gains that can be realized from having open positions.

Just as nature abhors a vacuum, a banker abhors an open position. However <sup>his</sup> ~~the~~ "closed" book will be a "banker's book" in that characteristically the liabilities will be of shorter term than the assets: a banker's book is not matched as to maturities. Each bank that runs a book has a rollover problem: maturing liabilities are normally paid from the proceeds of issuing new liabilities. During periods of financial turbulence, such as the ~~late~~ <sup>autumn 1982</sup> summer of 1979, when holders of bank liabilities seek to change the currency of denomination of their assets, banks may develop open positions. Deposits are shifted among currencies to accommodate depositors, even as assets remain in their initial currency. Such positions are open only until the assets mature.<sup>10</sup>

The discount window at the Central Bank is a refuge for banks caught in a rollover problem. However, access to the Federal Reserve is restricted to member banks or U.S. chartered banks. <sup>Mexican</sup> A German or Swiss bank caught in a rollover problem on its dollar book does not have direct access to the Federal Reserve. It has access to its home ~~Central~~ <sup>Central Bank</sup>. Dollars to meet withdrawals

will be available either from a bank's own resources (securities that are marketable for dollars in New York are part of every international bank's position) or from the home central bank. The availability of dollars from a home Central Bank depends upon the central bank's dollar balances and what arrangements are in place for swaps of its domestic currency for dollars with the Federal Reserve. The Federal Reserve exercises its responsibilities for resolving any rollover or flight problem of the dollar book of international banks by keeping orderly conditions in the United States money market as assets are sold to acquire dollars and by providing dollars to domestic banks or foreign central banks by way of discount, swap or similar arrangements.<sup>11</sup>

Debts denominated in dollars mean that there are payments of interest and principal that must be made in dollars which come due every day. Domestic private or foreign "national state" debtors can have dollars to meet such payment commitments because of

- 1) A surplus in accounts related to current income (profits or a "favorable" trade balance)
- 2) Borrowing
- 3) Sale of Assets
- 4) Stock of dollars on hand.

The fourth item -- stock of dollars -- can be eliminated immediately. Cash on hand is a buffer that can contain the effects of transitory cash flow short falls. But in economies with strong money markets (such as the New York money market) cash holdings are economized by holding dollar denominated financial assets of very short term or which can be readily marketed. Today's flexible exchange rate systems, in the context of well developed money markets, are characterized by thin reserves of cash. The sale of assets, borrowing and a trade surplus (profits) are the significant ways in which debtors obtain the cash that is required by their debts.



Assets can be characterized by their currency of denomination and term to maturity (ready marketability). For any "national economy" with dollar debts, the assets that might be used to raise cash to pay debts fit into a 2x2 table:

Assets That Can Be Used to Acquire Dollars

Maturity/Liquidity	Dollars	Home or Other Currency
Short term, marketable		
Long term or non-marketable		

The ownership by foreign monetary authorities and the "international" banks of short term marketable dollar instruments is a critical element in determining the "borders" to the band within which the Federal Reserve must operate. If their holdings of dollars and dollar instruments increase substantially more rapidly than the felt need for dollar assets by these offshore banking institutions then there will be "low" interest rates in the United States and there will be pressure on these institutions to use dollar assets to reduce their dollar denominated liabilities. The dollar will tend to depreciate as the demand for dollars falls. Such depreciation can trigger a run from the dollar whenever dollar holders begin to make their portfolio decisions by extrapolating exchange rate <sup>and price level</sup> trends. If, as was true in 1979, this unfavorable "foreign position" is accompanied by domestic inflation in the context of "low" interest rates, then once trend extrapolation takes over

a flight by domestic holders to collectables, gold and debt will be triggered even as there is a flight to other currencies.

In the recent past, asset sales have exacerbated rather than ameliorated the international payments problem. International payment difficulties lead to a fear not only of exchange rate changes but also of political and social instability. This leads to a felt need for a safe haven by holders of assets denominated in a wide variety of home currencies. Dowside pressure on home currencies on the exchanges results in a perverse increase in the demand for dollars, thereby amplifying initial difficulties. As "national" holdings of dollar denominated assets are finite, current account deficits and a run to the dollar will quickly erode any initial "buffer" of cash or marketable securities.

Market or non concessionary lending depends upon borrower and lender expectations of future incomes. For international financing, current lending reflects expectations of future balance of trade surpluses by the borrowing country. The existence of a massive volume of dollar denominated international debt means that the rest of the world has to earn sufficient dollars on its trade and current services account to pay interest on its debts; if not now then in that future that guides expectations that lead to current actions.

#### A Tiers Perspective on Financial Relations

We can visualize the balance of payments of a country as a series of tiers. These tiers represent the different ways payments or receipts arise. Because of our concern with financial flows and the sources of funds that validate financial commitments, payments and receipts that are due to

inherited financial commitments should be separated from those that are due to the sales and purchases of current output. We also segregate into separate tiers the new flow of financing that can be assumed to be voluntary from those that are the "balancing" or "settling" item. Thus we will treat international financial relations by breaking the balance of payments down into four tiers and inquire how the system operates so that the sum of the four tiers always turns out to be zero.

