FINANCIAL INTEGRATION

AND

NATIONAL ECONOMIC POLICY

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Peter Albin: "The agents in the model have a model of the model."

PREPARED FOR AN INTERNATIONAL SEMINAR ON FINANCIAL INTEGRATION AND MONETARY STABILITY,

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June 11, 1993
I. Introduction:

This paper is an application of the financial instability hypothesis to the problems posed for monetary and fiscal policy by international financial integration. As economic policy arguments always the author's economic theory priors, we begin by stating the main propositions of the financial instability hypothesis:

1. The path that an unconstrained capitalist economy, which possesses a sophisticated, complex and ever evolving financial system, generates exhibits periods of tranquil and periods of turbulent and even chaotic behavior. The self-seeking behavior of the diverse units that make up a capitalist economy leads through time to the emergence of conditions which are conducive to turbulent and chaotic behavior from prior conditions which were conducive to tranquil behavior.

2. Thus periods of tranquil as well as episodes of turbulent and chaotic behavior are endogenous phenomena in capitalist economies.

3. Turbulent and chaotic behavior can take the form of interactive inflations, speculative binges or deep interactive debt deflations.

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4. As these processes take place they seem to gain momentum. However, just as there seems to be no end to the chaotic behavior a combination of the constraints imposed by institutions and usages, policy interventions which may affect the institutional structure and the self organizing properties of markets create conditions which attenuates the incoherent regime and sets the stage for the emergence of a new tranquil regime.

5. This new tranquil regime may be at low levels of economic activity: stagnation is likely to characterize the tranquility that follows turbulence.

6. In time self seeking behavior by the diverse units of a capitalist economy leads to a burst of expansion, speculation and inflation which, in time, are followed by another regime of incoherent behavior.

This succession of regimes can be summarized in two maxims, "One can never step in the same river twice." and "The more things change the more they remain the same.". The first emphasizes that economies evolve, so that the present is not fully comparable with the past. The second points out that the evolutionary process yields a cyclical pattern which exhibits some important unchanging patterns.²

The financial instability hypothesis builds upon The General Theory of Employment, Interest and Money of Keynes, which it takes to be misnamed. ³ Keynes' The General Theory is viewed as A Special Theory of a Capitalist Economy. The observation that Capitalist economies are characterized by two quite different sets of prices, one of current output and the second of capital assets, is the foundation of the research program of the financial instability hypothesis. ⁴

The analytical core of the financial instability hypothesis is the development of a model of investment under capitalist conditions, in which the pace of investment depends upon the relation between these two price levels, internal finance, derived from gross profits, and the terms upon which external finance is available. There are two interfaces between finance and the investment process. Financial markets enter into the determination of the price level of capital assets and of the leveraging of internal funds, for both investment and the holding of assets.

These two price levels - one can be taken to be a consumer price index (the C P I) and the other can be taken


to be a price level of equities (the Dow-Jones) - reflect quite different facets of the economy. They vary one from the other, sometimes mildly and sometimes radically, and their gyrations can transform an initially mild inflation, speculation or deflation into a seemingly unending incoherent behavior of the economy. As a result of the complexity inherent in a financially sophisticated capitalist economy (with its two price levels, complex of financial institutions, and multiple interfaces between financial, labor and output markets and the flows of incomes) the Smithian assertion, that each agent, guided only by self interest as it perceives its self interest, is led, as if guided by an invisible hand, to do that which leads the economy to some "best" position, does not hold.  

5. The question of whether decentralized markets produce order, anarchy or sometimes one or the other is a critical question in economic theory. For a summary of the present state of general equilibrium theory, which purports to answer these questions, see Bruna Ingrau and Giorgio Israel, The Invisible Hand MIT Press 1989.

The general conclusions of Ingrau and Israel are that 1) the uniqueness and the stability of a general equilibrium have not been shown and 2) the proof of the existence of a general equilibrium for an economy that allows for production and exists in calendar time depends upon the assumption of perfect foresight.

