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The Discipline of Economics  
and Economic Cycles\*

par

*Rodrigue Tremblay*<sup>(1)</sup>

<sup>1</sup> Département de sciences économiques, Université de Montréal.

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THE DISCIPLINE OF ECONOMICS AND ECONOMIC CYCLES<sup>(1)</sup>

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*Rodrigue Tremblay*

Université de Montréal

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## RESUME

Cet article postule que le cycle financier et économique international de longue période (50 - 60 ans) n'est pas une aberration statistique, mais est le résultat de conditions institutionnelles, politiques, financières et économiques récurrentes dans l'économie mondiale. Il y est proposé comme hypothèse que la source des cycles financiers et économiques de longue durée origine de l'effondrement des systèmes monétaires internationaux, lequel met en marche un processus d'inflation non-anticipée, de déséquilibres dans les balances des paiements et d'endettement international dans une monnaie-clé. Ce processus se termine alors par une désinflation, un boom boursier spéculatif suivi d'un crash, et une liquidation des dettes qui influencent négativement le secteur réel de l'économie.

A cause de l'absence d'un mécanisme international et automatique de correction des déséquilibres financiers et économiques internationaux, l'économie mondiale risque de devenir de plus en plus instable jusqu'au point de retournement. Une coopération monétaire internationale est de nature à atténuer les conséquences néfastes de l'ajustement des déséquilibres.

**Mot-clés:** Cycles économiques, inflation, endettement international.

## SUMMARY

In this article, it is argued that the long international, financial and economic cycle (50 -60 years) is more than a statistical aberration, and is the result of institutional, political, financial and economic conditions which are recurrent. It is proposed as an hypothesis that the breakdown of international monetary systems is at the origin of the financial and economic long cycle. Such a breakdown starts a process of unexpected inflation, of balance of payments imbalances and of international indebtedness in a key-currency. The last stage of this process is characterized by disinflation, a speculative stock market boom and a period of debt-liquidation which negatively affect the real side of the economy.

Without an international and automatic mechanism to correct the financial and economic international imbalances, the world economy runs the risk of getting more and more unstable until the turning point. International monetary cooperation could contribute in alleviating the negative spillovers accompanying the adjustment of these imbalances.

**Keywords:** Economic cycles, inflation, international indebtedness.

## THE DISCIPLINE OF ECONOMICS AND ECONOMIC CYCLES

*"Macroeconomics is a messy subject, not a straight-forward application of a general equilibrium theory".*

James Tobin

*"The Great Depression remains a formidable barrier to a completely unbending application of the view that business cycles are all alike".*

Robert E. Lucas, Jr.

### INTRODUCTION

It is a trivial reality that economic data deviate overtime around a trend. They fluctuate, moving up and down. And when many economic series expand and contract at about the same time, they create a cycle with a given amplitude and a given length of time, as the economic system tends towards or away from equilibrium.

There is wide agreement about the existence of a short-run economic cycle in industrialized countries lasting from 3 to 5 years from peak to trough. Keynesian economists explain it by the fluctuations in aggregate demand, especially inventory investment. Monetarist and New Classical economists explain it either through unanticipated changes in monetary and fiscal policies or through random shocks in decision making or in technology that affect current values for prices, production and employment.

There is much less agreement on whether there are longer economic cycles lasting more than 5 years and being recurrent enough, even if irregular, to represent a cyclical pattern of industrialized economies. This is particularly the case regarding the Kondratieff economic long wave during which economic and financial imbalances generated during a persistent upswing (20-30 years) are corrected by downward movements of a

long duration (20-30 years). There is even less agreement on the causal mechanism of these long fluctuations, and whether they can be influenced by outside interventions.

My own analysis of worldwide economic fluctuations leads me to conclude that, firstly, there are common conditions (political, financial and economic) that tend to produce similar results, and secondly, that government intervention, especially international monetary co-operation between governments, is very useful in cushioning the adjustment mechanism that corrects the financial and economic imbalances. What are the conditions that result in basic financial and economic imbalances that feed the long-run economic cycle? What is the process by which these imbalances are corrected? And, how can forces, such as governments or international institutions either prevent or, when in progress, make less severe the adjustments that the economy has to go through in order to correct these imbalances?