We place interest, dividends and the amount of the principal that is due over a period on the first tier. The reason for this is that we visualize the payment commitments on account of liabilities that fall due as if they were the overhead or fixed costs that businesses have to make before they can book profits for any period. Of course interest payments and the repayment on principal on debts are contractual and dividend payments are contingent upon earnings. If a "national economy" has a large "nut" to make on account of interest and dividends and if the payments are mainly dividends, then the payments will "decrease" in a depression when profits fall. If the payments are mainly contractual (interest and the repayment of principal) then they will not contract in a recession. If international financial relations are largely in the form of ownership of capital or the ownership of equity shares, then a decline in profits in the "debtor" country will reduce the international payments in tier one, whereas if the international financial relations are mainly in the form of debts a domestic "recession" does not reduce payment commitments.

In our world of multinational firms with direct overseas investments, the ability to 'hide' profits -- and even capital movements -- in transfer prices makes it difficult to know the capital income and investment that really

occurs; the reported numbers are soft and imprecise. Nevertheless, as a concept, the interest, dividends, and repayment of principal due over a year as a function of the liability structure are important for they, so to speak, sets the stage within which international trade and investments take place. In the current world the explosion of the dollar denominated international debt, especially that of the less developed and developing countries, has pushed interest and principal payment commitments to the fore.

It is worth noting that the "burden" of a dollar denominated debt in the domestic currency increases with the depreciation of the domestic currency. There is no such impact of dividends which are stated in the domestic currency. With dollar denominated debt none of the costs of a depreciation in a country's currency is carried by the owner of debt, whereas for dividends depreciation transforms a fixed home currency dividend into a lower dollar dividend. The run up of the dollar relative to other currencies after mid-year '82 led to a decline in the dollar denominated profits of many multinational firms, even though the profits earned in the various local currencies where these firms operated need not have declined.

For analytical purposes this first tier can be broken into two parts, one that records the interest and dividends that are paid and the second that records the payments on account of the principal <sup>are</sup> on debts that ~~is~~ falling due. The reason for this division is that if a country "earns" enough in tier II to pay the interest and dividends on its debts, then the principal amount that is due may very well be rolled over as long as international financial markets are functioning "well". In this case the country, in a terminology I have used before, is engaged in speculative finance. In the same terminology, if a country does not "earn" enough to meet its interest payments and the interest

due but not earned is capitalized then it is engaged in Ponzi finance. The distinction between speculative and Ponzi finance is of vital importance in any evaluation of international financial relations.

If a country has a large volume of international debt denominated in dollars and if the interest rate on this debt "floats" with New York or London dollar interest rates then the country may be in a speculative financial posture at low interest rates and in a Ponzi financial posture at high interest rates. Over a period of Ponzi finance the principal of debt outstanding increases without any transfer of real productive resources, such as would occur in a profit oriented debt financing. As a result the burden of debt may increase relative to productive capacity so much that a return to a speculative financial posture is difficult. That is a sharp rise in interest rates can transform an initial speculative financial posture into a Ponzi posture, but after a bout of such high interest rates even a substantial lowering of interest rates may not transform the Ponzi financial structure ~~back~~ into a "speculative" structure. *amplified*

*What we are dealing with is a historical process in which the "undoing" of relations built up over time is not ~~reversible~~ readily or costlessly reversible.*

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The current balance of trade and services account is the second tier.

For a debtor this tier has to be in "surplus" if the payment commitments on debt are to be fulfilled. This tier is analagous to the gross profits after taxes of a private business and like gross profits it is the source of funds that ultimtely validate debts. In terms of validating external debts denominated in dollars it is not enough for debtor units to have a large cash flow in the domestic currency; they must also be able transform the domestic currency cash flow into dollars. Ultimately, the availability of dollars to validate debt depends upon the balance of trade. A favorable balance of trade - i.e., an excess of the value of exports over imports - not necessarily now but expected over a reasonable future - is the basis of a debtor country's

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financial viability. Just as it is necessary for a debtor country to generate a sufficient surplus over a reasonable horizon so, because the sum of all national surpluses and deficits is zero, it is a responsibility of the creditor countries to run a deficit on their current trade account.

Whereas a surplus of exports over imports tends to increase employment and the profits earned from operations within a country, a deficit of exports relative to imports tends to depress profits and employment. The impact of trade deficits upon domestic employment and the profits of domestic firms means that pressure for protection is likely to arise in creditor countries. Whereas the balance of trade is an abstract concept, the deficit in the trade balance takes the form of concrete plant closings, loss of domestic markets by domestic firms and a generally "low" flow of aggregate profits. Intervention to protect industries, jobs and to revitalize lagging industries is a 'natural' political response to an unfavorable trade balance.