These negative assessments of the substance of General Equilibrium theory hold even though General Equilibrium theory has not tackled the problems that enter into economic analysis with the introduction of money, banking and the financing of investment and positions in capital assets. The greater complexity introduced into the model when the capitalist mode of financing investment and positions in capital and financial assets are taken into account tilts the results towards treating any equilibrium of complex systems as a transitory rather than a stable outcome.
Units with payment commitments denominated in a currency are likely to react to a shortfall in cash flows in that currency in a manner which leads to further shortfalls in cash flows. Situations in which the decentralized pursuit of self interest transform initial unfavorable result into even worse results are easily constructed: market reactions can exacerbate rather than alleviate excess supplies. The metaphor of a benign invisible hand is not apt for a modern capitalist economy. The invisible hand of markets may lead to a malignant outcome.

If the prior for the analysis of economic policy is the financial instability hypothesis, then the outlook on institutions and policy is different from that to which a Smithian benign invisible hand prior leads. Whereas Smithian theory holds that interventions in the workings of markets are almost always counterproductive, i.e. that policy interventions exacerbate rather than alleviate initial disequilibriums, the financial instability hypothesis holds that policy interventions and institutional constraints are necessary if endogenously generated thrusts towards incoherence are to be thwarted or contained. If interventions and apt institutions are necessary to forestall incoherent behavior and to contain the tendency for market economies to sink into deep depressions, then the Smithian system cannot be the core of a useful economics. A useful economics must be able to identify institutions and usages which can contain processes that would lead to the
socially and economically very costly incoherent behavior and identify institutions and interventions which can sustain a close approximation to full employment.

At the head of this article I cite Peter Albin’s memorable phrase anent agents in the model having a model of the model. In our modern economies the agents in the model include policy makers. If orthodox economists, who believe in the validity and relevance of the Smithian proposition, are the advisors, then the policy advice will not reflect the possibility that the economy requires active interventions if it is not to generate periods of incoherent behavior. If a policy advisor accepts the financial instability hypothesis as a valid way of looking at the economy then his advice will look to the identification and creation of institutions and policy interventions which can contain or control the inherent instability of a capitalist economy.

II. Central Banks as Instability Containing Institutions

As a result of endogenous economic instability all capitalist economies have institutions and usages which intervene and dominate the natural behavior of markets in order to prevent either excessive speculations, run away inflations and debt deflations. Central banks are such institutions: they were put in place, as institutions which
would constrain banking processes and act as lenders of last resort, in order to contain the tendency for economies with fully endogenous and unconstrained finance (money) to generate inflations, speculative frenzies and debt deflations.  

Central banks both constrain financing behavior and, as lenders of last resort, contain the consequences of speculative binges. In particular, as lenders of last resort, central banks intervene to prevent the free fall of asset prices that can occur when financial institutions are forced to try to make position by selling out position. Thus monetary policy has its roots in the imputation of the instability of capitalism to the existence of fractional reserve banking and the endogeniety of the money supply, asset price levels and output price levels which follow.

After the Federal Reserve and the other Central Banks failed to contain the debt deflation of 1929-33, the

6. In 1993 Central bankers and the press are given to asserting that fighting inflation is the "raison d'etre" for Central banks. Such assertions ignore the history of central banks which were created either to finance the "Crown" (The Bank of England) or to contain financial instability (The Federal Reserve System).

7. The central banks constraint of financing practices is reflected in the traditional doctrine of eligibility by which only particular types of assets were eligible for discounting at the Central bank. This doctrine attempted to bias bank lending towards short term commercial transactions. Bank examination also constrains bank financing activity. Note that the Basle arrangement, by which differing capital absorption ratios are assigned to different classes of assets, is a technique for guiding financing towards assets with lower assigned capital absorption ratios.
inadequacy, of a policy regime based upon Central Bank interventions to contain the potential for "bust" inherent in capitalist development, became evident. Keynes constructed a system which legitimated the use of the fiscal powers of a modern nation state, in conjunction with monetary interventions, to smooth out the boom and bust character a capitalist economy with a sophisticated financial structure.