## II. EXISTING VIEWS ON ECONOMIC FLUCTUATIONS AND ON THE ROLE OF GOVERNMENTS

In 1939, when Joseph A. Schumpeter [1939] wrote his book Business Cycles, the world economy had gone through a decade of Great economic Depression. Economics as a discipline found itself ill-prepared to explain and, if possible, predict economic expansions and economic contractions, let alone prescribe public policies to control the business cycle. Economists, from Adam Smith [1776] and David Ricardo [1817] to Leon Walras [1898] and Alfred Marshall [1890] had long relied on the self-equilibrating mechanism of competitive markets to cure the economy of any short term deviation from the stable equilibrium. In this idealized world, there was no need for any government to intervene in the public interest in order to stabilize the system. Corporations, workers, consumers and bankers, if left alone, could fight it out, and economic stability and economic prosperity would prevail. Economists were like

doctors who would only rely on the self-healing propensity of the human body to cure itself, negating the possibility of long-lasting illnesses or even death-causing diseases.

John Maynard Keynes [1936] of course, as the modern founder of macroeconomics, had the vision to adapt theory to reality and to identify the need to stabilize aggregate demand as a condition for economic stability. His theory was based on the volatility of private investment demand and on excessive aggregate private savings, and his policy prescriptions called upon the government budget as the stabilizing force in the economy. As the 1970's and 1980's have shown, however, public deficit spending is not a long-run solution when demand deficiency is worldwide and long-lasting. As public debt grows, interest payments reach higher and higher levels, so that it comes inevitably to a point where the government deficit ceases growing or only covers interest payments and ceases therefore to be a stimulant for the economy.

In fact, Keynes' theory was a theory of recessions, not of prolonged depressions. And the Keynesian economic policy of counter-cyclical deficit spending was intended to smooth the short-run business cycle and not to cure a world-wide deficiency in aggregate demand. When deficits and debts are relied upon to correct the latter, the problems risk being compounded, as the experiences of the 1920's and the 1970's and 1980's illustrate.

A first proposition can therefore be advanced: because Keynesian policy recommendations are valid only in the short-run, economists are not much better equipped today to deal with a severe world-wide economic down-turn, should it occur, than before 1929 when Jean-Baptiste Say's "*law of markets*" [1803] was still widely accepted.

Indeed, for the new classical branch of macroeconomics, based on the rational expectations theory, economic cycles can be random disturban-

ces, traced back to temporary *"supply shocks"* or to errors in government policies (regulative unanticipated demand management policies) rather than to any causes inherent or endogenous to the economic process itself or to its institutional set-up. Just as before Keynes, money and financial conditions are neutral and *"do not matter"* and cannot influence the real variables. All markets clear and the world economy continually tends toward equilibrium along its trend. Many economists do not concern themselves, and in fact seem to deny the possibility of a recurrence of major financial and economic dislocations such as the world economy suffered in the 1830's and in the 1930's. The question is to know if such optimism is warranted in theory and in fact. As Milton Friedman [1968] has pointed out, after the creation of the Federal Reserve System, it was widely believed in the 1920's that *"a new era had arrived in which business cycles had been rendered obsolete by advances in monetary technology."* - Similarly, in the 1960's, through the Keynesian fiscal fine-tuning, it was believed that the business cycle was under the government's control. In the 1980's, because it is hypothesized that expectations adjust rapidly and that prices and quantities are taken to be always in equilibrium, we seem to have gone back to Wesley C. Mitchell's idea [1913] that there is only one type of business cycle, the stochastically created short-run cycle.

Is it not possible, however, that large external (institutional) shocks - combined with a politico-economic process and a world where uncertainty prevents economic agents from having identical distributions of expectations - generate recessions of ever increasing severity? In other words, are there worldwide economic cycles which are longer and more severe than the national short-run inventory cycle? If the answer is yes, as I believe it to be so, then exogenous forces or institutions at the international level would seem to be required to dampen the severity of such cycles.

Our purpose is not to go over all the various theories of business cycles and of economic crises<sup>1</sup> - a task too ambitious for this short paper - but to identify the conditions, symptoms and causes, which could explain the existence of longer-run worldwide economic cycles. Our central question is the following : Are the long-run economic cycles that have been observed over the last two centuries the result of recurrent, institutional deficiencies and of recurrent political, economic and financial processes which can be observed and analysed in advance? Our general hypothesis is that the break-down of international political monetary and financial institutions, usually associated directly or indirectly with war financing, tends to create financial imbalances in the world economy, and these financial imbalances become part of a politico-economic process which culminates sooner or later in sharp financial and economic adjustments.