The third tier consists of international capital movements that takes the form of loans to or equity investments in entities in a foreign country. Such capital movements supply foreign exchange to the borrowing country, as does a favorable balance of trade.

Recall that the payments on tier one included the payments on account of maturing debt. Maturing debt may be rolled over into new short term debts or they may be funded into long term debt. One part of the international capital movement over any period is just such rolling over or funding of debt. Another part is the net increase of indebtedness. It is evident that long term and short term capital movements make it possible for the payment commitments on interest (and dividend) accounts to be met with a smaller surplus on the trade and services account than would have been necessary in

the absence of such relations. In mid-year 1983 pressure was put on various commercial banks to maintain and increase their credits to Brazil and other countries so as to ease the "burden" of interest payments that were falling due.<sup>12</sup> Similarly in early 1984, the United States Treasury intervened so that credits would be advanced to Argentina to pay overdue interest on bank debts.

The fourth tier consists of "balancing items" which take the form of increases or decreases in "credits" in a bank, assets negotiable in the money market of the center, or in titles to gold. Under the international gold standard that ruled prior to World War I, the "balancing" of the balance of payments of the various countries took place by shifting titles to gold and by varying sterling balances in the London Money Market. Today the adjustments take place by varying positions in dollars or assets negotiable in New York, but without gold and without strong and believable commitments by the national authorities to maintain exchange rates within some quite narrow band. As a result, the adjustment process by which the various balances of payments are balanced by changing the national positions in dollar deposits, dollar assets or equivalent instruments also involves changing exchange rates. Because of international indebtedness and the importance of the payment commitments due to such indebtedness, the market reactions to serious "imbalances" over the first three tiers may aggravate rather than to ease the imbalance.

#### The Relation Among The Tiers In A Mature Gold Standard

During the gold standard days just prior to World War I, Britain had a huge accumulation of offshore bond and equity positions; as a result the British had a large net "income" each year on interest and dividend account.

~~A + this point ✓~~



British rentiers had larger incomes than the interest and rents paid by British households, industry and government supported.

Britain ran a deficit in its current trade and services account; this Tier II deficit was smaller than its Tier I surplus so that Britain had a surplus in the sum of the "capital income" flows and current "trade" account"; the sum of Tier I and Tier II was positive.

Schematic Balance of Payments  
Pre World War I  
Britain and the Rest of the World

Tier	Britain	Rest of the World
I. A. Interest Dividends	+	-
B. Maturing Debts	+	-
II. Trade and Services	<u>-</u>	<u>+</u>
Σ I + II	+	-
III. A. Rollover Investments	-	+
B. New Investments	<u>-</u>	<u>+</u>
Σ I+II+III	-	+
IV. Short Term Balancing Items, Gold	<u>+</u>	<u>-</u>
Σ I+II+III+IV	0	0

+ = surplus, - = deficit

In a typical year rollover and new overseas investment by Britain was so great that the sum of the first three tiers was negative. The British and the Rest of the World balances of payment were balanced by a combination of Tier IV short term capital "imports" into Britain and a movement of gold out of the

Bank of England. The short term capital imports into Britain took the form of "an increase in sterling balances" of foreign households, businesses and banks, private and central. Concretely, the sterling balances were deposits in London banks or holdings of British money market assets.

The increase of gold or short term sterling balances had the effect of augmenting the liquid asset holdings of the banks or the central bank of countries that were either on a Sterling or a gold standard. These liquid assets served as the "reserve" base for the domestic Central Bank and Commerical Banks. [recall that prior to World War I not all countries had a Central Bank. The United States Federal Reserve Act was passed in 1913.] Inasmuch as the holding of income earning assets in the London or in their domestic Money Market was superior to holding sterile gold for profit oriented banks (and Central Banks), gold would leave the Bank of England only if the accumulation of sterling balances became too great or increased too fast so that interest rates in Britain fell relative to say French interest rates.

In the mature gold standard of the quarter centry prior to World War II, the Bank of England held a very small amount of gold relative to the trade and debts that were denominated in sterling. Furthermore, Britain was the "new issues" center of the world economy and the British supplied a large portion of the global financing on new international issues. Net long term investments (Tier III) was a significant negative item in Britain's balance of payments.

~~Whenever the~~ Whenever the balancing item, short term investment in the British money market became too great, gold would flow from Britain. This threatened the viability of the Bank of England's gold standard. The Bank of England reacted to the gold drain by raising the bank rate: the interest rate at which it

supplied funds to the London money market.