During the first years after the second world war nation states quite effectively used monetary and fiscal policies to maintain a closer approximation to full employment over a sustained period of time than had ever before been achieved by capitalist economies. Furthermore the prosperity associated with this sustained full employment was more widely distributed through the population than was true of prior periods of extended good times. The combination of a big government and what Jan Kregel has called a big bank served the world well in the early post war period. However what some have called the Golden Age of post World War II capitalism rested upon a hegemonic economic position of the United States: the United States maintained its own economy close to full employment and allowed trading partners to run surpluses to offset at least part of the United States' capital incomes. This United States' hegemonic position was brought down by "policy" imports in the form of wars, armies stationed abroad and the subvention the defense efforts of other's.
III. Financial Integration.

The vast expansion in international trade over the past decades has resulted in the economies and financial systems of the world becoming more integrated than they ever were before. The rise in international trade has been accompanied by a huge expansion in international portfolio diversification and a rise in capital movements which both initiated and followed current payment balances. The revolutions in transportation, communication and computation, in the form of containerization, giant cargo planes and the new technologies of computing and communication, that have occurred is the underlying reason for this growth in trade and financial linkages.

The transportation, communication and computation revolution reduced the protection, due to costs of transporting and communicating, that a nation's producers had in its home market. This was of particular significance for the United States, whose continental scope and geographic separation from Europe and Asia had provided a significant degree of natural protection under older transportation and communication regimes. The phenomenal growth in international trade and the equally phenomenal growth in international financial linkages means that the conventional favorable view of the effect of international trade has to be reconsidered.
The communication and computation revolutions not only aided the growth of International trade they also removed barriers to international portfolio diversification. Not only did the number and importance of multinational firms increase but the portfolios of banks, various financial intermediaries and individuals were to an apparently ever increasing extent diversified internationally. Furthermore positions in foreign currencies and in assets denominated in foreign currencies give rise to a demand for instruments that can limit losses if currency movements became excessive. Such a demand for protection against currency fluctuations was unnecessary in the days when gold content of the currencies determined a narrow band within which currencies fluctuated or the Bretton Woods system achieved largely stabilized exchange rates.

The interrelated balance sheets of the units in a financially integrated international economy are tools for the analysis of such an internationally linked economy. Double entry book keeping means that every entry on a balance sheet has to be accompanied by an offsetting entry on the same balance sheet. In addition every financial entry has to have an opposite entry on some other balance sheet.

Furthermore every financial instrument on a balance sheet has an image on another balance sheet; one unit's asset is another unit's liability. The financial items in balance sheets are either means of payments as they stand,
commitments to make payments to others or claims to payments from others. The values placed on items on a balance sheet are either a current valuation of a particular expected cash flow or a value derived from an historical transaction (a purchase or a financing deal) as modified by some allowance for depreciation. The valuation of a tangible asset begins with the price paid for the asset as an investment output. This is adjusted to reflect depreciation of the asset. As such assets are sold and bought its price at these transactions, which may be higher of lower than the value on the seller's books becomes the valuation of the asset on its new set of books.

In a pure unintermediated bill of exchange economy, the risks that the outcomes for the underlying risky businesses and households, whose promises to pay are on the face of the bills, will not enable them to pay are carried by those who own the bills: i.e. merchants and producers.

Bankers were invented, so to speak, to have superior knowledge of the likelihood that a contractual payment will not be forthcoming than an ordinary businessman or investor, so that they can better judge the likelihood of repayment, and superior wealth so that they can fulfill their pledges to the owners of their liabilities, even when the assets they own fail to perform as the contract they own specifies. Furthermore by owning and owing to many, bankers can exploit a "banker's law" which holds that only a small set of debtors will fail to live up to their commitments and only a
small set of creditors will want to move their money from a bank during any short time period. For these services of furnishing liquidity and assurance, bankers charge a fee. Merchants and producers willingly pay this fee, for they accept a small loss with certainty against a large contingent loss, i.e. bankers, by discounting notes and substituting their own credits for the credit of the issuer of the bills, sell insurance.⁸

The liabilities on the balance sheet are commitments to make payments either on call, at a particular date or if specified conditions emerge. The essential banker's question to a unit whose liabilities it contemplates accepting is "What are you going to do to get the funds you are promising to pay." For firms the answer lies in the expected gross profit flows and the potential proceeds from the sale or pledging of assets and for households the answer lies in the expected wages, various types of transfer payments and the sale or pledging of assets. For governments it is the expected tax revenues, as well as the issuance of new debts to "pay off" maturing debts.