### III. INSIGHTS OF PREVIOUS ECONOMISTS

Even though modern economists, in general, are more optimistic regarding the self-generating capacity of industrialized economies to avoid prolonged economic dislocations, earlier economists confronted with sharp fluctuations in economic activity and with financial crises made fundamental contributions which should not be ignored today. I have already alluded to Schumpeter's contribution which consisted in stressing the complex overlay of repetitious economic cycles of different time lengths. Schumpeter classified economic cycles in three categories : a short-run business cycle (Kitchin) of 3 to 4 years length; an intermediate cycle (Juglar) lasting 8 to 11 years and depending on individual innovations; and the long cycle (Kondratieff) caused by sweeping innovations or by clusters of innovations. There is no doubt that prolonged prosperous periods are accompanied by enhanced entrepreneurial activity,

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<sup>1</sup>For a review of theories of severe depressions, see Temin [1976], Kindleberger [1978], Kindleberger and Laffargue [1982], Freeman [1984], and Schumpeter [1954].



by the application of inventions (innovations) and by booming investments. Three questions remain with Schumpeter's interpretation of the main force behind the long economic cycle : First, why would the innovative shocks which impinge upon the economic system be periodic rather than random? Second, why would not new innovations replace aging ones without a sharp contraction in economic activity? Third, by what causal mechanism do the introduction and aging of technological innovations carry the economy upward and ultimately, downward besides the availability of credit to the entrepreneurs? As long as no answers are given to these questions, one can describe ex-post a long economic cycle, but cannot predict its occurrence.

An important insight into the possible devastating effect of the synchronism of the different cycles was provided by Vilfredo Pareto [1896]. When cycles of different lengths go in the same direction, there results a cumulative effect which exaggerates a boom and exacerbates a downward movement. Paraphrasing Schumpeter, what is to be feared is a Kitchin recession, within a Juglar recession, superimposed on a Kondratieff depression!

Schumpeter's and Pareto's insights, as those of many other authors, are useful in understanding how a market economy fluctuates over time. However, these descriptions do not explain why expansionary economic cycles turn into depressive ones, and conversely.

Keynes insights [1930 and 1936] on booms and depressions, which have been reinterpreted by Temin [1976] as the spending hypothesis, complement those of Schumpeter.

The exhaustion of investment opportunities, after an unsustainable boom in previous investments led to the 1929 economic Depression:

*"The boom of 1928-29 and the slump of 1929-30 in the United States correspond respectively to an excess and deficiency of investment ... I attribute the slump of 1930 primarily to the deterrent effects on investment of the long period of dear money which preceded the stock-market collapse and only secondarily to the collapse half. But the collapse having occurred, it greatly aggravated matters<sup>2</sup>.*

The questions begging to be asked are why money became dearer before the stock-market collapse, and would the decline in autonomous investment spending have been so precipitous and so severe with only a slightly tighter monetary policy?

The money hypothesis especially espoused by Friedman and Schwartz [1963] and the financial-instability hypothesis proposed by Minsky [1982], provide both an exogenous and an endogenous explanation of deepening economic crises. In the former, the economic downturn is assigned, first, to the failure of monetary authorities to act as lenders of last resort and to stabilize the stock of money and, second, to the occurrence of banking panics which makes matters worse. And when the stock of money declines, deflationary expectations set in and the velocity of money itself declines, making a decline in income even more pronounced. In the latter, an expansion of bank credit feeds an economic boom, and as the system floats in liquidity, speculative "*mania*" or "*euphoria*" take over until the speculative "*bubble*" bursts and a rush for liquidity pushes the prices of securities and of goods down, and interest rates up. Bankruptcies then result and an economic downturn is under way.

Therefore, Friedman argues that the capitalist system is basically stable, if it were not for the failures of central bankers, while Minsky argues that capitalist economies become more and more financially

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<sup>2</sup>Keynes [1930], pp. 194-196.

vulnerable during expansions, and this fragility of the financial system sooner or later generates a cumulative contraction of aggregate financial wealth (debt-deflation) and of aggregate income.