A higher bank rate led to higher short term interest rates in London, which in turn led to higher long term rates. These higher rates led to a decrease in the long term investments floated in Britain. [As was seen in 1982 high rates can close down the long term bond market.] This in turn meant that the sum of the first three tiers (interest income, trade and services, and long term investments) for Britain became positive or at least less negative. With the <sup>sum of the</sup> first three tiers "improving," short term borrowing or the gold movement turned around. If carried far enough, gold flowed back to the Bank of England. The balance of payment difficulties that led to a drain of gold was halted and reversed, not because exports or imports changed, but because of changes in the flow of long term investment funds. The pound sterling was valued as a reserve currency because Britain, the international "banker", was rich in the sense of Sayers; it was able to force a cash flow in its favor by actions that did not cause undue pain to either its trading partners or to its own industry.

The flow of long term investment funds depends upon the expected future income of the borrowers. Under good banking and business practice long term ~~debts~~ <sup>credits</sup> will flow toward a country because of the expected profitability of the investment projects in the currency of the debtors and the expected overall trade balance of the country in question. It is the latter which determines the ability of the debtor's local currency to be transformed into the currency of denomination of debt.

Under a gold or a sterling exchange standard the transformation of local currency earnings into the currency of indebtedness was taken for granted; under flexible exchanges an excess demand for the currency of denomination of

international debt leads to a rise in the price of the currency of denomination. This rise in the price of the currency in which debt is denominated increases the burden of the debt in the domestic currency. Such exchange rate movements increases borrowers and lenders risk; it is a barrier to further long term loans. With long term loans down, (Tier III approaches zero) the excess demand for the currency of denomination in terms of the domestic currency increases. The market situation that led to the initial exchange rate depreciation is made worse; depreciation will continue until either the debtor countries income falls sufficiently to decrease imports, relative price changes increase exports and decrease imports, or "interventions" that lead to financing on non-market terms in an effort to restore order takes place.

In a "thin" gold standard, the flow of gold to the center country (Britain in the Pre World War I years) prompts an expansion of domestic credit. In a sterling exchange standard, the flow of deposits from foreign reserve holdings to domestic holders tended to lower sterling interest rates. This tended to induce an improvement in financing terms for both domestic and foreign borrowers as well as a domestic economic expansion.

The fixed exchange rate standard imposes monetary ease on the country with the equivalent of an appreciating currency and constraint on the country with the equivalent of a depreciating currency. The necessity of such symmetric developments <sup>less</sup> is strong under a sterling (or a dollar) standard (such as ruled after World War II). <sup>A man under a "pure" gold standard.</sup> An asymmetry is evident in the international financial crises of the third world countries since 1982, the I.M.F. now imposes conditions of "austerity" on Mexico, Brazil and Argentina, but does not impose conditions of "expansion" on the creditor, United States.

Note that a kind of reciprocal financing was built into the financial interrelations of the mature gold standard. Because the sum of Tiers I and II was positive and the sum of Tiers I, II, and III was negative for Britain the total of long term investment during a period exceeded the borrowing by the center on short term account. In effect Britain spent part of the income earned abroad to support a standard of living that was greater than its domestic productivity supported and it invested part abroad; ~~in fact~~ Britain invested so much abroad that it 'borrowed' funds for part of the offshore investment from the countries it was financing. But in such borrowing British institutions interposed a bankers guarantee which gave the foreign depositors a secure liquid monetary asset; *monetary reserves were being created in this financing-development relations.*

#### The Relation Among the Tiers Since World War II

In the early post-war period (mid 1940's and 1950's) the international indebtedness of the "third world" was at a minimum due to the war time export booms in basic materials and Britain's use of its accumulated offshore assets to finance the war. In the immediate aftermath of the war, transfer payments dominated the exchange balances for the advanced countries that required imports due to recovery and reconstruction needs. These unilateral transfers from the United States in the early postwar period is a unique event in the evolution of the balance of payments and the international.

Fundamentally the balance of payments of the early postwar era was dominated by a U.S. trade surplus and more than offsetting long term investment and unilateral transfers from the United States. As a result, there was a need for an "import" of balancing items by the United States. This short term "capital import" into the United States took the form of foreign central and private banks balances in New York and holdings of United

## States Treasury Securities.

These bank and treasury liabilities acted as the reserve (or high powered money) for foreign banking systems. Given the felt need for liquidity in the form of dollar denominated reserves by the rest of the world, the result was a welcomed improvement in the liquid asset position of the central and commercial banks of the rest of the world. This was a regime of mutual benefits; the trade surplus helped sustain profits and employment in the United States, long term capital movements financed overseas economic expansion and recovery, and the offsetting or balancing short term capital movement to the United States improved liquidity and served as the basis for credit expansion in various national banking systems.