Bankers are the designated skeptic of a capitalist economy: the prospective borrowers, or in general the

⁸ M. Friedman and L. J. Savage "The Utility Analysis of Choices Involving Risk" Journal of Political Economy, Aug. 1948 279-304. In this paper Friedman and Savage show why it is rational for households to consistently make the unfair bets of insurance.

Currency traders consistently make profits. So do bookies when they quote 6 to 5 either way when equal amounts are bet on both sides of a match.
prospective seekers after financing, paint only rosy pictures of their economic prospects. The banker is the agent of the economy who subjects the essential enthusiasm of an entrepreneur to a skeptical evaluation.

There is a need to apply the banker's question and banker's skepticism to our internationally integrated system.

IV The Tiers Approach to Balance of Payments and Exchange Rate Determination.

We have opened the question of what are the cash flows which support the internationally integrated financial structure.

"Every liability of an economic unit - be it household, government or financial institution - and every instrument traded in a financial market must be supported by cash flows. These cash flows are derived from participation in productive activity that generates wages, profits and taxes. The same requirement that cash flows support asset values holds for international indebtedness, the only difference being that the supporting cash flows may be derived from incomes denominated in one currency while the payments are denominated in another." 9

The opening of the question of cash flows supporting international liabilities throws new light on balance of


payments problems and the dominance of financial factors in determining exchange rates. The balance of payments is determined by four types of cash flows:

1. the payment commitments on debts,
2. the balance of trade,
3. long term capital movements and
4. short term capital movements. The short term capital movements are the adjusting factor which assures that the balance of payments balances.

We can call these types of payments tiers in the balance of payments and arrange the items in the balance of payments in these tiers. As is evident the tiers are determined by different markets: tier one is an inheritance from the past, tier two is the result of current trade in goods and services, tier three is the result of capital market behavior and tier four is the result of the international money markets and whether there exists an international "clearing currency" such as gold.

The short term capital movements are equilibrating factors which assure that a payments balance always balances. Under a gold standard these short term capital movements could take the form of gold movements. In a regime of floating exchanges an accumulation of short term capital movements can lead to changes in exchange rates: furthermore short term capital movements may be speculative movements lured by anticipated exchange rate changes. In
addition leads and lags in payments on international trade accounts can lead to short term capital movements.

As each period begins every agent has a prior commitment to make payments because of its debts: firms, households, and government units have payments to make on both interest and dividends account and on account of the principle of its debts that come due.

We can think of a national state as a unit with a balance sheet. During each say quarter its external indebtedness, whether the debt be of the government, the country's banks or private units, mandates payments on account of both interest and principle. We will call the payments due on indebtedness the tier one of the balance of payments.

Similarly the nation's households, firms and government units engage in trade activity and sell and buy various services. This activity leads to a balance of trade surplus or deficit. The items that are usually considered under the balance of trade enter under tier two of the balance of payments.

Each period there are flotations of long term capital issues on the various internationally integrated capital markets. Households and financial institutions buy and sell assets for various portfolios across national boundaries. Multinational firms move capital from country to country. These transactions are tier three of the international exchanges. The fourth tier is a movement of short term bank
assets or liabilities: under the gold standard this could take the form of a movement of specie.

In the 19th century heyday of the international gold standard with Britain as the dominant financial force, Great Britain ran a huge surplus on its international balance sheet payments account: Britain was creditor and banker to the world.¹⁰ Britain consistently ran a deficit on its current trading account: however the deficit was almost always smaller than its surplus on its balance sheet accounts. Thus the sum of the tier one and tier two accounts was almost always positive.

Britain was a main source of long term international capital movements. Its outflow during a year, say on account of the long term capital movement, was greater than the surplus on the sum of tier one and two. The balancing item was a growth of sterling balances of the rest of the world. Even as Britain was a net exporter of long term capital: Britain imported short term capital. This short term indebtedness took the form of balances in London banks, money placed on the London money market and deposits at the Bank of England.

These short term sterling balances of the rest of the world were the working capital of the private banks and also were part of the reserve base of the debtor country's

Central Bank.\textsuperscript{11} If these sterling balances became "too great" the attempt by holders to get out of sterling moved the exchange rate to a "gold" point at which the Bank of England would lose gold. The Bank of England operated a thin reserve gold standard which meant that a movement of gold from the bank called for measures to halt and even reverse the flow.