In regards to Friedman's optimistic view of the world, it is hard to accept that the doctor (i.e. the Central Bank) is always responsible for the disease of the patient (i.e. the market economy). Minsky's insights would seem to be more logical because there is no a priori reason why the financial structure of an economy would not change for the worst over time. And since financial crises did happen in the past, even under the Federal Reserve system as Friedman-Schwartz pointed out, the probability that future financial crises occur, especially if they are international in nature, is surely more than zero.

However, the possibility of financial crises is not a theory of economic long cycles. Why are financial crises recurrent over time? Why are they often international in nature and what is the transmission mechanism? And, why does real economic activity react negatively to financial crises? Moreover, since governments can resort to deficits to sustain aggregate demand and since central banks can be lenders of last resort and maintain liquidity, could financial stress and even debt-deflation be alleviated? If so, would a prolonged period of stagnation and inflation ensue, i.e. stagflation? If a financial crisis is international, however, my own view is that it is less than certain that the key-currency country itself will always intervene in a positive manner.

#### IV. THE LONG CYCLE: THE KEY-CURRENCY INTERNATIONAL DEBT HYPOTHESIS

Why do certain financial and economic conditions tend to re-appear each 50-60 years? There is not enough space here to present a complete and detailed theory of long economic cycles. I shall try nevertheless to give a general outline of the politico-economic evolutionary process which seems to be at work in the world economy. By definition, a process

describes gradual and progressive changes that may occur after a shock or a disturbance and which leads towards a particular outcome.

In that perspective, we suggest as an hypothesis that the breakdown of international institutions is at the source of the long financial and economic cycles that have been observed over the last two centuries. Indeed some system shocks seem to occur each fifty-some years, i.e. at intervals of two generations, and seem to evolve according to the following pattern:

- a) A period of war with inflationary financing, accompanied or followed by :
- b) A period of dislocation or malfunctioning of the international monetary system, leading to widely unexpected world inflation and international financial imbalances, accompanied by disalignments in real exchange rates and in real interest rates. These imbalances then lead to:
- c) A period of general build-up of international indebtedness and a lending boom which is followed by :
- d) A period of high real interest rates and less effective aggregate creating excess production capacity, and which in turn is followed by :
- e) A period of debt-deflation, disinflation, central bank's heavy discounting and liquidity creation, resulting into an equity markets speculative boom (inflation of assets values) culminating in :
- f) A period of high interest rates, of debt-repudiation and debt-liquidation, a return to protectionism, a financial market collapse and a severe economic slowdown.

Over the last two centuries, the world experienced three documented disastrous Great Economic Depressions, i.e. in 1837-48, in 1873-79 and in 1929-39<sup>3</sup>.

In each instance, the preceding decades had been decades of wars and financial strains : the Napoleonic wars and the U.K. - American War (1800-16), the American Civil War (1861-65) and the Franco-Prussian War (1870-71), and World War I (1914-18). Whether large scale wars are exogenous and accidental events or rather the endogenous products of the long economic cycle itself is outside our purpose here, even though a mixture of both would not be surprising. For the world economy, however, wars produce four results that are bound to influence future economic and financial events : First, they usually bring about the suspension of the working of the international monetary system, be it the gold standard in the nineteenth century or the gold-exchange standard in the twentieth century until 1971; second, they confirm the political, economic and financial dominance of one country whose currency afterwards becomes the key-currency for the world economy : the Pound Sterling in the nineteenth century and the U.S. dollar in the twentieth century; third, they destroy capital by definition and create a shortage of capital, and fourth, the demands of wars stimulate technological inventions and innovations which can be subsequently applied in the private sector.

Wars themselves represent a breakdown in international political institutions. Financially, however, they are always accompanied by a breakdown of the international payments mechanism. An efficient international monetary system does not allow inflation and persistent current account deficits. However, when credit in a key-currency is available internationally, the international supply of capital becomes

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<sup>3</sup>This is a chronology for the United States. See Kindleberger [1978].

very elastic and lending booms are naturally generated. This was the case in the 1820's when the London money market financed the boom in South American loans and mining stocks, and in the cotton industry<sup>4</sup>. That was the case in the 1860's with the financing of an industrial overexpansion capacity. That was also the case in the 1920's when the New York financial markets bankrolled foreign dollar bonds, adding to the war debts and to Germany's war reparations. That was also the case, I may add, after the Vietnam War (1965-73), when the Euro-dollar market and the American banking system financed the underdeveloped world debt expansion in the 1970's.