Schematic Balance of Payments  
Early Post War Period  
United States and the Rest of the World

	<u>United States</u>	<u>Rest of the World</u>
I: Interest, Dividends and Maturing Debts	0	0
II: Trade and Service	<u>+</u>	<u>-</u>
$\Sigma$ I+II	+	-
IIIA: Long Term Investment	-	+
IIIB: Unilateral Transfers	<u>-</u>	<u>+</u>
$\Sigma$ I+II+IIIA+IIIB	-	+
IV: Short Term Balancing Item	<u>+</u>	<u>-</u>
$\Sigma$ I+II+IIIA+IIIB+IV	0	0

Throughout this period, the long term capital movement from the United States exceeded the short term capital movements to the United States. As a

result, there was a net accumulation of indebtedness to the United States. This led to the "zero" interest, dividends, and maturing debt item for the United States in the above table becoming positive. A positive interest income and maturing debt account combined with a positive trade and service account meant that the balancing of the balance of payments required some combination of larger long term investments and greater unilateral transfers from the United States and a smaller liquid asset gain by the rest of the world. Either way the interest and dividend item will continue to increase. The "solution" to this dilemma is for the United States to go "negative" on its trade and service account (i.e., emulate Pre World War I Britain). But this implies lower profits and an increased difficulty in achieving full employment in the United States. From the United States' perspective the policy problem is that the balance of payments structure necessary for international financial stability and for continued world economic expansion implies an unfavorable profit and financial environment for domestic employment and economic expansion.

Schematic Balance of Payments  
Mature Post-War Period  
United States and the Rest of the World

<u>Tiers</u>	<u>United States</u>	<u>Rest of the World</u>
I: Interest, Dividends and Maturing Debts	+	-
II: Trade and Services	-	+
$\Sigma$ I+II	-	+
IIIA: Long Term Investments and Bank Credits	-	+
IIIB: Unilateral Transfers	-	+
$\Sigma$ I+II+IIIA+IIIB	-	+
IV: Short Term Balancing Items	+	-
$\Sigma$ I+II+IIIA+IIIB+IV	0	0

We now live in a world where there is an enormous amount of external debt of the less developed and developing countries. To a predominant extent this debt is denominated in dollars. At the end of 1983 this debt added up to between \$700 and \$1000 billion. This means that the Tier I interest payments and maturing principals of the rest of the world may be in excess of \$120 billions over a year, depending upon interest rates.

The Instability of Flexible Exchange Rate Systems with Financial Links

This enormous amount of debt is not mainly direct debt, so that citizens and non-bank institutions of the creditor countries (mainly the United States) own bonds of utilities, private companies or government units of the debtor countries. Instead banks have interposed their guarantee between the debtors, who owe it money, and the creditors, to whom banks owe money. The banks that interpose their guarantee are not necessarily United States domiciled banks,



the debtors are of course of "foreign" origin, and the creditors of the banks, the depositors need not be United States entities whose preponderate concern is with their dollar income and expenditure.

This offshore ownership of dollar denominated deposits imparts a special dimension of instability to the current international financial situation, for to some unknown extent the owners of dollar deposits have no special need to be in possession of dollars - as would be true of U.S. domiciled owners.<sup>14</sup> Of the well nigh 1000 of billions of dollar bank deposits that finance positions of the banks in the dollar denominated debts of the less developed parts of the world, some significant percentage would just as well be in Swiss francs or German marks as in dollars.

Any move by owners of dollar denominated deposits to shift to deposits denominated in other currencies puts downward pressure on the dollar exchange rate. With the dollar depreciating and alternative havens for cash balances appreciating, a movement out of the dollar can quite quickly escalate into a run on the dollar. A financial system with a large volume of international debt and several potential currencies of denomination is unstable, unless there are institutional arrangements that limit the advantages of being in one currency or another. With such arrangements, a small change in interest rates will have large effects. This is what fixed exchanges, the gold standard, achieves.

Central banks intervene to prevent and control runs. From the perspective of the Federal Reserve, a depreciating dollar will induce American inflation and international banks with dollar assets might well develop open positions as they "finance" their dollar assets by accomodating their customers with liabilities in currencies other than dollars. Open positions

mean that a depreciating dollar adversely affects the net worth of the banks that are involved. The Federal Reserve will feel a need to intervene to contain and reverse such a run on the dollar.

In 1979 there was just such a run on the dollar. The run was not only from the dollar to other currencies within the international financial structure but there also was a "run" to gold, collectables and real estate as a "speculation", (i.e., as an asset bought for capital gains) within the United States. The runs were triggered by domestic U.S. inflation and by the prior growth of excess holdings of short term dollar assets by overseas organizations.

In order to break the 1979 run, the Federal Reserve had to increase the income available from holding dollars and adopt an anti-inflationary position that had credence in financial markets. For a goodly number of years "money supply control", i.e., monetarism, had been touted by economists of reputation and eminence as a rather painless cure all for economic ailments and most particularly as a way of assuring "no" inflation.<sup>15</sup> The "adoption" of monetarist language and procedures by the Federal Reserve led to credit tightening and interest rates that rose to new heights. The high and rising interest rates disrupted the domestic and international long term capital market, so that ~~short term~~ capital exports in the form of borrowing from banks increased.