The Bank of England reacted to the outflow of gold by raising the bank rate. All short term rates rose with the bank rate. This meant that underwriting costs rose and arbitrage among issues led to a rise in long rates. The rise in rates decreased the new long term issues that came to the market. This led to a fall in Britain's tier three deficit. This together with an unchanged surplus on the sum of tier one and tier two led to a net short term capital flow to Britain. When the capital markets are integrated internationally the equilibrating movement occurs in the long term and short term financial markets not ion the goods and services market. In the heyday of the Gold standard financial transactions ended any outflow of gold and allowed for the reflux of gold to the Bank of England.

\textsuperscript{11} Note that the net creditor country, the one with the large accumulation of foreign assets and the recipient of a large net income on tier one account is a debtor on short term capital. If the books of the country are drawn, it becomes evident that the positions of the major exporters of long term capital is financed by short term debts: In the days of Bretton Wood the United States was borrowing short to finance long term positions.
The aphorism that a 6% bank rate would draw gold from the moon was validated, not by a change in the trade balance or in the relative incomes of Britain and the rest of the world but by capital and money market adjustments.

The basic lesson to be learned from the operations of the financially integrated gold standard of the 19th and early 20th century is that the country or countries that have a large net favorable cash flow because of their income from foreign assets must offset their tier one surplus with a tier two deficit. Furthermore, if they still run a surplus on the sum of tier one and two they need to be a reliable source of long term capital. As eventually international indebtedness will be denominated in the currencies of the countries with large offshore assets, they must also accept that their currency will become a reserve currency of their debtors, for it is convenient to hold liquid assets in the currency in which your debts are denominated.

V. Perverse Effects

We will first look at the adjustment process from the point of view of a country with a large deficit on tier one payments. If the net amount due each period on foreign indebtedness, i.e. the tier one deficit, is so large that in spite of a substantial tier two surplus the balance over tiers one and two is negative a large short term capital
movement will take place to the deficit country. (We ignore tier 3, long term capital, movements.) The short term debt of this deficit country will pile up of the in the banks and central banks of the world. This leads to pressures on the exchanges which the Central Bank of the debtor country will offset by raising interest rates, which depresses the economy of the debtor country. If the accumulation of short term indebtedness continues speculation against the deficit currency will become prevalent and the central bank of the country will need to expend reserve balances to defend the currency. The exchange rate will fall.

The number of units of the debtors money that is required to fulfill unchanged obligations in the creditor's money increases. If the debt is private then the firms in the deficit country need to use a higher percentage of their gross cash flow to fulfill their obligations. The internal funds available to fund investment or to decrease indebtedness falls and with this the pace of investment in the economy diminishes: in particular gross profits fall. The private foreign debt leads to local firms tending towards bankruptcy.

If the debt is a government debt then either the tax revenue that is needed to meet obligations increases or the deficit increases in order to meet the payment commitments. But this deficit neither supports domestic consumption nor supplies goods and services to the population. It is truly a dead wood deficit. But raising taxes or generating a
surplus net of payment on the international debt is also a dead weight expenditure.

If the international capital position is in the form of equity positions or if it is in the form of debts denominated in the deficit country's currency then the pressure on the exchange rates will keep the debtor currency payments constant while decreasing the flow to the asset owners in the surplus country. Denominating international debts in the currency of the debtor country at least forces the creditor country to recognize that it can lose from exchange rate depreciation by its indebted trading partners.

However in fact international indebtedness is normally denominated in the lenders currency or in another "strong" currency. This means that the exchange rate of the indebted country is under pressure: the terms of trade move against the indebted country.

Furthermore if there are fixed exchange rates, i.e. a gold standard or its equivalent, then the pressure from the exchanges will be felt in wage rates. The wage rate (cost structure) in the indebted country has to be low enough so that enough of the nut, which is due to the carrying costs of international indebtedness is made on the trade account so that the "financiers of the world" feel they can hazard more long term capital into the indebted economy. In this way the chronic deficit on the first two tiers does not result in an accumulation of short term indebtedness which can lead to pressure on the fixed exchange rates.
It is clear that international indebtedness benefits the inhabitants of the creditor country two ways. The first is that there is a transfer of profits from the debtor country to the creditor country. The second is that if the debtor country runs a tier one plus tier two deficit then the pressure on the exchanges will lead to chronic depreciations and declines in relative wages: prices in the debtor country fall below purchasing power parity.