It is noteworthy that after World War II, the foresight of statesmen and of economists led to the establishment of an international monetary system, the Bretton Woods system. This international financial development, plus the transfer of resources through the Marshall Plan, certainly contributed to preventing an international debt build-up and played no minor role in maintaining financial and economic stability, until the financing of the Vietnam war led to the breakdown of that system on August 15, 1971.

Why do breakdowns of international monetary systems lead to inflation and debt and their eventual resorption? Essentially because, by definition, an international monetary system collapses because the repressed inflation which has been accumulated over many years cannot be contained anymore by expedients. In a key-currency system, this means an overvaluation of that currency (and undervaluation of everything else). Even though it is possible to foresee such a collapse, as Rueff [1971] and Triffin [1960] did over many years for the Gold-exchange (dollar) standard, when it comes it is nevertheless always a surprise. And so are the catch-up inflation and the currency re-alignments that follow. When

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<sup>4</sup>See Schumpeter [1954], p. 732.

the Bretton Woods system and the Smithsonian Agreement that briefly followed it collapsed, the dollar price of gold went quickly from \$38 an ounce to \$100 an ounce. And in late 1983, the price of the basic commodity called oil went from U.S. \$1.73 to \$10. The gold shock and the oil shock were both the logical consequence of the collapse of the Gold-exchange (dollar) system.

A repressed inflation in a key-currency quickly spreads to other countries because these countries are forced to monetize their capital inflows in order to prevent their currencies from rising too fast. The repressed inflation inevitably becomes a world inflation. Being largely unexpected, real interest rates fall which makes it that much easier to finance rather than correct the large fiscal deficits and current account imbalances that appear. The history of the 1970's is a classical illustration of how the absence of an international standard of value and the lack therefore of monetary discipline and of an automatic adjustment mechanism allowed surplus countries to pile up liquid claims and deficit countries to go deeper into international debt.

We can deduct from the experience of the 1970-80 period that the breakdown of the international monetary system is followed by three successive cyclical peaks : a peak in world inflation (1980); a peak in international indebtedness<sup>5</sup> (1987); and a peak in international bond markets (1986) and in equity markets (198?).

These three successive peaks are the logical consequence of the breakdown of the international monetary system and of the discretionary policies that the key-currency country adopts in order to control inflation.

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<sup>5</sup>According to the IMF-World Economic Outlook, April 1987, the ratio of external debt to gross domestic product for Developing Countries should peak in 1987 at 41.3 percent and decline in 1988 to 39.7 percent.

There is an implicit law in international finance which I will call the Rueff Law (from the French economist Jacques Rueff), stating that "*when small financial earthquakes are suppressed, large financial earthquakes are rendered unavoidable*". A truly efficient international monetary system should be judged by its capacity to set in motion adjustments that prevent the emergence of large imbalances in the balances of payments between countries.

As long as the international demand for credit is demand-driven, international imbalances persist because borrowers can always hope to repay in depreciated currency. There is no better proof of the absence of a working international monetary system than the discretionary step that the United States took in October 1979 in order to limit the supply of U.S. dollars (after gold hit a peak of \$875 an ounce and the price of oil \$39 a barrel). This action established two things: first, that the demand for U.S. dollars cannot be a function of U.S. income and U.S. interest rate alone, but must incorporate an international part that reflects expectations regarding future currency values and the demand for U.S. dollars to finance the dollar denominated debt service. Secondly, the United States Federal Reserve Board is the only international Central Bank that the world can rely on, the International Monetary Fund being much more an international central trust than a world central bank.

What would have happened if the Fed had not taken the money punch bowl away in late 1979 by ending its "*benign neglect*" elastic supply of dollars? Sooner or later, inflationary expectations would have caught up with the world inflation, and a firming of real interest rates would have precipitated a debt crisis and probably a major financial panic like those occurring when no central bank was in charge, i.e. in September 1837, in September 1873, and in October 1907<sup>c</sup>. Without the Fed's intervention the

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<sup>c</sup>Cf Kindleberger [1978], pp. 253-259.



international debt bubble would have reached its climax much sooner. A concentrated period of debt-liquidation and debt-repudiation could then have turned the 1981-82 recession into a more serious downturn in world-wide economic activity.