It took much more than a 6% "deposit rate" at the international banks but, just as Bagehot's famous line to the effect that a "6% bank rate will draw gold from the moon" suggests, the 1980, 1981, and 1982 interest rates reestablished the well nigh exclusive position of the dollar as the currency of denomination of international debts. The appreciating of and the high

interest rates on dollars led depositors in the international banks to prefer dollar deposits. The multicurrency system that was emerging in the 1970's was put to rest.

The "excuse" that was advanced for the high interest rate policy that began in 1979 was that <sup>a "monetarist" policy of</sup> money supply control was necessary to control domestic inflation and that the high interest rates that accompanied money supply control were unavoidable side effects. But one effect of a high dollar interest rate is to increase the interest payments due in dollars on outstanding international debts. The high interest rates which made holding dollar assets attractive plus the rapid run up of dollar denominated interest payments meant that excess demand for the dollar ruled; the dollar began to appreciate. In the context of inelastic, with respect to price, demands for the import of many manufactured items as well as an inelastic, with respect to price, demand for imports of raw materials and oil, the rise in dollar interest rates meant that for many countries the interest due on loans had to be "capitalized"; instead of paying interest by dollars earned through exports interest was being paid by borrowing from banks or international agencies. As interest payments fell due they were "capitalized" into short term debts: the structure of the international financial system shifted <sup>towards</sup> ~~from being speculative~~ to being Ponzi, <sup>along the speculative - Ponzi spectrum.</sup>

If international debt is denominated in dollars then the "component" of the total demand for dollars on the foreign exchanges that is due to interest payments has a "positive slope" with respect to the dollar interest rate. If the payments due to international debt denominated in dollars is large relative to the balance on current account, then the noninvestment, nonbalancing part of the demand for dollars on the exchanges will be

positively sloped with respect to interest and exchange rates. This implies that other currencies will depreciate with respect to the dollar and this depreciation will continue even as high interest rates ~~will~~ lead to higher interest rates: market reactions to this disequilibrium exacerbate the disequilibrium.

Such a payment and interest rate imbalance means that a "run to the dollar" can take place. Such a run will depress the stock and bond market, for high and rising short term interest rates induce managers of dollar portfolios to hold money market assets. A run to the dollar also means that large and frequent depreciations of the dollar value of other currencies take place. This means that the home currency needed to meet payment commitments in dollar denominated debt rapidly increases, so that the burden of indebtedness as measured in the home currency may become intolerable. Incoherence emerges in financial markets. This forces lender of last resort intervention by both the Federal Reserve System and the Central Banks of the debtor countries. The lender of last resort intervention by the Federal Reserve in mid-year 1982, as the Penn-Square domestic fiasco and the break in the exchange value of the Mexican peso took place, took the form of both emergency intervention to refinance exposed positions and a retreat from the monetarist emphasis upon the money supply to a more traditional central bank emphasis upon accomodating financing and refinancing needs.

There is therefore a "corridor" ~~of stability~~ that is determined by interest rates, exchange movements and the accumulations of dollar balances, beyond whose borders runs to and runs from the dollar occur. The Federal Reserve and the cooperating central banks have to operate so that neither an excessive build up of <sup>short term</sup> dollar balances, such as occurred in late 1970's and

which triggered a flight from the dollar, or an excessive burden of interest payments denominated in dollars, such as ruled in 1982, which triggered a flight to the dollar, occurs.

#### Some Implications of the Huge Dollar Denominated Debt

A "peculiar" aspect of the current situation is that a large portion of the interest and the other income that results from the dollar denominated debt does not "end up" as the income of United States entities. The large accumulation of dollar denominated "bank" or "money market" assets by the oil exporting countries that are thinly populated and the large dollar books of non-United States banks are cases in point. If we assume that the dollar income that validates debt has to be the result of a dollar trade balance, then given the nature of the offshore owners of dollar assets, the United States current account deficit has to exceed the United States income received as interest and dividends on offshore investments by a goodly amount so that other holders of dollar assets can get their income in dollars.

But a United States deficit on current account that is large enough to provide dollars for interest on perhaps \$1000 billion of outstanding debt will cause severe employment dislocations and downside pressure on the overall profitability of United States industry. There will be 'protectionist' pressures on United States policy to try to close the gap in the trade balance - which is correctly seen to be a barrier to the well being of the impacted markets. Let us assume this pressure results in quotas and tariffs which effectively decrease the current account deficit of the United States that is due to the trade in these goods. Successful tariffs and quotas lead to a shortfall of dollars to meet payment commitments. As a result,

currencies of the rest of the world will depreciate even further against the dollar. This further depreciation opens new United States markets to imports. The large volume of dollar denominated debts outstanding implies that a continuing strong trend in the dollar's exchange rate is most likely: a trend in which the dollar appreciates seems to be in order. This of course means that as a trend, the burden of indebtedness measured in the various domestic currencies of the dollar denominated debt will increase, even as the competitive position of United States industries deteriorates.<sup>16</sup>