VI. Conclusion: The Need for International Responsibility.

A unique balance between a tier one surplus, a deficit in tier two which was not large enough to fully fund the tier one surplus, a serious long term tier three capital movement so that the sum of tiers one, two and three had the creditor country in deficit and a tier four short term capital inflows to the creditor country seems to be the condition for a sustainable international payment system. In the 19th century when England was the center of a seemingly stable monetary system and during the Bretton Woods system when the United states was the center of a successful fixed exchange rate system the broad contours of a system that was stable ruled.

In particular the balancing movement, in the form of a short term capital movement toward the stable international center, augmented the reserve base and the transaction
balances for central banks and commercial banks for countries on a sterling or dollar standard. The center, Britain and the United States at different times, benefited from the system because of the capital income they earned and the jobs in finance the system generated. Furthermore the "unrequited" exports of the debtor countries were made possible by means a relatively depressed wage unit in the debtor countries along with an enlarged flow of profits associated with the tier two surplus.

The "benefits" from trade for the center may well include the accumulation of international assets, which lead to pressure on the exchange rates of the debtor countries. If the deficit on the combination of tier one and tier two payments is greater than what can be funded on the long term capital market and what is needed for international liquidity by debtor countries then there will be downward pressure on the currency of the debtor country and a deterioration in the terms of trade.

For an international trading and finance system to be viable over the longer run a flow of funds from the substantial creditor countries to the debtor countries which enables the debtor countries to service their external liabilities without any downside pressure on the terms of trade is needed. This means that the creditor countries cannot run a surplus on tier one plus tier two that is greater than the amount of long term liabilities from the debtor country they are willing to acquire and which the
income flows in the debtor country can support. Furthermore, at least some of the capital movement needs to take the form of equity investments and some needs to be denominated in the currency of the debtor, so that a deterioration in the terms of trade has adverse effects upon the asset values of at least some units in the creditor countries.

In particular countries with a large position in international assets should not have policies or institutions which make them dependent on chronic surpluses in international trade. Creditor countries which protect their export surpluses are achieving their prosperity by begging their neighbor: by making their neighbors poorer. Furthermore if a country with a substantial international asset position maintains an anti inflationary position which prevents its trading partners, who are also its debtors, from using monetary and fiscal measures to achieve an approximation to full employment then it is begging its neighbors.

International financial integration has obviously increased to an enormous extent in the two decades since the end of the Bretton Woods system. Some of the integration represents the volume of currency trades undertaken in efforts to contain exposure to currency fluctuations. The theory of the advocates of flexible exchange rates argued that fluctuations would be small. In truth the swings in exchange rates have been very large: much too great to be
explained on trade accounts. The wide swings are an effect of financial integration.

One corollary of financial integration is the need for national states to agree on the objectives of economic policy. In the 1960's a trade-off between the level of employment and price stability became part of standard economics. In today's index of objectives that Central Banks aim to achieve the weight of full employment is well nigh zero and that of containing inflation is well nigh one.\(^\text{12}\)

This may well be an unfortunate weighting system. If the price of international financial integration is the fostering of a regime of high unemployment and low growth upon debtor countries then I expect that measures to establish greater autonomy in economic policy for nation states will once again be on the political agenda.

VII. A Note on the Current Situation.

the note about Japan's international asset position.

If there is international portfolio diversification then a 55 billion net position may be associated with a 1500 plus and a 100 negative position. Such a situation is much

\(^{12}\) Press reports keep on appearing to the effect that the *raison d'être* for central banks is to contain inflation. This is miss reading of history. Central banks were created for a variety of reasons such as financing the crown, creating a financial structure in which short term loans accommodated to the needs of trade, and cooperated in creating a close approximation to full employment.
more conducive to volatility that a simple 500 net and gross position. Own nationals as speculators against home currency.