The Fed-engineered slowdown in world economic activity nevertheless put a stop to the international debt explosion and bought time to proceed with its orderly management and, if needs be, its partial liquidation. However, because of the lack of an international automatic adjustment system, current account imbalances have mushroomed among industrial countries. The excess supply of commodities, including oil, and the excess demand for dollars, have proven to be a boon to a raw material importer like Japan. Without an international and automatic mechanism to correct current account imbalances, Japan and a few other Pacific Rim countries started replacing the OPEC countries as generators of large current account surpluses. Indeed, even with growing current account surpluses, the Yen kept appreciating vis-à-vis the U.S. dollar until as late as February 1985. The new international debt thus generated is owed this time by the United States, a large part of it being the debt of the U.S. Treasury itself. Such a debt cannot be repudiated just as easily as some of the Less Developed Countries' debt. The world economy is still faced with structural balance of payments imbalances, but the means to resorb them in a discretionary manner may be less attractive. This time, the international build-up is not a consequence of worldwide inflation, but is rather the consequence of the worldwide disinflation engineered by the U.S. Central Bank.

#### V. THE LAST STAGE OF THE LONG CYCLE : THE TURNING POINT?

Since governments have some choice in choosing policies when facing a crisis, any likely scenario of future events must be stated in qualified terms by distinguishing between autonomous developments and the

effects of exogenous interventions. To summarize, the 1970 inflation and debt build-up are still in the process of being liquidated and it is to be expected that any worldwide economic slowdown would accelerate a debt-repudiation's process which is already in motion.

Left alone, the process of debt-liquidation and of debt-repudiation would lead to lower asset prices and to higher interest rates. However, most of the international debt is denominated in the currency of a country which is itself facing external payments deficits. This creates a potential conflict in economic policies for the United States. On the one hand, in order to cushion the process of debt-liquidation, the U.S. (Fed and Treasury) must act as lender of last resort and keep the dollar system in a flux of liquidity. This is what has been done since 1985 with a precipitous drop in interest rates, a dollar depreciation and a stock-market boom. On the other hand, an international solution to current account payments imbalances would have required some tightening by the United States of its monetary and/or fiscal policies, and a deflation of the surplus economies. Faced with an international debt crisis, the United States is applying the principle enunciated by Walter Bagehot [1924] in the late nineteenth century, i.e. to "*discount and discount heavily*" when there is a liquidity crisis. However, by creating more liquidity in order to smooth the debt-liquidation process, the Fed runs the risk of feeding an unsustainable stock market boom.

Indeed, the question is to know if this exogenous expedient is a solution to the financial imbalances or if, by creating other imbalances, it only postpones adjustments which sooner or later will be more severe. Indeed, by flooding the system with liquidity, the Federal Reserve Board can counteract the deflationary effects of the debt-liquidation process and can extend prosperity without higher interest rates. This naturally would encourage present-value revaluations, stimulate stock market speculation and bail out heavily financially-hedged firms. The key for the reversal of this process is when a falling dollar and rising prices