### Conclusion

If the world economy is to do better, it is necessary that the need for dollars by countries with dollar denominated debt not lead to either unfavorable profits and chronic unemployment in the United States or to restrained growth in the debtor countries. In the heyday of the International Gold Standard, the function of providing the poorer countries with income to service sterling or other gold standard denominated debt was shared by the current accounts of Britain and other gold standard countries and long term capital movements to the debtor countries. To the extent that dollars are furnished through long term investment, the pressure on the current account and on the exchanges can be eased. However an increase in long term investments imply a need for a growing favorable trade balance for the debtor countries. In this way the problem returns to the maintaining of domestic full employment in the United States in the face of a need for a substantial United States balance of trade deficit: the United States needs to emulate the British balance sheet posture from the heyday of the gold standard. This means that the income earned because of international indebtedness is in part

used to finance a deficit on the current account with the remainder used to finance part of long term international investment. The remainder of the long term international investment is to be financed by short term dollar balances that accrue to the debtor countries. The United States furnishes liquid assets that serve as the monetary base for the debtor countries as well as long term investment funds.

Such a system is viable if and only if the increase in international indebtedness and in international holdings of short term dollar balances take place in the context of a growing international economy. Thus the increased indebtedness must take place in the context of effective expansion of the two sets of economies: the United States and the rest of the world.

For any given interest rate and volume of dollar denominated international indebtedness there is a "deficit" in the trade balance of the United States that will be fully offset by earnings on dollar assets. The United States should and could run domestic employment and non-market determined investment programs that bring the United States income to the level that brings the first two tiers into a manageable relation. Long term investments to debtor countries that are motivated by market profitability cannot be expected to fill the <sup>debtors'</sup> gap between <sup>asked because</sup> payments due to financial contracts and a weak balance of trade performance by debtors, such as would exist in the absence of a strong United States trade deficit.

Once offshore earnings of the debtors on trade account rise to a level where the income portion of the payments due can be fully validated, the profit prospects, in terms of dollars, of long term investments in these <sup>debtors</sup> countries will be attractive. This will trigger long term investment: what had been a dollar shortage can quite quickly disappear so that the debtor

countries ~~will~~ accumulate short term dollar holdings.

If the accumulation of short term dollar assets by the rest of the world becomes too great, the dollar will begin to fall on the international exchanges. Such a fall can lead to further falls if the holders of dollars try to exchange their holdings for other currency. A regime of strong trade balances by debtor countries and a strong international investments climate can lead to a run from the dollar which takes the form of a depreciation of the dollar. The Federal Reserve is then back in the 1979 situation where it is forced into a high interest rate posture to protect the dollar. High dollar interest rates leads to a proliferation of Ponzi financing postures.

The key variables that determine Federal Reserve policy in the circumstances that now rules are the volume of short term dollar holdings of foreign private banks and central banks and the course of exchange rates. Too great a level and rate of increase in offshore dollar holdings that leads to a depreciation of the dollar requires a tightening of United States credit conditions to prevent a run away from the dollar and too small a level and rate of increase in offshore holdings of dollars that leads to an appreciation of the dollar requires an easing of United States credit conditions to prevent a run to the dollar.

The evolution of international financial relations among countries since World War II has produced a straight jacket. This time it is not the gold standard that constrains the key central bank, the Federal Reserve. We now have a financial stability straight jacket that constrains the freedom of action of the Federal Reserve. Although it is possible to visualize a pattern of international financial flows such that financial stability is compatible with a close approximation to full employment at stable prices in the United



States, it may very well be that the prospects for achieving such a pattern is a pious hope. It is true that protectionism, in the form of tariffs or quotas by the United States, will tend to make things worse not better; protectionism is not a solution to the problem. For the problem to be manageable, the United States needs to be able to generate <sup>and</sup> ~~the~~ sustain a close approximation to full employment without generating inflation. This may require institutional constraints upon the exploitation of market power by firms and labor; but in today's political/economic climate in the United States, such institutional constraints are anathema to the political powers.

The I.M.F. solution involves some combination of "debtor constraint" and "concessionary refinancing". The debtor countries are under "injunction" from the I.M.F. to decrease their imports by decreasing their income levels. But a decrease in income implies a decrease in profit flows and therefore in the flow of local currency funds that are the basis for the validation of dollar denominated debt. Furthermore, the decrease in imports is supposed to improve the balance of trade (tier II) of the debtor country, but as was seen earlier this improvement will have adverse consequences for United States income and employment.

The "debt" can be made to go away, at least in part, by moving the debt from the portfolios of private banks to some "international" organization which will then refinance the debt at concessionary rates. However the funds for refinancing will have to come from someplace. That someplace either will have to pay market rates for the funds or the funds are furnished by "central banks". If market rates are paid for liabilities and the assets earn below market concessionary rates then a subsidy is necessary. If the funds used in the concessionary refinancing are central bank funds, then the "reserve base"

of the monetary system of the participating central banks increase; concessionary refinancing can be an engine of monetary inflation.