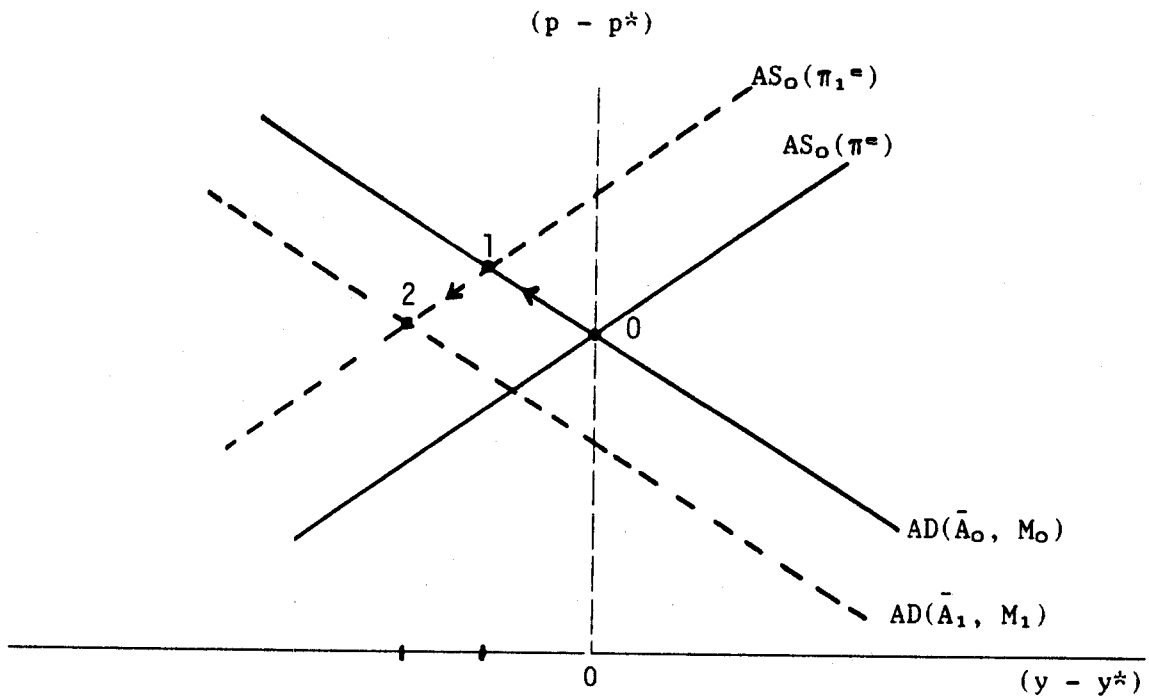
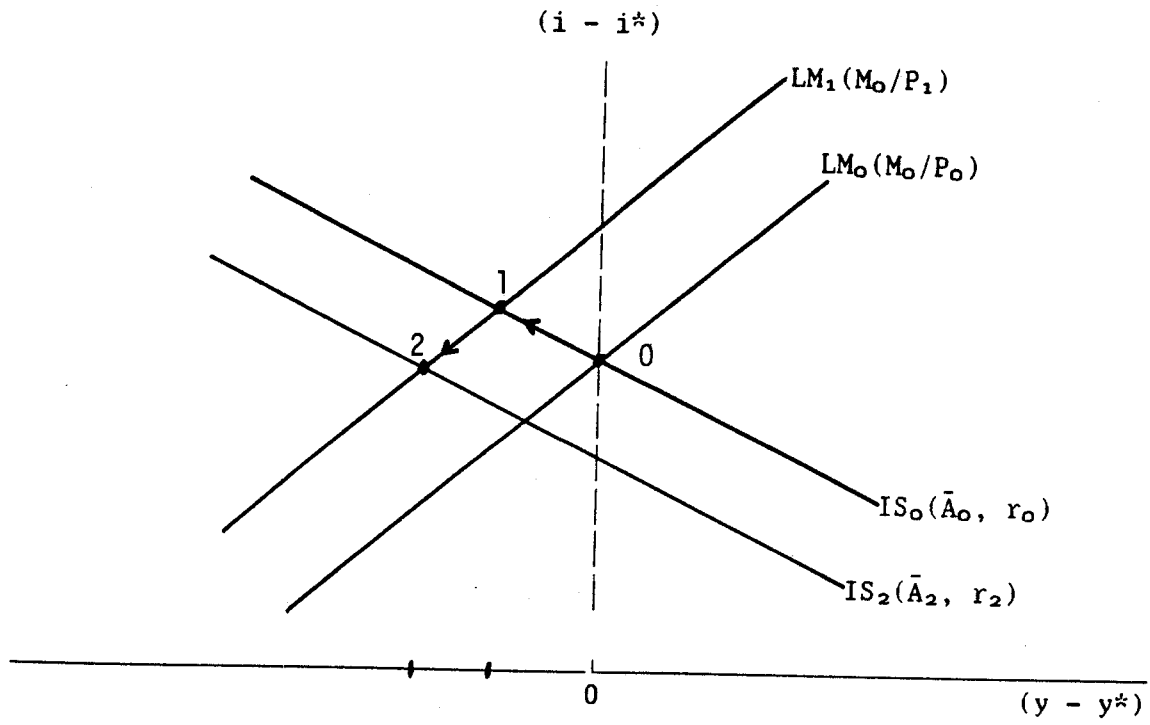
induce expectations of further inflation and further depreciation. Then interest rates will rise, the stock market will reflect the decline in the value of firms, and investments will fall. Unless the Central Bank wants to move towards accelerating inflation or even hyper-inflation, it will have no choice but to stabilize the currency<sup>7</sup>. And the great "*artificial*" financial boom will be over.

This analysis can be expressed by using the standard IS-LM diagram. In order to stress the cyclical and dynamic nature of the process of the upper turning point in the long cycle, we will express all variables as differentials from their trend values expressed with an asterisk.