If we consider the problem to be the compatibility of the international debt structure with the achievement of employment and growth policy objectives of the United States, then for any pattern of government spending and potential deficits there is a maximum deficit in trade account that is feasible. This maximum sets the limit to the dollar interest payments that international debtors can pay. Given the total feasible interest payments then for any expected level or range of interest rates there is a level or range for the dollar denominated international debt that can be validated.

It may be necessary to cut the interest rate on dollar denominated debt to lower the barrier to full employment in the United States that the need for a United States trade deficit implies. The international financial problem reduces to a problem of getting the "center" which is the United States to operate in an appropriate fashion: the United States should be under an injunction to achieve full employment with a substantial trade deficit and interest rates that are substantially lower than those that now rule. But <sup>it</sup> ~~as long as~~ full employment in the United States leads to inflation, the lower interest rates of the above may be unobtainable.

The world is not in a gridlock from which there is no way out but the dimensions of the problem are indicated by the need to maintain a reasonable approximation to full employment in the United States even as profits of American business are held <sup>down</sup> <sub>1</sub> as a repercussion of the need to run a large deficit on trade account. There is no solution without a large United States trade deficit. This implies that a major portion of the income and profit sustaining expenditure in the United States will have to come from a Federal

Deficit rather than profit determined investment. Hopefully the non-market determined expenditures by the Federal Government will be real income and productivity enhancing, but ~~of course~~ the United States record on this account is not good, military expenditures and transfer payments are the preferred expenditures.

It is embarrassing to bring up the costs and internal conflicts that arise within a rich country that is shouldering the burden of being the host country for the denomination of international debts. What stands out from the argument is that this is not really a multipolar world. The financial center role in a world of flexible exchange rates has made New York and the United States the predominant center of the international economic structure.

In this structure ~~it~~<sup>good</sup> does no or little to impose austerity on the debtor countries, where austerity implies unemployed ~~reserves~~<sup>resources</sup> and a decline of income. What should be "imposed" is an emphasis upon full employment and economic expansion based upon domestic resources. Imposing and sustaining depressions is no solution. The current heavily indebted countries should be under an injunction to find an expansion path that is consistent with the economizing of foreign exchange - even as the center countries - and particular the United States - should be under an injunction to maintain their income and employment so that the supply of foreign exchange is sustained.

The naive harmony of orthodox economics in which the free play of market forces leads to each "entity" achieving a best possible result misspecifies the way systems ~~in the~~<sup>with</sup> complex financial linkages behave. The orthodox anti-inflationary policies in a center country such as the United States and the austerity imposed by creditors ~~or~~<sup>on</sup> international debtors are policy interventions that interact to make things worse in ~~with~~<sup>both</sup> the center and the

periphery. ~~However~~ the key to doing better in our interdependent world remains the responsibility of the center - the country whose currency is the unit of denomination of international debt. Policies that achieve a close approximation to full employment even as imports are welcome are the responsibility of the center country and the countries that run a strong current balance in the currency of the center. Since 1979 the United States, Japan and the affluent economies of Europe have not done their part. The international indebtedness crisis cannot be resolved by imposing austerity on debtors while ignoring the responsibility of the creditors to maintain prosperity.

Instead of <sup>Bryson's</sup> a cross of gold, the cross <sup>being borne today that</sup> making for systemic impoverishment is made of a mismanaged ~~dollar~~ <sup>United States economy.</sup>

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10. In the late summer of 1979 some banks papered over emerging open positions in which Swiss franc liabilities exceeded their Swiss franc assets by issuing long term debt denominated in Swiss francs.
11. The final collapse of the Continental Illinois Bank of Chicago was triggered by a withdrawal of jumbo deposits by, it is presumed, Japanese banks; this led to a flight of other offshore deposits. The Federal Reserve made this withdrawal possible by a massive infusion of funds through the discount window. Finally the Authorities announced that they stood ready to validate not only all deposit liabilities at the Continental Illinois but also all deposit liabilities at the other "major" or "giant" banks. In this way the High Powered money of the international banks was protected.

12. "Central Banks Ask More Private Loans for the Third World", Headline in the New York Times, June 14, 1983.

13. John Maynard Keynes, Great Britain Foreign Investments, New Quarterly, February 1910; Vol. XV Activities 1906-1914 India and Cambridge; Collected Writings (MacMillan and St. Martins Press for the Royal Society, Cambridge, England 1971) pp. 44-59.

14. A U.S. domiciled owner of assets denominated in a currency other than dollars which has payment commitments and current expenditures in dollars would have an open position.

15. The literature in monetarism is immense.

16. If a fixed exchange rate rule then money wages or costs of production in the United States would rise relative to wages and costs in the debtor countries. ~~The need for "unrequited exports" when international indebtedness feeds back up on money wages.~~