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<sup>7</sup>Since markets nowadays are very sophisticated and sensitive to inflation expectations, it is unlikely that an accelerating inflation is possible, because the skyrocketing of interest rates will by itself control inflation.

FIGURES



When expectations of future dollar inflation and depreciation take hold, the foreign demand for dollar monetary assets falls and capital outflows accelerate. In order to control the confidence crisis in the currency, the Fed has to moderate its rate of creation of the nominal money supply. The position of the LM curve, which depends on the level of real balances ( $M/P$ ) shifts to the left. Nominal interest rates and domestic inflation rise as the dollar depreciates (situation 1). The tightening of monetary conditions could be reinforced by a leftward move of the IS curve whose position depends on autonomous spending ( $\bar{A}$ ) and the nominal money supply ( $M$ ). First, autonomous spending, especially related to the fiscal deficit, may decline<sup>u</sup>. Second, the rise in nominal interest rates would provoke a decline in the stock market value of firms and real interest rates could increase, leading to a contraction of investments (situation 2).

At this stage, when easy money and deficit spending are no more available, history teaches that governments will resort to protectionism in order to stimulate their economies. The resulting shift to the right of the IS curve can only reflect a temporary stimulus however, because first, protectionism accelerates inflation and second, because foreign retaliations reduce exports and shift the IS curve back towards the left.

The same adjustment process can be described with the aggregate supply and demand apparatus. Higher price expectations ( $\pi$ ), and higher commodity prices shift the aggregate supply curve (AS) to the left (situation 1). The slowdown in money growth and in autonomous spending

<sup>u</sup>  
Autonomous spending  $\bar{A}$  : Government spending, autonomous consumption and investment spending and exports.  
The LM and IS curves have respectively a positive and a negative slope that reflects a nonzero interest elasticity of the demand for money and of the demand for investment and for consumption spending.

shift the aggregate demand curve (AD) leftward (situation 2)<sup>9</sup>.

## V. CONCLUSIONS

Can these policy means - i.e. monetary expansion, deficit spending and protectionism - contribute to an orderly adjustment of structural problems such as international overindebtedness and current account payments imbalances, or by postponing the adjustments do they only make matters worse? Central bank discounting can avoid banking crises and cumulative debt default crises from occurring and be a factor of financial stability. However, it can be overdone if in the process it generates a speculative stock market bubble which will, when it bursts, provoke a deflationary contraction in asset values and in new investments. Similarly, large budgetary deficits and huge current account deficits cannot last forever, before they degenerate into a confidence crisis in the currency. In these circumstances, fiscal policy cannot be expansionary. Finally, protectionism is a non-solution which can create an illusion of short term improvement at the cost of much greater dislocations later.

Our final conclusion is that there are basic institutional flaws in the world economy which contribute to its instability and to the severity of long economic cycles. These flaws relate to the absence of an international standard of value and of an international monetary system, and to the use of a key-currency which is under the influence of a domestic monetary policy rather than an international monetary policy. They also relate to an international freedom of movements of monetary and financial assets, while the movement of goods and services is much less free. Because of these basic institutional flaws, when the international mone-

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<sup>9</sup>The AD curve traces the locus of all intersections of the IS and LM curves for given  $\bar{A}$  and  $M$ . Therefore, a shift in the AD curve and in nominal income can originate from a shift in nominal money or in autonomous spending.

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tary system breaks down, it stops imposing its discipline on individual countries, and an endogenous world-wide financial and economic process is set into motion which, at the very least, exaggerates the upward and downward movements of the long economic cycle. The absence or collapse of orderly international monetary relations leads inevitably to international financial imbalances and to over-endebedtness. The unwinding of these imbalances and the resorption of excessive debt represent a delicate situation for the world economy. The identification of which exogenous policy interventions are required and in what dosage can be critical. A huge responsibility rests then on the key-currency country which can influence the endogenous financial and economic process through its monetary, fiscal and trade policies. It is of paramount importance to pursue a stable monetary policy which can avoid both banking crises and speculative excesses in financial asset valuation. Also of great importance is the need to correct balance of payments imbalances through responsible fiscal policies and realistic exchange rate values, rather than through trade protectionism. What can be asked from the authorities of the key-currency country is that they do not worsen the imbalances in the world economy but contribute positively to reducing them. This is not an easy task in any circumstance.



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